INEQUALITY IN THE HIGHEST DEGREE?

Postgraduates, prices and participation

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About the Sutton Trust

The Sutton Trust is a foundation which improves social mobility in the UK through evidence-based programmes, research and policy advocacy.

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Foreword

For 24 years now the Sutton Trust has campaigned for fair access to university. Our summer schools have supported tens of thousands of young people from low and moderate income backgrounds to enable them to access the most selective universities, and we have advocated to government and universities for policies promoting fair admissions. Those 24 years have seen a significant expansion in the numbers of young people attending universities. That has been accompanied by an increase in those from less well-off backgrounds attending university, opening up opportunities for them in the workplace, including some of the most competitive professions.

However, when it comes to social mobility, the goalposts are always moving. As overall qualification levels have increased and access has widened, better off families have found new ways to get ahead. Competition for the most sought-after jobs in society is always going to be fierce. The rise of unpaid internships is one way better-off graduates have stayed ahead of their classmates in accessing top jobs. Another way of standing out from the crowd is through postgraduate study.

Increasingly, a postgraduate degree is required for many jobs. There has been huge growth in the number of courses available, yet issues of fair access have not traditionally been promoted for postgraduate study. In 2013 the Trust showed that the returns to postgraduate study in the workplace amounted to more than £5,000 a year on average, and that unequal access to these courses was potentially holding back social mobility.

Today's research shows how postgraduate study has grown since our last report in 2013, and, in particular, how fees for postgraduate study have ballooned. While the introduction of postgraduate loans appears to have had a positive impact on access, adding new post-graduate loans on top of the substantial debt from undergraduate study leaves young people with eye watering levels of debt. And those loans themselves are not enough to cover the fees of many top postgraduate courses, let alone living costs.

The culture of fair access that the Sutton Trust has played a leading role in developing for those entering undergraduate degrees, must now be extended to postgraduate study. Talented young people from all backgrounds should have the opportunity to further their studies, whether through taught master's courses or through research that pushes forward the boundaries of knowledge. We can only benefit from a greater diversity of backgrounds contributing at the top levels. As Britain seeks to further establish itself as a global centre of excellence in science, technology and research, ensuring we make the most of all of our talent is more important than ever.

In many ways postgraduate study has become the new frontier for social mobility. We must work to ensure it is no longer a curb on our ambitions, but a bridge.

I'd like to thank the authors for this most vital research.

Sir Peter Lampl

Founder and Executive Chairman of the Sutton Trust, Chairman of the Education Endowment Foundation

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Recommendations

1. **The funding system at postgraduate level in England should be reformed, to remove financial barriers to postgraduate study.** While recent reforms to postgraduate loans are welcome and have helped to widen access, there is still evidence of financial barriers deterring prospective students. This is particularly pressing at the country's most prestigious institutions, as these tend to be more expensive both in terms of tuition fees and living costs. Instead of being a contribution, the government's postgraduate financial support system should cover full maintenance costs for students, and the full course fee cost for all but the most expensive courses. This should ideally be through a mix of loans as well as grants for students from lower income backgrounds.

2. **Universities should extend their widening access work to postgraduate level, especially at high-status institutions.** This should include efforts to improve the attainment of disadvantaged undergraduate students to allow them to progress to postgraduate level. High status universities especially should look at recruiting students for postgraduate level from a range of different institutions, as well as exploring other ways to widen access, for example running postgraduate summer schools aimed at potential students from lower socio-economic backgrounds. Universities should also make use of contextual admissions at postgraduate level, taking into account the potential as well as the prior attainment of applicants.

3. **Data on widening participation to postgraduate study should be regularly published by the Office for Students and/or the Department for Education (for England) and the devolved governments.** As is the case at undergraduate level, universities should be required to provide data on access and outcomes, with data regularly published as an official statistical release. Having this data available can help policy makers to track progress on opening up access to this level of study.

4. **In England, The Office for Students should be given strengthened responsibility to ensure fair access to postgraduate study, as it does at undergraduate level.** Universities are required to submit access and participation plans for undergraduate study to demonstrate how they will widen access, and these plans should also cover efforts to widen participation at postgraduate level, with published data on postgraduate participation being used to inform their plans and track their progress. As with undergraduate level, the OfS should have a role in engaging with institutions who are not making sufficient progress.

5. **Universities should ensure course fees are fair and appropriate, and they should avoid charging application fees for postgraduate courses.** If universities are charging course fees above the increased level of government support outlined above, they should provide adequate financial support themselves to ensure there are no financial barriers to participation. Ideally, universities should not be charging application fees at postgraduate level, but if application fees are charged, they should be as low as possible, with waivers easily accessible to any applicants who are unable to afford them. Oversight from the Office for Students should include looking at both course and application fees, with action taken where these costs are acting as barriers to lower-income students.

6. **The application process for postgraduate courses should be clear and easy to navigate, with information about courses easy to find and the application process simplified where possible.** In the short term, all universities should consistently provide information on their postgraduate courses to UCAS, so that it is quick and easy to find for applicants. In the longer

term, if universities decide UCAS is not the best place for this, institutions should look at ways the sector could better coordinate to improve the application process for students, especially at taught postgraduate level, for example working together to create a centralised application system between multiple institutions. Having a clear, joined up and transparent application process would benefit applicants, especially those from disadvantaged backgrounds who are less likely to have help and support with their applications. A more joined up system could also help to improve data on the application and success rates of students from different backgrounds at postgraduate level, as well as potentially reducing administrative costs for institutions.

Executive summary

Background and context

- The expansion of undergraduate education in high-income countries, including the UK, is associated with the growing prominence of postgraduate education. Previous research suggests that when a given level of education expands, educational inequalities pass up to the next level. This study explores whether this holds true for the UK, looking at socioeconomic inequalities and patterns of progression from undergraduate to postgraduate education.

- Existing evidence, both academic and policy-oriented, demonstrates that postgraduate qualification holders tend to fare better in the labour market than those with "only" a first degree. The most optimistic accounts indicate that postgraduate degree holders have substantially higher median salaries. Research producing more conservative conclusions states that, at the very least, postgraduate degrees insure individuals against poor professional outcomes. Therefore, postgraduate degrees may be an important element in fostering social mobility in the UK.

- We use data from very large-scale surveys of UK graduates across the years 2012/12 – 2017/18 to track progression from undergraduate to postgraduate study. We investigate how this varies according to graduates' socio-economic and academic characteristics. We look too at whether new master's loans have helped to shift inequalities of postgraduate access. With the help of a major database on postgraduate fees, we track how postgraduate tuition fees have changed in the same period and assess whether, despite these new loans, this is pricing some graduates out of postgraduate study.

Master's loans

- Master's loans have been introduced in all the UK nations, starting with England in 2015/16. The generosity and the terms and conditions of loans vary significantly though. In 2020/21, students domiciled in Wales could receive a maximum of £17,489 to pay for their postgraduate study, which could be taken entirely as a loan or as a combination of loan and grant subject to household income, whereas Northern Ireland only offers a tuition fee loan of up to £5,500.

- Through a detailed analysis of master's loans in England, we show they have apparently been successful in increasing and widening access to master's degrees. Rates of progression from an undergraduate degree to a postgraduate master's have increased for graduates of all backgrounds, but they have increased the most for those from socio-economically disadvantaged groups. In 2013/14, just 6% of first-degree holders from working class backgrounds in England progressed to a taught higher degree (i.e. master's), compared to 8.6% for those from managerial and professional backgrounds. By 2017/18, rates for both groups had risen considerably, and the gap in participation had reduced, with 12.9% for those from working class backgrounds and 14.2% from managerial and professional backgrounds going onto this type of study.

- We highlight a risk that increases in postgraduate tuition fees have the potential to wipe out these gains in access if there is not better targeting of financial support for the most needy.

Inequalities in progression to postgraduate study

- We find differences in progression rates to higher degrees across several different socioeconomic characteristics: graduates from less privileged backgrounds appear to be less likely to progress than their better-off counterparts. This is true whether looking at parental occupation (with 18.4% of graduates from professional and managerial backgrounds going onto a taught or research higher degree within 15 months of graduating, compared to 14.4% of graduates from routine or semi routine backgrounds), and education (13.9% for those with at least one parent with a higher education qualification vs 11.6% for those with none), neighbourhood (13.2% for those from high participation areas vs 12.6% for low participation areas) or type of school attended prior to higher education (14.6% for private schools vs 12.5% for state schools).

- These differences are smaller than those seen at earlier educational levels, but they remain even after taking account of prior attainment and institution attended at first degree. Differential degree attainment accounts for part, but not all of the differences in rates of postgraduate access.

- Among those who progress to a higher degree, there are important differences across socioeconomic groups in access to the UK's most prestigious institutions, differences that tend to persist even among those students that graduate with top marks and from a Russell Group institution. About eight out of every twenty graduates from professional/managerial backgrounds who progressed to a higher degree within 15 months of graduating in 2017/18 did so at a Russell Group university. For working-class graduates the equivalent figure was five out of twenty.

- There are also differences in participation in postgraduate study by ethnicity. For progression to taught higher degrees, groups with the highest transition rates are Other (16.1%), Black African (13.8%) and Chinese (12.9%), with graduates from White (10.7%), Indian (10.7%) and Bangladeshi (10.2%) backgrounds having lower rates. For progression to higher degrees by research, White graduates have the highest rate (1.7%), followed by Mixed (1.6%) and Chinese (1.4%). Black Caribbean graduates have low rates of progression to both taught (9.4%) and research (0.6%) higher degrees.

