centreforcities

The great British brain drain

An analysis of migration to and from Liverpool

January 2017

Introduction

The economic performance of UK cities is increasingly dependent on the skills of their workforce. Cities across the UK face the challenge of both attracting and retaining high-skilled talent. *The Great British Brain Drain*[1] investigates migration within the UK, specifically between cities. It finds that migrants tend to be younger and more highly-skilled than the population overall. Looking specifically at graduate migration, many university cities lose their graduates to London and this movement is especially strong for the highest performing graduates with 2.1 or 1st class degrees from Russell Group universities. Despite this, most university cities experience a 'graduate gain': they gain more graduates than they lose. This is because the majority of movements to and from cities consist of students moving to a new city for university, and then moving again for work, with over half of all graduates following this pattern.

This briefing is a complementary piece of analysis to the main report, in which we look in detail at the nature of migration and graduate mobility to and from Liverpool. Firstly, it looks at overall migration patterns into and out of Liverpool. Secondly, it looks specifically at the movements of students and new graduates. Finally, it looks at the new graduate labour market in the city.

Centre for Cities uses the Primary Urban Area (PUA) definition of cities. For Liverpool this comprises of Liverpool and Knowsley Local Authorities. For more information visit: http://www.centreforcities.org/puas.

1 Swinney P and Williams M, T*he Great British Brain Drain: where graduates move and why,* London: Centre for Cities

The nature of migration between Liverpool and the rest of England and Wales

This section combines data on migration within the UK from the ONS and the 2011 Census to look at migration to and from Liverpool by age and qualification. This data does not include international migration.

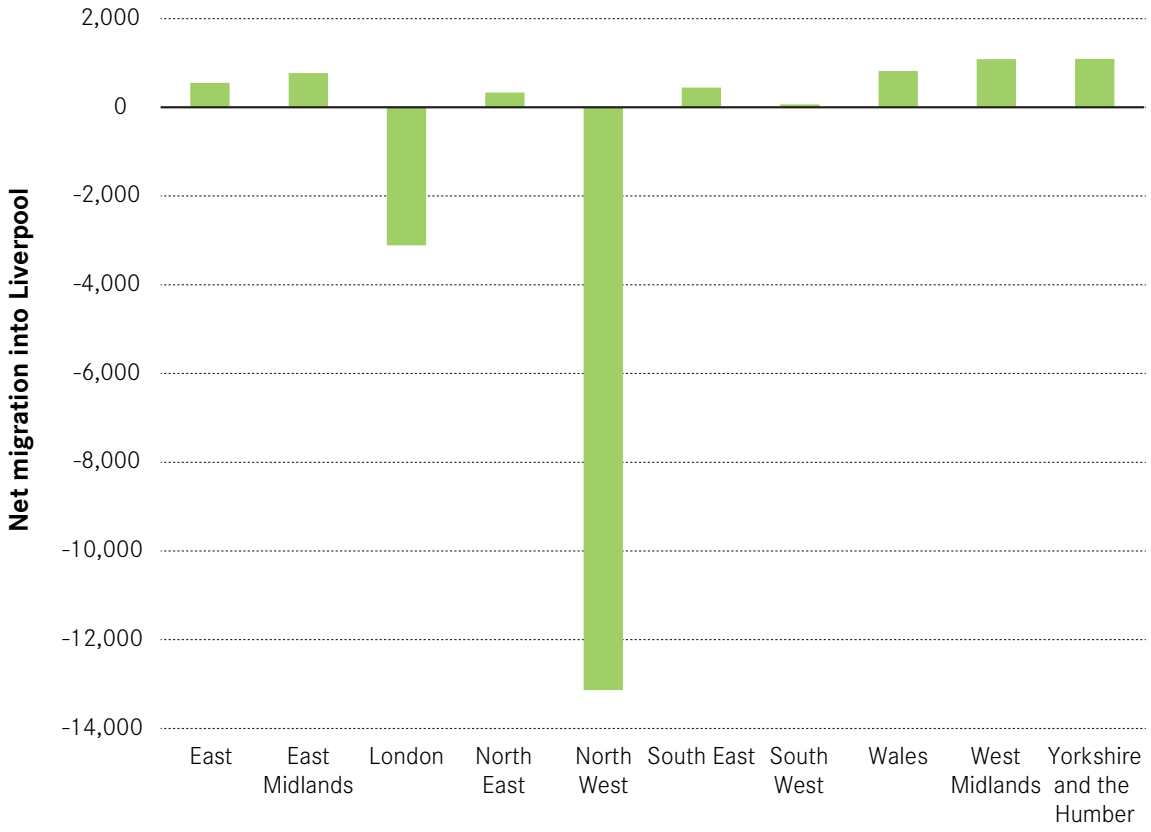
Liverpool experiences a considerable churn of people

Between 2009 and 2015 143,380 people moved into Liverpool from England and Wales and 154,470 moved out. As a result there was a net outflow of 11,090 people from the city, the 8th highest net outflow from any UK city in that period. In comparison, Bournemouth experienced the largest net inflow of 15,100 people and London the largest net outflow of 340,310 people.

Much of this migration was between Liverpool and the rest of the North West. Half of those moving into the city came from elsewhere in the region, and 55 per cent of those leaving Liverpool stayed within the region. As a result there was a considerable net outflow to elsewhere in the North West between 2009 and 2015, as shown in Figure 1. Beyond the North West, Liverpool also saw a net outflow to the London region. In contrast, there was a net inflow to the city from every other region.

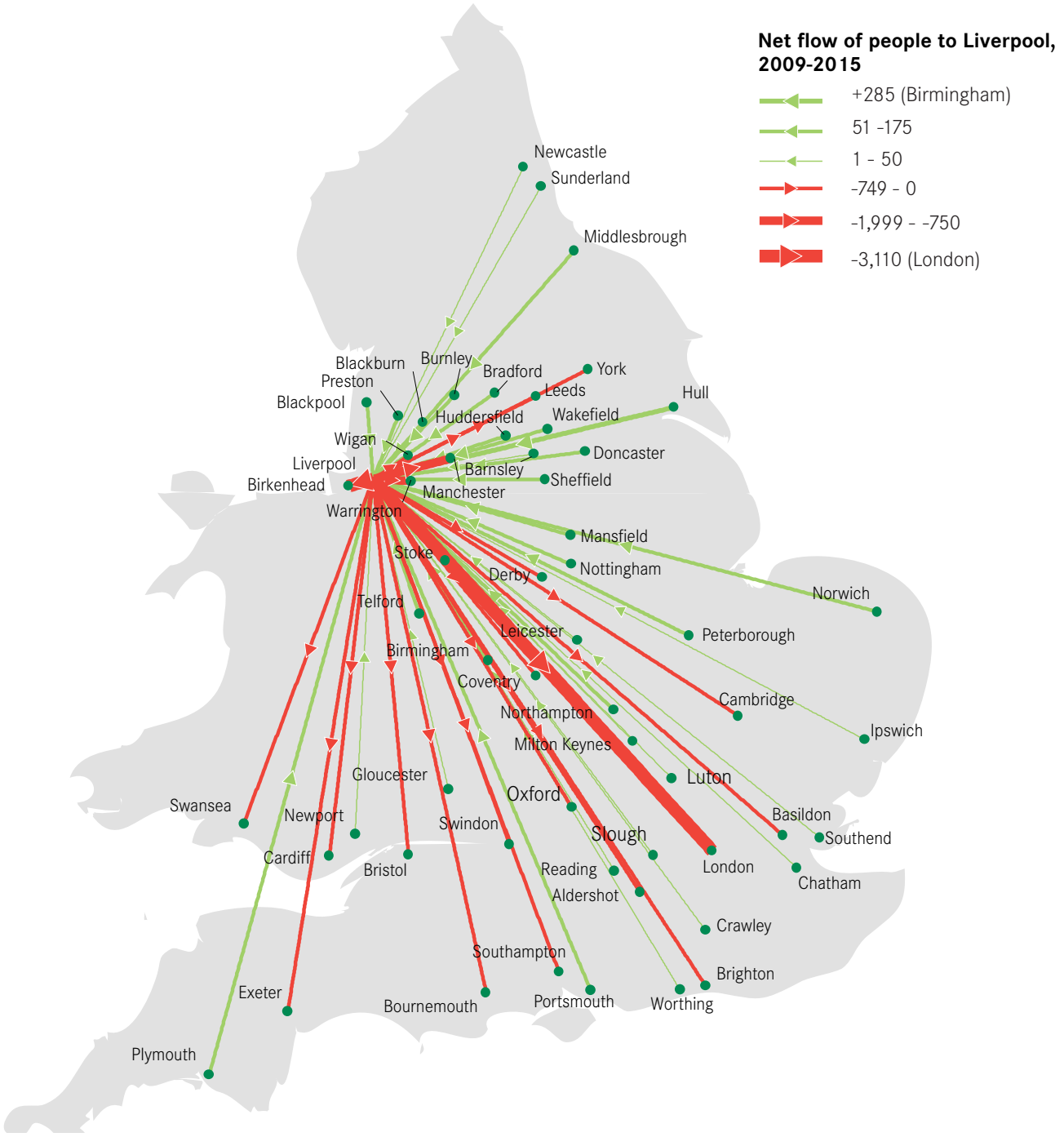
Looking specifically at cities, the largest net outflows from Liverpool were to London and Manchester (see Figure 2), while the largest net inflows were from Hull and Birmingham.

