GLAECONOMICS

Working Paper 36

Commuting patterns in London by qualification level and employment location

By Nick Ennis, Margarethe Theseira and Adrian McMullan







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Greater London Authority July 2009

Published by Greater London Authority City Hall The Queen's Walk London SE1 2AA www.london.gov.uk enquiries 020 7983 4000 minicom 020 7983 4458

ISBN: 978-1-84781-269-8

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Executive summary

People with low qualifications face more barriers to employment than other groups. Less than half of Londoners with no qualifications were employed in 2007, while nearly 90 per cent of those with a degree were in work. Jobs in London require higher qualification levels and there are relatively few job opportunities available to those without qualifications, making competition for such jobs high.

GLA Economics commissioned a special dataset from the 2001 Census to analyse the relationship between employee qualification level and the distance travelled to work. The dataset shows the number of people travelling to work between all ward pairs in the Greater South East by qualification level. This database allows us to examine for the first time the travel patterns of all employees in Greater London.

The analysis has shown that there is a notable difference in distance travelled to work between people of different qualification levels. Employees with higher qualification levels are likely to travel further to work than those with low qualifications. This remains true for nearly all employment centres studied.

The census data also reveals a clear difference in qualification levels held by both residents and employees in the eastern half of the region and those in the west. Residents in the west are far more likely to hold a degree while residents to the east are more likely not to hold qualifications. Similarly, the number of jobs filled by people with high qualifications is much higher in the west of the region.

Central London is shown to be the major source of employment for the highly qualified workforce in the region. Around one third of degree holders resident in the Greater South East work in Central London, making it a significant employer of highly qualified people living within a commutable distance. The only other significant draw for employees with high qualification levels is the Thames Valley.

The relatively few jobs open to those with no qualifications are spread more evenly across London than jobs taken by those with degree-level qualifications. Apart from the very large number in Central London, jobs filled by people with no qualifications are spread across London so are more likely to source labour locally.

The absolute distance travelled to work varies by place of employment, with the largest centres drawing employees from the largest geographic area. The smallest town centres appear to draw employees only from the immediate surroundings. Similarly, employees are likely to travel the furthest distance to work when there are relatively few other opportunities available locally. This is true at all skill levels.

The evidence presented in this report raises a question of how travel horizons should be considered when forecasting the impact of public sector interventions or proposed developments. It appears people are willing to travel further to work in Central London than to other employment centres and that the local economic context is an important factor in distance travelled to work. This is especially the case for people coming from the east. Public sector interventions targeting people with low qualification levels must carefully evaluate the most appropriate area of impact to maximise effectiveness.

Introduction

London is one of the world's leading international business centres yet 30 per cent of its residents are not in work. For some time, fewer Londoners with low qualifications have been in work than elsewhere. In 2007, less than half of Londoners with no qualifications were employed while nearly 90 per cent of those with a degree were in work.

People with low qualifications face more barriers to employment than other groups. Jobs in London require higher qualification levels and there are relatively few job opportunities available to those without qualifications, making competition for such jobs high¹. When job opportunities are not available locally it is not economical for people with low qualification levels to commute long distances because travel costs are high relative to wages on offer². This limits the search horizons of those with few qualifications.

The purpose of this report is to explore whether there is a relationship between qualification level and distance travelled to work and to understand the role of geography in employment rates and access to work.

GLA Economics commissioned a special dataset from the 2001 Census to analyse the relationship between employee qualification level and the distance travelled to work. The dataset shows the number of people travelling to work between all ward pairs in the Greater South East by qualification level. This database allows us to examine for the first time the travel patterns of all employees in Greater London³.

The dataset provides valuable insight into London's labour market, allowing us to gain an understanding of the labour catchment area of London's key employment centres, to see the effect of qualification level on distance travelled to work and to compare the qualification levels of employees in different geographies across London.

¹ London Skills and Employment Board, "Globalisation, Skills and Employment: The London Story," 2007.

² Hogarth, T. et al. "Exploring Local Areas, Skills and Unemployment," 2003.

³ The data covers all journeys beginning in the Greater South East and accounts for 98 per cent of London employees. The Census shows 64,000 people commute to London from outside the Greater South East.