The costs of postgraduate study

- We look at the cost of postgraduate education – both in terms of tuition fees and living expenses – and compare it to the loan funding available. Most postgraduate fees are currently unregulated. We present evidence that tuition fee levels at UK higher education institutions for taught postgraduate courses have increased, in the past 14 years, well beyond inflation. For example, while average tuition fees for a classroom-based taught postgraduate programme in 2011 were £5,435 at a Golden Triangle university and £4,408 in the other Russell Group universities, by 2020 they had risen to £10,898 (an increase of 101 percent) and £8,744 (a 98 percent increase) respectively.

- The price differences between the UK's most prestigious institutions and the rest of the sector have also widened within the same time period. In 2006/07 for classroom-based courses, the difference between the most expensive group of institutions (in the Golden Triangle) and the least costly (interestingly, these were other Russell Group universities) was just £1,404. But in 2020/21, the difference between the most and the least expensive group of institutions, this time between Golden Triangle universities and post-1992 institutions, was 2.5 times higher: £3,532.

- We find that the postgraduate loan arrangements in Scotland and Northern Ireland would only partially cover the tuition fee costs for a handful of institutions, which do not include any Russell Group university. Qualitative research by Dr Rosa Marvell suggests many postgraduates are price sensitive and discouraged from applying to some courses by high costs.

- If we take living costs into account, no postgraduate loan regime in England, Scotland and Northern Ireland would allow students to cover the cost of their postgraduate education full-time without having to get resources from elsewhere. For full-time master's students, only the postgraduate funding arrangements in Wales give the prospect of affordability at present.

Promoting fair access to postgraduate study

- Throughout the report, we highlight actions universities are taking to improve access to postgraduate qualifications. These include scholarship schemes (University of Sheffield), summer school schemes (University of Oxford) and a national working group (NEON, with the University of Leeds and the University of Manchester).

- There is scope for significantly increased and co-ordinated efforts to further widen postgraduate participation by universities and funding bodies.

1. Introduction

In this report, we investigate access to postgraduate education in the UK by focusing on the transition from undergraduate to postgraduate degrees by underrepresented groups. We believe that improving access to postgraduate education is important to enhance equality of opportunity for UK graduates, particularly for those from disadvantaged backgrounds. As the former Minister of Universities David Willetts suggests, 'increasing numbers of professions expect a master's, so access to a master's is becoming a new barrier to social mobility'.[1] There are several reasons why this is the case, but generally speaking, the growing relevance of postgraduate qualifications is tightly linked to the expansion of undergraduate education, as 'gains in equality of access to first-degrees are indeed at risk from postgraduate expansion'.[2] While recent developments in addressing inequalities in access to UK undergraduate qualifications should certainly be celebrated, previous research suggests that, once access to a given level of education universalises, inequalities tend to pass up to the next level.[3] Therefore, whilst policymakers and universities should keep working to expand and widen access to undergraduate education, attention needs to be paid as well to access to higher levels of education. We believe this report makes an important contribution to understanding the latter.

The research reported in the subsequent sections of this report deals with a variety of issues that are relevant to widening access to postgraduate education, specifically in relation to access to master's and research degrees.[4] We make extensive use of data from the Destination of Leavers from Higher Education (DLHE) survey, a dataset capturing the destinations of UK graduates. Here, we update our findings by using the first round of data from the Graduate Outcomes survey, which, as with DLHE, records the activities of UK undergraduate leavers. After describing the data and methods used in this report (section 2), we first assess the impact of the recently introduced master's loans on access to postgraduate education and whether they have changed the progression rates of students from different socioeconomic backgrounds (section 3). Second, we look at the socioeconomic characteristics of students progressing to a postgraduate degree – particularly at the UK's most prestigious institutions – and identify those graduates whose academic achievement would allow them to undertake further study (section 4). Finally, we report the cost of postgraduate qualifications, looking at how this varies across different types of institutions, comparing them to the amount of loan funding available (section 5). Additionally, throughout the report, we provide break-out boxes outlining examples of best practice regarding access to postgraduate education, and one example of qualitative research looking at first-generation student narratives regarding their experience of postgraduate study.

Before we discuss the substantive findings of our research, this section begins by contextualising the recent expansion of postgraduate education in the UK. We also review past research on socioeconomic inequalities and access to postgraduate education, and the labour outcomes of postgraduate degree holders.

[1] Willetts, D. (2017). *A University Education.* Oxford: Oxford University Press.
[2] Wakeling, P. and Laurison, D. (2017). Are postgraduate degrees the 'new frontier of social mobility'? *British Journal of Sociology* 68(3): 533-555.
[3] Raftery, A. and Hout, M. (1993). Maximally Maintained Inequality: Expansion, Reform, and Opportunity in Irish Education, 1921-75. *Sociology of Education* 66(1): 41-62.
[4] This report draws on and extends research presented elsewhere, including Mateos-González, J.L. and Wakeling, P. (2020). Student loans and participation in postgraduate education: the case of English master's loans. *Oxford Review of Education* 46(6): 698-716.

1.1. Postgraduate education in context

In the 20th century, high-income countries have experienced what the educationalist Peter Scott calls 'the most profound but least celebrated social revolution'.[5] a phenomenal expansion of secondary schooling, followed by an equally remarkable development of undergraduate education. In the case of the UK, the higher education enrolment rate – measured as the percentage of 18–20-year-olds entering higher education – increased from 4 percent in 1950 to 32 percent by the turn of the 21st century.[6] There are different factors that explain this growth, including the universalisation of secondary education, the consolidation of political ideologies that link educational attainment with economic productivity and social mobility, or a labour market that increasingly demands a more formally educated workforce.

Now, we are witnessing a similar phenomenon in relation to postgraduate education.[7] In 2019/20 there were 281,950 taught higher degree students in UK higher education institutions, compared to 168,315 in 2007/08, an increase of two-thirds. The proportion of UK-domiciled students at this level remained at just over 40% across the period. Among research degree students, numbers grew from 81,160 to 99,845 across the same years, with UK students making up around 55% of the total in most years.[8] Between 1995 and 2019, the number of UK-domiciled students entering a postgraduate taught programme has grown by 36 percent, from 95,525 to 130,115.[9] This growth appears to be driven by similar factors associated with undergraduate expansion. Notably, it may be linked to the massification of UK undergraduate education, as demand for a given level of education may be caused by an increase in participation at a lower level. This was already stated in 1963 by a report published by the Committee on Higher Education, the so-called Robbins report:

> there is a natural presumption that the demand for postgraduate study will increase. […] Every increase of educational opportunity at one level leads almost at once to a demand for more opportunity at a higher level.[10]

Interestingly, the Robbins Report also took postgraduate education into account when asserting its famous principle that has guided policymaking on the expansion of undergraduate opportunity: that 'courses of higher education should be available for all those who are qualified by ability and attainment to pursue them and who wish to do so'. According to Robbins, 'on the principle we have already stated, the demand [for postgraduate education] should be met'. Nevertheless, it has not been until recently that the relevant authorities in the UK and its devolved nations have taken action to apply the Robbins principle to postgraduate opportunity. Fortunately, it appears that postgraduate study is now increasingly perceived as a key aspect of widening participation policies, and research seeking to diagnose inequalities in its access is gaining momentum. The main reason why attention is gradually being directed to postgraduate education is that research consistently reports favourable economic returns to postgraduate qualification holders.

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[5] Scott, P. (2010). Higher Education: An Overview. In: Peterson, P., Baker, E., and McGaw, B. (editors), *International Encyclopaedia of Education.* Volume 4, pp. 217-228. Oxford: Elsevier.

[6] Boliver, V. (2011). Expansion, differentiation, and the persistence of social class inequalities in British higher education. *Higher Education* 61: 229-242.

[7] Broadly speaking, postgraduate education refers to any type of higher education that is pursued by those with an undergraduate degree. In the UK, postgraduate qualifications include, inter alia, diplomas, certificates, master's or doctorates, which vary in the length of their expected period of study and whether a research-based dissertation is required. In this report, we focus on two main postgraduate qualifications: taught master's and research degrees. For a comprehensive report on postgraduate education in the UK, see House, G. (2020). *Postgraduate education in the UK*. Oxford: HEPI.

[8] Source: HESA Student Record 2007/08 – 2019/20 (via Heidi Plus). Numbers of students on 'other' postgraduate qualifications, which do not lead to a full degree (e.g. postgraduate certificates and diplomas) actually shrank over the period, from 67,125 to 56,565.