Figure 1: Net regional migration into Liverpool, 2009-2015



Source: ONS internal migration

Figure 2: Net flow of people from UK cities into Liverpool, 2009-2015



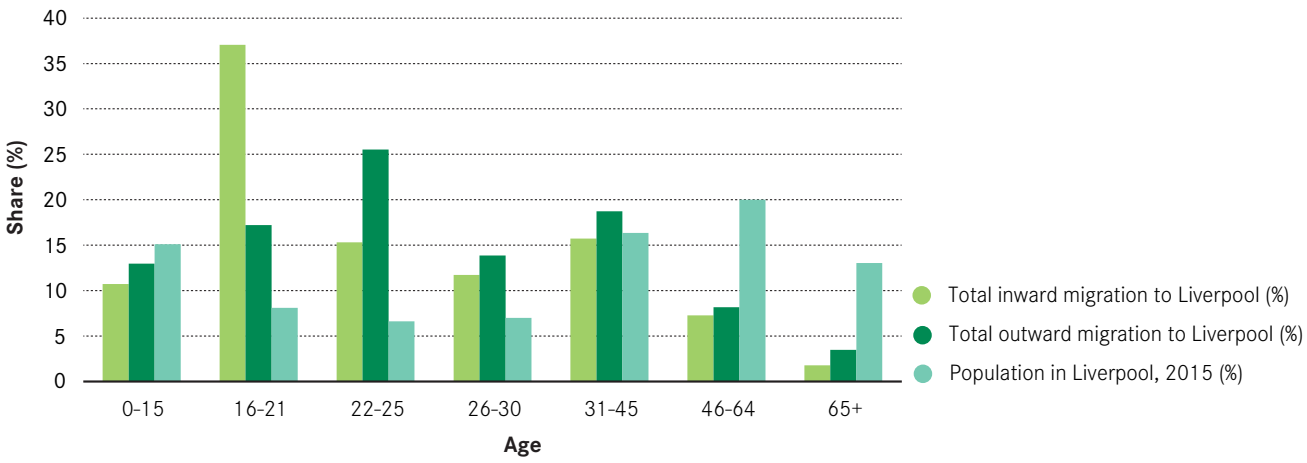
Source: ONS Migration

Liverpool gains young people and loses older people

The pattern of migration varied greatly by age. Figure 3 shows how the movement of young people dominated Liverpool's migration patterns. Despite only accounting for 8 per cent of the population of the city, 16 to 21 year olds accounted for 37 per cent of inward migration. Similarly, 22 to 25 year olds accounted for 7 per cent of the population but 26 per cent of outwards migration.

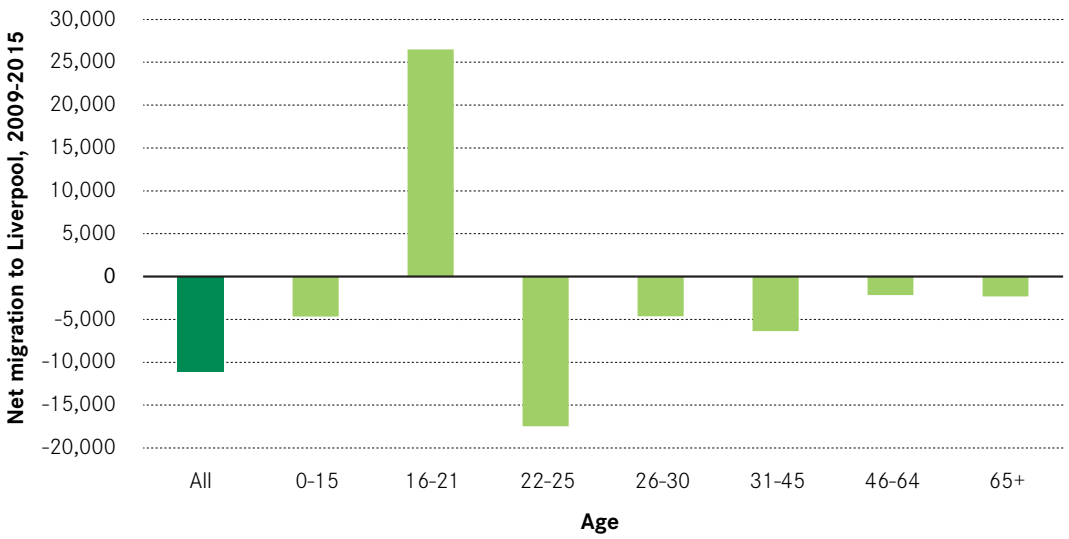
Overall, most age groups experienced a net outflow from Liverpool, the largest of which was a net outflow of 17,460 22 to 25 year olds (see Figure 4). In contrast, there was a net inflow of 26,500 16 to 21 year olds into the city.

Figure 3: **Contribution of each age group to migration and to the city's population, 2009-2015**



Source: ONS internal migration data

Figure 4: **Net inflow of people to Liverpool by age, 2009-2015**



Source: ONS internal migration data

Liverpool loses degree holders to the rest of the country

While the ONS migration data does not provide information on the qualifications of migrants, the 2011 Census does for those who moved between 2010 and 2011. When the data is split into three age groups: 16 to 21, 22 to 30 and 31 to 45 year olds, three distinct trends emerge.

Liverpool saw a net inflow of 16 to 21 year olds from every region of England and Wales, with the North West (excluding Liverpool) providing the largest net inflow to the city (see Figure 5). These net inflows were dominated by people who held A-level qualifications or equivalent, highlighting the pull of the city's universities which will be discussed in greater detail in the next section.

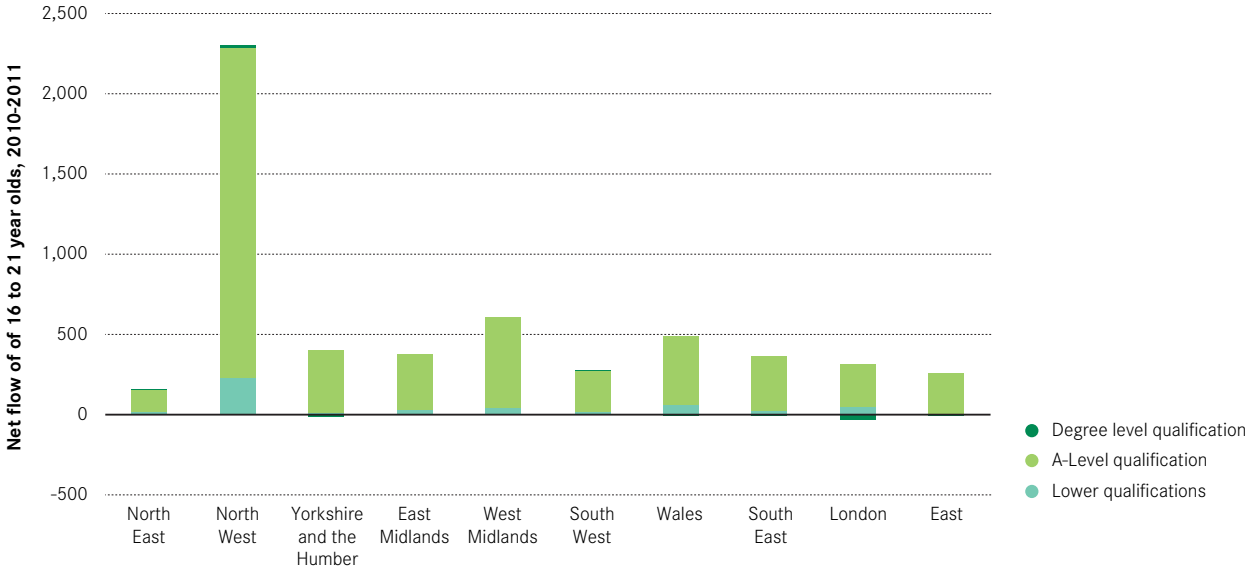
The net outflow of 22 to 30 year olds was dominated by degree holders. With the exception of the North East and Wales, Liverpool saw a net outflow of degree holders to every region of England and Wales. The largest was to the London region, as shown in Figure 6.

The city continued to lose degree holders aged 31 to 45. However the destinations of these movers were different from those in the 22 to 30 age group, as Figure 7 shows. The outflow of older graduates was mainly to the rest

of the North West. Looking again at the wider migration data for 2009 to 2015, from the ONS, allows us to see movements between local authorities and shows that the majority of people did not travel very far. Sefton was the authority to which Liverpool lost the most people, followed by Wirral and St Helens. This means that these movers remained very much within commutable distance to Liverpool even if they no longer lived in the city.

There was also a very small net inflow of older graduates from London into the city. Looking again at the wider migration data suggests that authorities around Liverpool also saw a flow of older graduates in from the capital. It must be stressed, however, that while the flow was positive it was small.

