

How Far do England's Second-Order Cities Emulate London as Human-Capital 'Escalators'?

Tony Champion^{1,*}, Mike Coombes¹ and Ian Gordon²

¹*Centre for Urban and Regional Development Studies, Newcastle University, Newcastle upon Tyne, UK*

²*Department of Geography and Environment, London School of Economics, London, UK*

ABSTRACT

In the urban resurgence accompanying the growth of the knowledge economy, second-order cities appear to be losing out to the principal city, especially where the latter is much larger and benefits from substantially greater agglomeration economies. The view that any city can make itself attractive to creative talent seems at odds with the idea of a country having just one 'escalator region' where the rate of career progression is much faster, especially for in-migrants. This paper takes the case of England, with its highly primate city-size distribution, and tests how its second-order cities (in size order, Birmingham, Manchester, Leeds, Newcastle, Bristol, Sheffield, Liverpool, Nottingham, and Leicester) compare with London as human-capital escalators. The analysis is based on the Office for National Statistics Longitudinal Survey of linked census records for 1991–2001 and uses one key indicator of upward social mobility – the transition from White Collar Non-core to White Collar Core. For non-migrants, the transition rate for the second-order cities combined is found to fall well short of London's, but in one case – Manchester – the rate is significantly higher than the rest of the country outside the Greater South East. Those moving to the second-order cities during the decade experienced much stronger upward social mobility than their non-migrants, but this 'migrant premium' was generally similar to that for London, suggesting that it results from people moving only after they have secured a better job.

Second-order cities, therefore, cannot rely on the speculative migration of talented people but need suitable jobs ready for them to access. Copyright © 2013 John Wiley & Sons, Ltd.

Accepted 11 June 2013

Keywords: human-capital escalator; second-order cities; England; ONS Longitudinal Study; career progression; city region

INTRODUCTION

Recent years have seen an urban resurgence in many of the countries that experienced a major decline in city fortunes in the 1960s and 1970s (Cheshire, 2006; Turok and Mykhnenko, 2007). This has been put down to a combination of factors, including the effects of globalisation, the shift towards the quaternary sector of transactional activity, and a refocusing of government policy on urban regeneration (Dunning, 2000; Edmonds, 2003; Malecki, 2007; EU Regional Policy, 2009). Stress has been laid on the importance of agglomeration economies accruing to knowledge-based industries that cluster together (Krugman, 1996; OECD, 1996; Glaeser and Maré, 2001; Maskell and Malmberg, 2007). In particular, the concentration of high-skill labour in large metropolitan areas is seen to enable their employers to make more efficient use of the available human capital, which leads to these cities being especially attractive to people from elsewhere who want to 'get on' in their careers (Glaeser and Saiz, 2003; Montgomery, 2006; Fielding, 2007; Florida, 2008).

The benefits of such agglomeration economies cannot, however, be expected to accrue equally to all large metropolitan areas (Berry and Glaeser,

*Correspondence to: Tony Champion, Centre for Urban and Regional Development Studies (CURDS), Newcastle University, Newcastle upon Tyne, UK.
E-mail: tony.champion@ncl.ac.uk

2005). In principle, the larger the urban agglomeration, the greater is its growth potential and the more attractive it is to potential migrants from elsewhere, thereby leading to a cumulative reaction in the absence of any major checking 'diseconomies of scale' (MIER, 2009a; Storper and Scott, 2009). This line of reasoning poses an especially severe challenge to the economic prospects of the second-order cities in countries with a primate city-size distribution and, most notably, in countries whose second-order cities are striving to throw off the legacies of the industrial era and restructure away from textiles, coal, and steel or heavy engineering (Parkinson *et al.*, 2012).

A classic example of this situation is provided by the UK, with its pioneering of the industrial revolution and the growth of London as the capital of the British Empire. London hugely dominates the urban system of the UK and – given that Wales, Scotland, and Northern Ireland have some degree of political autonomy – especially that of England (see in the succeeding text). This is reflected in the commentary on the drivers of the North–south divide in England (Smith, 1989; Ward, 2011), including the line of research that has portrayed London and the south-east as England's 'escalator region' (starting with Fielding, 1992). Interregional migration in England is seen to pivot on London, with young adults being drawn there to take advantage of faster career progression before 'stepping off the escalator' towards the end of their working lives (Coombes and Charlton, 1992; Fielding, 1993; Champion *et al.*, 2007).

This paper seeks to discover whether England's second-order cities are acting as human-capital 'escalators' for their residents and also for migrants that choose them as their destination rather than the national capital. Is the 'oversized' capital in a class of its own in terms of people's pace of upward occupational mobility? Or does England's second tier of urban agglomerations show any signs of rivalling London in this respect? In short, is there any case that could be made for advising aspiring young workers to move there rather than to London?

The remainder of the paper comprises four parts. The first sets out the background to this line of inquiry and its English context in more detail. This is followed by a description and justification of the approach used in the analysis, including the related issues of data source and choice of career-progression metric as well as selecting and defining the second-order cities.

The third section presents the results, starting with the patterns of career progression of those who stayed in the same agglomeration over the reference period and then comparing these with the fortunes of those who moved to them during the period. Finally, the paper provides a concluding discussion and suggestions for further research.

BACKGROUND TO THE RESEARCH QUESTION

In recent years, there has been a considerable growth of interest among both policymakers and researchers in second-order cities, that is, the tier of urban agglomerations immediately below the premier city (for reviews, see Parkinson *et al.*, 2012; Champion and Townsend, 2013). As indicated earlier, this interest has been stimulated by the decline of manufacturing as the major production sector and the emergence of knowledge-based industries, because the latter are seen as being the most vibrant where they can take advantage of the greatest agglomeration economies. Such restructuring has prompted fears of the largest city benefitting disproportionately at the expense of the second-order cities. This is even more the case in countries where the latter are struggling with the legacy of deindustrialisation, and the largest city is the national capital with a long-established presence of command and control functions.

