



Data analysis

October 2017/26

Undergraduate transfers in England

This report analyses transfers between higher education institutions made by first degree students in England. It describes the scale of transfers made within the same subject area and identifies which students switch between institutions. It investigates when the transfer of academic credit is more likely and it examines the qualification rates of transferring students.

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Contents

Executive summary.....	3
Purpose	3
Background	3
Key points.....	3
Action required	5
Introduction	6
Context.....	7
Data.....	8
Student transfers.....	10
Student characteristics.....	10
Geographical location	13
Institution type	16
Subjects.....	19
Academic credit transfer	20
Regression methodology	21
Results.....	22
Student outcomes	23
Regression methodology	24
Results.....	25
Conclusions.....	26
References.....	28

Undergraduate transfers in England

To	Heads of HEFCE-funded higher education institutions
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Executive summary

Purpose

1. This report analyses first (bachelors) degree students who transfer between higher education institutions (HEIs) in England, but who continue to study in the same subject area. It explores three main research questions:
 - a. How does the scale of student transfers vary across institutions and student groups?
 - b. Which students are more likely to transfer academic credit?
 - c. What are the qualification rates for students who transfer and how do these compare with students who continue in the same institution?

Background

2. The majority of full-time first degree students qualify from the higher education provider that they start their course with. However, some students want or need to change their provider and so switch between institutions during their degree. Some transferring students take academic credit with them and progress to a higher year of study at their new institution, but others repeat years or start afresh. The extent to which students make these different types of transfer has been previously unexplored, but is an important question as it sheds light upon the degree of flexibility in the sector and how this may differ for some students, studying some subjects and in some locations.

Key points

3. Overall, between 1.5 and 2 per cent of UK-domiciled first degree students in England transfer between institutions, but stay in the same subject area. This is approximately 4,000 to 5,000 students each year. Approximately two-thirds of these students start again in the first year of study, while the rest progress to a higher year of study. Since the latter group can be assumed to be a reasonable proxy for the extent to which students transfer academic credit, it appears that academic credit transfer is relatively uncommon.

Who transfers between HEIs?

4. Notwithstanding the small scale of inter-institutional transfers, analysis of these transfers reveals patterns concerning which students are more likely to transfer and the nature of the transfers they undertake. It shows that:
- a. Approximately 6 per cent of transferring students become distance learners and almost one in four return to their parental or own residence.
 - b. Transfer rates vary across institutions, and are highest in London, where the greater density of HEIs is believed to reduce the logistical and social costs of transferring.
 - c. Students attending HEIs with a low entry tariff are most likely to transfer and those at high-tariff HEIs least likely. Few students transfer into a high-tariff HEI if they have not previously attended one.

Who transfers academic credit?

5. Between 2012-13 and 2014-15, 29 per cent of students transferring between HEIs but remaining in the same subject area went into the second year at their new institution. Students who transfer into year two are assumed to be more likely to be transferring academic credit than those who switch into year one. We use regression analysis to examine the likelihood with which transferring students move into year two, identifying a number of factors that correlate to the likelihood with which a student undertakes credit transfer. These are as follows:

- a. Male, black and Asian students are less likely to transfer academic credit. Controlling for other factors, male students are an estimated 2.6 percentage points less likely to transfer into year two than female students, while black and Asian students are an estimated 7.5 and 5.7 percentage points less likely to transfer into year two than white students.
- b. Students attending high-tariff institutions are less likely to transfer credit.
- c. Students who switch their mode of study to part-time or who move home are more likely to transfer credit.

How well do transferring students do?

6. The qualifying rates for students who transfer are worse than for those who continue at the same HEI. 94 per cent of students who continue into year two at the same institution go on to qualify within six years. This compares with 67 per cent for students who transfer into year two at a different HEI, and 72 per cent for those who transfer into year one.

7. The relationship between transferring and qualifying is conditional on controlling for first-year performance and whether the student switches to part-time study. Students who switch to part-time study are much less likely to qualify, as are those who do not pass all of their year one modules. Controlling for these and other factors, students who transfer into year two are somewhat more likely to qualify than those who transfer into year one, but overall we estimate that students who transfer are 10 to 11 percentage points less likely to qualify than those who continue at the same HEI. However, there is no counterfactual analysis of how these students would have performed had they not transferred and so it cannot be inferred that the act of transferring reduces the likelihood of qualifying.

8. Overall, the limited scale of transfer indicates that, while more might be done to enable flexibility and choice for students once they have started a first degree, further research into the reasons why students might wish to transfer, and the barriers to and enablers of transfer is required to provide sufficient additional evidence to inform policy.

Action required

9. This document is for information only.

Introduction

10. The choice of where to study for a degree can be complex. Experiences at university do not always match expectations, and circumstances can change partway through a course. It is therefore not surprising that, while a vast majority of students who study for degrees in England qualify from the provider with which they started, some students choose to transfer to a new provider midway through their degree.

11. Recent interest in transferring students has focused on their ability to transfer academic credit as evidence of prior learning, and the potential for credit transfer to act as a mechanism to increase competition between providers. The higher education sector in England has a long-established framework of academic credit (QAA, 2008), which allows for students to transfer credit for passed modules so that it can count towards the award of a qualification at their new institution. However, providers are not obliged to recognise credit acquired elsewhere and Mian (2016) suggests that if there were an easier system of transferring credit then it would improve student outcomes by enabling a better match between students and courses and it would encourage providers to compete beyond the point of admission. To this end, the Department for Business, Innovation and Skills consulted to better understand the barriers to a successful credit transfer market (BIS, 2016).

12. This report seeks to inform this debate by providing analysis of full-time first degree students who have transferred across higher education institutions (HEIs) in England. The main difficulty in analysing these students is that since relatively few undertake transfers in any given year then analysis is limited by small sample sizes. However, by pooling data for students across multiple years we are able to overcome this.

13. The report addresses three questions. First, we investigate who transfers. This is done through an (unconditional) analysis of the raw data to examine how the population of students who continue at the same HEI differs from the populations of students who transfer into year one or year two at a new HEI, but who stay in the same subject area.

14. Secondly, we investigate which students are more likely to undertake credit transfer when switching institutions. This is done using regression analysis of students who transfer to identify the factors that make transfers into year two more likely than transfers into year one. Specific data about which students have undertaken credit transfer is not available, but we assume that those students who move from year one at one HEI to year two at another HEI must have undertaken credit transfer and so year two transfers are assumed to be a proxy for credit transfer.

15. The aim of this analysis is to identify whether all students are similarly able to undertake credit transfer and whether barriers might exist to transferring academic credit. It is an important question since not only might barriers inhibit competition between HEIs, but students who transfer into year one incur an additional year's tuition fees and potentially delay their entry into the labour market, causing them to lose future income.

16. Finally, we examine how the outcomes for transferring students compare with those for students who do not transfer. This is done by regression analysis that estimates the likelihood of an individual qualifying with a degree within six years of starting at their first institution.