Figure 1: Employment rate by qualification level

Source: Labour Force Survey, excludes full-time students



Figure 2: Employment rate amongst those with Level 1 and no qualifications

Source: Labour Force Survey, excludes full-time students

The Census distinguishes the following qualification levels in ward-level data:

- No qualifications: no academic, vocational or professional qualifications
- Level 1: NVQ Level 1, one or more O-level/CSE/GCSE passes (any grade), Foundation GNVQ
- Level 2: NVQ Level 2, five or more GCSEs (grade A-C) or equivalent, Intermediate GNVQ
- Level 3: NVQ Level 3, two or more A levels or equivalent, Advanced GNVQ
- Level 4/5: NVQ Levels 4 and 5, First and Higher degrees, HNC, HND, etc.
- Other qualifications: Other

This analysis was conducted with a particular focus on those with no qualifications. People with no qualifications are far less likely to be in work than people who hold qualifications. They are also competing in the job market against those with few qualifications for relatively scarce jobs. Comparisons are made between employees with no qualifications and those with Level 4/5 qualifications throughout this report.

London's employment centres

Large numbers of jobs in London are concentrated in a few areas: Central London, Croydon, Heathrow and the Isle of Dogs. Central London is by far the largest centre, with well over 1 million employees in 2001, more than ten times the size of Croydon, the second largest centre at the time. Heathrow Airport and its surroundings had nearly the same number of employees as Croydon while the Isle of Dogs had only 60,000 employees in 2001. Since then there has been significant growth in the Docklands and the number of employees in the Isle of Dogs has grown to around 100,000 (Annual Business Inquiry, 2007).



Figure 3: Number of employees in major centres by qualification

Source: 2001 Census

The types of jobs located in Central London and the Isle of Dogs are different from those in other London centres, with a high concentration of specialised, high-value jobs. This is reflected in the qualifications held by those working there. Around half of these employees hold a first or higher degree and less than 10 per cent of employees hold no qualifications. Around 40 per cent have Level 1, 2 or 3 qualifications and a small remainder have other qualifications.



Figure 4: Proportion of employees in employment centre at qualification level

Source: 2001 Census

The composition of the labour force in Croydon and Heathrow is distinctly different from the other two major centres yet remarkably similar to one another. Nearly half of employees in these centres hold Level 1, 2 or 3 qualifications and only a quarter hold a degree. A much larger proportion of the workforce has no qualifications than in Central London.

Metropolitan Town Centres

There are 11 Metropolitan Town Centres in London, all in Outer London. They range in size from Croydon, with more than 80,000 employees to Hounslow, with only 8,000 employees. Most have between 10,000 and 15,000.



Figure 5: Employees by qualification in Metropolitan Town Centres

Metropolitan Town Centres are small local centres of employment, usually containing a mixture of office-based and consumer service jobs targeting the local community. The retail and public sectors play a much larger role in town centres than in the major employment centres.

Highly specialised employment is concentrated in Central London and many jobs in the Metropolitan Town Centres do not require highly qualified employees, evident in the qualifications held by employees there. Some centres, like Uxbridge, Kingston and Ealing contain universities and the high qualification levels of the workforce there reflect this. Around 30 per cent of employees in Metropolitan Town Centres have a first or higher degree, a much lower proportion than in Central London. Those with no qualifications make up a larger proportion of Town Centre employees – 14 per cent – compared to Central London, though the majority of employees have qualifications of Level 1, 2 or 3.

Source: 2001 Census



Figure 6: Proportion of employees in town centres at qualification level

Source: 2001 Census

Analysis

This section will analyse the distance travelled to work in these key employment centres to determine whether there is a relationship between the level of qualifications held and the distance travelled to work. The analysis of the Census data was carried out in two stages. First, the labour market catchment area at each qualification level was mapped for each centre. A second map was then constructed to show the degree to which the local population is orientated toward an employment centre for job opportunities. This map shows the percentage of ward residents working in a particular centre.

Travel to work patterns

Figures 8 and 9 demonstrate the difference in commuting distance between people of different qualification levels working in Central London. Only those with no qualifications and those with Level 4/5 (a degree or higher) qualifications are shown, but qualification levels in between generally complete the trend, which is that people holding higher qualifications travel longer distances than those with low qualifications. The full results of the analysis are included in Appendix B. It is important to keep in mind the region's transport network, shown in Figure 7, when examining the maps contained in this report.