This concern about the economic prospects of second-order cities is certainly very evident in Europe (EU) and not least in the UK. For instance, following a major investigation of EU's 'second-tier cities', Parkinson *et al.* (2012: 82) concluded that, although 'capital cities are crucially important to their national economies and must be able to complete in a global market', their growth should 'not [be] at the expense of everywhere else'. The risk is that over time the capitals will so dominate the urban system that the national economy becomes spatially and structurally unbalanced. In contrast to the experience of Germany, where a strong set of second-order cities was found to be helping to drive national economic performance, in a clear majority of EU countries, the gross domestic product of the second city in 2007 was less than two-fifths that of the national capital. On this criterion, the UK lies at the other extreme from Germany, with its second largest urban agglomeration having less than one-eighth of the gross domestic product of

London – with the ratio being lower only for Hungary and with only France and Latvia being similarly unbalanced.

Within the UK, perhaps not surprisingly given that distance and a degree of political devolution promises Wales, Scotland, and Northern Ireland a measure of insulation from London, it is the situation in England that has received particular attention. Although the problems of urban decline here have long been recognised, urban regeneration policies were invigorated by the New Labour government from 1997. The publication of *Towards an urban renaissance* (Rogers Report, 1999) was swiftly followed by a wide-ranging set of proposals in the White Paper *Our towns and cities* (DETR, 2000) and aimed at promoting more balanced city growth across England. Building on this, the Sustainable Communities Plan (ODPM, 2003) established a planning framework for northern England focused on eight city regions and their principal cities (Northern Way, 2004, 2009). By this time, too, England's eight largest regional cities had set themselves up as the 'Core Cities Group' to lobby central government for more funds to help them compete with the capital (Charles *et al.*, 1999; Core Cities Group, 2004).

Evidence-based assessments of the achievements and prospects of second-order cities present a very mixed picture in terms of both consistency across cities and sustainability over time. The Core Cities Group (2004) announced that 'Our cities are back', but Parkinson *et al.* (2006) concluded that the record across the 56 urban areas covered by their *State of the English Cities* report was distinctly patchy. Jones *et al.* (2006) identified Manchester as the second-order city most likely to capitalise on growth in the knowledge sector, with Bristol and Leeds having the next strongest prospects, whereas MIER (2009b) confirmed that Manchester possessed more jobs in knowledge-based industries than any other city outside London. Overman *et al.* (2009) demonstrated how improved links within northern England, especially between Manchester and Leeds, could build up local critical mass and reduce the productivity gap with London. Subsequently, the Great Recession has exposed the fragility of what progress had been achieved, impacting less severely on the capital than the second-order cities because part of the latter's previous growth was supported by increases in public expenditure that were then sharply reversed under recessionary

conditions (ippr north, 2009; Clayton, 2011; Centre for Cities, 2012; Parkinson *et al.*, 2012; Champion and Townsend, 2013). It would seem that the extra policy support since the 1990s has not been sufficient to redress the structural weaknesses of England's second-order city economies and indeed may have aggravated them by diverting skilled labour into higher-paying public-sector jobs and raising costs for the private sector (Morton, 2011).

Arguably, the key challenge for cities is to attract high-quality workers and create suitable jobs for them. Several studies including Jones *et al.* (2006) and MIER (2009b) have followed Florida (2002) in stressing the importance of the 'creative class' to the achievement of sustainable economic growth in the knowledge economy. Yet second-order cities, especially those with a strong manufacturing tradition, face the difficulty of low educational aspiration in the indigenous population. Another of their problems is the environmental legacy of the industrial era, which can deter young aspirers from migrating to them from elsewhere. Indeed, second-order cities even struggle to hold on to their home-grown talents because of a long-standing 'culture of migration', where their high-achieving school leavers expect to move away in order to get on in their careers (Champion and Coombes, 2007; Houston *et al.*, 2008; see also Work Foundation, 2011).

This process has also become an established part of migration theory. Two decades ago Fielding (1992) set out the hypothesis of the escalator region in which people move as young adults to the part of the country where they can achieve most rapid promotion and then leave it towards the end of their working lives or at retirement in order to live in a place with lower living costs and a better quality of life. His case study of England and Wales, using data for the 1971–1981 intercensal decade, confirmed the escalator role of London and the south-east: this region was characterised by a higher rate of upward social mobility than any other; it saw net in-migration of young adults who managed even faster promotion than the indigenous population, and it experienced net out-migration of older people who overall were downshifting in labour market terms. Subsequent studies have largely reinforced these findings (Fielding, 2007; Findlay *et al.*, 2009; Champion, 2012; Gordon, 2012).

There is, however, some evidence suggesting that this research puts too much stress on moving to the escalator region of a country: it is almost as if those who choose not to move there are seen as doomed to second-class status in their working lives. Yet, even in Fielding's original (1992) work, it was clear that these things were relative, not absolute: people living in other regions besides the south-east did experience upward social mobility over time but just not as quickly and/or surely as in the escalator region. At the urban rather than regional scale, Devine *et al.* (2003) found evidence in Manchester that it is possible to forge a successful professional career without moving to London, while Findlay *et al.* (2003, 2008) and van Ham *et al.* (2012) have identified considerable upward social mobility amongst migrants to Edinburgh. In the Canadian context, Newbold and Brown (2012) demonstrated that those moving to Toronto achieve an income premium over that city's indigenous population but so too do migrants to Canada's other large metropolitan areas, albeit a somewhat smaller one.

This previous research raises the issue of how far the concept of escalator region should be considered in absolute terms (i.e. one per country) rather than in relative terms where potentially all places can be considered to act as escalators but merely operate at different speeds. It is also possible that the macro-regional scale used in Fielding's analyses masks the existence of second-order cities with higher than average rates of upward social mobility. This study therefore aims to test whether there are any second-order cities that rival London as places where people progress their careers more rapidly than the norm, and thereby attract in-migration in the way that Florida (2002) has argued. The rest of this paper presents the methodology and results of a systematic city-level study that compares London and England's nine next largest cities on the basis of the pace of career advancement for their longer-term residents and their recent in-migrants.