Context

17. As far back as the Robbins Report the ability to transfer between higher education providers has been considered a necessary requirement for a flexible higher education system that meets the needs of students (Committee on Higher Education, 1963). At that time transfers were generally considered to be for students to progress up through types of institutions that provided different levels of qualifications, although over time the purpose of transfers has come to be seen more broadly.
18. Pollard et al (2017) identify three models of credit transfer, which are 'topping up', 'returning to learning' and 'switching'. Topping up most closely resembles the kind of transfer described in the Robbins Report and enables a student to build on previous qualifications, while models of returning to learning allow students to receive credit for prior learning in higher education or for experience in the workplace. While both of these are important, this report focuses solely on the third model of credit transfer – switching.
19. Each year approximately 300,000 students start undergraduate first degrees in England. Between 2 and 3 per cent of these switch between institutions. This rate of inter-institutional transfer is low relative to some other countries. Institutional switching is particularly common in Scandinavian countries (Hovdhaugen et al., 2015), while Wang and McCready (2013) estimate that 9 per cent of undergraduate students starting at a four-year institution in the USA transfer at some point during their course of study¹.
20. Given this, it is unsurprising that there has been relatively little analysis of transferring students in England, although data on transfer rates in England is published by sector bodies. HEFCE annually publishes data on the characteristics of transferring students at a sector level². This data shows that the proportion of students who transfer varies across student groups. For example, male students are more likely to transfer than female students, mature students (aged 21 or over on entry) are less likely to transfer than young students, and there are large differences between ethnic groups, with Chinese and white students being least likely to transfer. There are also observable differences in rates of transfer across institution by region in England and subject studied. Those studying in London are much more likely to transfer than students elsewhere, while students in science, technology, engineering and maths subjects are, on average, more likely to transfer.
21. Data on transfer rates is also published by the Higher Education Statistics Agency (HESA) as part of the UK Performance Indicators³. This is published by HEI and it shows that rates of transfer differ greatly between HEIs, with students at institutions with lower entry requirements (low-tariff HEIs) being on average more likely to transfer out to another institution.
22. However, none of the data currently published is disaggregated by type of transfer, so it contains all students regardless of whether they have changed subject or what year they have

¹ Of course, the rates of transfer in the USA are much higher if transfers between two-year public institutions (community colleges) and four-year institutions are considered, but this is the topping-up model of transfers. The high transfer rates in Scandinavia are likely related to generous student finance systems in which the cost of switching is mostly borne by the state.

² This interactive data can be found at www.hefce.ac.uk/analysis/ncr/.

³ Data by institutions can be found on the HESA web-site under table series T3a: see www.hesa.ac.uk/content/view/2072/141/.

transferred into. Some of these students are starting afresh by studying a new subject at a new institution and the data does not shed light on the extent to which students could be transferring academic credit between institutions.

23. A consultation by the Department for Business, Innovation and Skills (BIS) identified a number of potential barriers to credit transfers (BIS, 2016). Some of these barriers are expected to reduce student demand for credit transfers. They include switching costs and a lack of information. Logistical and social factors, for example the need to find new accommodation and meet new friends, are likely to increase the costs of transferring between institutions, while the absence of a specific transfer process may mean that some students who might consider transferring are unaware that they can do so. There may also be barriers affecting the supply of places into which a student can transfer. For example, credits are not a universal currency and those gained at one institution are not necessarily equivalent to those at another, even for courses with the same name.

24. Analysis of the responses to the BIS consultation identified a number of motivations for transferring including teaching quality, location, health and a wish to change from full-time to part-time study (DFE, 2016). The analysis also identified a lack of student awareness about transfers. About one in five respondents were unaware that they could transfer between HEIs⁴, while 60 per cent, including those who had transferred and those who had not, said that more information would help their decision.

25. Overall, the currently published data and the consultation can be used to identify a number of factors that may influence a student's decision about whether to transfer institution and where to transfer to, and these will be investigated in this report. These factors include the type of institution attended, the geographical location of institutions, and the subject studied. It is also clear that student characteristics, such as sex, age and ethnicity, may be correlated with the likelihood of transferring. In seeking to identify which student groups are less likely to undertake credit transfer and in which subject areas this happens, this report is intended to shed some light on the extent to which barriers to credit transfer might vary across the sector.

Data

26. This report focuses on student transfers between HEIs in the year following a student's entry. We use the same methodology to calculate transfers as the UK Performance Indicators. To be consistent with the performance indicators, only students who transfer institution after 1 December are counted. Students who begin a course but leave before 1 December are not included in any data used in this analysis.⁵

⁴ Since there must be a selection bias with which students respond to a consultation titled 'Accelerated courses and switching university or degree', this is likely to be an underestimate. The majority of student responses (3,000 of 4,500) were from the Open University.

⁵ The UK Performance Indicators have been published on an annual basis since 1999 and a full description of the methodology used to calculate them is available on the HESA web-site at <https://www.hesa.ac.uk/data-and-analysis/performance-indicators/non-continuation/technical>. Note that a difference in linking methodology has led to a small discrepancy between HESA's total figures and the analysis presented here.

27. This report considers UK-domiciled, full-time first degree entrants to HEFCE-funded HEIs by year of entry. Our interest is in students who transfer institution at some point between the start of year one and the start of year two, and we identify two relevant groups of students:

- **Transfer – Year one, same subject.** Students transferring into a different institution, but studying in year one again and studying in the same subject area as previously. Subject area is identified using the Joint Academic Coding System (JACS 3.0) level 1 classification, which has 19 principal subject areas.
- **Transfer – Year two.** All students who transfer to a different HEI into a year of study beyond year one, regardless of the subject they are studying.

As a comparison group we also consider:

- **Continuing – Year two.** All students who progress beyond year one at the same institution, regardless of the subject they are studying. People who have transferred course within the same institution are included within this group.

In addition to these groups, students could also: transfer into year one at a different institution in a different subject (starting afresh); repeat year one at the same institution; or leave higher education altogether (non-continuation). However, students following these paths are beyond the scope of this report.

28. Table 1 shows the numbers of students in each of the three populations defined above, according to the academic year in which they started their first degree. Students who transfer to a different institution in the same subject are more likely to go into year one than year two. The very low numbers of students transferring into year two give an indication of the limited scale of academic credit transfer.

Table 1: Numbers of students by year of entry

		2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Total entrants		272,945	292,725	303,375	303,450	326,675	291,335	317,970	328,550
Continue year 2	N	218,880	235,820	246,670	253,785	275,815	242,075	261,635	268,090
	%	80.2%	80.6%	81.3%	83.6%	84.4%	83.1%	82.3%	81.6%
Transfer year 1	N	2,990	3,070	2,630	2,290	2,445	2,755	3,100	3,475
	%	1.1%	1.1%	0.9%	0.8%	0.8%	1.0%	1.0%	1.1%
Transfer year 2	N	1,570	1,940	1,430	1,295	1,525	1,385	1,255	1,220
	%	0.6%	0.7%	0.5%	0.4%	0.5%	0.5%	0.4%	0.4%

Note: UK-domiciled, full-time first degree entrants to HEFCE-funded HEIs only. The numbers in the table do not sum to the number for total entrants, as other categories such as non-continuation are not shown.