Figure 7: Transport network in the Greater South East

Source: Ordnance Survey

The maps show a clear difference between the residential location of Central London employees with no qualifications and those with the highest qualifications. Central London sources employees with low qualifications mostly from East London and the Thames Estuary while highly qualified employees are drawn from across the Greater South East. An especially large number of highly qualified workers live in Inner London but far fewer live in East London. The eastward bias of Central London employees with low qualification levels continues through Levels 1, 2 and 3 but with distance travelled generally getting longer. The residential location of Central London employees with qualifications at Level 4/5 spreads in every direction.

The second set of maps in Figures 10 and 11 show the degree to which the residents of a ward are orientated toward working in Central London. Central London is shown to play a relatively minor role in providing jobs for people with no qualifications except for those living in the immediate vicinity.

In contrast, Central London is shown to be the major source of employment for the highly qualified workforce in the region. Around one third of degree holders resident in the Greater South East work in Central London, making it a significant employer of highly qualified people living within a commutable distance. It is notable that this effect is less significant for highly qualified residents living west of London, particularly in the Thames Valley, where there are many other specialist industries offering employment.

Figure 8: Number of ward residents with no qualifications working in Central London

Employees by residence with no qualifications 100 to 479 50 to 100 25 to 50 10 to 25 0 to 10 Central London Nonwich Cambridge Guildford Brighton 10 20 miles



Figure 9: Number of ward residents with Level 4/5 qualifications

working in Central London

Source: 2001 Census

Source: 2001 Census

Figure 10: Percentage of ward residents with no qualifications working in Central London

Figure 11: Percentage of ward residents with Level 4/5 qualifications working in Central London





Source: 2001 Census

Source: 2001 Census

A similar pattern exists for the other major employment centres in London. Employees with higher qualification levels travel further to work, although rarely as far as Central London employees travel. The role of the transport system becomes evident by comparing Croydon, with limited parking facilities but strong rail links, with Heathrow where car travel plays a much larger role.

The geographic reach of the labour catchment areas of Croydon and Heathrow are much smaller than for Central London and are influenced by the existence of other employment centres. It is unusual for employees to travel past a larger employment centre to get to work in a smaller centre.

So for example, employees travel from much further south to Croydon than from the north, with very few living on the other side of Central London. Only at high qualification levels does the labour catchment area approach Central London. The same happens for Heathrow, with employment in the Thames Valley giving residents more choice in workplace.

Figures 12 to 19 show the location of employees and the orientation of residential population for employees in Croydon and Heathrow Airport with no qualifications and with Level 4/5 qualifications. The Isle of Dogs data is not presented because the employment situation has changed significantly since the Census data was collected in 2001.

Figure 12: Number of ward residents with no qualifications working in Croydon







Source: 2001 Census

Source: 2001 Census

Figure 14: Percentage of ward residents with no qualifications working in Croydon





Source: 2001 Census



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Figure 15: Percentage of ward residents with Level 4/5 qualifications working in Croydon

Figure 16: Number of ward residents with no qualifications working at Heathrow



Figure 17: Number of ward residents with Level 4/5 qualifications working at Heathrow



Source: 2001 Census

Source: 2001 Census

Figure 18: Percentage of ward residents with no qualifications working at Heathrow





Figure 19: Percentage of ward residents with Level 4/5 qualifications working at Heathrow

Source: 2001 Census

Source: 2001 Census

The Metropolitan Town Centres are only minor employment centres but were analysed in this report to determine whether they are fundamentally different from the large employment centres. The nature of jobs on offer tends to be less specialised and pay less in town centres than in Central London⁴. This would limit their appeal relative to Central London. The data appears to confirm the same trend as in other centres; employees with higher qualifications travel further than those with low qualifications. Metropolitan centres tend to source their employees locally, with only a few of the larger ones pulling employees from some distance. Uxbridge and Romford have particularly long reach, which may be because of their ease of access by car. There are three notable exceptions to the established pattern; Hounslow, Ilford and Wood Green attract employees of all qualification levels from nearly the same area. It is unclear why this is, but it may be an issue of size, as these centres are some of the smallest.

Figures 20 and 21 show residential location of employees with no qualifications and with Level 4/5 qualifications working in Uxbridge. This is representative of town centres with a significant difference in commuting distance between employees with no qualifications and those with Level 4/5 qualifications. Figures 22 and 23 show the same for Wood Green, where employees with no qualifications live in largely the same area as those with high qualification levels.

⁴ The Annual Survey of Hours and Earnings reports the median weekly gross income for employees in the City of London at £858 in 2008, compared to £440 across Outer London.