DATA AND METHODOLOGY

Three main methodological issues need to be addressed in order to find out the extent to which second-order cities compare with London as a human-capital escalator for their residents and for migrants that choose one of them as their

destination. The first step must be the choice of data source, as this has some influence on the subsequent decisions. The second is the identification of the urban centres that constitute a second-order city and the adoption of a consistent basis for delineating both these and London. The third is the selection of the variable to be used to measure people's career progression over time, along with the specification of the population for which this is to be calculated.

As regard the first of these issues, in practice there is just one viable data source, the Office for National Statistics Longitudinal Study (ONS-LS). This contains the anonymised records of a sample of just over 1% of people enumerated in each population censuses of England and Wales between 1971 and 2001 (not 2011 at the time of writing). It has been used by the vast majority of the previous studies on the escalator region phenomenon in England and Wales, including the original work by Fielding (1992). It comes into its own even more when the spatial focus is shifted from the regional to the urban scale, given the smaller population size of the latter units: its sample size is much larger than alternatives like the Labour Force Survey and British Household Panel Study (BHPS). In this connection, the only downside is the ONS's policy on disclosure control, which is that there can be no reporting of small counts or any ratios based on these, with the threshold unfortunately being raised during the course of this study from 3 to 10, which equates to almost 1,100 people in grossed-up form and turns out to be quite a large number in relation to specific occupational transitions among migrants to individual cities.

In terms of identifying England's second-order cities, the aim was to select the largest places outside the Greater South East (GSE) defined as London, the South East and the East regions. Adopting the Primary Urban Area (PUA) basis used by Parkinson *et al.* (2006) for analysing their 56 cities, it was found that nine of these contain 200,000 or more jobs, including all eight members of the Core Cities Group: in rank order on this criterion, Birmingham, Manchester, Leeds, Newcastle, Bristol, Sheffield, Liverpool, and Nottingham. Adding in Leicester, the ninth in size, makes the list correspond with that used by the Parkinson *et al.* (2012) study of 'second-tier' cities. For defining their extent, owing to having to locate people by home address rather than workplace, it

England's Second-Order Cities as Human-Capital 'Escalators'?

was important to set the PUA definition within a boundary including workers who commuted to these jobs. This leads to a 'city-region' approach primarily based on commuting patterns, following the method developed for analyses of the eight Core Cities (Charles *et al.*, 1999). Applying the same principles to Leicester and London, the resulting city regions are as shown in Figure 1. All mentions of 'city' in the succeeding texts refer to places defined on this basis.

For the approach to be taken towards measuring people's career progression, it was decided to focus on just one key occupational-status transition, namely the proportion of White Collar Non-core (WCN) workers moving up to White Collar Core (WCC) status over the reference period. This single 'transition rate' metric, chosen

in preference to an index that averages across several between-status transitions or to a single scale ranking people on change in some continuous indicator of occupational status, was seen to afford greater transparency to the results, potentially guiding subsequent work using alternative formulations. WCC is defined as SEGs 1, 3, and 4 (i.e. employers and managers in large firms, and professional workers), and WCN comprises the other main non-manual SEGs 2, 5.1, 5.2, and 6 (i.e. employers and managers in small firms, ancillary workers and artists, non-manual supervisors and junior non-manual). The rationale for this approach is as follows. In relation to the choice of WCC as the destination category, the main emphasis in the literature in this field has been on the uppermost level of the occupational ladder, or what Fielding

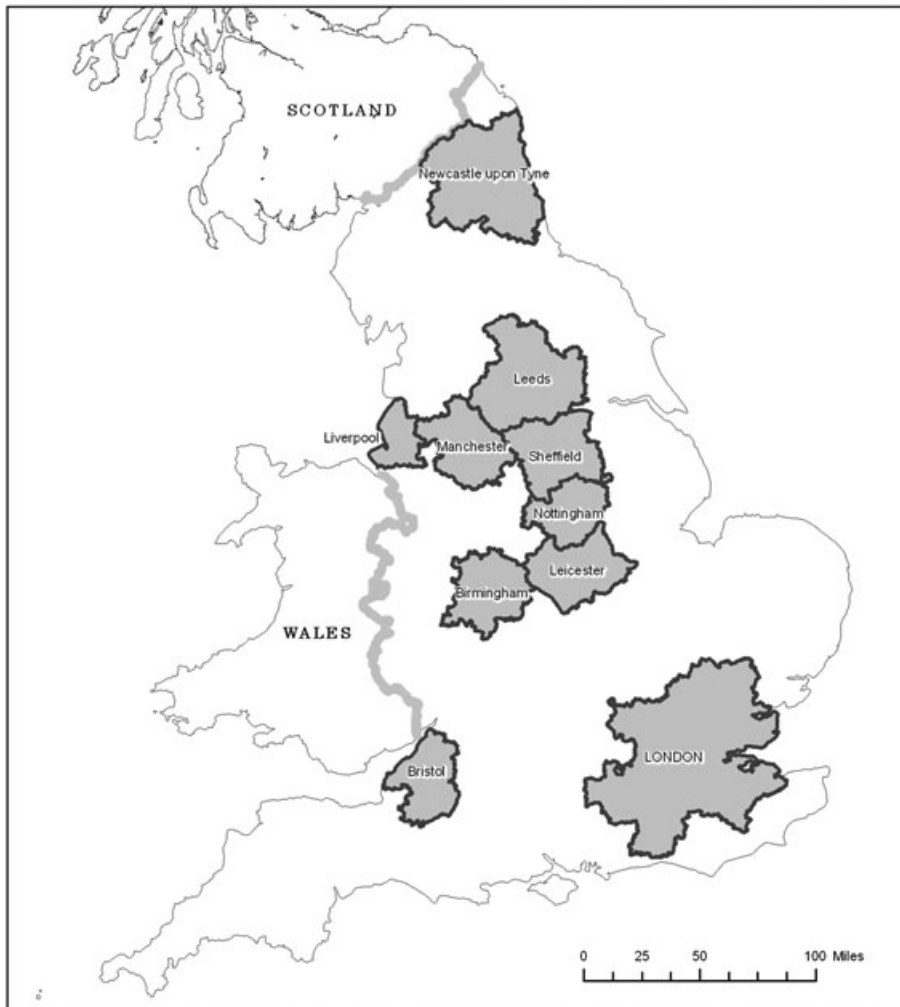


Figure 1. City regions of London and 9 second-order cities.