29. Table 1 also shows that the proportions of students transferring between institutions each year is relatively stable (approximately 4,000-5,000 each year). This is important as in the subsequent analysis we pool multiple years of data, so that we have sufficient numbers of students to consider groups within the population. In the following two sections we use three

years of data, from 2012-13 through to 2014-15, to examine the characteristics of students who transfer. In the final section of the report we use data from 2007-08 through to 2009-10 to investigate the outcomes for students who transfer.

30. Some factors may affect the likelihood of a student transferring institution, but we have no data for them and are therefore unable to examine them in this report. One example would be whether the process in which the student was matched to the course and institution (first choice, insurance offer, clearing placement and so forth) is related to the likelihood of transferring institution.

Student transfers

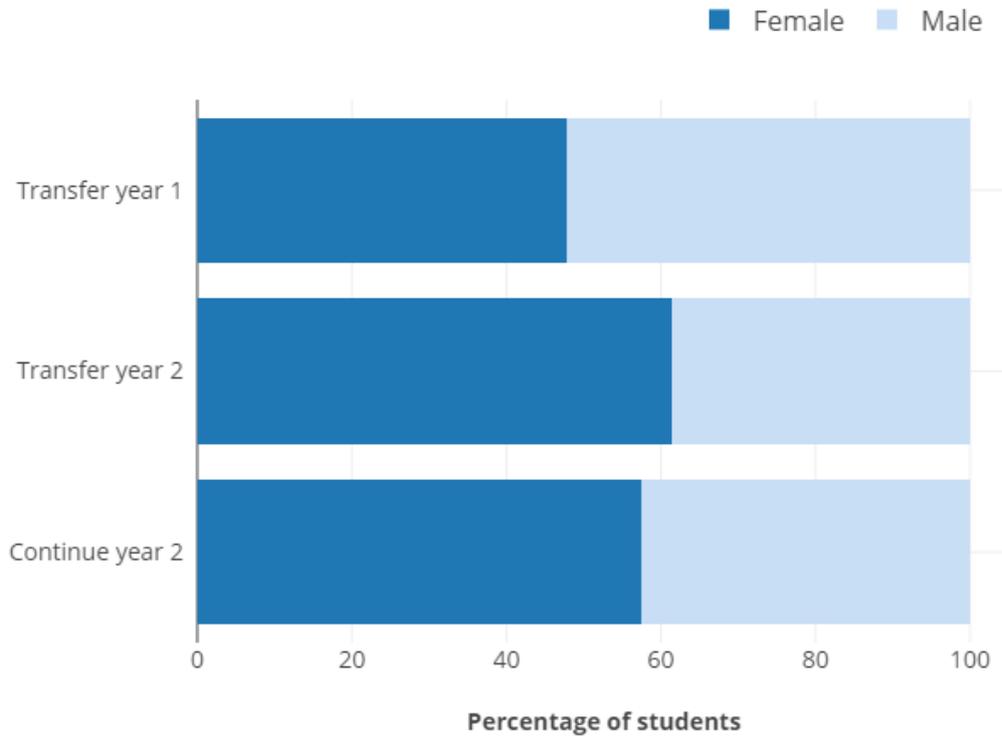
31. As there have been no previous attempts to analyse undergraduate student transfers in England by the type of transfer, we begin with an unconditional analysis of the populations of transferring students in comparison with those who continue on to the second year at the same institution. This is done with regard to the four factors identified in paragraph 25 as likely to be related to whether a student transfers HEI: the personal characteristics of students, the institution type attended, the spatial nature of transfers, and the subject studied.

Student characteristics

32. It has been established elsewhere (for instance in Naylor and Smith, 2004) that student behaviour and outcomes vary according to the equality and diversity characteristics of sex, age, disability and ethnicity, and whether the student comes from an area with low or high participation in higher education. In this section we examine whether there is any relationship between these characteristics and whether students who transfer HEI are likely to move into year one or year two at their new institution.

33. Beginning with **sex**, the overall proportion of male and female students who transfer institution is broadly in line with the proportion who continue on to year two at the same institution. However, Figure 1 shows that male students are disproportionately more likely to transfer into year one, while female students are more likely to transfer into year two.

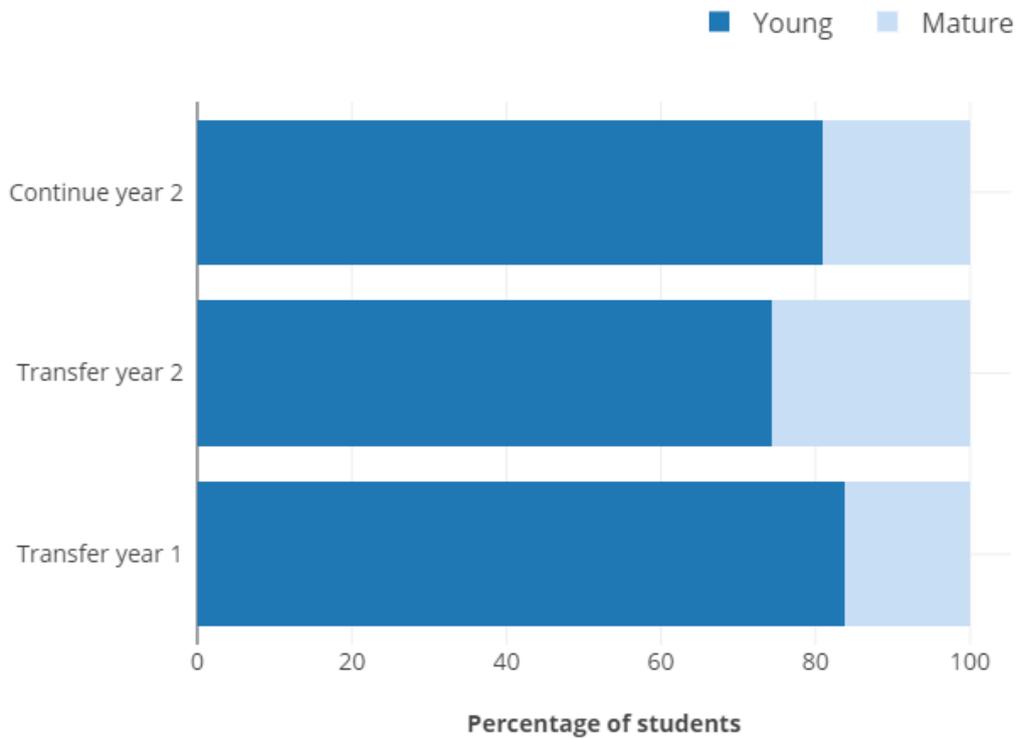
Figure 1: Transfer types by sex



Source: HESA Student Record 2012-13 to 2014-15 inclusive.