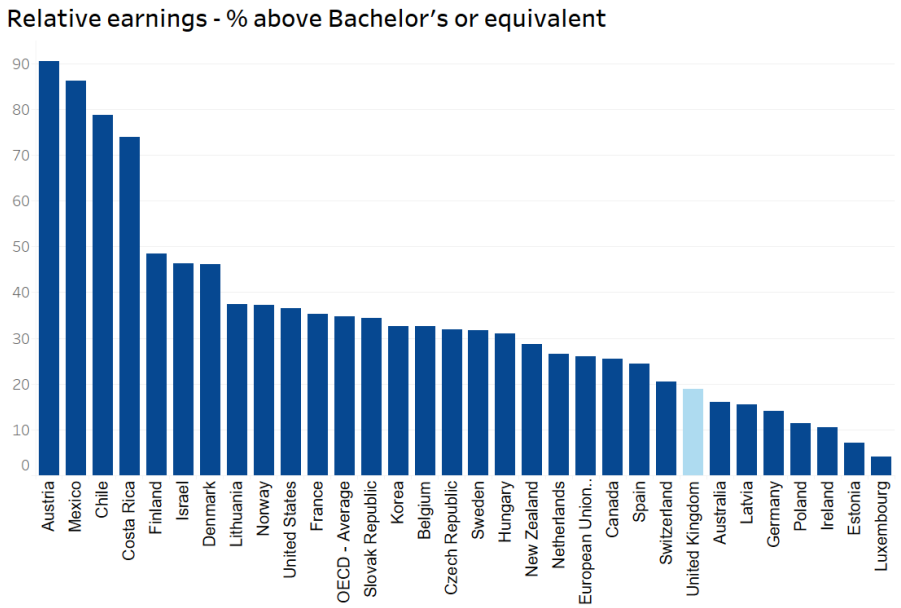
[9] In Full-Time Equivalent numbers. These figures are sourced from the dataset used in Mateos-González, J.L. (2019). Non-EU international students in UK higher education institutions: prosperity, stagnation and institutional hierarchies (Doctoral Thesis). University of Durham and HESA's Heidi Plus service (https://www.hesa.ac.uk/services/heidi-plus).

[10] Committee on Higher Education (1963). *Higher Education: Report of the Committee appointed by the Prime Minister under the Chairmanship of Lord Robbins* [The Robbins Report]. London: Her Majesty's Stationery Office.

1.2. Postgraduate education and professional outcomes

Research consistently reports better professional outcomes for individuals with a postgraduate degree, both in the UK and elsewhere. For instance, in 2018, individuals with a master's or a doctoral degree from all OECD countries showed higher relative earnings than those with an undergraduate qualification. Figure 1 reports this.

Figure 1. Earnings of individuals from OECD countries with a master's or doctoral degree relative to those with an undergraduate qualification (2018).[11]



Postgraduate degree holders in OECD countries earn, on average, almost 40 percent more than individuals with an undergraduate qualification only. The postgraduate premium in the UK is slightly lower than the OECD average, with holders of a master's or a doctoral degree earning around 20 percent more than their undergraduate counterparts.

The data provided by the OECD is consistent with the findings of research looking at the labour market outcomes of UK postgraduates. For instance, in previous Sutton Trust research, Lindley and Machin suggest that, in 2011, UK postgraduate holders could expect to earn £5,500 more a year compared to undergraduate degree holders.[12] Similarly, research from the UK's Department for Education indicates that, in 2013/14, the median earnings of UK-domiciled individuals with a taught master's from an English university were around £10,000 more than those with only an undergraduate degree.[13] Furthermore, Wakeling and Savage[14] showed that postgraduate degree holders are more likely to belong to the 'elite' class, characterised by having the highest levels of income, savings, social and cultural capital.

More recently, a report produced by the Institute for Fiscal Studies on the earnings returns to postgraduate degrees in the UK using the Longitudinal Education Outcomes (LEO) dataset showed that indeed postgraduate holders have, on average, higher earnings than undergraduates, but with some

[11] Source: OECD.Stat (https://stats.oecd.org/Index.aspx?DataSetCode=EAG_EARNINGS) and the authors' own calculations
[12] Lindley, J. and Machin, S. (2013). *The Postgraduate Premium: Revisiting Trend in Social Mobility and Educational Inequalities in Britain and America.* London: The Sutton Trust.
[13] Department for Education. (2018). *Graduate Outcomes (LEO): Postgraduate Outcomes in 2015 to 2016*. London: Department for Education.
[14] Wakeing, P. and Savage, M. (2015). Entry to elite positions and the stratification of higher education in Britain. *The Sociological Review* 63: 290-320.

caveats. They identified substantial variation in postgraduate returns depending on the subject studied both at the undergraduate and postgraduate levels, and the type of postgraduate degree. Notably, they found that master's degrees in law, economics and business yield particularly high returns. Additionally, while they discovered that the postgraduate earnings premium is low once attainment and socioeconomic characteristics are accounted for, they showed that 'postgraduate degrees appear to offer insurance against bad labour market outcomes.' That is, postgraduate degrees did not on average deliver very high earnings, but those with postgraduate degrees did avoid low earnings.[15]

Indeed, the findings of the research reviewed here are consistent with students' understandings of postgraduate study, which seem to perceive postgraduate education primarily as a way of improving their career prospects. Furthermore, this perception appears to have strengthened in recent years. In 2009, results from the Postgraduate Taught Experience Survey (PTES) showed that 53 percent of its respondents decided to undertake a postgraduate degree to progress in their current career path, with half of them stating that they did so to improve their employment prospects. In 2019,[16] these percentages grew to 61 and 58 percent respectively. Therefore, considering that postgraduate study provides substantial returns to its graduates – or at least insures them from poor professional outcomes – it is important to tackle any inequities in access to postgraduate study, which, according to previous research, are present in the UK and elsewhere.

1.3. Socioeconomic inequalities and access to postgraduate education

With the expansion of undergraduate education, scholars of education have started to pay attention to inequalities in access to higher levels of instruction. Research consistently reports inequities in access to postgraduate education and identifies mechanisms of exclusion and social reproduction found in earlier levels of education. Notwithstanding, these inequalities appear to be less marked than for those individuals entering higher education for the first time. In this section, we review the existing literature on how transitions to postgraduate education vary across socio-demographic characteristics.

International evidence – although relatively scarce – suggests that students from less well-off backgrounds are less likely to enrol in a postgraduate course. In the case of the US, Posselt and Grodsky demonstrate that students whose parents already hold a master's, professional or doctoral degree are overrepresented in these programmes, particularly in the latter two, arguing that 'graduate and professional education are a site of substantial social reproduction'.[17] Similarly, Mullen and colleagues identified, in the early 2000s, that first-generation students – that is, students whose parents have not been to university – are significantly less likely to enter a postgraduate course leading to professional accreditation, and PhD programmes.[18] In this sense, Grodsky and Pyne suggest that, in the US context, this may be due to the additional debt disadvantaged students need to incur to pursue 'lucrative careers through advanced degree programs.'[19] Furthermore, they demonstrate that the median returns of postgraduate degrees compared to undergraduate ones are particularly high for African American and socioeconomically disadvantaged students, suggesting that addressing inequalities in access to postgraduate study is important for fostering social mobility.

Research on several European countries also reveals social inequalities in access to postgraduate education. For instance, in the case of Italy, Argentin and Triventi show that students whose parents have some form of tertiary education are between 10 and 15 percent more likely to enrol in a

[15] Britton, J. Buscha, F. Dickson, M., van der Erve, L., Vignoles, A., Walker, I., Waltmann, B., and Zhu, Y. (2020). *The earnings returns to postgraduate degrees in the UK.* London: Institute for Fiscal Studies.
[16] Neves, J. and Leman, J. (2019). *2019 Postgraduate Taught Experience Survey.* York: AdvanceHE.
[17] Posselt, J. R. and Grodsky, E. (2017). Graduate Education and Social Stratification. *Annual Review of Sociology* 43: 353-78.
[18] Mullen, A., Goyette, K. and Soares, J. (2003). Who Goes to Graduate School? Social and Academic Correlates of Educational Continuation After College. *Sociology of Education* 76(April): 143-169.
[19] Pyne, J. and Grodsky, E. (2020). Inequality and Opportunity in a Perfect Storm of Graduate Student Debt. *Sociology of Education* 93 (1): 20-39.

postgraduate course than first-generation students, controlling for age, sex, and geographical area of origin.[20] Similarly, Mastekaasa reports that students from the most privileged backgrounds are more likely to progress to a doctoral degree, particularly those whose parents have PhDs and are employed in higher education institutions. [21] In the case of Germany, Nuegebauer et al find that socioeconomic characteristics do have an effect on progression to master's studies, which is indirect in nature. According to the authors, access to master's courses is shaped by students' educational trajectories, academic achievement, and cost sensitivity, which are all in turn strongly linked to individuals' social origins.[22]

The patterns identified internationally are consistent with those observed in the UK. For instance, the Institute for Fiscal Studies identified that students from better-off backgrounds were more likely to undertake postgraduate study,[23] but this can be explained, as in Germany, by prior achievement and attainment at school and in higher education. Similarly, Wakeling and Hampden-Thompson, in a report for the Higher Education Academy (now AdvanceHE) looking at progression patterns to postgraduate study of UK undergraduates that graduated in 2009/10 and 2010/11, showed that individuals from the most privileged backgrounds were 1.4 and 2.3 times more likely than their working-class peers to progress to a master's and a research degree respectively. However, while academic performance explained some of these differences, they still observed a social class effect. [24] Additionally, in 2017, Wakeling and Laurison reported that this effect had grown over time, coinciding with the expansion of undergraduate education.[25]

In relation to race/ethnicity, international evidence also suggests that ethnic minority groups are less likely to attain postgraduate degrees. In Australia, students from indigenous backgrounds face important barriers to completion of research degrees, including racism, social isolation and economic difficulties.[26] In the US, African Americans and Hispanic individuals appear to be less likely than White and Asian students to progress to research degrees.[27, 28] In the UK, students from almost all ethnic minority groups appear to be more likely to progress to a master's degree than White British graduates, although this issue could be due to the fact that these individuals 'are less likely than their White counterparts to fare well in the labour market and are more likely to adopt a compensatory strategy of further educational investment'.[29] However, regarding access to research degrees, Black graduates are substantially under-represented, even when taking into account differences in prior attainment, with White British and British Chinese individuals being more likely to progress to a research degree.[30]