(1992) termed the 'service class', as opposed to lower-level white-collar work and manual labour. For the starting category, it was decided not to include all other occupations because the chances of moving to high-level white-collar work differs considerably between them and, as the occupational composition of places varies markedly, this effect could dominate the city-level likelihoods of transition.

A decision was also required about the population to be included in the analysis. With issues of sample size in mind, the first step would be to look at the career progression of the whole cohort of people who were in WCN work at the start of the intercensal decade, merely restricting these to the main working-age span of 15–64 years, who would be aged 25–74 years by the end of the decade. As far as sample size permitted, this could be subdivided by gender and broad age group. It was also decided to restrict the study population to those who were also in employment at the end of the reference decade, so as to ensure as far as possible that their recorded occupational status truly reflected their situation then as opposed to being inherited from their most recent job before leaving work, whether due to retirement, redundancy, ill-health, or caring for family. This approach parallels that of Newbold and Brown (2012) who restrict their analysis to people in work. Two groups of people are distinguished: 'non-migrants' – those living in the same city region at the end of the decade as at its start – and 'migrants' – all those who moved into a city region during the decade apart from those who had moved less than 40km. The latter precaution was designed to filter out the short-distance cross-boundary moves that would probably not be accompanied by a change of workplace: the latter would have been the more relevant locator for this study but was not available in the data set. Lastly, although migrant sample numbers would have been boosted by including those who started the reference decade in Scotland and Northern Ireland, this was not possible because the ONS-LS is restricted to England and Wales and cannot be readily integrated with the other two UK Longitudinal Studies (but see van Ham *et al.*, 2012, for a similar study of Scotland).

RESULTS

Adopting the parameters set out earlier, the test of how far England's second-order cities

compare with London as human-capital escalators is organised in two main steps. Following Fielding (1992), the first examines the extent to which the 10 cities vary in their capacity to act as escalators for their non-migrant population, based on the transition rate from WCN to WCC in a decade. The second step applies the same metric to the migrants to each city. Here places are compared not only to discover how strong an escalator function they perform for their migrants but also to see how the latter fare relative to their non-migrants. In both of these steps, the examination of the whole sample is followed by a breakdown by gender and broad age group to check that the results are not affected by differences in demographic composition. The primary focus is on the comparison between London and the other nine cities, with the latter being treated as an aggregate so as to achieve the most robust results but, finally, the cities are treated individually as far as sample size and disclosure rules permit.

Non-migrant Transition Rates for London Compared with the 9 Second-order Cities Combined

Looking first at London, the ONS-LS sample contains 14,372 records of people who were living in its city region (Figure 1) in both 1991 and 2001, were aged 15–64 years in 1991 and engaged in WCN work at that time and were also in work 10 years later (equivalent to almost 1.6 million when grossed up). A total of 2,270 of these Longitudinal Study members had moved up to a WCC occupation by 2001, that is, 15.8% of the non-migrant WCN starters. This transition rate compares with one of 12.2% for the other nine cities combined, which is very similar to the 12.4% for the rest of England and Wales. This suggests that – at least at the scale of this 3-fold division – London was in a class of its own in providing a greater than average chance of this career progression in 1991–2001, whereas the second-order cities offer no advantage over the rest of the country. Thus, compared with the second-order cities' aggregate, the chances of making this transition were 30% higher in London. It is clear that the capital's superiority as a place where people can get on in their careers has survived the many labour-market changes of

recent decades. Indeed, exploratory analyses undertaken early in this study suggest that the margin between London and the second-order cities may even have widened since the 1970s.

Can demographic composition help to explain this difference in transition rate between the second-order cities and London, with the latter containing more of the types of people who tend to progress more quickly in their working lives, notably younger people? Certainly, London's population is known to have been rejuvenating itself since the 1970s, as a result of the combined effects of older people leaving, of younger adults moving in, and of increasing numbers of births (Champion, 2006). Nevertheless, Figure 2 shows that the 'London premium' remains largely intact in analyses distinguishing four broad age groups and also splitting men from women. Overall, women display lower transition rates than men, as do those aged 35 years or over in 1991 (becoming 45 years and over by 2001) compared with the two younger cohorts. But it is clear that London systematically outperforms the second-order cities' aggregate for both men and women and for all the age cohorts shown, albeit it by a smaller margin for the oldest one.

Migrant Transition Rates for London Compared with the 9 Second-order Cities Combined

The second step is to look at the equivalent transition rates for these places' in-migrant populations

(as defined earlier). Although the career progression of non-migrants suggests that London offers clearly superior prospects, there were 5,586 people in the sample (over 610,000 grossed up) who were living in a second-order city in 2001 but had been living elsewhere in England and Wales (including one of the other second-order cities) in 1991 and, of these, 22% (1,231) were working in a WCN occupation in 1991 and were still in some type of job in 2001.

At least part of the reason for this migration can be found in the WCN-to-WCC transition rates. According to the ONS-LS data, those moving into one of the 9 second-order cities between 1991 and 2001 managed to progress faster as a group than would be expected from the non-migrant transition rates described in the previous texts. Of the 1,231 WCN starters, 273 had progressed to WCC jobs by 2001. This transition rate of 22.2% is very much higher than the 12.2% rate for the second-order cities' non-migrants. Moreover, it is substantially above the rate for the equivalent group moving into the rest of England and Wales from all 10 cities (19.7%), although well short of the 26.0% rate for those moving into London during the decade.