34. There are also differences between **age** groups, with Figure 2 showing that mature students are more likely to transfer into year two than young students. Of those students who transfer into year two, 24 per cent are mature (aged 21 or over at the start of their degree programme). This compares with 18 per cent of those who transfer into year one at a different institution, and 19 per cent of those who continue into second year at the same institution.

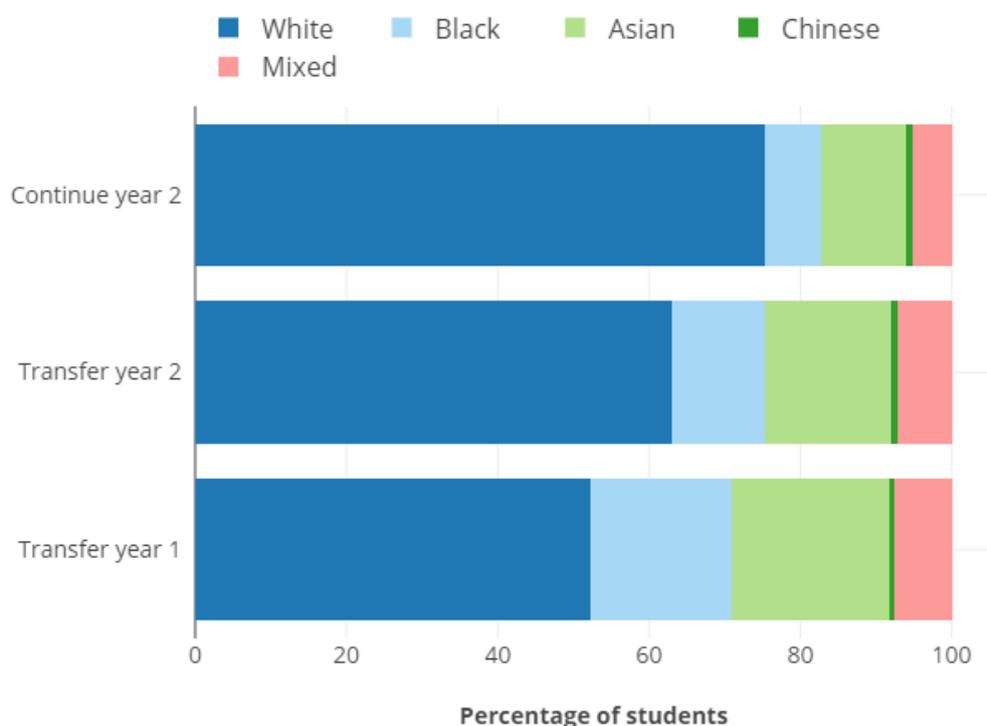
Figure 2: Transfer types by age



Source: HESA Student Record 2012-13 to 2014-15 inclusive. Note: Young entrants are those aged under 21 years on entry.

35. With regards to **ethnicity**, Asian (excluding Chinese) and black students are disproportionately more likely to transfer institution and are especially more likely to transfer into year one (see Figure 3). Of those students who continue into year two at the same institution, 11 per cent are Asian and 7 per cent are black. However, these proportions increase to 16 and 12 per cent of those who transfer to year two and 20 and 18 per cent of those who transfer to year one.

Figure 3: Transfer types by ethnicity



Source: HESA Student Record 2012-13 to 2014-15 inclusive.

36. There is no observable relationship between the **disability status** of students and the likelihood of transferring institution.

37. Those from areas with the highest **rates of participation** in higher education are slightly less likely to transfer institution, but there is no strong evidence in the raw data of a relationship between the rate of transfer and the level of participation in the local area from which a student comes.

Geographical location

38. Analysis of the transfer data to investigate where students' first and second institutions are located reveals three main findings. First, transferring is associated with a switch to distance learning. Approximately six per cent become distance learners, with the vast majority of these transferring to the Open University and changing from full-time to part-time study.

39. Second, a significant motivation for transfers appears to be the desire to move home, and this is apparent even when we exclude those students who become distance learners. Table 2 shows that students who transfer are more likely to move to a HEI that is located closer to their home postcode prior to entering higher education. This is the case regardless of which year the

student transfers into, although for students who transfer into year two, both first and second institutions tend to be further away from home than those who transfer into year one⁶.

Table 2: Median distance (miles)

	Continue year 2	Transfer year 2	Transfer year 1
Home to first institution	66	66	60
Home to second institution	-	53	34
Institution one to institution two	-	98	74

Note: Excludes those who become distance learners.

40. Examining the term-time addresses of students reveals that about one in four transferring students move back to the parental home. Table 3 presents the percentage of students recorded as living at either their parental home or a residence they own themselves. It shows that, in total, 36 per cent of students who continue into year two at the same institution live at home – 28 per cent have lived at home for both years and a further 8 per cent move home after the first year. However, the proportion living at home is much greater for transferring students, with about half of them living at home in their second year of study. The difference is driven by the high proportion of transferring students who lived in other accommodation in year one, but then moved home following their transfer.

Table 3: Term-time accommodation

First year of study	Second year of study	Continue year 2	Transfer year 2	Transfer year 1
Parental / own residence	Parental / own residence	28%	26%	26%
	Other	3%	9%	12%
	Unknown	3%	2%	2%
Other	Parental / own residence	8%	29%	23%
	Other	53%	26%	29%
	Unknown	3%	3%	3%

Note: Students with 'unknown' year one residence are not shown, so percentages do not sum to 100.

41. Thirdly, transferring students are disproportionately likely to have attended London institutions. Of those who transfer to year one, 28 per cent attended a London institution in their

⁶ The distance between a transferring student's first and second institutions varies according to institution type, with students transferring between high-tariff institutions transferring the largest distance. For those transferring between two high-tariff HEIs the distance between their first and second institution is 153 miles on average, whereas for transfers between two medium-tariff HEIs it is 71 miles and for those between two low-tariff HEIs it is 52 miles.

first year of study, while 23 per cent of those who transfer to year two did so. This compares with just 16 per cent of all students who continue on to year two at the same institution. Students in the East Midlands, North East and South West are somewhat disproportionately less likely to transfer institution.

42. The greater density of HEIs in London means that it is more likely that a student there will be able to find a HEI to transfer to without relocating. This means that the logistical and social costs of transferring are likely to be on average lower in London than elsewhere, which could be a factor in the higher observed transfer rates in London.

43. To investigate whether this effect is evident in other cities with multiple HEIs, the mean total transfer rate (the mean proportion of students who make year one or year two transfers) was calculated according to how many HEIs are located in the same city, excluding specialist HEIs⁷. The results are shown in Table 4. It confirms that the mean transfer rate is highest in London, but provides limited evidence of greater numbers of transfers in other cities with multiple HEIs. Transfer rates at HEIs in cities with three HEIs are greater than elsewhere, but rates are actually lower in cities with two HEIs than those places with just one. However, all four of the cities shown as having three HEIs also have a fourth located just outside the city and within easy travelling distance by public transport⁸. Including these HEIs increases the mean transfer rate for those cities to 1.90 per cent and reduces the rate for single-HEI cities to 1.24 per cent, bringing them in line with cities that have two HEIs.