Figure 5: Net flows of 16 to 21 year olds by region and qualification, 2010-2011



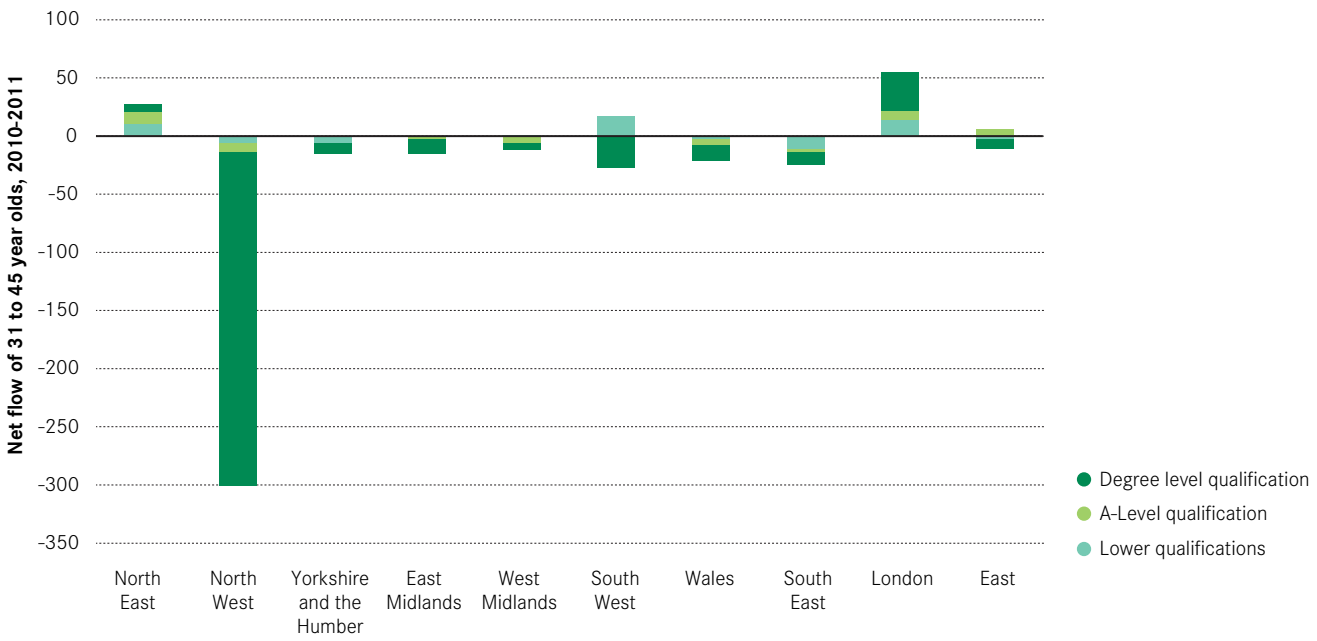
Source: Census 2011

Figure 6: Net flows of 22 to 30 year olds by region and qualification, 2010-2011

Source: Census 2011

This trend of older degree holders moving out of a city but staying within commutable distance is common to many UK cities. Previous work by Centre for Cities has shown that those aged between 35 and 54 tend to place more value on the size and type of their houses, and access to local schools, leading many to prefer living outside cites.[2]

Figure 7: Net flows of 31 to 45 year olds by region and qualification, 2010-2011



Source: Census 2011

Summary

- Liverpool experienced an overall net outflow of people from the city to elsewhere in England and Wales between 2009 and 2015.
- However, there was a net inflow of 16 to 21 year olds with A-Levels to Liverpool. Many of these are likely to have been students going to university, which is explored in the next section.
- The city experienced a net outflow of 22 to 30 year old graduates, with London as the most popular destination. There was also a second outflow of older graduates from Liverpool, but the geography of this movement was different and most of these graduates remained inside the North West region.

2 Thomas E, Serwicka I & Swinney P (2015), *Urban Demographics: why people live where they do*, London: Centre for Cities

A more detailed look at the movement of students and graduates

The data above suggests that universities play a large role in the movements of people to and from Liverpool. This section explores the migration patterns of students and graduates into and out of the city using two data sets from the Higher Education Statistics Authority (HESA). The first looks at admissions (for all students at university in 2014/15), and the second is based on a survey of graduates six months after graduation (for leavers in 2013/14 and 2014/15). Unlike the ONS data used above, it covers the whole of the UK and includes students who came from abroad.

Box 1: Higher education institutions in Liverpool

This analysis covers Liverpool's four universities: University of Liverpool (UoL), Liverpool John Moores University (LJMU), Liverpool Hope University (Hope) and the Liverpool Institute for Performing Arts (LIPA). In the academic year 2014/15 there were 49,600 students enrolled at these universities, 46 per cent at UoL, 42 per cent at LJMU, 11 per cent at Liverpool Hope, and 1 per cent at LIPA.

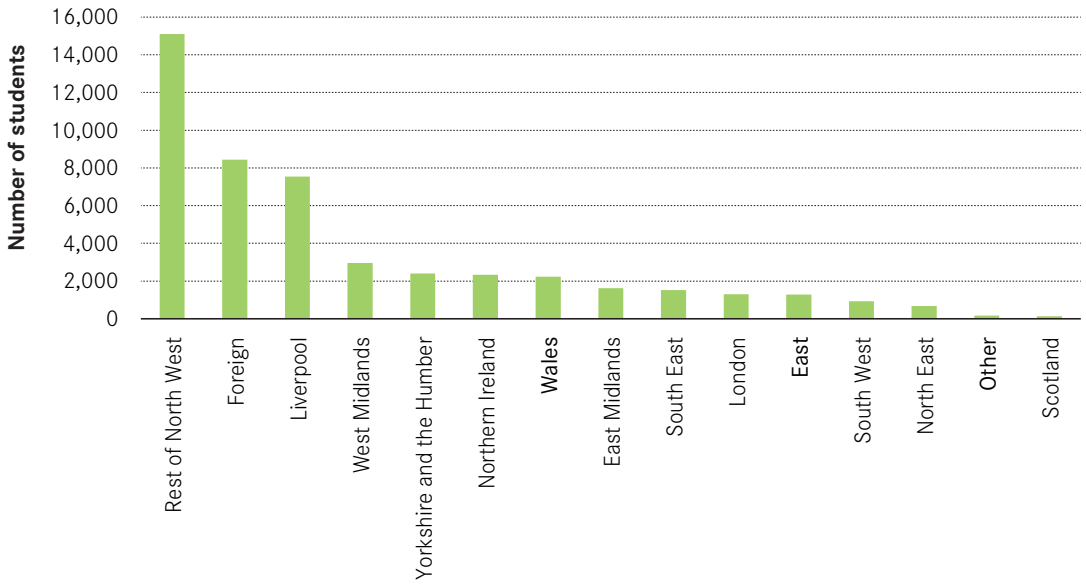
Movements of students

Most students at university in Liverpool were from the North West

As a group, the pull of Liverpool's universities was mainly regional; nearly half of all students at university in the city in 2014/15 were from the North West, with 16 per cent from Liverpool and 31 per cent from elsewhere in the region. Another 6 per cent of students came from the West Midlands. There were also a large number of international students: 17 per cent of students were from overseas, more than from the city itself.

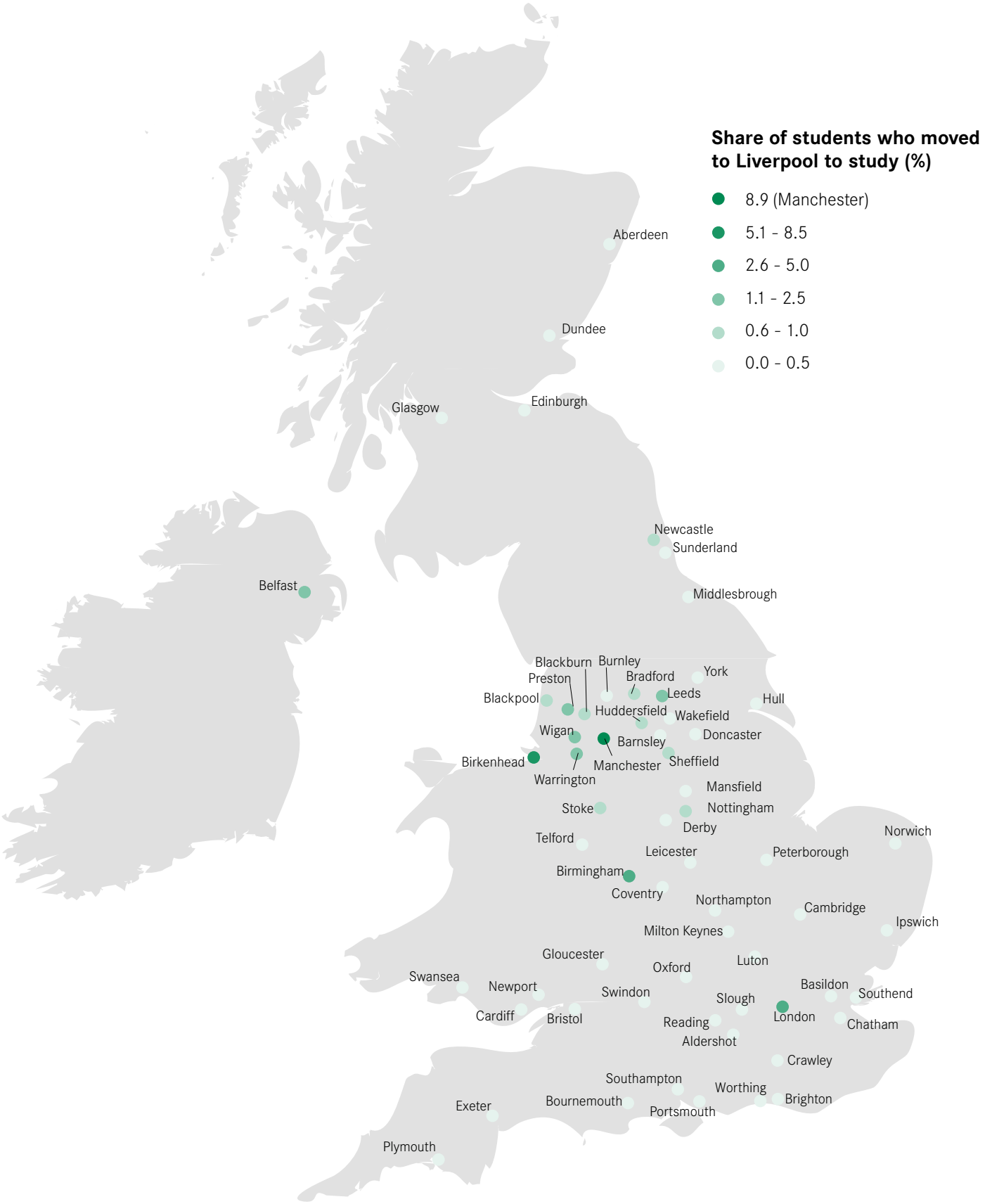
Looking specifically at cities, Figure 9 shows the share of students moving to Liverpool for university who came from each UK city. Manchester and Birkenhead were the most common urban origins, each contributing 6 per cent of students moving to Liverpool to study. Another 3 per cent of students moving to Liverpool for university were originally from London.