Compositional effects need to be considered when comparing the second-order cities' migrants with their non-migrants. Certainly, it is well known (Boyle *et al.*, 1998) that migration tends to be a selective process, with young adults being disproportionately represented in longer-distance moves – and also a socially biased one, although

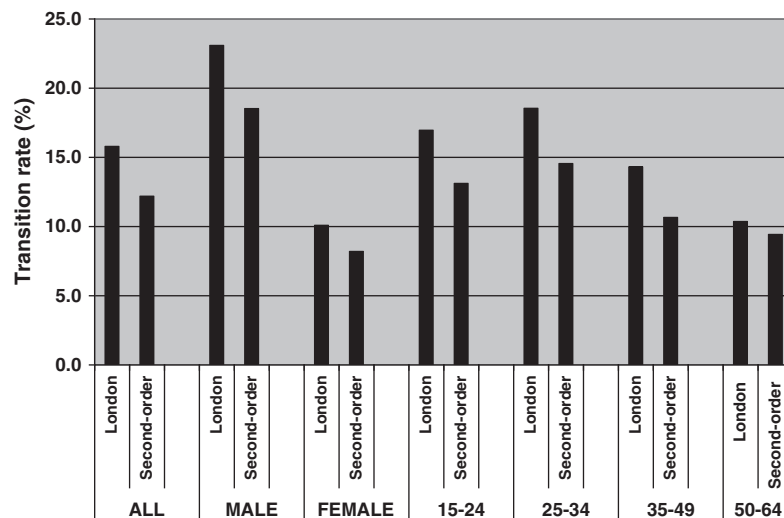


Figure 2. White Collar Non-core-to-White Collar Core transition rates, 1991–2001, for non-migrants in work at both the start and the end of the reference decade, by population group (Source: calculated from the Office for National Statistical Longitudinal Study data. Crown copyright.)

this is already being allowed for to a considerable extent by restricting the sample to just those who were in WCN work at the start. The test is provided in Table 1, which breaks down the migrant transition rates by gender and age and compares them with the non-migrant rates that formed the basis of Figure 2 (apart from those aged 50–64 years in 1991 for whom an element of the ratio for migrants fails to meet the ONS disclosure threshold). It can be seen that the second-order cities' transition rate for migrants is higher than the non-migrant one for each of the population groups. The same is also the case for London. Moreover, the 'migrant premium' for the second-order cities is virtually identical to London's for all persons and varies more or less in tandem with London's across the population groups. These results confirm the findings of Fielding's original (1992) study that migrants tend to get on better in their careers than non-migrants, but additionally suggest that this must be related to some other factor(s) besides those of gender, age, and starting occupational level allowed for here.

Table 1 also permits a cross-group comparison of transition rates between those migrating to a second-order city and those going to London as well as facilitating a comparison of this London premium for migrants with that of the non-migrants' performances already described. For all

the population groups shown, the migrants' transition rates are always higher for London than for the second-order cities, just as is the case for the non-migrants' rates. Impressively, for the most part, the two sets of differences move in parallel, reinforcing the image of similarity given by the all-persons' differences of 3.6 and 3.8 percentage points for non-migrants and migrants, respectively. For instance, the London/second-order-city difference of 5.0 points for migrant men is not much greater than the 4.6 for non-migrants, whereas the differences for those aged 25–34 years in 1991 (becoming 35–44 years in 2001) are even more closely matched. On the other hand, the migrant/non-migrant differences are somewhat wider apart for those aged 15–24 years and 35–49 years. Also, the transition rate for London's migrants reduces with age unlike for the second-order cities. The overriding feature, however, is of the margin of difference between London and the second-order cities in the chances of occupational progression being about the same for their recent in-migrants as for their longer-term populations.

The 10 Cities Compared

The role of place can be probed further by examining the 9 second-order cities individually and comparing their transition rates with London's,

Table 1. White Collar Non-core to Core transition rates, 1991–2001, for migrants and non-migrants: London and the 9 second-order cities combined by population group.

Group with age in 1991 (years)	City	Non-migrants	Migrants	Migrant premium
All 15–64	London	15.8	26.0	10.2
	Second-order cities	12.2	22.2	10.0
	London premium	3.6	3.8	
Males 15–64	London	23.1	37.3	14.2
	Second-order cities	18.5	32.3	13.8
	London premium	4.6	5.0	
Females 15–64	London	10.1	15.6	5.5
	Second-order cities	8.2	13.4	5.2
	London premium	1.9	2.3	
All 15–24	London	17.0	27.5	10.6
	Second-order cities	13.1	22.6	9.5
	London premium	3.8	4.9	
All 25–34	London	18.6	25.6	7.1
	Second-order cities	14.6	21.9	7.3
	London premium	4.0	3.8	
All 35–49	London	14.3	24.2	9.9
	Second-order cities	10.7	22.9	12.2
	London premium	3.7	1.4	

although the ONS disclosure rules make it impossible to do this for the breakdown of population subgroups used earlier owing to the relatively small numbers in the migrant category of some cities. Table 2 shows the transition rates for those who were living in a particular city at both dates, and those who moved to it from elsewhere in England and Wales (including one of the other cities) during the decade. The cities are arranged in size order in order to help in checking for agglomeration effects. As a further refinement, the rest of the country is subdivided into the rest of the GSE (see the previous text), and the remainder, as the latter constitutes a more valid benchmark for the performance of the nine provincial cities, which lie outside this generally prosperous region.

As mentioned earlier, the first test for how strongly places perform as escalators of human capital is based on their non-migrant populations. It can be seen (from the first two data columns of Table 2) that agglomeration effects operate on at least a partial basis. None of the second-order cities has a higher non-migrant transition rate than London, whereas Manchester ranks in second place, which is close to its size ranking. Beyond this, however, the relationship is less clear, with the third highest transition rate being for Leicester, the smallest of the cities. Indeed, allowing for sample size, *t*-test results show that, of the 9 second-order cities, only Manchester has a rate significantly above that 11.5% benchmark. Nevertheless, across

the 10 cities calculations suggest a degree of size effect: a correlation coefficient of 0.73 between the transition rate and the log of number of jobs is significant at the 5% level and indicates that on this measure agglomeration effects account for around half of the between-place variance in cities' non-migrant career advancement.