44. Overall, the small number of cities and the limited variation in the number of HEIs across cities means that strong conclusions cannot be drawn. However, it seems that while the presence of a second HEI in a city does not make transfers more likely, it may be that transfer rates are higher in places where there are larger numbers of HEIs.

⁷ Specialist institutions are defined as being those with at least 60 per cent of all students registered in no more than two cost centres.

⁸ Namely the University of Wolverhampton, the University of Bradford, Edge Hill University and the University of Bolton. Travel times between these universities and the centres of Birmingham, Leeds, Liverpool and Manchester are comparable to journey times within London.

Table 4: Mean transfer rate by number of HEIs in a city

HEIs in a city	Number of cities	Cities	Total number of HEIs	Mean transfer rate (per cent)
1	33	For instance: Derby, Durham, Exeter, Huddersfield, Portsmouth, Sunderland	33	1.42
2	14	Bath, Brighton, Bristol, Cambridge, Canterbury, Coventry, Leicester, Newcastle, Nottingham, Oxford, Sheffield, Southampton, Stoke, York	28	1.25
3	4	Birmingham, Leeds, Liverpool, Manchester	12	1.65
20	1	London	20	2.83

Note: Excludes specialist HEIs.

Institution type

45. Mean transfer rates by institution type are presented in Table 5. It shows that students at HEIs with high average entry tariffs are less likely to transfer between institutions, while those at low-tariff institutions are most likely to transfer. This is the case for transfers into both year one and year two, although the students at low-tariff institutions are more likely to transfer into year one. This means that students with lower prior attainment seem to be less likely to transfer academic credit and this is explored in the regression analysis that follows.

Table 5: Transfer rates by institution type

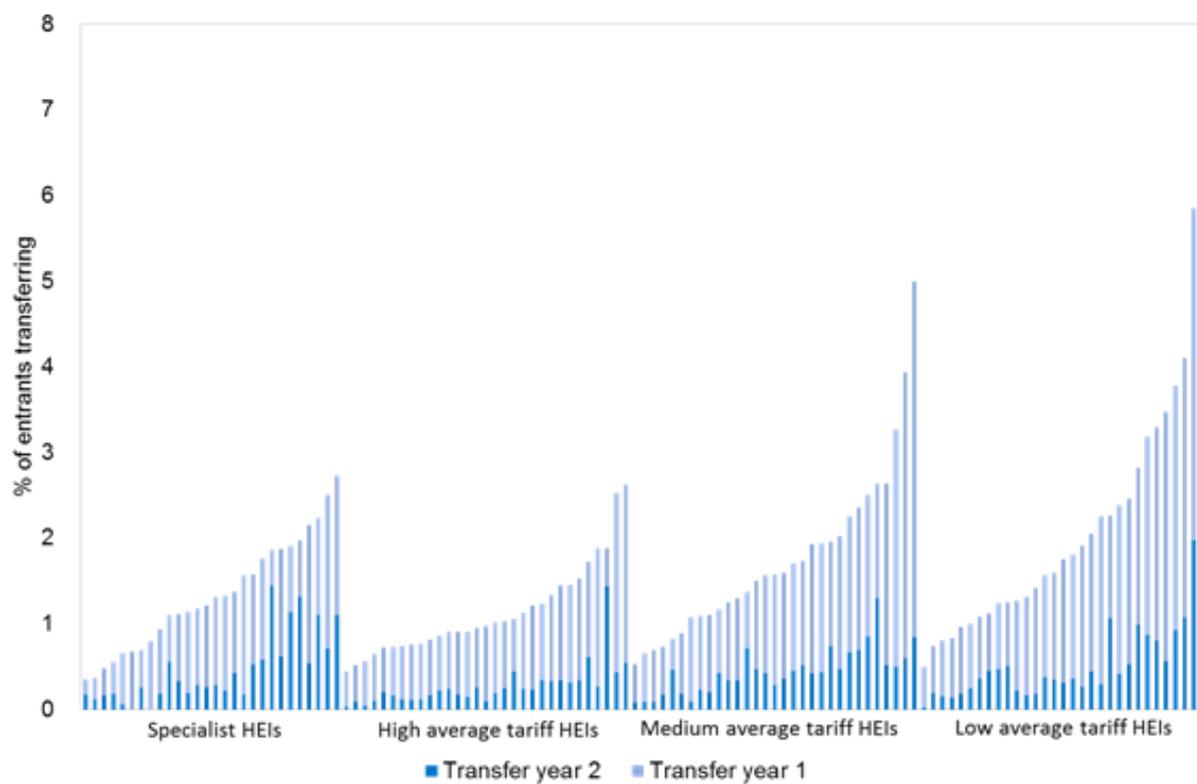
Institution type	Transfer year 1	Transfer year 2	Total
High tariff	0.86	0.28	1.14
Medium tariff	1.32	0.45	1.77
Low tariff	1.64	0.54	2.18
Specialist	0.87	0.50	1.34

46. Figure 4 presents the distribution of the percentage of students across all English HEIs who transfer to a different HEI. This combined rate of transfer ranges from 0.3 per cent to 7.6 per cent, but for a majority of institutions it is between 0.5 and 3 per cent of students.

47. The proportion of year one and year two transfers is strongly positively correlated across institutions ($p = 0.75$), meaning that institutions with a greater proportion of year one transfers

tend to also have a greater proportion of year two transfers. This correlation is especially strong ($p = 0.90$) for low-tariff institutions.

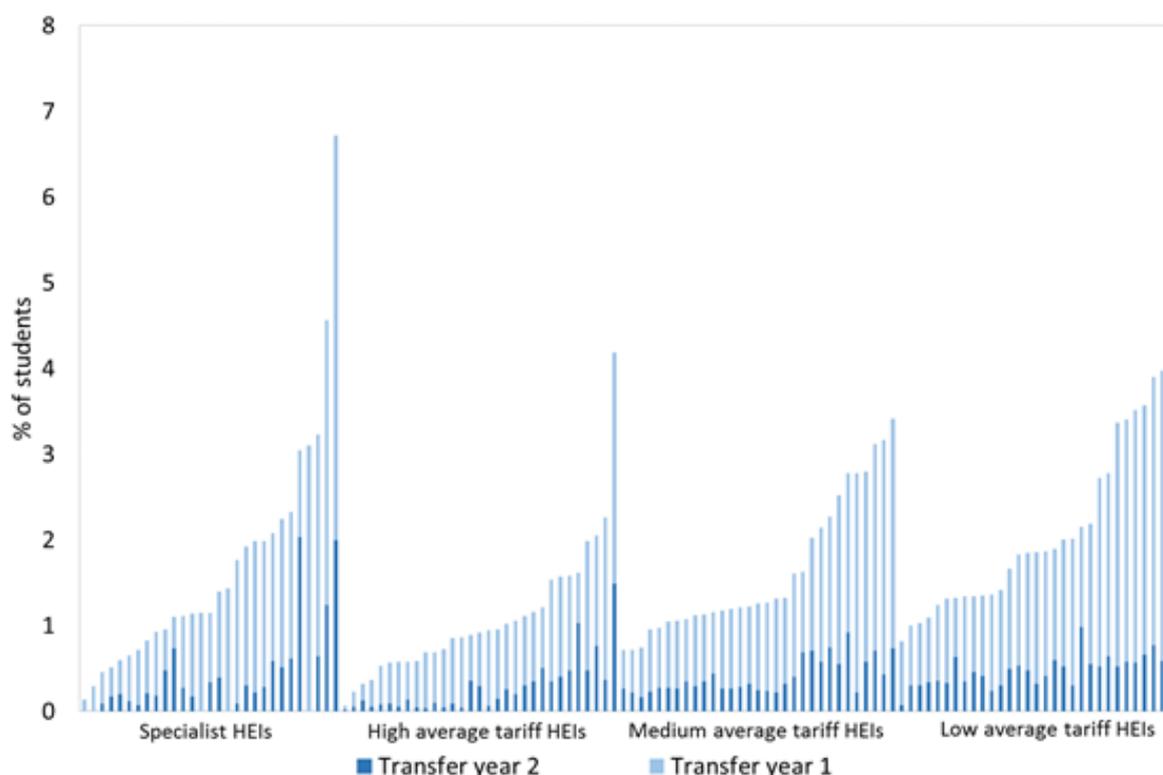
Figure 4: Percentage of students transferring to another HEI