Figure 8: Origins of Liverpool university students, 2014/15



Source: HESA admissions data

Figure 9: Origin cities of those students who moved to Liverpool for university, 2014/15

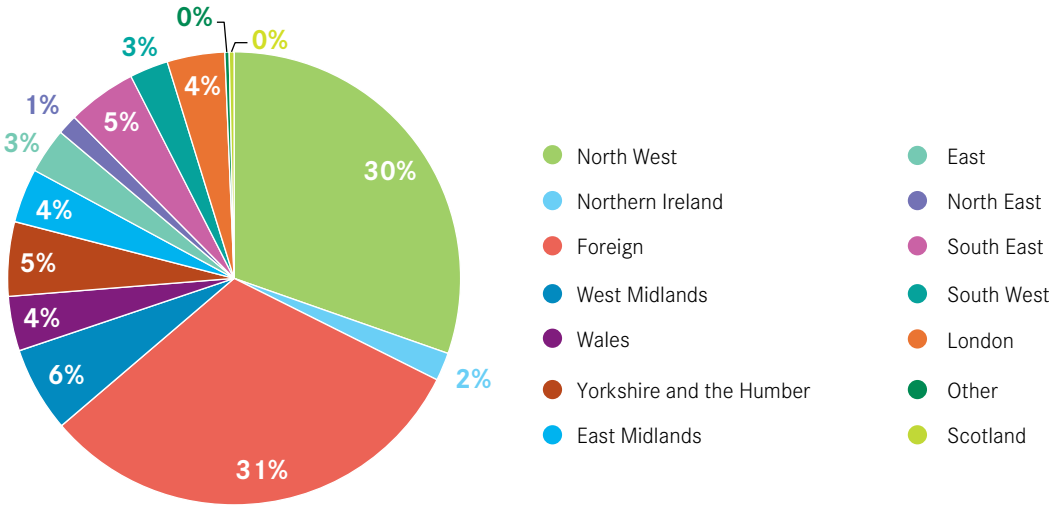


Source: HESA admissions data

However, these patterns varied significantly by institution. At LJMU, 62 per cent of students were from the North West, with 21 per cent from Liverpool itself. Figure 12 shows how the proportion was similarly high for Liverpool Hope students, with 56 per cent coming from the region and 23 per cent from Liverpool. The pull of these institutions was therefore predominantly local. Other popular origin regions were Northern Ireland and the West Midlands.

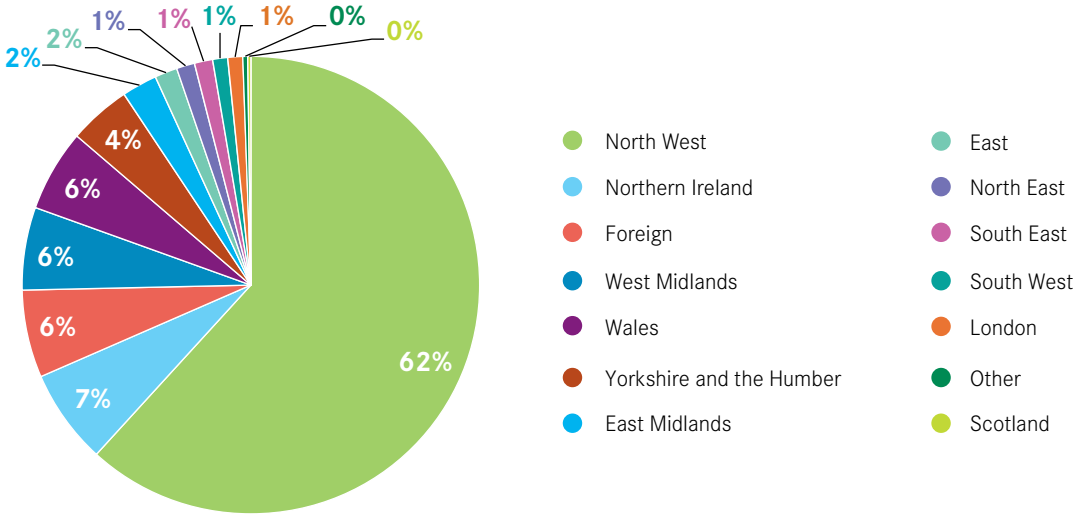
In comparison, University of Liverpool and LIPA had a wider pull. At the University of Liverpool, 31 per cent of students in 2014/15 were international, and 30 per cent were from the North West. The next most popular origin was the West Midlands. And at LIPA, 23 per cent of students were from abroad and another 22 per cent of students were from the North West region.

Figure 10: Origin of students at University of Liverpool, 2014/15



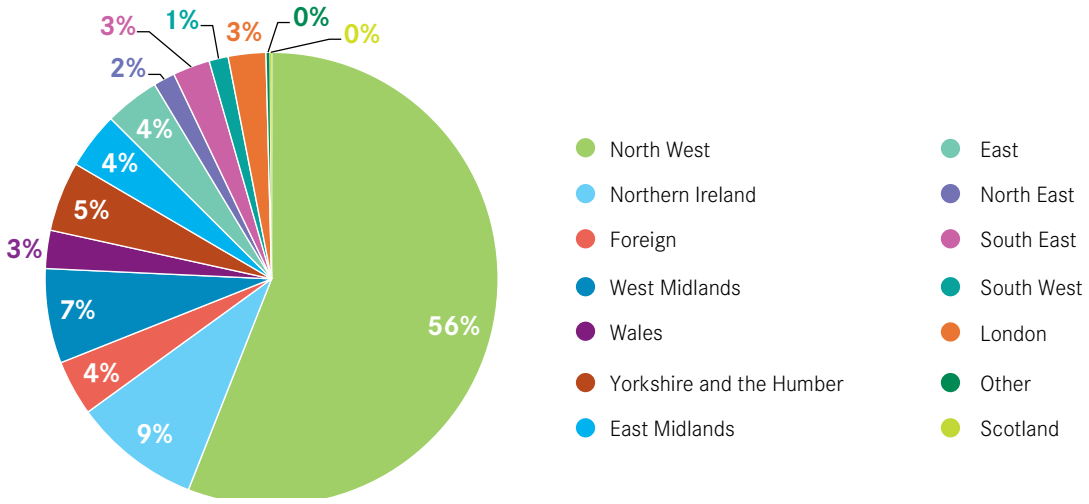
Source: HESA admissions

Figure 11: Origin of students at Liverpool John Moores University, 2014/15



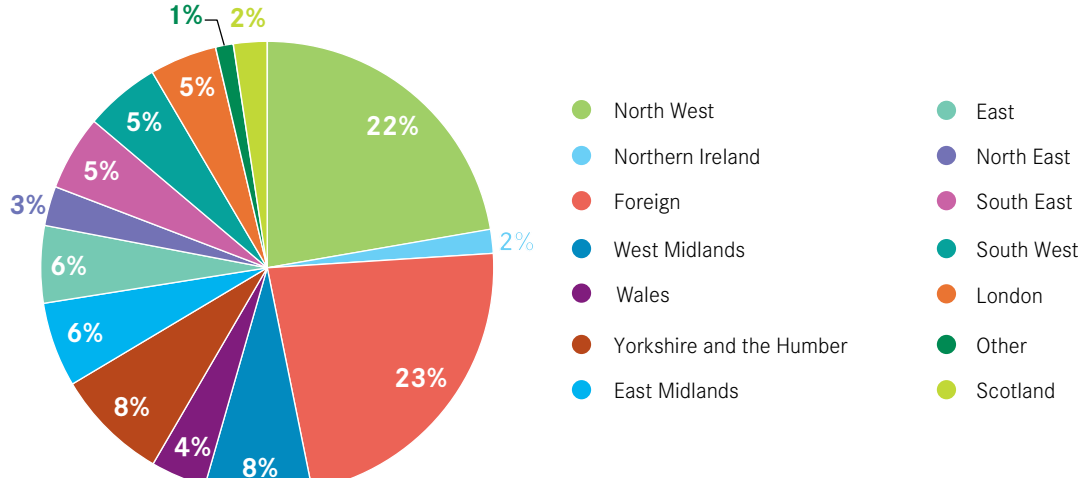
Source: HESA admissions

Figure 12: **Origin of students at Liverpool Hope University, 2014/15**



Source: HESA admissions

Figure 13: **Origin of students at the Liverpool Institute of Performing Arts, 2014/15**