Figure 20: Number of ward residents with no qualifications working in Uxbridge

Employees by residence with no qualifications 100 to 422 100 to 422 50 to 100 25 to 50 10 to 25 5 to 10 0 to 5 Uxbridge Norwich Cambridge Colcheste Lutor Chelmsf Guildford Brighton 10 20 miles









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Figure 22: Number of ward residents with no qualifications working in Wood Green

Figure 23: Number of ward residents with Level 4/5 qualifications working in Wood Green





Source: 2001 Census

Source: 2001 Census

Factors affecting travel to work patterns

This analysis has shown that employees with higher qualification levels are likely to travel further to work. However, it has also raised the issue of why Central London sources employees with low qualification levels primarily from the East. There is also a need to understand where those with low qualifications do find work.

This section will examine the distribution of jobs and residents by qualification level. The differences between these two distributions create the need to travel and determine the labour catchment areas.

Figures 24 and 25 show the distribution of employees in London with no qualifications and residents in the Greater South East with no qualifications. Figures 26 and 27 show the same for Level 4/5 qualifications. Apart from the large number in Central London, jobs held by those without qualifications are spread thin, but fairly evenly. Residents with no qualifications are more likely to live to the east than to the west.

The opposite picture is revealed for residents with high qualification levels, who are much more likely to live to the west. Employment opportunities for this group are clearly skewed to the west. However, the spatial concentration of jobs is much more significant for highly qualified positions. Half of all employees with high qualifications work in only 50 wards while only one quarter of employees with no qualifications work in the top 50 wards for jobs not requiring any qualifications. So while there are many more employees with high qualification levels, they work in far fewer geographic areas.

The relatively few jobs open to those with no qualifications are spread more evenly across London than jobs taken by those with degree-level qualifications meaning such jobs are more likely to be locally available. Figure 24: Number of employees with no qualifications working in each ward



Source: 2001 Census



miles



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Figure 26: Number of employees with Level 4/5 qualifications working in each ward



Source: 2001 Census





Source: 2001 Census

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Conclusions

The analysis presented in this report has shown that for any given place of work, employees in London with no qualifications travel shorter distances to work than people with high qualifications. The distance travelled varies by place of employment, with the largest centres drawing employees from the largest geographic area. So employees with no qualifications working in Central London generally travel further than employees with high qualifications working in many Metropolitan Town Centres. The smallest town centres appear to draw employees only from the immediate surroundings, which may indicate that small centres have only local impacts.

Employees are likely to travel the furthest distance to work when there are relatively few other opportunities available locally. This is true at all skill levels. Central London sources many of its low qualified employees from the east where there are fewer other employment centres. For jobs requiring high qualification levels there are very few locations with large numbers of suitable jobs, so these employees are most likely to travel furthest to work. In this case, only the Thames Valley competes significantly with Central London for employees, so a relatively smaller share of residents there commute to Central London.

The research has also revealed that the relatively few jobs filled by those with no qualifications are spread round London fairly evenly, apart from a large concentration in Central London. This may explain partly why people with low qualifications tend to travel less; employment opportunities are more likely to be available close to home.

The evidence presented in this report raises a question of how travel horizons should be considered when forecasting the impact of public sector interventions or proposed developments. It appears people are willing to travel further to work in Central London than to other employment centres. This is especially the case for people coming from the east. However, for other centres the labour catchment area is smaller and generally takes the shape of a raindrop radiating out away from Central London. This suggests the geographic area affected by new schemes may be less regular than expected and will vary depending on the local economic context. Applying a uniform travel time or distance to gauge the number of people affected is therefore not appropriate. Consideration must be given to determine what is a reasonable travel distance in all directions, especially for programmes targeting those with low qualifications.

Appendix A: Employment centre definitions

The wards used to define major centres are shown in Figure 28. The definition of the Isle of Dogs is simply the two wards covering the peninsula. For Heathrow and Croydon an analysis was done to determine which wards contained a notable concentration of employment. The centre boundaries were largely drawn where the difference in the number of Heathrow and Croydon-based jobs between one ward and its neighbours was considerable.



Figure 28: Ward-level boundaries of London's major employment centres

Source: Ordnance Survey

Central London

The most common definition of Central London is the Central Activities Zone (CAZ), an area defined in the London Plan. The data used in this analysis is at the ward level so required a ward level definition of Central London. A best match with the CAZ was constructed as shown in Figure 29.