[20] Argentin, G. and Triventi, M. (2011). Social inequality in higher education and labour market in a period of institutional reforms: Italy, 1992-2007. *Higher Education* 61: 309-323.
[21] Mastekaasa, A. (2006). Educational transitions at graduate level: social origins and enrolment in PhD programmes in Norway. *Acta Sociologica* 49(4): 437-453.
[22] Neugebauer, M., Neumeyer, S. and Alesi, B. (2016). More diversion than inclusion? Social stratification in the Bologna system. *Research in Social Stratification and Mobility* 45: 51-62.
[23] Britton, J. Buscha, F. Dickson, M., van der Erve, L., Vignoles, A., Walker, I., Waltmann, B., and Zhu, Y. (2020). *The earnings returns to postgraduate degrees in the UK.* London: Institute for Fiscal Studies.
[24] Wakeling, P. and Hampden-Thompson, G. (2013). *Transition to higher degrees across the UK: an analysis of national, institutional and individual differences.* York: The Higher Education Academy.
[25] Wakeling, P. and Laurison, D. (2017). *Are postgraduate degrees the 'new frontier of social mobility'?* British Journal of Sociology 68(3): 533-555.
[26] Moodie, N. Ewen, S. McLeod, J. and Platania-Phung. C. (2017). Indigenous graduate research students in Australia: a critical review of the research. *Higher Education Research & Development* 37(4): 805-820.
[27] McCallum, C. M., Posselt, J. R. & López, E. (2017) Accessing postgraduate study in the United States for African Americans: relating the roles of family, fictive kin, faculty, and student affairs practitioners. In A. Mountford-Zimdars & N. Harrison (eds.) Access to Higher Education: Theoretical Perspectives and Contemporary Challenges, Abingdon and London: Routledge and Society for Research into Higher Education, 171 – 189.
[28] Torche, F. (2018). Intergenerational Mobility at the Top of the Educational Distribution. *Sociology of Education* 91(4): 266-289.
[29] Lessard-Phillips, L., Boliver, V., Pampaka, M., and Swain, D. (2018). Exploring ethnic differences in the post-university destinations of Russell Group graduates. *Ethnicities* 18(4): 496-517.
[30] Williams, P., Bath, S., Arday, J & Lewis, C. (2019) *The Broken Pipeline: Barriers to Black PhD Students Accessing Research Council Funding*. London: Leading Routes.

KEY POINTS

Postgraduate qualifications are increasingly important for entry to certain professions. Postgraduate student numbers have grown in the UK and across the world in recent years. This growth has followed on from increases in educational participation at lower levels.

Those who hold a postgraduate qualification tend to enjoy advantages over those with first degrees and lower qualifications in their earnings, security of employment and job satisfaction.

Previous research in the UK, USA and elsewhere points to inequalities in access to postgraduate education. Those from socio-economically disadvantaged backgrounds are less likely to access postgraduate qualifications. There is also evidence that graduates from certain minority ethnic groups are less likely to enter postgraduate study. In the UK this is the case for research degrees, but at master's level White students have the lowest rate of immediate progression.

2. Data and methods

The data drawn on here comes from four key sources, providing the information needed to carry out the analysis for each substantive section of this report. First, in order to assess the impact of postgraduate loans (section 3), we use data from the Destination of Leavers of Higher Education survey (DLHE), curated by the UK's Higher Education Statistics Agency (HESA), which provides information on, inter alia, the educational destinations of UK undergraduate leavers between 2012/13 and 2016/17. This allows us to investigate changes in progression rates to postgraduate study before and after postgraduate loans were implemented. Second, section 4 utilises the first round of the Graduate Outcomes survey, also managed by HESA, a new social survey that captures, like DLHE, the destinations of UK graduates.[31] We use this dataset to provide the most recent snapshot of patterns of progression to postgraduate study by graduates' socioeconomic characteristics. Additionally, this dataset also allows us to understand patterns of access to the UK's most prestigious institutions. Finally, in section 5, we explore the cost of UK postgraduate degrees, both in terms of tuition fees and maintenance, using two main sources of data: the Reddin survey of tuition fees and *Which?* student budget calculator, a tool advertised by UCAS to help prospective students understand the average expenses they may incur when pursuing a degree at any UK higher education institution (HEI). In the following pages, we discuss these datasets in detail, the variables used in our analysis, and how we have analysed them.

2.1. The Destination of Leavers of Higher Education survey

In section 3, we summarise the work we recently published in the *Oxford Review of Education,* in which we used DLHE data to assess the impact of the English master's loans introduced in 2016 on widening participation at the postgraduate level.[32] In this article, we used a bespoke dataset containing information on all English-domiciled first-degree leavers who finished their undergraduate studies in a UK HEI between the academic years 2012/13 and 2016/17, including those graduates that started a postgraduate degree between 2013/14 and 2017/8. This resulted in a dataset with 1,360,965 individuals, covering the destination of graduates three years before and two years after the introduction of the loans.

The DLHE survey, which aims to be a census of UK graduates, allows exploration of the main activity of first-degree leavers approximately six months after graduation. Thus, in our dataset, we were able to track whether a given graduate was pursuing further study when surveyed and analyse patterns of immediate progression to postgraduate study in UK higher education. Additionally, graduates' responses to DLHE were linked to HESA's Student Record, which offers an array of socioeconomic and educational information that students provided when they started their undergraduate studies.

Cleaning the data included limiting our population of interest to English-domiciled students in order to isolate the impact of the English master's loan policy, the eligibility of which depends on students' residency status. Unfortunately, we were not able to assess in detail the impact of the implementation of postgraduate loans in other home nations, as they were introduced in later academic years. We also excluded from our analysis those individuals who undertook an integrated master's degree at the undergraduate level, a programme that combines a first-degree and a master's course that is commonly

[31] Unfortunately, DLHE and Graduate Outcomes do not provide comparable results due to differences in the period when data is collected. The former asked graduates about their current status 6 months after graduation, while the latter does so 15 months after they finished their undergraduate studies. As stated by HESA themselves, 'we cannot assume that graduates will be doing the same activities at the six and 15-month point, even if it was the same set of graduates' (Agarwal, N. (2020, June 11). Don't mistake Graduate Outcomes for DLHE. *HESA.* https://www.hesa.ac.uk/blog/11-06-2020/dont-mistake-graduate-outcomes-dlhe).
[32] Mateos-Gonzalez, J. L. and Wakeling, P. (2020). Student loans and participation in postgraduate education: the case of English master's loans. *Oxford Review of Education* 46(6): 698-716.

found in STEM subjects. We believe that it is reasonable to assume that these students will be substantially less likely to progress to a master's degree.

The resulting analytic dataset contained a combination of socioeconomic and educational variables. First, it allowed us to capture the educational destinations of graduates, which included the following types of further study recorded 6 months after graduation: 1) Higher degree, mainly by research (e.g. PhD, DPhil, MPhil), 2) Higher degree, mainly by taught course (e.g. MA, MSc, MBA), 3) other types of postgraduate diplomas and professional qualifications, 4) first degree. For the purpose of section 3's analysis, we focussed on loan-eligible courses, that is, taught higher degree. Additionally, these datasets included information on first-degree subject of study, institution and degree classification, as well as other background characteristics such as the occupational social class (NS-SEC) of the household reference in cases where the students were regarded as dependent, gender and ethnicity.

We believe that this dataset is the most comprehensive source of information to understand the impact of master's loans on progression rates to postgraduate study that takes into account the socioeconomic characteristics of students. Unfortunately, with this dataset, we can only make claims about those students that enrolled in a postgraduate course immediately after they finished their first degrees. While this represents a good proportion of the postgraduate student population – in the academic year 2017/18, they represented 38% of the total population of English-domiciled taught postgraduates[33] – we are not able to capture the characteristics nor the educational trajectories of those individuals that left higher education and returned after a period of employment. This is why we believe that in future, data on the socioeconomic characteristics of postgraduates should also be collected at the point of entry, as it is collected for new undergraduate entrants.

In section 3, we analyse the dataset described above using two logistic regression models, one for those graduates that may have immediately progressed to postgraduate study before the loans were available, and another one for those who had access to the English master's loans. This way, we can assess the predictive power of the variables described above in explaining progression to postgraduate study before and after the implementation of the loans.

2.2. The Graduate Outcomes survey

In section 4 of this report, we provide an updated snapshot of patterns of access to postgraduate education – and to the UK's most prestigious HEIs in particular – by a wide range of socioeconomic characteristics. To do so, we use a bespoke dataset derived from the Graduates Outcomes survey that captures the destinations of first-degree leavers who successfully finished their undergraduate studies in 2017/8, 15 months after graduation. To our knowledge, this is the most recent dataset containing the socioeconomic characteristics of postgraduate students in the UK. Unfortunately, as with DLHE, this is not a census of UK postgraduates. Instead, it provides a picture of what 2017/18 graduates were doing 15 months after graduation, thus missing those students that entered a postgraduate programme in subsequent years.