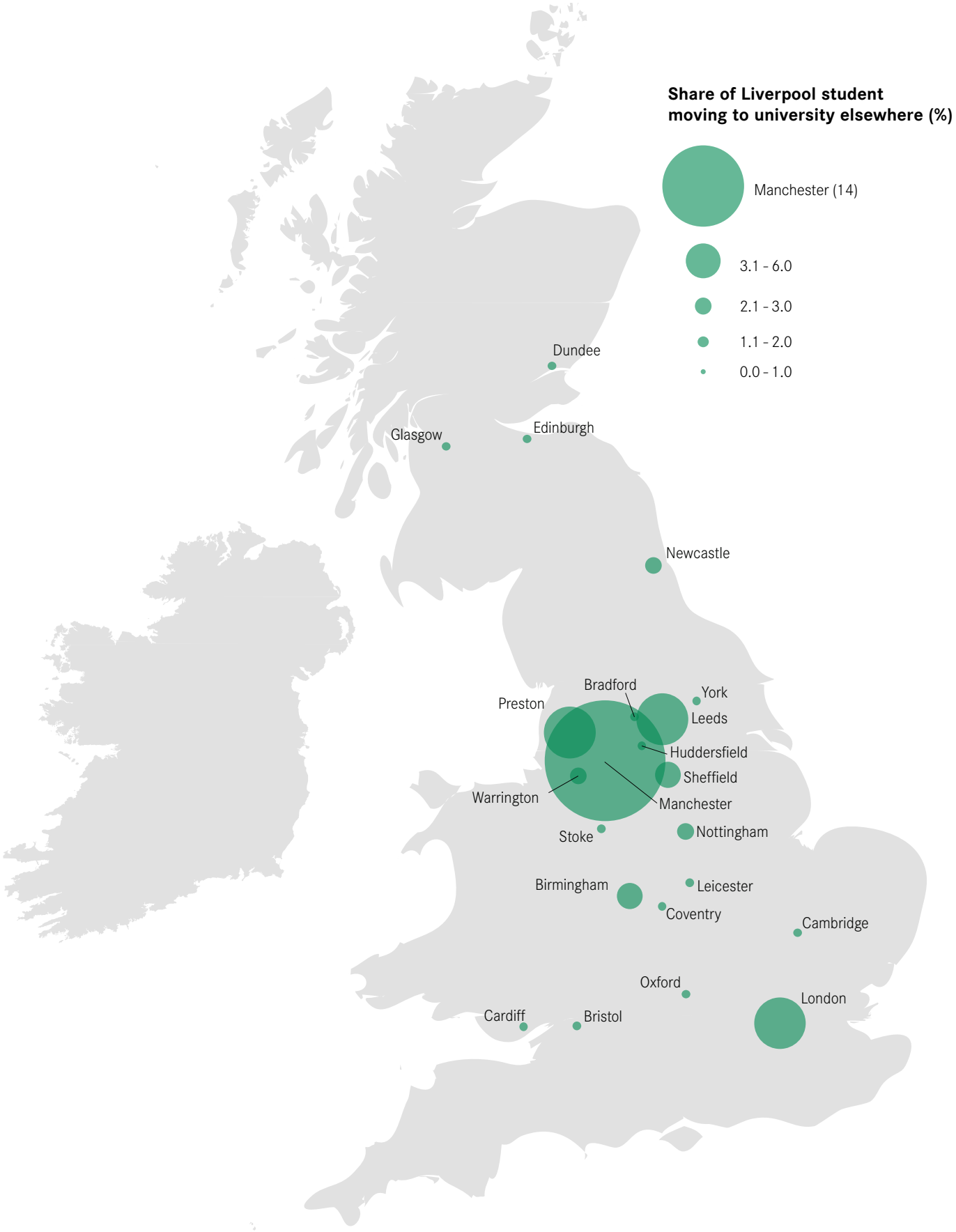


Source: HESA admissions

Half of all students from Liverpool leave the city for university, but tend to stay in the region

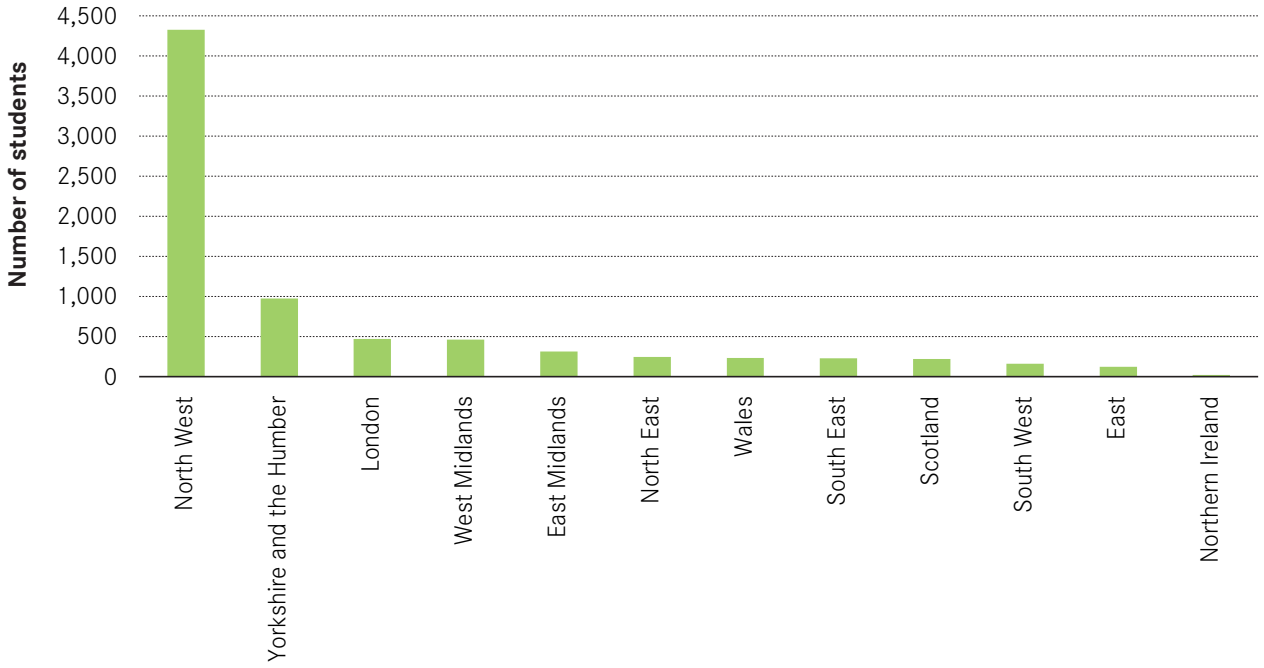
Of the 15,320 young people from Liverpool who were attending a UK university in 2014/15, 49 per cent were studying in Liverpool. Of those who moved away, the most popular choice was to stay within the North West region (see Figure 15). As Figure 14 shows, Manchester was by far the most popular choice, with 14 per cent studying there. This was followed by Preston (6 per cent).

Figure 14: **Destination cities of Liverpool students moving away for university, 2014/15**



Source: HESA admissions

Figure 15: Destination regions of those moving away from Liverpool for university, 2014/15



Source: HESA admissions

Overall Liverpool attracted many more students for university than it lost

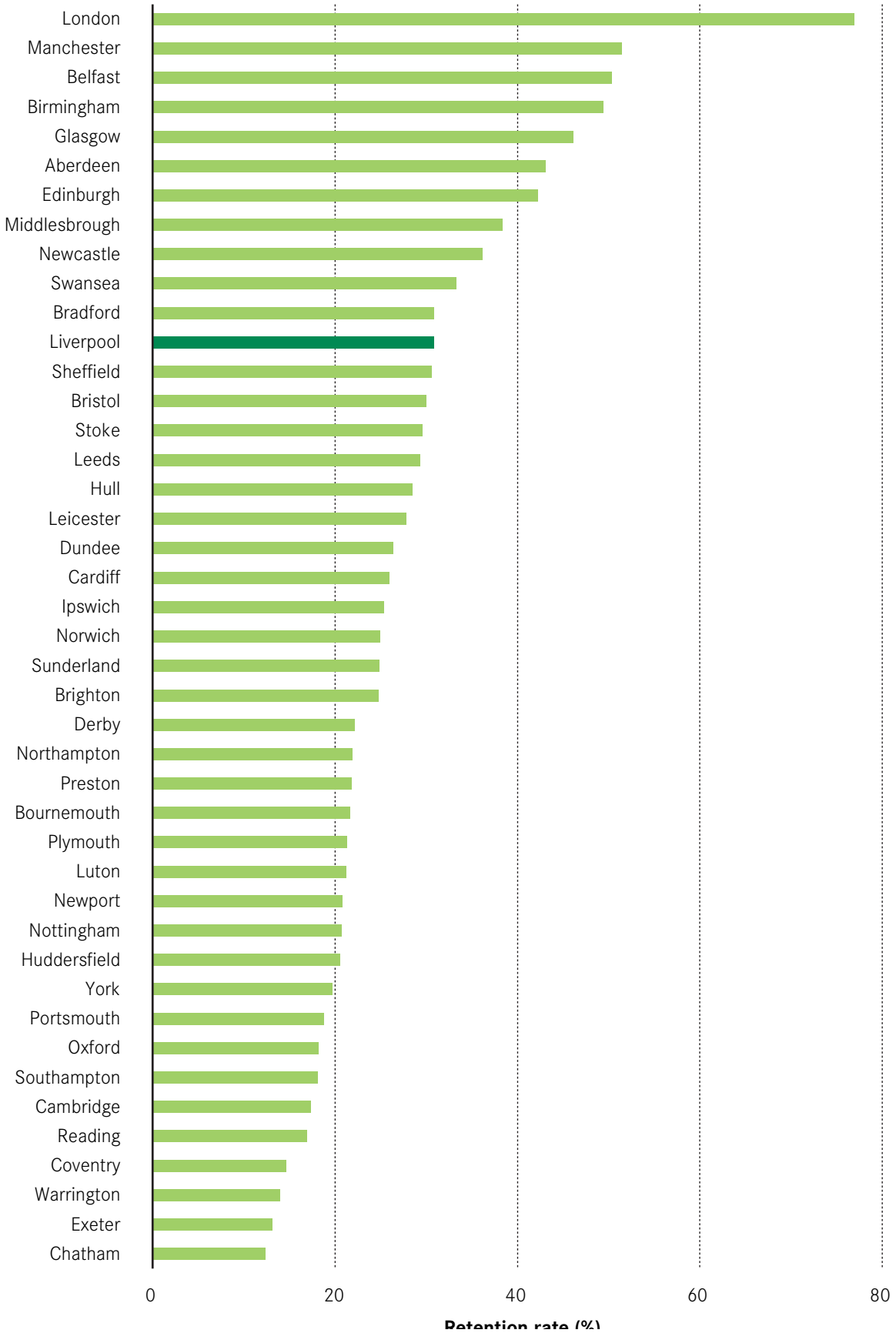
Reflecting the movements of young people seen in the previous section, many more students moved into Liverpool for university than left to study elsewhere. In 2014/15 the net inflow of UK students to Liverpool was 24,900, one of the highest net inflows across all UK cities: 32,700 students in Liverpool were from outside the city whilst 7,800 students at other UK universities were originally from Liverpool. Other cities which benefited from a similar net inflow were Leeds, Nottingham and Edinburgh who each saw net inward migration of 33,000 students.