Turning to the migrants, it might have been expected from the previous section that there would be a stronger role for agglomeration effects, given the progressive fall in migrant transition rate from London to the 9 second-order cities combined and then to the aggregate of the smaller labour markets that make up the rest of England and Wales (26.0%, 22.2%, and 19.7%, respectively). On the contrary, however, the pattern for migrants shown in Table 2 (third data column) is found to be less related to size than the one for non-migrants. London does not stand above all the others and, moreover, on a par with it are Leeds and Leicester rather than the second-largest or third-largest cities. Overall, the correlation between the migrants' transition rate and the log of number of jobs is only 0.21, well below the 0.63 level required for a 5% significance with just 10 cases. Moreover, London is the only place where migrants fare significantly better (at the 5% level) than those moving to the non-GSE rest of England, although this test is affected by the small number of migrant cases for some

Table 2. White Collar Non-core to Core transition rates, 1991–2001, for migrants and non-migrants: 10 cities ranked by size, the rest of Greater South East (GSE) and the rest of England and Wales (E&W).

City region	Size (000s)	Non-migrants	Migrants	Migrant premium
London	4,448	15.8*	26.0*	10.2
Birmingham	1,047	11.8	21.7	9.9
Manchester	878	13.9*	20.7	6.7
Leeds	397	12.1	26.0	13.9
Newcastle	365	11.3	15.2	4.0
Bristol	361	11.7	21.4	9.7
Sheffield	337	12.2	22.4	10.2
Liverpool	335	10.7	20.0	9.3
Nottingham	281	11.7	21.1	9.4
Leicester	208	13.3	27.0	13.7
9 second-order cities	n/a	12.2	22.2	10.0
Rest of GSE	n/a	13.2*	21.1	7.9
Rest of E&W	n/a	11.5	19.4	7.9

Note: Size is based on total number of employees working in the city's Primary Urban Area in 2001 (see section on Methodology);

*Difference from the rest of E&W significant at 5% (*t*-test).

Source: calculated from the Office for National Statistical Longitudinal Study data. Crown copyright.

cities (notably Leicester, Liverpool, Newcastle, Nottingham, and Sheffield with between 65 and 116, much lower than London's 759).

A related question concerns the extent to which the fortunes of the migrants are affected by the differences between the 10 cities in their ability to perform as escalators for their non-migrants. The correlation coefficient between the transition rates of the migrants and non-migrants, at 0.57, is positive but not significant at the 5% level. Instead, what is most remarkable about the migration premiums shown for the 10 cities in Table 2 is how similar they are, with the majority falling in the narrow band of 9.3–10.2 and with none differing significantly from the rest of England and Wales. This suggests more of a flat-rate bonus for the migrants in that, irrespective of the actual performance of each city's escalator, an additional 10% or so of the WCNs 'stepping on to these escalators' achieve WCC status compared with the progress made by these places' longer-term residents. This migrant premium is therefore not just associated with a move to the national escalator region that is London, but applies to other destinations too. This observation helps to explain why, despite most of these second-order cities performing less strongly as escalators than London, people of working age are still prepared to move to them.

DISCUSSION

This paper has examined the extent to which England's second-order cities perform a role akin to the 'regional escalator' function previously observed for London's region, using data from the ONS LS and focusing on one key indicator of occupational mobility, namely moving up from WCN to WCC during an intercensal decade. This section summarises the main findings and discusses their significance. The results are seen to confirm the value of tracking over time people's spatial mobility alongside their social mobility, but they also raise questions which merit further research.

The first main finding is that, although many people rise in occupational status as they age through a decade, their chances of doing so vary according to both the type of person they are and the type of place they live in. At the same time, between-place differences in the WCN-to-WCC transition rates are not caused by

compositional factors, or at least not by the ones allowed for here. It would seem that, as far as the non-migrant population is concerned, the 9 second-order cities as a group did fall well short of London in terms of this transition rate for 1991–2001 and in fact fared no better than the rest of the country. Taking the nine separately, however, a considerable range of performance is found that can partly be explained in terms of agglomeration effects and, among them, there is one – Manchester – that posts a transition rate which justifies it being seen as a 'mini London' in the opportunities it offers its residents.

A rather different picture, however, has emerged when considering these places as potential escalators for migrants to 'step on to'. People going to a second-order city, on average, fare better than those moving to the rest of the country, especially if the latter is restricted to the part beyond the GSE. Moreover, the migrants do better at their destinations than the non-migrant populations – something that applies everywhere and does not seem to be related to compositional effects. On the basis of this evidence, it seems that the second-order cities do act as escalators for those moving into them, raising these people's chances of transitioning from WCN to WCC by around 10 percentage points on average compared with the longer-term residents of these places, a 'migration premium' that is almost identical to the one achieved by moving to London.

So, what is it that helps to make these second-order cities act as escalators for their migrant populations almost as well as London, given that they perform less well for their non-migrants? It does not seem to have anything to do with migrant selectivity in terms of gender, age, and occupational status at the start of the reference period. One potentially important factor is what Gordon (2012) termed 'ambition' and has estimated using the attitudinal information collected by the BHPS (not available in the census-derived data in the ONS-LS). It seems plausible that it is only the more ambitious, able, and enterprising among those in WCN jobs that are prepared to up sticks and take the risk of a long-distance move to another area.

Alternatively, maybe this outcome has more to do with the way in which much of the job search and staff recruitment process works nowadays, at least in relation to the higher-skilled sections of the labour market. Fewer people are now

engaging in speculative migration in search of work, while more are moving home only after they have been successful in their job search and even then may delay making a permanent move and instead commute on a weekly basis. Also, presumably employers would normally appoint a person from a distance only if they could not find a suitable candidate in their local area, or if the more distant applicant was much better suited. Another reason behind longer-distance labour migration that is now seen as more important than in the past is the relocation of continuing employees between the branches of multi-site firms and government agencies, which in many cases would be associated with staff promotion (Findlay *et al.*, 2003).

These possible explanations, in their various ways, raise questions about the nature of a labour-market escalator and what exactly drives the migration of people towards it, with such issues relating just as much to the archetypal escalator of London as to second-order cities. The original model is based on the premise that, in moving to a place like London, people advance their careers faster than staying where they were living previously because they are able to 'ride' the faster-moving escalator at their destination alongside the local residents, with the overall effect presumably increasing the longer the in-migrant lives there. More recent research (Findlay *et al.*, 2009) argues that this combination of spatial and social mobility should be broken down into two elements; namely, the immediate change in occupational status at the time of 'stepping on the escalator', and the change which takes place subsequently while 'riding the escalator'. Fielding's notion of the escalator emphasises the latter component, but for in-migrants, the two cannot readily be split using data for a single period.