In terms of data management, we have restricted our population to UK-domiciled students and, as in DLHE, to first-degree leavers, excluding those who graduated from an integrated master's programme. Moreover, in section 4, we not only look at patterns of access to taught higher degrees, but also higher degrees by research.

As in DLHE, the Graduate Outcomes survey allows HESA to link graduates' responses to their Student Record information, meaning that our bespoke dataset also contains information on graduates'

[33] Source: authors' own calculation using our bespoke dataset and data drawn from HESA's Heidi Plus service, HESA's data dashboard.

demographic, socioeconomic and educational characteristics. Besides the factors described in section 2.1, our bespoke Graduate Outcomes dataset contains these additional variables:

- **POLAR4 quintiles:** POLAR4 is a method of classifying local areas based on their young participation rate in higher education. Then, these areas are ranked by participation rate and divided into five quintiles, with quintile 1 showing the lowest rate of participation and quintile 5 the highest. We include this measure of disadvantage as it is widely used in fair access research; however, we believe that it is not particularly useful in capturing the socioeconomic background of postgraduate students. This is because there is evidence that suggests that it is not an accurate indicator of individual circumstance and that its use may lead to 'increased injustice',[34] with new research suggesting deprivation-based area-level measures are more valid, provided they are combined with some individual-level information.[35]
- **Parental education:** this variable measures whether at least one parent, step parent or guardian of a given graduate had higher education qualifications upon the graduate's entry into their undergraduate degree.
- **Type of school attended:** this variable measures the type of school or college a student attended prior to entering higher education (either state or private-funded).

Furthermore, section 4 looks at access to postgraduate courses at the UK's most prestigious institutions. To do so, we also classify the institutions attended by graduates who progress to a postgraduate course using a categorisation widely used in the research literature seeking to capture nationally-bounded categories of prestige.[36] These are as follows:

- **The Golden Triangle:** includes Oxford, Cambridge, and a handful of London institutions: Imperial College, King's College, University College London and the London School of Economics (LSE). These institutions, which 'enjoy a worldwide reputation for excellence',[37] are a 'palpable entity in terms of its graduates' entry to elite positions'.[38]
- **Other Russell Group universities:** this set of highly socially selective institutions[39] is a 'self-proclaimed [group] of "leading" universities',[40] and includes the six Golden Triangle institutions and 18 other research-intensive universities. In this category, we exclude the six Golden Triangle institutions.
- **Other Pre-1992 institutions:** this category includes all those institutions that do not belong to the two categories above but obtained their university title before 1992, the year when former polytechnics were awarded their university title. As suggested in previous research, institutional age – particularly the 1992 divide – plays a key role in shaping public perceptions of university reputation and social selectivity.[41]
- **Post-1992 institutions:** these are universities that were granted a university title through the 1992 Further Higher Education act or later.

[34] Gorard, S., Boliver, V., Siddiqui, N., and Banerjee, P. (2019). Which are the most suitable contextual indicators for use in widening participation HE? *Research Papers in Education* 34 (1): 99-129.
[35] Jerrim. J (2020) Measuring Disadvantage. The Sutton Trust. Available at: https://www.suttontrust.com/our-research/measuring-disadvantage-higher-education-polar-fsm/
[36] See, for instance, Fenton, S. Moodod, T. and Smetherham, C. (2011). Academics and Globalisation. In Moodod, T. and Salt, J. (editors). Global Migration, Ethnicity and Britishness. London: Palgrave Macmillan UK.
[37] ibid
[38] Wakeling, P. and Savage, M. (2015). Entry to elite positions and the stratification of higher education in Britain. *The Sociological Review* 63: 290-320.
[39] Boliver, V. (2013). How fair is access to more prestigious UK universities? *British Journal of Sociology* 64(2): 344-64.
[40] Boliver, V. (2015). Are there distinctive clusters of higher and lower status universities in the UK? *Oxford Review of Education* 41(5): 608-27.
[41] Raffe, D. and Croxford, L. (2015). How stable is the stratification of higher education in England and Scotland? *British Journal of Sociology of Education* 36 (2): 312-35.

2.3. The Reddin survey of tuition fees and the Which? *student budget calculator*

Section 5 of this report looks at tuition fee levels for postgraduate courses delivered in UK higher education institutions, provides an approximation of the maintenance costs students need to incur when pursuing a postgraduate degree away from home, and compares these with the amount of loan and grant funding available in England, Scotland, Wales and Northern Ireland.

To do so, we utilise two main sources of data: the Reddin survey of university tuition fees[42] to gain an approximation of tuition fee levels for taught postgraduate courses (PGT)[43] and the *Which?* student budget calculator, [44] which provides the average monthly maintenance costs for students living outside the parental home to pursue a degree at each UK institution.

The Reddin survey was originally designed and conducted annually by the LSE academic Mike Reddin, who passed away in 2011. His work as a university lecturer and researcher in Social Policy, and his altruist contribution to knowledge on the costs of attending UK universities are deeply appreciated by his colleagues[45] and, of course, by us. The Reddin survey contains information on the tuition fees charged by UK universities to home, EU, and overseas students for a range of higher education courses, including foundation degrees, accelerated undergraduate programmes, undergraduate programmes, and PGT degrees. Mike Reddin's dataset has proven useful in furthering our understanding of UK higher education, its costs, and the behaviour of UK institutions.[46]

Every year, and since 2006, Mike Reddin – and now the *Complete University Guide* – would ask all UK higher education institutions to supply a 'typical (modal) fee for [full-time] courses in the relevant fee categories'.[47] In the case of PGT courses, these include:

- Classroom-based courses
- Mixed: programmes where teaching is undertaken both in lecture/seminar rooms and laboratories.
- Laboratory: programmes where most of the teaching happens at laboratories.
- Clinical
- MBA

In most cases, universities are able to provide a single typical fee for the categories above. Unfortunately, some universities do not do so and provide a fee range instead. In this report, for those universities that provide a range, we have decided to use its lower bound. While this approach is clearly conservative in terms of understanding the costs of postgraduate courses and may lead us to miss those institutions that are typically more expensive than otherwise reported, we do so from the perspective of providing the bare minimum that students have to spend if they want to pursue a postgraduate course in a given institution.

In relation to maintenance costs when undertaking a PGT degree, we have collected data supplied by *Which?*, a UK not-for-profit organisation that promotes consumer rights and reviews products and services. *Which?* has developed a student budget calculator that provides the average monthly cost of attending a given UK university, which is in turn advertised by UCAS, the UK's Universities and Colleges admission service. *Which?* stipulates that the calculator gives 'an indication of regional costs and average

[42] The Reddin survey of university tuition fees is now compiled by the Complete University Guide. Link to the survey: https://www.thecompleteuniversityguide.co.uk/sector/insights/reddin-survey-of-university-tuition-fees
[43] Unfortunately, the Reddin survey does not collect tuition fee data for research degrees.
[44] Link to the student budget calculator: https://www.which.co.uk/money/university-and-student-finance/student-budget-calculator/
[45] Please, see Mike Reddin's obituary in the following link: http://www.aflse.org/article.html?aid=1554
[46] For instance, see Broecke, S. (2015). University rankings: do they matter in the UK? *Education Economics* 23(2): 137-161.
[47] The Complete University Guide (2021). Consolidated spreadsheet of Reddin fees data (2007-2021). Retrieved on December 12, 2020. Link: https://www.thecompleteuniversityguide.co.uk/sector/insights/reddin-survey-of-university-tuition-fees

student spending'[48] using the Living Costs and Food Survey and the Relative Regional Consumer Price Levels, both provided by the Office of National Statistics. Additionally, *Which?* calculates accommodation costs for different types of student housing (halls of residence, private halls rents, and private rentals). In this report, we have decided to use the default option of the student budget calculator: the cheapest self-catered university accommodation. We have then multiplied this monthly average by 12, thus providing an indication of the yearly cost of attending a PGT degree, as 'master's typically requires a minimum of one full year of full-time equivalent study'.[49] The *Which?* student budget calculator currently provides data for the academic year 2019/20, therefore any analysis in this section in relation to maintenance costs will be done for that academic year.

[48] Which? Money Team (2020). Data on the Which? Student Budget Calculator. *Which?* https://www.which.co.uk/money/university-and-student-finance/student-budget-calculator-data-a04pt1w6skgh
[49] House, G. (2020). *Postgraduate education in the UK.* Oxford: HEPI.

3. Postgraduate loans and access to postgraduate study

In this part of the report, we describe the loan funding which forms the principal source of public support for postgraduate master's study in the UK. We consider briefly how and why master's loans were introduced, describe the schemes in operation in the four UK nations and summarise our research evaluating their impact on access to postgraduate study for different socio-economic groups. There are positive effects from master's loans, which it is important to recognise. However, there are also aspects of the loans, particularly in the English funding system, which limit their effectiveness in widening and equalising access. Considering the rapid increases in fees which we discuss in detail in section 5, the design of master's loans potentially carries the undoing of the apparent gains in access they have helped to facilitate.

The information box overleaf outlines the funding arrangement in each of the four UK nations.

FUNDING FOR 'HOME' MASTER'S STUDENTS IN THE FOUR UK NATIONS[50]

ENGLAND

Master's loans were first available in 2016/17, when a total of £10,000 could be borrowed towards the cost of studying a master's course at a UK university, growing each year with inflation. For students in 2020/21, the maximum loan amount is £11,222. Eligibility is based on residence/nationality, age (under 60s only) and the course studied. Loans are paid in three instalments across the year and unlike undergraduate tuition fee loans, are paid direct to the student, not their institution. Repayment is income contingent: payment is required only when a debtor is earning above a certain threshold (currently £1,657 per month), but concurrent repayment is required if an undergraduate loan is held too. Interest is charged on the loan at a rate of RPI + 3%.