48. There is also a positive correlation between the transfer rate and the non-continuation rate across institutions. This is only a weak correlation overall ($p = 0.27$ for entrants in 2014-15), but it indicates that, on average, institutions with higher non-continuation rates also have higher transfer rates. The correlation is strongest ($p = 0.49$) for high-tariff universities.

49. The proportion of an HEI's first- and second-year first degree population who have transferred into the HEI is presented in Figure 5. It shows that this is also related to the institution type and that low-tariff HEIs are relatively more likely to take in students from other HEIs, while for a majority of high-tariff HEIs less than 1 per cent of their student population is made up of students who have transferred in. Further, a large number of high-tariff HEIs have very few students who transferred into year two, while specialist HEIs are also more likely to receive only students who transfer into their first year. The latter accords with progression on specialist programmes requiring credit in curriculum that is less likely to be offered elsewhere.

Figure 5: Percentage of students at a HEI who transferred in from a different HEI



Note: Calculated as the percentage of students in years one and two who have transferred from another HEI. Excludes students who become distance learners.

50. The data for individual HEIs supports the analysis earlier that found that transfers are more likely to involve institutions based in London than elsewhere. Eight of the 10 HEIs with the greatest proportion of students transferring out are in London, while the HEIs with the greatest proportion of students who have transferred in are based in London.

51. The movement of transferring students between types of HEIs is shown in Table 6. In general, students are most likely to move to another HEI with similar entry requirements, although movements between low- and medium-tariff HEIs are not uncommon. Just over a third of students leaving low-tariff institutions transfer to medium-tariff ones, and vice versa. However, transfers into high-tariff HEIs are much less common. Table 6 presents the data for both year one and two transfers, but splitting the data by transfer type makes little difference. Those transferring into year one are no more likely to move to a higher-tariff institution than those transferring into year two, although specialist institutions are much more likely to allow students from high-tariff HEIs to transfer into year two than those coming from medium- and low-tariff HEIs.

Table 6: Movement between institution types

		Second institution			
		High tariff	Medium tariff	Low tariff	Specialist
First Institution	High tariff	1,325 (52%)	670 (26%)	410 (16%)	160 (6%)
	Medium tariff	755 (18%)	1,730 (41%)	1,590 (37%)	190 (4%)
	Low tariff	310 (7%)	1,620 (37%)	2,220 (50%)	265 (6%)
	Specialist	45 (9%)	150 (31%)	195 (40%)	95 (20%)

Note: Includes transfers into years one and two. Transfers into English HEIs only.

Subjects

52. There are large differences in the likelihood of students transferring institution according to the subject studied. Table 7 shows that more transferring students are studying courses in business and administrative studies than any other subject, and these students are disproportionately likely to transfer into either year one or year two at a different institution. By contrast, relatively few students in historical and philosophical studies make an institutional transfer of either kind.

53. Some subject areas have a disproportionately large number of transfers into year one, such as engineering and technology (9.6 per cent of all year one transfers relative to 4.6 per cent of the continuing population) and computer science (7.5 per cent relative to 3.7 per cent), whereas students in subjects including social, economic and political studies and subjects allied to medicine are relatively more likely to transfer into year two.

Table 7: Proportion of students by subject

Subject	Continue year 2	Transfer year 1	Transfer year 2
Biological sciences	11.8%	11.9%	11.7%
Subjects allied to medicine	11.7%	6.1%	9.0%
Creative arts and design	11.8%	11.7%	10.8%
Business and administrative studies	11.4%	16.9%	16.1%
Social, economic and political studies	10.3%	8.3%	10.0%
Languages	6.0%	4.7%	5.5%
Physical sciences	4.8%	3.8%	2.6%
Historical and philosophical studies	4.7%	2.7%	3.7%
Engineering and technology	4.4%	10.5%	4.5%
Education	4.8%	2.2%	6.2%
Law	4.0%	5.8%	5.1%
Computer science	3.9%	7.4%	3.5%
Mass communication and documentation	3.1%	2.8%	3.5%
Medicine, dentistry and veterinary science	2.4%	0.1%	2.3%
Mathematical sciences	2.2%	2.4%	1.7%
Architecture, building and planning	1.6%	2.5%	3.2%
Agriculture and related subjects	0.7%	0.2%	0.4%
Combined	0.2%	0.0%	0.1%
Total	100%	100%	100%

Academic credit transfer

54. The analysis so far has given indications of which students are more likely to transfer between HEIs, but we are especially interested in the factors that might be related to a student's ability to transfer academic credit, so in this section we use regression analysis to explore the likelihood that a student transfers credit. Attention elsewhere has often focused on the relationship between academic credit transfer and lifelong learning (see Pollard et al., 2017), with students' opportunity to top up credit being key to their ability to progress up qualification levels, but since our focus is on credit transfer and switching behaviour we will continue to focus solely on full-time first degree entrants.

55. Since we are unable to observe directly which students transfer credit, we assume that transferring into year two is a proxy for whether or not the student has transferred academic credit. This assumption implies that each year between 25 and 40 per cent of the students who transfer into the same subject at a different HEI also transfer academic credit.

56. Of course, for a student to transfer academic credit they must have passed modules. It may be that those who transfer into year one will transfer some credit, perhaps receiving exemptions for year one modules at their new institution, but have passed insufficient modules to be able to transfer into year two. To take account of this in the regression analysis we define a categorical variable for the proportion of modules a student has passed in their previous year. The HESA student record includes data on the modules a student has undertaken and which of them they have passed. A summary of this module data is presented in Table 8. It shows that those who transfer into year two are more likely to have passed all modules than those who transfer into year one. However, almost half of those who transfer into year one did pass all of their modules and, perhaps surprisingly, almost a third of the students transferring into year two did not pass all modules.