In conclusion, it would be over-hasty to treat the observed migration premium as a validation of policies seeking to speed up the economic growth of second-order cities through attracting more migrant talent along the lines proposed by Florida (2002). If it is the case that most of the migration of human capital into these cities takes place only after a job has been secured, then any attempt to increase migration to them is dependent on employment growth there. This needs to be checked by investigating how much of migrants' change in occupational status occurs at the time of the move. Within the ONS-LS, this

could be attempted by defining migrants as those who moved in the previous decade and comparing their career progress during their move decade with that achieved in the subsequent decade, but the effect of the move itself could be pinpointed more accurately from an alternative data set that monitors change in occupation more frequently, such as the Annual Survey of Hours and Earnings.

Beyond this, there are at least three other ways in which this line of research could be developed and taken forward. Firstly, multivariate modelling would allow a fuller like-for-like comparison of migrants and non-migrants that takes into account the effect on career trajectories of other personal characteristics not allowed for in the present study. Unfortunately, however, the ONS-LS does not contain the sort of information on people's attitudes that Gordon (2012) used to derive a measure of ambition which proved so powerful in his BHPS-based analysis of occupational mobility. Secondly, this study has focused on just the one occupational transition of changing from WCN to WCC, albeit this being a key one in relation to the totality of longer-distance migration as well as to places' economic fortunes. A case can be made for comparing these results with those for other occupational transitions or, alternatively, for adopting a single scale of job-status change like that developed by Gordon (2012). Finally, given that urban regeneration programmes continued after 2001, opportunity should be taken of the incorporation of 2011 Census data into the ONS-LS (due for release by 2014) for discovering whether the most recent decade has seen any narrowing of London's advantage over the second-order cities as a human-capital escalator. The results of this updating could be set in a longer-term context by comparing the differences between these two latest decades with the equivalent patterns of change in the previous two decades back to 1971.

ACKNOWLEDGEMENTS

Data analyses in this paper are based on micro-data from the ONS-LS, linking England and Wales Census data for a (roughly) 1% sample of the population, accessed securely via the Virtual Microdata Laboratory in ONS. Census output is Crown copyright and is reproduced

with the permission of the Controller of HMSO and the Queen's Printer for Scotland. The permission of the ONS to use the LS for this study is gratefully acknowledged, as is the substantial help provided by staff of the Centre for Longitudinal Study Information & User Support (CeLSIUS), notably Christopher Marshall. CeLSIUS is supported by the ESRC Census of Population Programme (Award Ref: RES 348-25-0004). This paper has been cleared by ONS (Clearance Number 30112) but the authors alone are responsible for the interpretation of the data. Analysis has been supported by grants to the Spatial Economic Research Centre by the Economic and Social Research Council, the Welsh Assembly Government, and the Department of Business, Innovation and Skills, but these sponsors also bear no responsibility for the findings reported here. The authors are also grateful for the insightful comments and suggestions of two anonymous referees.

REFERENCES

- Berry CR, Glaeser EL. 2005. The divergence of human capital across cities. *Papers in Regional Science* **84**: 407–444.
- Boyle P, Halfacree K, Robinson V. (eds) 1998. *Exploring Contemporary Migration*. Longman: Harlow, Essex.
- Centre for Cities. 2012. *Cities Outlook 2012*. Centre for Cities: London.
- Champion T. 2006. *State of the English Cities – The Changing Urban Scene: Demographics and the Big Picture*. Department of Communities and Local Government: London.
- Champion T. 2012. Testing the return migration element of the 'escalator region' model: an analysis of migration into and out of south-east England, 1966–2001. *Cambridge Journal of Regions, Economy and Society* **5**: 255–269.
- Champion T, Coombes M. 2007. Using the 2000 Census to study human capital movements affecting Britain's large cities: insights and issues. *Journal of the Royal Statistical Society A* **170**: 447–467.
- Champion T, Coombes M, Raybould S, Wymer C. 2007. *Migration and Socioeconomic Change: A 2001 Census Analysis of Britain's Larger Cities*. The Policy Press: Bristol.
- Champion T, Townsend A. 2013. Great Britain's second-order city regions in recessions. *Environment and Planning A* **45**: 000–000.
- Charles D, Bradley D, Chatterton P, Coombes M, Gillespie A. 1999. *Core Cities: Key Centres for Regeneration*. Centre for Urban and Regional Development Studies: Newcastle upon Tyne.
- Cheshire PC. 2006. Resurgent cities, urban myths and policy hubris: what we need to know. *Urban Studies* **43**: 1231–1246.
- Clayton N. 2011. The spatial impacts of recession. In *The Recession and Beyond*, Bailey D, Chapain C (eds). Routledge: London; 27–44.
- Coombes M, Charlton M. 1992. Flows to and from London: a decade of change. In *Migration Processes and Patterns Volume 2: Population Redistribution in the United Kingdom*, Stillwell J, Rees P, Boden P (ed). Belhaven: London; 56–77.
- Core Cities Group. 2004. *Our Cities Are Back*. Office of the Deputy Prime Minister: London. <http://www.corecities.com/dev07/Publications/OurCitiesAreBack8Nov.pdf>
- DETR. 2000. *Our Towns and Cities: The Future. Delivering an Urban Renaissance*. Department of the Environment, Transport and the Regions: London.
- Devine F, Britton NJ, Mellor R, Halfpenny P. 2003. Mobility and the middle classes: a case study of Manchester and the North West. *International Journal of Urban and Regional Research* **27**: 495–509.
- Dunning JH. (ed.) 2000. *Regions, Globalization and the Knowledge-based Economy*. Oxford University Press: Oxford.
- Edmonds T. 2003. *Regional Competitiveness and the Role of the Knowledge Economy*. Research Paper 00/73. House of Commons Library: London.
- EU Regional Policy. 2009. *Promoting Sustainable Urban Development in Europe*. European Commission: Brussels.
- Fielding AJ. 1992. Migration and social mobility: South East England as an escalator region. *Regional Studies* **26**: 1–15.
- Fielding AJ. 1993. Migration and the metropolis: an empirical and theoretical analysis of interregional migration to and from South East England. *Progress in Planning* **39**: 71–166.
- Fielding AJ. 2007. Migration and social mobility in urban systems: national and international trends. In *International Handbook of Urban Policy Volume 1 Contentious Global Issues*, Geyer H, Elgar E. (eds): Cheltenham; 107–137.
- Findlay A, Stockdale A, Hoy C, Higgins C. 2003. The structuring of service-class migration: English migration to Scottish cities. *Urban Studies* **40**: 2067–81.
- Findlay A, Mason C, Harrison R, Houston D, McCollum D. 2008. Getting off the escalator? A study of Scots out-migration from a global region. *Environment and Planning A* **40**: 2169–2185.
- Findlay A, Mason C, Houston D, McCollum D, Harrison R. 2009. Escalators, elevators and travelators: the occupational mobility of migrants to south-east England. *Journal of Ethnic and Migration Studies* **35**: 861–879.