NORTHERN IRELAND

UK students ordinarily resident in Northern Ireland can apply for a tuition fee loan, which is paid directly to the institution, not the student. Unlike English master's loans, there is no age limit, and students on postgraduate certificates and diploma courses are also eligible. Students can borrow the total cost of tuition fees for their course or £5,500, whichever is lower. For repayment purposes, Northern Irish master's loans are treated the same as undergraduate loans (and effectively added to any undergraduate debt). Interest is charged, but at a low rate (1.1% as of April 2020).

SCOTLAND

Scottish students can borrow up to £10,000 to support studying a postgraduate master's degree or postgraduate diploma. The loan is divided into two elements: a £5,500 tuition fee loan, paid directly to the institution; and a £4,500 living cost loan. The latter is not means-tested, but is only available to students under 60. Students must be full-time to be considered eligible. Repayment is income-contingent, fixed at 9% of income over the threshold (currently £25,000 per year), but interest is linked to RPI, with the intention that borrowers repay the value of the loan in real terms. As with English master's loans, debt is written off after 30 years.

WALES

Welsh-domiciled students have access to the most generous funding for master's study among the four UK home nations. It shares some eligibility features with the other schemes: students must be aged under 60 at the start of their course and studying a full master's degree for the first time to qualify. Funding is made up of loan and grant elements. All eligible students receive a grant of £1,000. Further funding of up to £16,489 (for 2020/21) is available. This can be taken entirely as a loan, or - subject to means-testing of household income - further grant funding up to £5,885 is available for students with the lowest household incomes (£18,370 per year or lower). Students can access the grant without having to take a loan as well. Care leavers automatically qualify for the full grant. Repayment of loans follows the same arrangements as in England.

[50] Sources: HM Government, Student Awards Agency Scotland, Student Finance Wales, and Student Finance Northern Ireland.

Master's loans were first introduced in England targeting English-domiciled students for the academic year 2016/17.[51] They had been proceeded by two versions of a scholarship scheme, the Postgraduate Support Scheme 2014/15 and 2015/16, which had been targeted at students from groups who were underrepresented on taught postgraduate degrees. While those schemes provided support in the form of fee waivers and/or maintenance bursaries, English master's loans are modelled on the system of undergraduate student loans in England in that repayment is income contingent. They differ in two important respects, however: the master's loan is intended as a *contribution* to costs; and no element of the loans is means-tested. After the academic year 2016/17, other home nations followed suit. The box below summarises the loan funding available at the four UK home nations, the eligibility of which depends on the residency status of students in each home nation.

Much had been made in the period preceding the introduction of master's loans of the potential impact of accumulated debt from undergraduate study on postgraduate participation. This was expected to deter those graduates who were subject to the higher £9,000 annual undergraduate tuition fees in England, especially for graduates from lower income households. Indeed the 2015/16 Postgraduate Support Scheme was specifically targeted at the first cohort of £9,000 graduates. Prior to the introduction of master's loans, UK master's students faced an almost complete absence of public funding for their tuition fees and living costs, and almost three-quarters reported being self-funded.[52] There is something of a contradiction in a policy which addresses concerns about significant debt burdens as a deterrent by offering further debt; however previous research has suggested that lack of independent resources or credit appeared to be more of a barrier than debt levels for financing a master's.[53]

Through the report, we introduce selected case studies of actions and initiatives taken by universities to address widening participation and fair access at postgraduate level. The first of these, looking at the Sheffield Postgraduate Scholarship, can be found in Case Study 1 below.

[51] A doctoral loan, initially for a total of £25,000 for the whole course, was subsequently introduced in England. To the best of our knowledge, there has been no evaluation of its impact on widening access to doctoral study.
[52] Universities UK (UUK). (2014). *Postgraduate taught education: The funding challenge.* London: Universities UK.
[53] Wakeling, P., Hampden-Thompson, G. and Hancock, S. (2017) Is undergraduate debt an impediment to postgraduate enrolment in England? British Educational Research Journal, 43 (6): 1149 – 1167.

Case Study 1

WIDENING PARTICIPATION THROUGH THE SHEFFIELD POSTGRADUATE SCHOLARSHIP

In 2014 the University of Sheffield piloted a successful initiative as part of the Higher Education Funding Council for England's Postgraduate Support Scheme – making the largest postgraduate scholarship offer ever made in the UK.

The University led a consortium of five partner Russell Group institutions which demonstrated latent demand for postgraduate study, with more than 1,700 applications for the 350 scholarships on offer. Following this successful initiative, the government announced new postgraduate loans worth up to £10,000 would be available from the 2016-17 academic year, but the University made the decision to carry on offering scholarships to students with widening participation characteristics.

I was fostered into a working-class family from Hillsborough, Sheffield and it means the world to me to receive the scholarship. […] I have fallen on many hard times in recent years as I have throughout my life and this has given me the impetus I so desperately needed to chase my dreams. […] I plan on pursuing a PhD once I have completed my master's degree and intend on contributing to the body of science in human communication.

The Sheffield Postgraduate Scholarship was launched for the first time in the 2016-17 academic year and is funded by the University along with the support of alumni and donors. Scholarships are worth £10,000 and are for taught postgraduate students who meet at least one of the University's widening participation criteria and/or students who achieve a first in their undergraduate degree. Some 570 scholarships have been awarded over the past five years. The scholarship scheme is a flagship part of Sheffield's widening participation efforts and continues into 2021/22 with over 100 new scholarships.

I come from a small town where most of the people around me do not have a university education and there is no encouragement to pursue a degree. It was through my undergraduate degree that I found out where my interests lie and the master's that I am studying is a step closer to chasing my career. The scholarship changed the direction my life was taking. Being on furlough and later losing my job, my future was insecure but having the scholarship meant that I had the funds to do a master's earlier than I had planned. After finishing my postgraduate degree, I hope to go in to bioengineering either through a job or a PhD.

3.1. Have postgraduate loans widened access to postgraduate degrees?

Before considering whether master's loan policies could be improved to better widen access to postgraduate education, we first need to consider whether the policy had any impact on access inequalities to begin with. Making available funding where there had previously been none would lead us to expect increased participation but concerns about the deterrent effect of yet more debt might mean that the already well-off would benefit most.

Simple statistical analysis by the Office for Students showed that progression into taught postgraduate degrees rose for all groups in the year when master's loans first became available.[54] However, those from low participation neighbourhoods saw the greatest increase. An evaluation of the loans policy for the Department for Education used parental higher education as a marker of socio-economic background and found little shift in the years before and after the introduction of loans.[55] Our analysis, which we

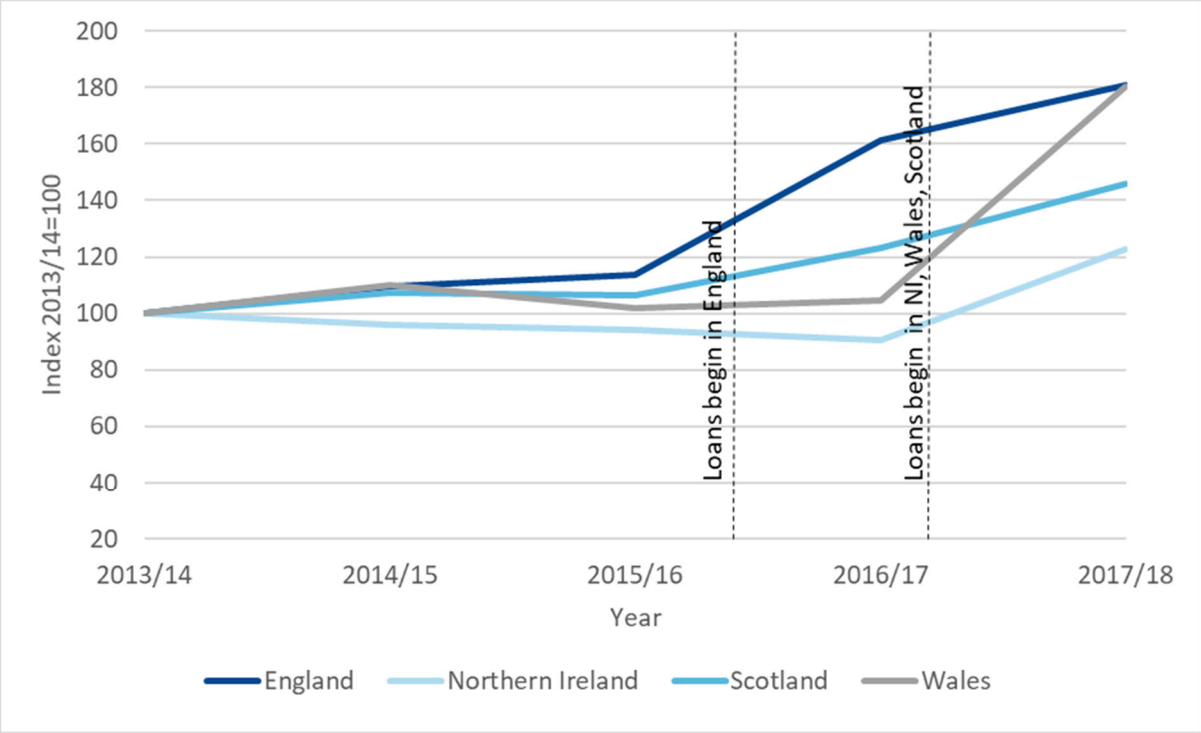
[54]Office for Students (OfS). (2018). The effect of postgraduate loans. *Office for Students*. https://www.officeforstudents.org.uk/data-and-analysis/the-effect-of-postgraduate-loans/

[55] Adams, L., Huntley-Hewitt, J., Morris, S., Whittaker, S., & Robertson, K. (2019). *Master's loan evaluation*. London: Department for Education.

summarise here, used a more sophisticated approach, including a longer run of years before and after the introduction of master's loans, a socio-economic measure based on household occupation (NS-SEC) and with other important factors taken into account.[56] The data we have available covers only those graduates who progress immediately from a first degree to a taught higher degree as their 'first destination', hence we cannot make claims about the effect of loans on the decision to return to postgraduate study by graduates of longer standing. Nevertheless, the comprehensive coverage of our dataset and the availability of time series gives a clear signal as to the impact of loans. While we cannot be certain that changes observed are *caused* by the availability of loans, we certainly have very strong circumstantial evidence.