Movements of new graduates post university

Graduate retention in Liverpool is relatively high

At 31 per cent, Liverpool had the 12th highest graduate retention rate of all university cities in 2013/14-2014/15 (see Figure 16). However, as Figure 17 shows, this rate of retention varied greatly depending on which university the student attended. The proportion of graduates staying to work in Liverpool after graduation was highest for LJMU and Liverpool Hope. At 21 per cent, the University of Liverpool had a much lower retention rate, but this was not dissimilar to the retention rates of other Russell Group institutions.

Figure 16: Retention rates of each UK city, 2013/14 – 2014/15



Source: HESA destination of leavers survey

Further nuance can be seen by splitting those who remained in Liverpool after graduation into two groups: those who grew up, studied and worked in Liverpool, and those who came in to study and stayed for work.

As Figure 18 shows, half of all retained students from both Liverpool Hope and LJMU were originally from the city, 51 per cent and 49 per cent respectively. In comparison, only 32 per cent of those retained by the University of Liverpool were originally from the city, while for LIPA this figure was 16 per cent.

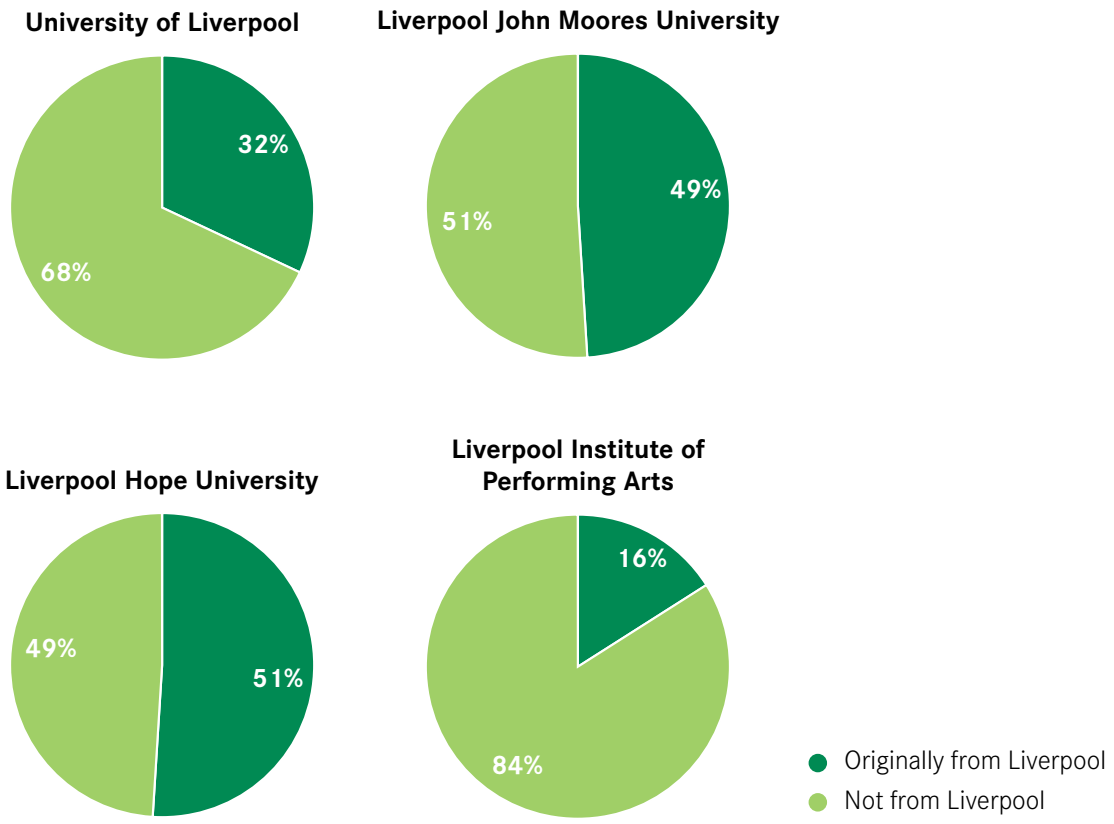
This means that both LJMU and Hope University attracted the highest shares of Liverpool students, and relied on these home-grown students to achieve their high retention rates. This suggests that higher retention rates are driven by the regional pull of institutions. By implication, this means that the greater national and international outlook of the University of Liverpool and LIPA produces a lower retention rate.

Figure 17: Retention rate[3] of each university in Liverpool, 2013/14 – 2014/15

Institution	Retention rate (%)
University of Liverpool	19
Liverpool John Moores University	34
Liverpool Institute of Performing Arts	26
Liverpool Hope University	30

Source: HESA destination of leavers survey

Figure 18: Proportion of all retained students from Liverpool and from elsewhere, 2013/14 - 2014/15



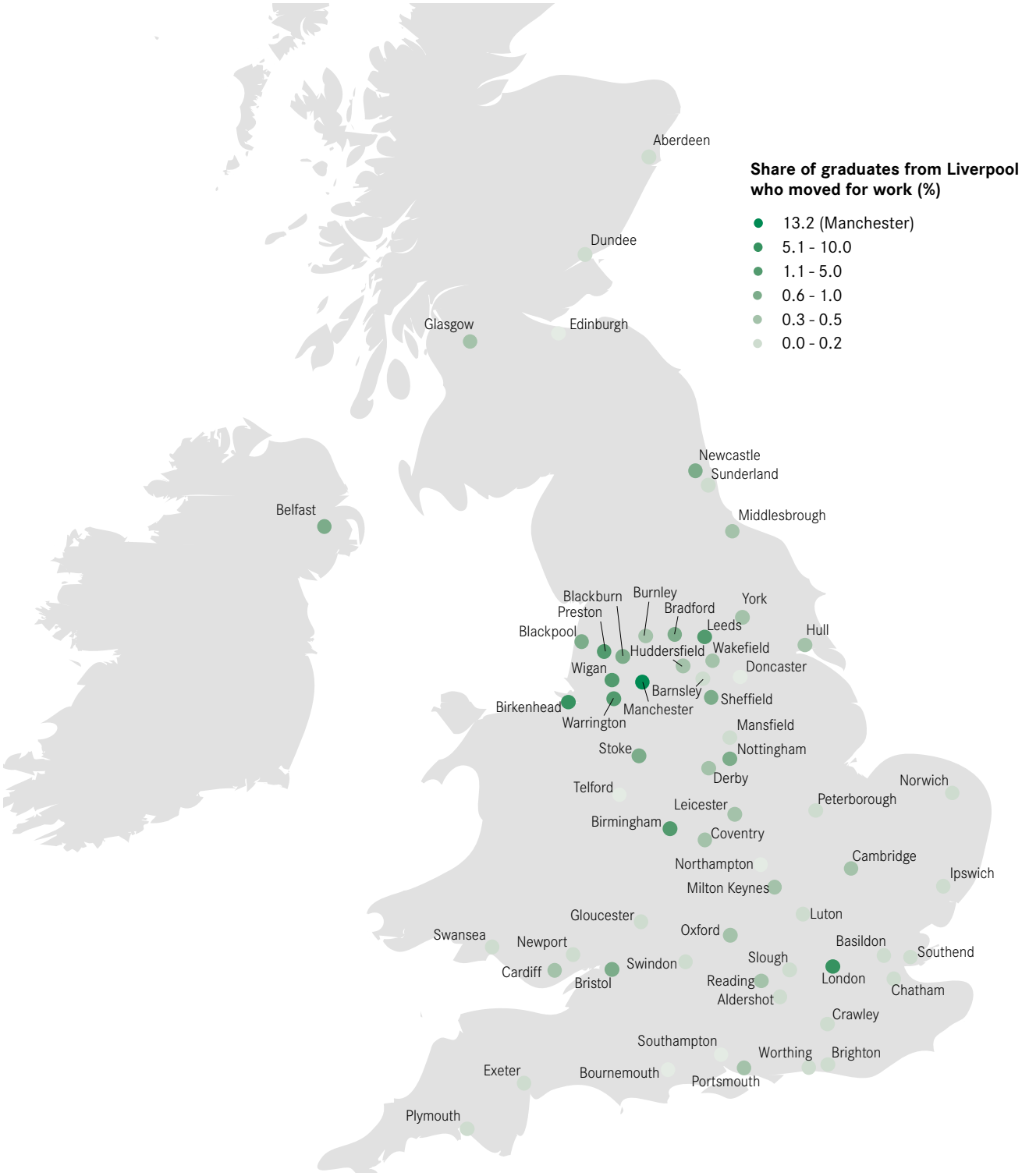
Source: HESA destination of leavers survey

3 Retention rate is defined as the number of university graduates working in the city after 6 months, as a proportion of the total number of graduates from that university, not including those in further education.

The most popular city destination of Liverpool's graduates was Manchester

Of those graduates who did not work in Liverpool six months after graduation, Manchester was the most popular destination, with 13 per cent of Liverpool graduates working there. The next most common city to move to was London, where 9 per cent of Liverpool's graduates were employed. As Figure 19 shows, the other popular cities were Birkenhead, Warrington and Birmingham.

Figure 19: Destinations of Liverpool graduates who move to other cities for work, 2013/14 – 2014/15



Source: HESA destination of leavers survey

Liverpool was successful at attracting new graduates home, but less successful at attracting new graduates from elsewhere

The final component of graduate migration consists of those who are attracted into Liverpool after graduation to work. While graduate retention figures tend to be given a lot of attention, the ability of a city to attract in new graduates from elsewhere is also an important part of increasing the number of degree holders in a city.

Again this cohort can be split into two groups: those that grew up in Liverpool, moved away, and then returned for work, and those that moved in for work but had not lived in the city previously. Of those students who moved away from Liverpool to study, 50 per cent returned for work. This was the 6th highest of all UK cities.