England's Second-Order Cities as Human-Capital 'Escalators'?

- Florida R. 2002. *The Rise of the Creative Class*. Basic Books: New York.
- Florida R. 2008. *Who's Your City? How the Creative Economy is Making Where to Live the Most Important Decision of Your Life*. Basic Books: New York.
- Glaeser EL, Maré DC. 2001. Cities and skills. *Journal of Labour Economics* **19**: 316–342.
- Glaeser EL, Saiz A. 2003. The rise of the skilled city. NEBR Working Paper **191**.
- Gordon I. 2012. *Ambition, Human Capital Acquisition and the Metropolitan Escalator*. Discussion Paper 107. Spatial Economics Research Centre: London.
- Houston D, Findlay A, Harrison R, Mason C. 2008. Will attracting the 'creative class' boost economic growth in old industrial regions? A case study of Scotland. *Geografiska Annaler B* **90**: 133–149.
- ippr north. 2009. *The Impact of the Recession on Northern City-Regions*. ippr north: Newcastle upon Tyne <http://www.ippr.org/publications/55/1731/the-impact-of-the-recession-on-northern-city-regions?siteid=ipprnorth>
- Jones A, Williams L, Coats D, Lee N, O'Keefe A. 2006. *Enabling Cities in the Knowledge Economy*. Department for Communities and Local Government: London.
- Krugman P. 1996. *The Self-Organising Economy*. MIT Press: Cambridge MA.
- Malecki EJ. 2007. Cities and regions competing in the global economy: knowledge and local development plans. *Environment and Planning C* **25**: 638–654.
- Maskell P, Malmberg A. 2007. Myopia, knowledge development and cluster evolution. *Journal of Economic Geography* **7**: 603–618.
- MIER 2009a. *The Case for Agglomeration Economies*. Manchester Independent Economic Review: Manchester.
- MIER. 2009b. *Understanding Labour Markets, Skills and Talent*. Manchester Independent Economic Review: Manchester.
- Montgomery J. 2006. *The New Wealth of Cities*. Ashgate: Aldershot.
- Morton A. 2011. *Cities for Growth: Solutions to Our Planning Problems*. Policy Exchange: London.
- Newbold KB, Brown WM. 2012. Testing and extending the escalator hypothesis does the pattern of post-migration income gains in Toronto suggest productivity and/or learning effects? *Urban Studies* **49**: 3447–3465.
- Northern Way. 2004. *Moving Forward: The Northern Way Growth Strategy*. The Northern Way: Newcastle upon Tyne.
- Northern Way. 2009. *City Regions of the North*. The Northern Way: Newcastle upon Tyne. <http://www.thenorthernway.co.uk/downloaddoc.asp?id=667>
- OECD. 1996. *Employment and Growth in the Knowledge-based Economy*. OECD: Paris.
- ODPM. 2003. *Sustainable Communities: Building for the future*. Office of the Deputy Prime Minister: London
- Overman H, Gibbons S, D'Costa S, Mion G, Pelkonen P, Resende G, Thomas M. 2009. *Strengthening Economic Linkages between Leeds and Manchester: Feasibility and Implications*. Report by Spatial Economics Research Centre. One North East for Northern Way: Newcastle upon Tyne.
- Parkinson M, Champion T, Evans R, Simmie J, Turok I, Crookston M, Katz B, Park A, et al. 2006. *State of the English Cities, Volume 1*. Office of the Deputy Prime Minister: London.
- Parkinson M, Meegan R, Karecha J, Evans R, Jones G, Tosics I, Gertheis A, et al. 2012. *Second Tier Cities in Europe: In an Age of Austerity Why Invest Beyond the Capitals?* ESPON & Institute of Urban Affairs, Liverpool John Moores University: Liverpool.
- Rogers Report. 1999. *Towards an Urban Renaissance: Final Report of the Urban Task Force*. Department of the Environment, Transport and the Regions: London.
- Smith D. 1989. *North and South: Britain's Economic, Social and Political Divide*. Penguin: London.
- Storper M, Scott AJ. 2009. Rethinking human capital, creativity and urban growth. *Journal of Economic Geography* **9**: 146–167.
- Turok I, Mykhnendo V. 2007. The trajectories of European cities, 1960–2005. *Cities* **24**: 165–182.
- Van Ham M, Findlay A, Manley D, Feijten P. 2012. Migration, occupational mobility and regional escalators in Scotland. *Urban Studies Research*. Hindawi Publishing Corporation. doi:10.1155/2012/827171.
- Ward M. 2011. *Rebalancing the Economy: Prospects for the North*. Smith Institute: London.
- Work Foundation. 2011. *Centrally-Led Growth Policy Holding Back Cities Outside London*. The Work Foundation: London. <http://www.theworkfoundation.com/Media/Press-Releases/602/Centrallyled-growth-policy-holding-back-cities-outside-London>