As shown in Figure 2, the introduction of master's loans in each of the four UK nations was associated with an increase in the number of first-degree graduates progressing to taught higher degrees. In the case of English-domiciled graduates, this increase was seen in both the year loans were introduced and in the following year. In the case of Northern Ireland, loans seem to have reversed a trend of declining enrolments.

Figure 2. Number of UK-domiciled first-degree graduates progressing to a taught higher degree (i.e. master's) by country of domicile and year (indexed to 2013/14 = 100). Dotted lines show year of introduction of master's loans in respective countries.

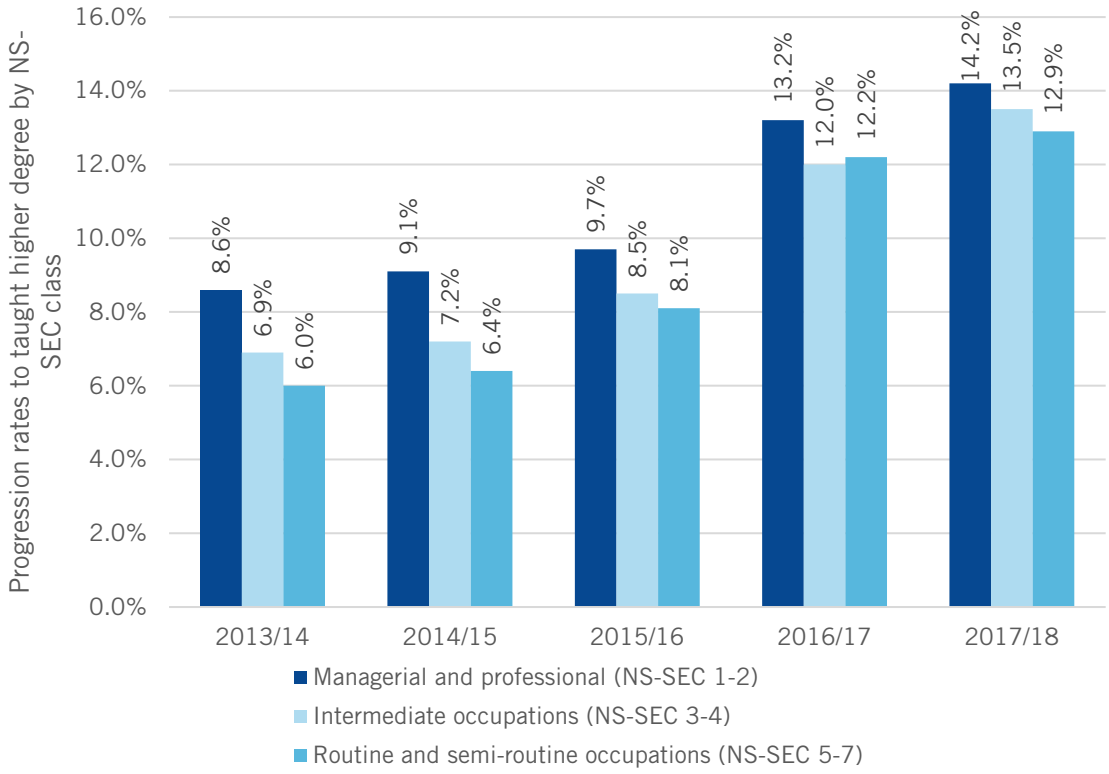


Focusing on England only,[57] we see that the rate of progression to a taught higher degree increased for graduates from each social class (measured using the National Statistics Socio-Economic Classification), as shown in Figure 3. However, it increased at a sharper rate for graduates from the more disadvantaged occupational groupings than those from the most advantaged group. Rates for 2017/18 for those coming from households where the main earner was in a routine or semi-routine occupation were more than twice those for the same group in 2013/14. This sharper rate of increase meant that after the

[56] For a full account, please see Mateos-González, J. L. and Wakeling, P. (2020) Student loans and participation in postgraduate education: the case of English master's loans, Oxford Review of Education, 46:6, 698-716.
[57] As explained in section 2 (Data and Methods), the research summarised here only focussed on the impact of English master's loans. This is due to the fact that postgraduate loans in other home nations were introduced later, thus limiting the possibility of assessing their impact due to data availability issues.

introduction of master's loans, differences in the participation chances of graduates from managerial and professional backgrounds, and those from routine and semi-routine backgrounds had reduced considerably.

Figure 3. Rate of progression from first-degree to a taught higher degree (i.e. master's) for English-domiciled graduates by academic year and occupational social class of household.

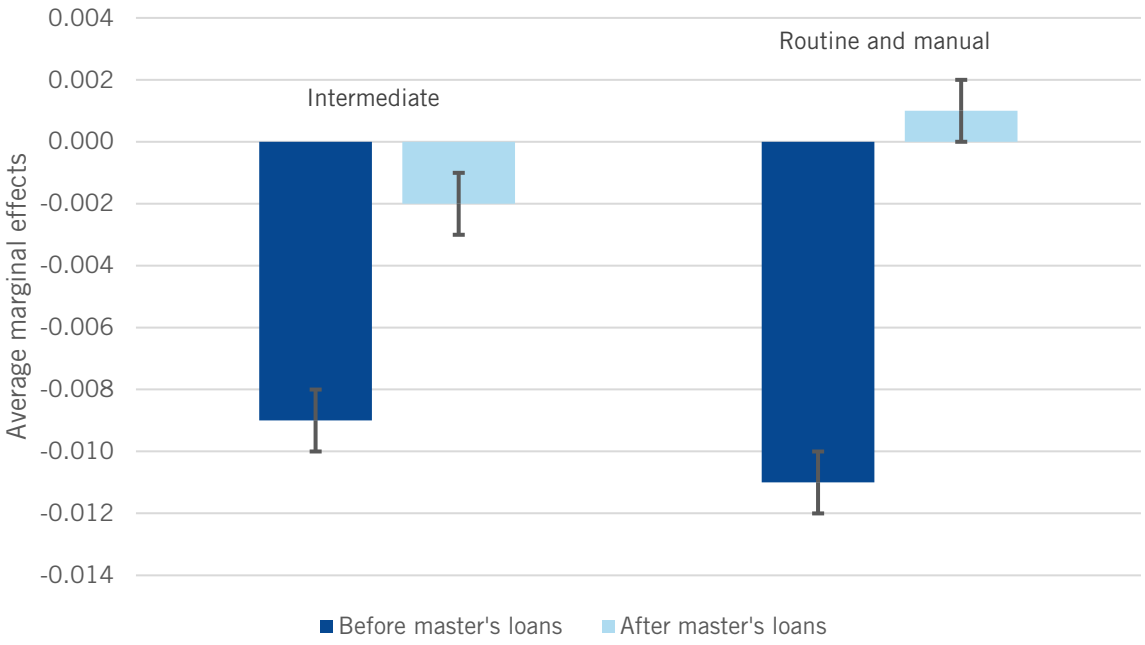


Finally, in considering evidence on the impact of master's loans, we took into account a range of other factors which are known to influence progression to postgraduate study, including first-degree subject of study, institution and degree classification, as well as other background characteristics such as gender and ethnicity. Using a statistical technique (logistic regression), we report, for both before and after the introduction of loans, the association between occupational social class and progression to a taught higher degree, net of other pertinent factors. This is shown in Figure 4, where zero represents graduates from professional and managerial backgrounds. A negative score indicates that the social class in question has a lower chance of progression to a taught higher degree than those from professional/managerial backgrounds, net of other factors; a positive score shows a higher chance of progression. A clear shift is evident in the years before and years after master's loans. In fact, after master's loans were available, the statistical model finds little difference by occupational social class between first-degree graduates in progression to taught postgraduate degrees, net of other factors.