Liverpool was relatively less attractive to new graduates who had not lived in Liverpool before. The number of new graduates attracted in for work that had no connection to Liverpool was equivalent to 15 per cent of all students studying in the city. This placed Liverpool 31st out of 44 university cities.[4]

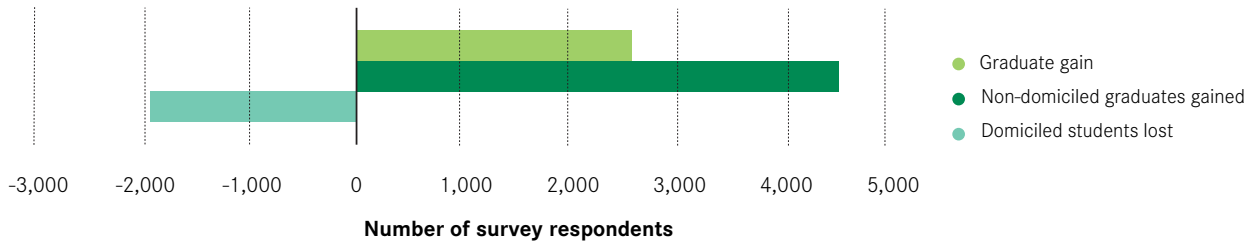
Liverpool gained graduates overall

Putting this data on student and new graduate moves together shows that overall Liverpool experienced a 'graduate gain', attracting in more graduates who had grown up elsewhere (and had either moved to Liverpool to study and subsequently stayed, or moved in after graduation) than the number of people lost who grew up in Liverpool but worked elsewhere upon graduation. Figure 20 shows the size of this graduate gain, of 2,600 survey respondents. In absolute terms, this placed Liverpool as the 7th highest gainer of graduates, when compared with other UK cities; London gained 56,000 of the graduates who responded, Manchester gained 10,000 and Leeds gained 6,000.

This finding may not appear to square with the earlier finding about the outflow of young graduates from Liverpool. This is because there is one final cohort of students: the 'bouncers'. These students move into Liverpool to study, and leave straight after graduation. Of all the students who moved to Liverpool to study, 63 per cent bounced. As Figure 21 shows, the number of bouncers was far larger than the graduate gain driving the outflow of young graduates shown earlier.

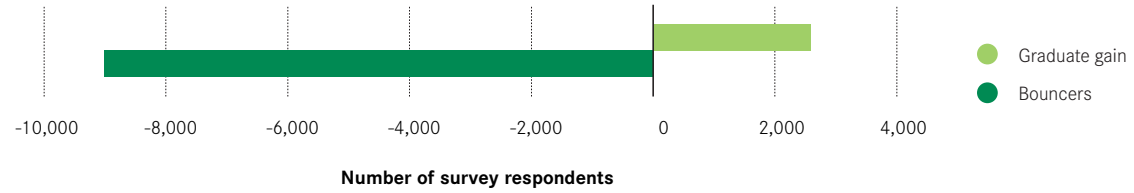
This cohort causes a lot of noise in the data. Removing them and looking at the share of (would be) graduates in Liverpool before university and the share of graduates in the city after graduation, shows Liverpool to experience a graduate gain.

Figure 20: Comparing students lost and graduates gained by Liverpool, 2013/14 – 2014/15



Source: HESA destination of leavers survey

Figure 21: The bouncers and the graduate gain, 2013/14 – 2014/15



Source: HESA destination of leavers survey

4 Cities with small secondary campuses only, such as Burnley, are excluded from this list.

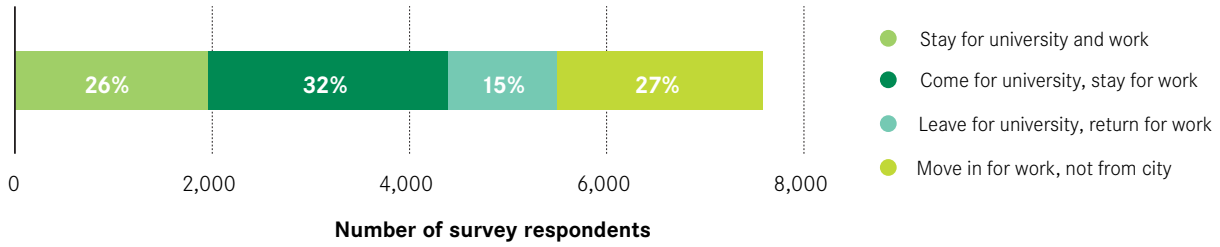
The nature of the new graduate workforce

The composition of the new graduate workforce

Figure 22 brings together all graduates who decided to work in Liverpool on graduation to provide an overview of the nature of the graduate workforce in the city. A quarter of all workers were home-grown, growing up, studying and subsequently working in Liverpool. One third of workers were those people who came to study in Liverpool and stayed for work. Finally, 27 per cent of new graduate workers had been attracted in from elsewhere.

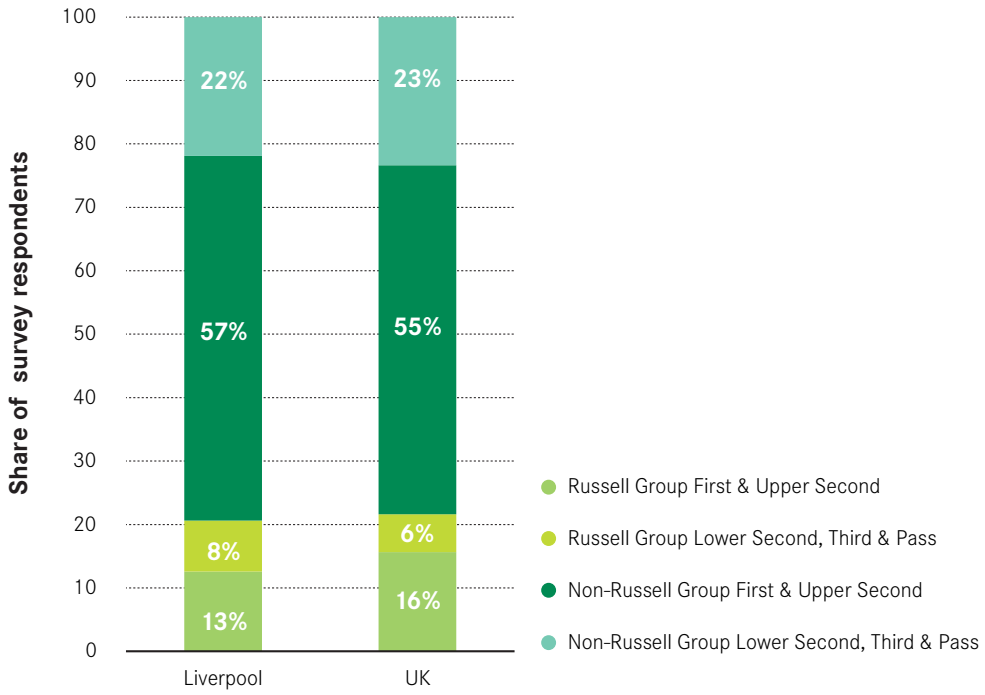
In terms of the class of degree achieved, a slightly smaller share of these workers had a first or upper second class degree from a Russell Group university than for the UK as a whole, as shown in Figure 23. Meanwhile the city had a slightly higher share of Russell Group graduates with a lower second class degree or lower.