The definition of Central London was constructed to highlight the concentration of highvalue employment located there. This type of employment drops off quickly with distance from Central London. As a result, a preference existed to restrict the geographic definition of Central London rather than select all wards that included any part of the Central Activities Zone. In wards where the bulk of employment falls within the CAZ the ward was included, as demonstrated by those on the City Fringe and near London Bridge. However, on the western side of the CAZ a number of wards were not included, including parts of Knightsbridge and Belgravia. This is because these wards were determined to have a composition of employment quite different from the rest of the CAZ, including a large number of jobs in hotels and retail sectors. While these are important sectors in defining the CAZ, they do not make up the core of high-value Central London jobs this report is most concerned with. Wards in Battersea, Vauxhall, Camberwell and Angel were also excluded. These wards in total contain a relatively small number of jobs.



Figure 29: Comparison of Central Activities Zone and Central London boundaries

Source: Ordnance Survey

Metropolitan Town Centres

The London Plan identifies 11 Metropolitan Town Centres. Specific wards were selected to define the town centres in the same manner as for Croydon and Heathrow. In nearly all cases these centres occupy only one ward. In some cases employment is spread over a number of wards. Here the town centre was drawn around the wards with significantly more employment than their neighbours. Figure 30 shows the definition of the town centres used for this note.



Figure 30: Ward-level boundaries of Metropolitan Town Centres

Source: Ordnance Survey

Appendix B: Complete map set

The analysis contained in this paper has shown only the residential location of employees with no qualifications and those with Level 4/5 qualifications. This appendix includes the full results of the analysis, showing the residential location of employees at all skill levels. The format of the maps on the following pages is identical to the maps in the report.

Appendix B is only available online at: http://www.london.gov.uk/mayor/business-economy/publications/working-paper-36.jsp

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Chinese

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Vietnamese

Nếu bạn muốn có văn bản tài liệu này bằng ngôn ngữ của mình, hãy liên hệ theo số điện thoại hoặc địa chỉ dưới đây.

Greek

Αν θέλετε να αποκτήσετε αντίγραφο του παρόντος εγγράφου στη δική σας γλώσσα, παρακαλείστε να επικοινωνήσετε τηλεφωνικά στον αριθμό αυτό ή ταχυδρομικά στην παρακάτω διεύθυνση.

Turkish

Bu belgenin kendi dilinizde hazırlanmış bir nüshasını edinmek için, lütfen aşağıdaki telefon numarasını arayınız veya adrese başvurunuz.

Punjabi

ਜੇ ਤੁਹਾਨੂੰ ਇਸ ਦਸਤਾਵੇਜ਼ ਦੀ ਕਾਪੀ ਤੁਹਾਡੀ ਆਪਣੀ ਭਾਸ਼ਾ ਵਿਚ ਚਾਹੀਦੀ ਹੈ, ਤਾਂ ਹੇਠ ਲਿਖੇ ਨੰਬਰ 'ਤੇ ਫ਼ੋਨ ਕਰੋ ਜਾਂ ਹੇਠ ਲਿਖੇ ਪਤੇ 'ਤੇ ਰਾਬਤਾ ਕਰੋ:

Hindi

यदि आप इस दस्तावेज की प्रति अपनी भाषा में चाहते हैं, तो कृपया निम्नलिखित नंबर पर फोन करें अथवा नीचे दिये गये पते पर संपर्क करें

Bengali

আপনি যদি আপনার ভাষায় এই দলিলের প্রতিলিপি (কপি) চান, তা হলে নীচের ফোন্ নম্বরে বা ঠিকানায় অনগ্রহ করে যোগাযোগ করুন।

Urdu

اگر آپ اِس دستاویز کی نقل اپنی زبان میں چاھتے ھیں، تو براہ کرم نیچے دئے گئے نمبر پر فون کریں یا دیئے گئے پتے پر رابطہ کریں

Arabic

Gujarati

જો તમને આ દસ્તાવેજની નકલ તમારી ભાષામાં જોઇતી હોય તો, કૃપા કરી આપેલ નંબર ઉપર ફોન કરો અથવા નીચેના સરનામે સંપર્ક સાઘો.

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Greater London Authority City Hall The Queen's Walk London SE1 2AA

Tel: 020 7983 4922 Fax: 020 7983 4137 Minicom: 020 7983 4458 Email: glaeconomics@london.gov.uk

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