Table 8: Module outcomes

	Transfer year 1	Transfer year 2	Continue year 2
Passed less than 100% of modules	55%	27%	2%
Passed 100% of modules	45%	73%	98%

Regression methodology

57. The regression model is specified in Annex B. A multilevel, logistic regression model is used to estimate the conditional relationship between variables including entry qualifications, subject studied and student characteristics, and the probability that a transferring student goes into year two rather than year one.

58. The model is estimated for students who entered higher education in three consecutive years between 2012-13 and 2014-15. During this period a total of 9,330 students transferred into the same subject in year one at a different institution and 3,860 transferred into year two at a different institution, so that 29 per cent of transferring students went into year two. Unfortunately, not all institutions return module information data for their students, but this data is available for 84 per cent of the transferring students. The summary statistics of the variables are presented in Annex A and they show that the sample is representative of all transferring students.

59. The full regression results are presented in Annex B. Three different specifications of the model are presented. The first, Table B1 column 1, is estimated for the sample of students for whom module outcomes are known. It includes terms for student characteristics (including entry qualifications), institution type, region of institution, subject, and whether or not the student passed 100 per cent of their modules in year one. It also includes variables for whether the student transferred to part-time study and whether they moved back home.

60. The results in columns 2 and 3 are presented to show the stability of the results to changes in the model specification. The variables for part-time study and whether the student moves back

home are omitted in column 2. There is some correlation between these variables and whether the student is of mixed race or has a disability, as these become statistically significant (at the 5 per cent level) in the results in column 2, but in general the results are in line with those in column 1. The results in column 3 are for all transferring students and so necessarily exclude the term for whether the student has passed their modules. Overall, these results also support those in column 1.

Results

61. Focusing on the results in column 1, it can be seen that the likelihood of a student transferring into year two does indeed depend upon whether or not they passed all modules in their first year at their first institution. Those students who have passed all of their modules are an estimated 27 percentage points more likely to transfer into the second year at their new institution.

62. With regard to student characteristics, the only variables that have a statistically significant effect on the likelihood of transferring into year two are **sex** and **ethnicity**, with male, black and Asian students being less likely to transfer into year two.

63. Male students are an estimated 2.6 percentage points less likely to transfer into year two than female students, controlling for all other variables.

64. Of all ethnic groups, black students are least likely to transfer into year two. They are an estimated 7.5 percentage points less likely than white students, while Asian students are an estimated 5.7 percentage points less likely to transfer into year two than white students (see Table 9). Chinese students are somewhat more likely to transfer into year two than white students although the difference is not statistically significant.

Table 9: Modelled results for ethnicity

	% transferring to year 2	% expected to transfer	Difference
White (base)	32.3%	-	-
Black	21.3%	28.8%	7.5%***
Asian	24.0%	29.7%	5.7%***
Chinese	30.9%	26.7%	-4.2%
Mixed / Other	28.9%	30.4%	1.4%

Note: *** indicates significant at 1 per cent significance level.

65. Neither age nor disability status is related to the likelihood of transferring into year two. Further, it does not matter whether the student comes from a place with a high or low level of participation in higher education. We also tested whether it matters if the student attended a state or private school, but this is not statistically significant.

66. Prior attainment appears to have little effect on the likelihood of transferring into year two. The exceptions to this are that those with very low UCAS tariff points (less than 200), or some other qualification (such as BTECs and International Baccalaureates), or unknown qualifications, are less likely to transfer into year two.

67. Engineering and technology students are considerably less likely to transfer into year two, while those studying computer science, mathematical sciences, physical sciences and law are somewhat less likely to do so. The reasons behind this are uncertain. It may be that curricula in these subjects are more heterogeneous, and that institutions are therefore less likely to accept credit transfer, or that students are transferring across sub-disciplines within these broad subject groups, making them unable to transfer credit. It seems probable that the latter is part of the explanation, since engineering and technology is the broadest JACS level 1 subject area, containing the largest number of level 2 subjects. Students in historical and philosophical studies, education and combined subjects appear to be slightly more likely to transfer into year two.

68. With regard to the regional variables, students in the West Midlands and the North West are least likely to transfer into year two. However, once other factors are taken into account students in London do not seem either more or less likely than those elsewhere to transfer into year two. This contradicts somewhat the raw data, but an implication is that while the higher density of HEIs in London seems to be related to a greater number of transfers, there is no evidence that competition between institutions in London makes them more likely to accept the transfer of academic credit.

69. There is a clear relationship between institution type and the likelihood of transferring into year two. Students at low- and medium-tariff institutions are significantly more likely to transfer into year two than those at high-tariff institutions. Controlling for other factors, they are about five percentage points more likely to do so. The difference between low- and medium-tariff institutions is not statistically significant.

70. The raw data suggested that low- and medium-tariff HEIs in London had particularly high levels of transfer, but interaction variables for low- and medium-tariff HEIs based in London are not statistically significant, which indicates that there is no relationship between location, institution type and the likelihood of a transferring student going into year two.

71. The results show that students who change their mode of study to part-time are more likely to move into year two, while those moving back to the parental home are also more likely to transfer into year two. This suggests that the reason why the student makes a transfer is related to the likelihood of transferring credit, but also perhaps reflects that the second year of a part-time degree will have a lower credit requirement and it is easier to transfer into year two of a part-time course.

72. Finally, the variables for academic year show that it became less common to transfer into year two between 2012-13 and 2014-15. This may be randomness over time as it is too short a period to identify a trend, but the increase in undergraduate tuition fees in 2012-13 decreases the incentive for HEIs to admit students into year two as opposed to year one and could therefore potentially discourage credit transfer. Further analysis is needed as data for more recent cohorts becomes available to investigate whether this is a trend.

Student outcomes

73. Inter-institutional transfers are generally considered to be positive outcomes, as students switch to what is hoped to be a better match for their circumstances and preferences. This means that students stay in the higher education sector and still have the opportunity to earn a degree. In this section we examine the qualifying rates for transferring students, to see how commonly they go on to be awarded a degree compared with students who do not transfer. To

do this we track the 2007-08 to 2010-11 entrant cohorts for six years after entry, which is sufficient time for the vast majority of students to have either qualified or left higher education, with few being classified as 'still active'. Restricting this population to those who either continued to year two in the same subject or transferred to another HEI to do the same subject in either year one or year two gives a total sample of 972,380 students, of whom 17,210 (1.8 per cent) transferred.

74. Table 10 presents the qualification rates for these students and shows two main findings. First, the qualification rates of those who transfer are lower than those of students who continue on to year two at the same HEI. About one-fifth of students who transfer do not qualify with a degree within six years of first entering higher education. Of course, there is no counterfactual analysis of how these students would have performed had they not transferred and so it cannot be inferred that the act of transferring reduces the likelihood of qualifying. Secondly, qualification rates do not seem to be related to whether or not students transfer into years one or two. In both cases, almost three-quarters of students have qualified within six years. A slightly higher proportion of students who transfer into year two are still active in higher education after six years, which reflects the fact that students who switch to part-time study are more likely to transfer into year two.