Figure 22: The components of the new graduate workforce, 2013/14 – 2014/15



Source: HESA destination of leavers survey

Figure 23: Share of working new graduates by class of degree, 2013/14 – 2014-15

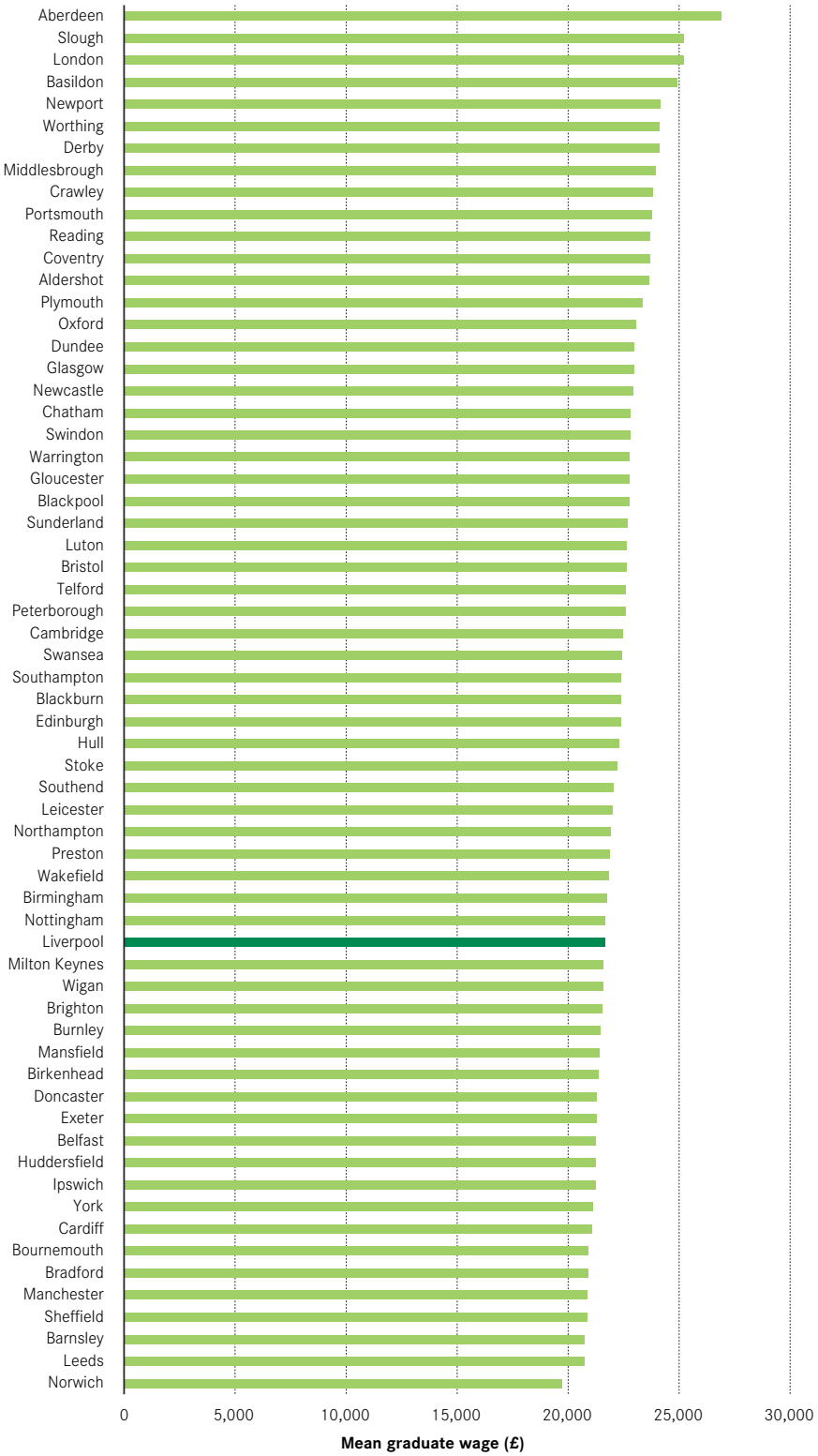


Source: HESA destination of leavers survey

Graduate wages in Liverpool are fairly low

In comparison to other UK cities, graduates working in Liverpool on average earn £21,700, which is below the mean UK graduate wage of £23,100. Cities offering a similar wage were Nottingham, Milton Keynes and Wigan, as shown in Figure 24.[5]

Figure 24: Mean graduate wages of each UK city, 2013/14 – 2014/15



Source: HESA destination of leavers survey.

5 These figures do not take account of the cost of living in different areas as data is not available on this at the local level.

In terms of the city's institutions, the average salary of a University of Liverpool graduate is higher than the other institutions in the city, and the average salary of a Liverpool Hope graduate is the lowest. With the exception of LJMU University, graduates who left Liverpool tended to earn more than those that stayed, as Figure 25 shows.

However, analysis of UK graduates finds that graduate wages was not the main reason for graduates choosing their employment location.[6] Other factors such as the type of jobs available in that city and the opportunities for career progression are more important.

Figure 25: Mean graduate wages by institution and location of employment, 2013/14 – 2014/15

University	Average salary of graduate (£)	Average salary of graduate employed in Liverpool (£)	Average salary of graduate employed elsewhere (£)
University of Liverpool	23,400	23,000	23,500
Liverpool John Moores University	21,100	21,700	20,800
Liverpool Institute of Performing Arts	18,300	16,700	18,800
Liverpool Hope University	18,000	16,900	18,600

Source: HESA destination of leavers survey

The majority of working graduates in Liverpool work in the publicly-funded services sector, and the proportion working in KIBS is considerably lower than the UK average

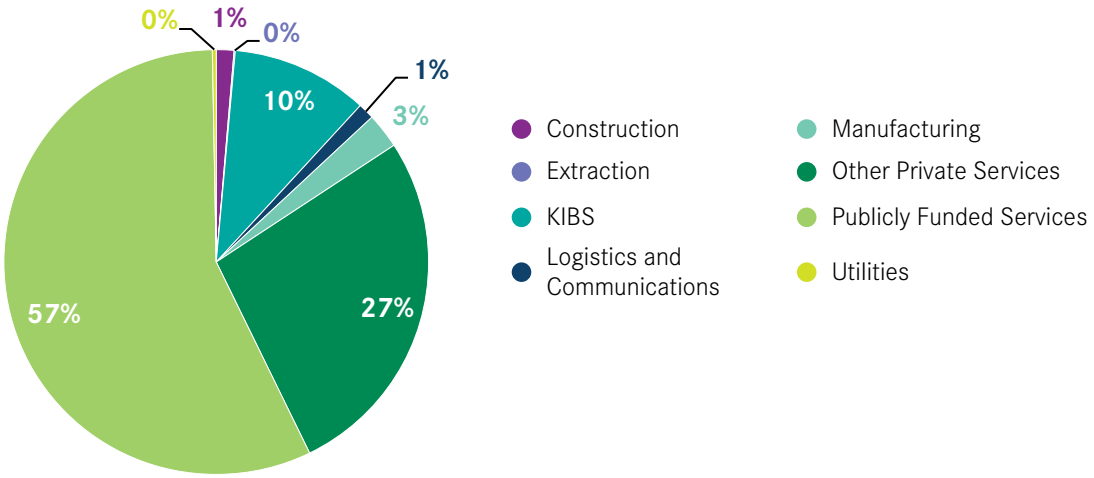
The type of jobs available to graduates in each location will be a major determinant of where they choose to work. Figure 26 shows that a much higher proportion of graduates in Liverpool work in publicly-funded services (57 per cent), than UK graduates on the whole (46 per cent). At 10 per cent, the share working in private knowledge intensive business services (KIBS) was lower than the UK average (15 per cent).

Looking at a finer industrial breakdown shows that 35 per cent of all graduate jobs were in health and 21 per cent in education. In the KIBS sector, 4 per cent of the city's graduate jobs were in legal and accounting activities and 3 per cent were in financial services. Other prominent employers in the city were retail trade (5 per cent of graduate jobs) and food and beverage service activities (3 per cent). These jobs tended to be concentrated in the centre of the city. The L1, L2 and L3 postcodes combined were home to 28 per cent of all new graduate jobs, and 56 per cent of all new graduate jobs in the private sector.

Those who left Liverpool after graduating worked in different sectors to those who stayed to work in the city. Of the leavers, 18 per cent went on to work in a KIBS jobs, while 45 per cent went into a publicly-funded job. The analysis in The Great British Brain Drain showed that those cities with a greater number of jobs in KIBS industries tended to experience a greater graduate gain, while those more reliant on publicly-funded sectors to provide opportunities to new graduates were less attractive to graduates. This suggests that one of the reasons graduates left Liverpool was because of a lack of job opportunities.

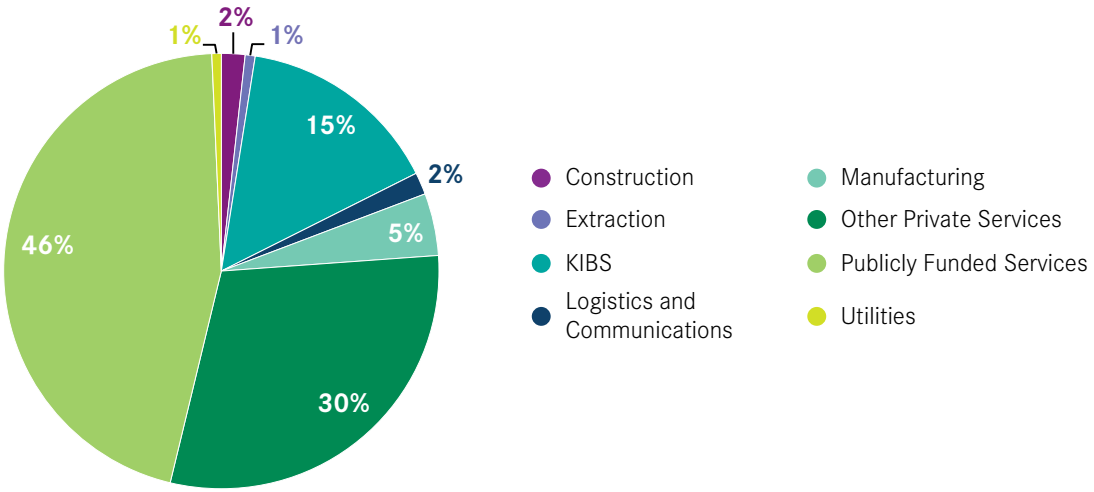
6 Swinney P and Williams M, *The Great British Brain Drain: where graduates move and why*, London: Centre for Cities

Figure 26: **Share of graduates in Liverpool working in each sector, 2013/14 – 2014/15**



Source: HESA destination of leavers survey

Figure 27: **Share of UK graduates working in each sector, 2013/14 – 2014/15**



Source: HESA destination of leavers survey

Conclusions

Like other large cities, Liverpool's migration patterns are dominated by movements of university students and graduates. There is a large net inflow of young people into the city for university, and the largest net outflow occurs as students leave on graduation.

Overall the city gains graduates. An inflow of students to study in the city's higher education institutions is followed by an outflow of degree holders. But these movements mask the underlying trend of Liverpool gaining graduates. While many people who come to study leave upon graduation, some remain, and this increases the number of degree holders working in the city. The net gain in graduates is equivalent to 2,600 of the graduates who responded to the survey.

Liverpool's universities play different roles. LJMU and Liverpool Hope have a much stronger regional pull than the University of Liverpool and Liverpool Institute for Performing Arts. The latter universities attract a significant proportion of international students and students from outside of the North West. As a result, the retention rates of the universities vary: the former group retain a much higher proportion of graduates as they principally attract local students, who are more likely to stay on graduation.

Any policies designed to increase retention should keep in mind these different roles. The University of Liverpool's ability in particular to pull in students from further afield should be seen as a success. But without a greater number of job opportunities for new graduates, many will leave after. This pulls down the retention rate of the university.

Ultimately this means that it is the jobs available to graduates that determine how many stay. Improving the job opportunities available to graduates in Liverpool will improve the city's ability to retain the graduates it produces, as well as attract in graduates from elsewhere. If policy makers want to increase the number of graduates working in Liverpool, be that either through higher retention or through greater attraction, then policy will need to focus on improving the economy rather than more narrowly focusing on direct graduate retention policies.

Contact

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