Table 10: Outcomes of students six years after transfer

	Continue year 2		Transfer year 2		Transfer year 1	
	N	%	N	%	N	%
Qualified from new institution	894,290	94%	4,155	67%	7,905	72%
Qualified from different institution	7,570	1%	270	4%	290	3%
Still active at new institution	1,810	0%	255	4%	170	2%
Still active at different institution	3,210	0%	190	3%	280	3%
Did not qualify	48,290	5%	1,360	22%	2,335	21%
Total	955,170	100%	6,225	100%	10,985	100%

Regression methodology

75. The relationship between transfers and qualification is likely to be affected by other factors, so to analyse this we estimate a multilevel regression model examining the differences between students who qualify with a degree and those who do not. The model predicts the likelihood that a student goes on to qualify within six years of entering higher education. The variables of most interest are those that identify whether the student transfers and which year they move into if so. We also examine the sensitivity of the relationship between transfers and the likelihood of qualifying, to whether the student passed all of their modules and to characteristics of the transfer, specifically whether the student changed their mode of study from full-time to part-time and whether they moved back to their parental home.

76. The full regression specification and results are presented in Annex C and four alternative specifications are presented. The first, Table C1 column 1 is estimated for the sample of students whose module outcomes are known. It includes terms for student characteristics (including entry

qualifications), institution type and subject, whether the student passed all of their first year modules, whether they transferred and what year they transferred into. It covers all students whether or not they qualified, but students still active after six years are excluded from the regression analysis. The other columns in Table C1 present results for similar specifications of the model, but omit some variables. They show that the relationship between the type of transfer and the likelihood of qualifying is sensitive to this, as discussed in paragraphs 80 to 82.

Results

77. Overall, the results in Table C1 column 1 generally accord with other work that has investigated differences in degree outcomes across students in England (including 'Differences in degree outcomes: Key findings', HEFCE 2014/03 and 'Differences in degree outcomes: The effect of subject and student characteristics', HEFCE 2015/21). The strongest effects are mostly related to entry qualifications: the likelihood of qualifying decreases as entry qualifications become less good.

78. In addition to this, the likelihood of qualifying varies across student groups. Male students are less likely to qualify, as are students with a disability and mature students. There are some differences in the likelihood of qualifying between ethnic groups, although the differences between white, black, Asian and Chinese students are not statistically significant once other factors have been controlled for. Students from educationally disadvantaged areas that have low rates of participation in higher education are less likely to qualify, but those from state schools are more likely. Students who live at home are less likely to qualify.

79. There are also differences between subjects: students in computer science, mathematical sciences and, to a lesser extent, engineering and technology and business and administrative studies are less likely to qualify. This is also the case for students in architecture, building and planning, although as these courses last longer than others it is more likely that these students will be still active after six years.

80. Focusing on the transferring students, the regression confirms that these students are less likely to qualify than students who continue into year two at the same institution. The results also show that students transferring into year one are less likely to qualify than those transferring into year two⁹. However, this latter finding depends on the inclusion of variables to control for first-year performance and whether the student switched to part-time study.

81. Part-time study has a large impact on the likelihood of qualifying, with part-time students being an estimated 29 percentage points less likely to qualify. Furthermore, in column 3, which includes part-time study, those transferring into year two become more likely to qualify than those transferring into year one.

82. Students who do not pass all of their modules in year one are less likely to qualify than those who do pass all modules. As seen in the results in column 2, the inclusion of this variable reduces the overall negative impact of transferring on the likelihood of qualifying for both types of transfers, and the transferring students are estimated to be approximately 10 to 11 percentage points less likely to qualify than continuing students¹⁰. However, the difference between types of

⁹ Statistically significant at the 1 per cent level.

¹⁰ As outlined in paragraph 58, students' module outcomes are not known for all HEIs and the exclusion of some HEIs could introduce bias if these HEIs are unrepresentative. To investigate this, a

transfer becomes conditional upon the inclusion of terms that account for the interaction between first year performance and type of transfer, see column 1, as students who do not pass all year one modules do better on average by transferring into year one at a different institution.

Conclusions

83. This report has investigated same-subject transfers between English HEIs made by first degree students. Relatively few students, between 1.5 and 2 per cent of entrants each year, undertake these transfers. The limited scale of transfer indicates that, while more might be done to enable flexibility and choice for students once they have started a first degree, further research into why students might wish to transfer, and the barriers to and enablers of transfer, is required to provide sufficient additional evidence to inform policy.

84. Notwithstanding this, by pooling data across multiple years this report has shed light on which students are more likely to transfer, how likely they are to transfer academic credit, and how their qualification rates compare with those who do not transfer.

85. First, it has been shown that the likelihood of a student transferring between HEIs varies based on student characteristics, type of institution, location and subject studied. Transfers are more common in London than elsewhere, and the likelihood of transferring is correlated to prior attainment, with students at low-tariff HEIs being most likely to transfer. It was also found that approximately one in four transferring students return to their own or a parental residence.

86. Secondly, assuming that students who transfer into year two are more likely to be transferring academic credit than those who go into year one, it was found that male, black and Asian students, and those attending high-tariff institutions, are less likely to transfer credit, while students who switch their mode of study to part-time or who move home are more likely to transfer credit.

87. Thirdly, it has also been shown that students who transfer are less likely to qualify than those who continue at the same HEI, while those transferring into year two do better than those transferring into year one. However, these findings are conditional on controlling for first-year performance and whether the student switches to part-time study. The qualifying rates for those who switch to part-time study are significantly worse than for full-time students, while students who progress to year two without passing all of their year one modules also do worse.

88. A limitation of the report concerns the lack of a direct measure of credit transfer. We believe that using year two transfers is a reasonable proxy for credit transfer, but recognise that some students will be given exemptions to progress without having passed modules, while students transferring into year one may be transferring an amount of credit insufficient to progress to year two.

89. A further limitation is that we analyse students in the same subject area based on the 19 level 1 JACS classifications. These represent fairly broad subject areas, especially in some disciplines such as engineering and technology, and it may be that students are moving between subjects within these broad groups and so would not have relevant academic credit to transfer. However, small sample sizes prohibit analysis at more granular levels.

sensitivity analysis was conducted in which the model was estimated only for the sample of students whose module outcomes were known. The results, see Table C1 column 4, are qualitatively similar to those for the whole population, so we do not believe that the reduction in sample size is an issue.

90. Finally, throughout the report we have identified relationships between transfers and student characteristics. However, these relationships cannot be interpreted as causal. For example, it has been shown that male students and those from some minority ethnicities are less likely to transfer credit, but identifying the cause behind this is beyond the scope of this report. We hope that by identifying areas where correlative relationships exist the report will be a starting point for future research that investigates why.

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