On the face of it then, it seems that master's loans have erased much of the socio-economic inequality in access to master's degrees, at least for those English-domiciled graduates entering master's degrees immediately after a first degree. This is clearly a positive and welcome outcome. Yet there remain reasons to be concerned about funding available for postgraduate study. Although the aggregate effect of loans on the participation of those from lower income households appears positive, there will of course be many disadvantaged individuals who remain deterred by debt, and by cost. As we will show later in section 5, the master's loan was already insufficient to cover living costs for a full-time student continuing postgraduate tuition fee inflation is eroding the proportion of study costs which the loan can cover. This is likely to be more acute at the present time because of the significant effect of the Covid-

19 pandemic on the retail and hospitality sectors[58] where many postgraduate students would normally have undertaken work to supplement their income. We suggest there are three other issues with the design of the master's loan in England.[59]

Figure 4. Association of English-domiciled first-degree graduates occupational social class with progression to taught postgraduate study, net of other factors: average marginal effects before (2013/14 – 2015/16) and after (2016/17 – 2017/18) master's loans (reference group: professional/managerial).



First, there is the issue of 'deadweight'. In absolute numbers, the group which has benefitted most from master's loans is graduates from professional/managerial backgrounds. Many graduates who could previously afford to complete a master's from their own resources can now access public subsidy. Since financial support in the English system is not means-tested, this is an inefficient use of resources.

Second, the success of master's loans may be temporary, and there are reasons to believe that the positive trends we have reported will be reversed. We do not want to suggest that an increase in master's students overall is a 'bad' outcome. However, we will not be the first to point out that increased participation in master's degrees bring inflationary pressures on both tuition fees and on 'expected' qualification levels. If lots of graduates continue to master's level, then they are likely going to be ahead of those with only a first degree in the labour market 'queue', which will push more to enrol to secure the same advantage.

Third, if we think of postgraduate study as part of a social mobility trajectory, then there are reasons to be concerned about loans. Again, as others have noted, they are regressive in that they burden those who begin with the fewest resources with the longest debt repayments. We also need to consider, in due course, whether graduates from lower income households who have pursued postgraduate study actually achieve better outcomes than they might have done with a first degree alone. We know already that those with postgraduate qualifications tend to earn more and have better employment outcomes than those

[58] See, for instance, Sky News' report on Covid job losses (https://news.sky.com/story/coronavirus-crisis-where-jobs-have-been-lost-across-the-uk-12029604, accessed 26 April 2021).
[59] We are not qualified to comment on the microeconomics of aspects of loan design, such as interest rates, repayment arrangements and the like, nor on public accounting matters such as resource account budgeting charge.

with a first-degree alone.[60] We know that graduates from disadvantaged backgrounds do better than their non-graduate peers from the same background.[61] However, we also know that graduates from socio-economically disadvantaged and minority ethnic backgrounds suffer an apparent income penalty in the labour market. It would be a cruel and perverse result if the good news of more equal rates of progression to postgraduate study following the introduction of the master's loan were not matched with gains in social mobility thereafter.[62]

3.2. Could the current postgraduate loan policy be improved to widen access?

Returning to the question we posed at the start of this section: how can we improve the loan policy to avoid some of these issues? An improved master's funding scheme for UK students would draw elements from across those in operation in England, Scotland and Wales, but add some new features. The scheme in Northern Ireland is the least generous, except for the very low interest rates, and has evidently had the least impact on progression to postgraduate study. English master's loans, which established some of the parameters then adopted in the other nations, benefit from being straightforward and easy to understand, especially regarding eligibility. They are effective in expanding postgraduate participation, and to some extent widening participation, but are a very blunt instrument if we wish to reduce inequalities more broadly, particularly enhancing social mobility. Like the English system, Scottish loans are not targeted to more disadvantaged students. The Welsh system, with its combination of loans and means-tested grants offers the most socially progressive approach because it covers a greater proportion of the costs of study and targets the greatest subsidy to the most needy. None of the loan systems puts a regulatory cap on tuition fees, which risks fee inflation (as we discuss in section 5).

In the best of all possible worlds, all higher education, including master's and doctoral degrees, would be free to students, who would be supported with generous living costs. In the current UK context though, increasing subsidy to postgraduate qualifications is unlikely to be a political priority. Given other demands on public finance, there is a need to better target public funds in support of widening postgraduate access to minimise deadweight. In our view, a system which adapts the Welsh arrangements would be the best way to achieve this: cap master's tuition fees; and means-test the living cost element. For the most disadvantaged students, the loan and grant combined should be enough to cover the full cost of study. Care will be needed in considering the appropriate reference household for postgraduates – i.e. whether they should be classed as 'independent' of their parents.[63] In England, since there is now considerable additional public support for higher education institutions through UK postgraduate loans (some £693M was lent in 2019/20),[64] there is a justification for introducing regulation on providers that accept loan-funded students to undertake widening participation and work similar to that governed by Office for Students Access and Participation Plans at undergraduate level. Employer funding is an important source of support for some postgraduates, and there is an argument that employers should contribute more than they currently do to higher education funding. Careful thought would be needed about how very high fee courses, such as MBAs, could be included in any fee capping arrangement to ensure continued employer subsidy was not lost. Some form of hypothecation of a proportion of funds from very high tuition fee programmes could be investigated here.

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[60] Britton, J. et al. (2020) *The Earnings Returns to Postgraduate Study in the UK: Research Report.* London: Institute for Fiscal Studies.
[61] Britton, J., Dearden, L. and Waltmann, B. (2021) *The Returns to Undergraduate Degrees by Socio-economic Group and Ethnicity.* London: Institute for Fiscal Studies.
[62] Friedman, S. and Laurison, D. (2019) *The Class Ceiling: Why it Pays to be Privileged*. Bristol: The Policy Press.
[63] Wakeling, P., Berrington, A. and Duta, A. (2015) *Investigating an age threshold for independence at postgraduate level*. Bristol: Higher Education Funding Council for England.
[64] Office for National Statistics, Student Loans Company and Department for Education (2020) Students Loans in England Financial Year 2019-20: Tables and Footnotes Parts One and Two (Table 1A). https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/912434/slcsp012020_Part1_2.xlsx

KEY POINTS

Master's loans schemes have been introduced in all the UK nations in recent years. The schemes differ in design and the amount available. In all four nations there has been an increase in the rate of progression from first-degree to taught postgraduate degree study following the launch of master's loans.

Detailed analysis of the impact of loans on access to taught postgraduate degrees in England shows apparent success. Rates of progression have increased for graduates of all backgrounds, but they have increased the most for those from more disadvantaged groups. These gains remain in place when taking account of other important influences on access to taught postgraduate degrees.

Despite the success of master's loans, under current circumstances there is a risk that these gains will be eroded for disadvantaged students. Tuition fee inflation and increasing pressure to obtain a master's just to stay in the educational 'arms race' have the potential to push out graduates who cannot afford to fund the difference between the costs of postgraduate study and the amount of loan available. We argue that better targeting of financial support to the disadvantaged will help to ameliorate this and to avoid 'deadweight' from subsidy of graduates who could have afforded to pay their own way.

4. Socioeconomic characteristics and access to postgraduate education

This section explores whether there are any inequities in access to postgraduate degrees in the UK, particularly at its most prestigious institutions. As discussed in previous sections, at the very least, postgraduate degrees may insulate their holders against poor professional outcomes, although most of those who attain them tend to earn more on average than their undergraduate counterparts. Therefore, diagnosing these inequities may be key in fostering social mobility in the UK. In this section, we use the first round of the new Graduate Outcomes survey to explore whether there is a relationship between UK first-degree leavers' socioeconomic characteristics and their patterns of access to postgraduate programmes – in particular, what HESA calls Higher Degrees, either taught or by research[65] – and whether this relationship is mediated by graduates' prior attainment and institution. We also identify the available pool of potential postgraduate students (those with the grades required to secure a place in a postgraduate programme) and how this varies across different socioeconomic characteristics. Specifically, we look at how access to postgraduate education among UK-domiciled 2017/18 graduates varies across NS-SEC classes, POLAR4 quintiles, ethnicity, type of school or college attended prior to higher education, parental higher education, and gender.

4.1. Socioeconomic differences in access to postgraduate degrees

In 2017/18, there were 181,170 UK-domiciled first-degree leavers, 11.1 percent of which enrolled in a taught higher degree 15 months after graduation. Furthermore, 1.6 percent of this cohort was undertaking a higher degree by research when surveyed. However, as we will see in the following pages, there is some variation in progression rates across different socioeconomic characteristics, and also in the type of institution attended at the postgraduate level.

First, we look at how progression rates to higher degrees vary by different socioeconomic characteristics. Table 1 reports these, accounting for graduates' NS-SEC background.

Table 1. Educational destinations of UK-domiciled 2017/18 graduates 15 months after graduation by NS-SEC class.

	Higher degree, taught		Higher degree, research		Other qualification		Not aiming for a formal qualification or N/A	
NSSEC	N	%	N	%	N	%	N	%
Higher managerial	4,530	12.6	735	2.1	3,780	10.5	26,875	75.0
Lower managerial	4,575	11.6	670	1.7	3,835	9.8	30,265	77.0
Intermediate	2,090	10.2	290	1.4	1,945	9.5	16,190	79.0
Small employers	1,115	10.5	150	1.4	1,055	10.0	8,250	78.0
Lower supervisory	750	10.8	120	1.7	660	9.5	5,440	78.1
Semi-routine	1,935	10.0	250	1.3	1,720	8.9	15,410	79.8
Routine	1,020	10.3	155	1.6	910	9.2	7,860	79.0
Never worked	65	11.5	0	0.0	50	8.9	450	79.7

[65] In most cases, a 'taught higher degree' is a postgraduate master's, but will include some taught doctorates (EdD, DBA, EngD etc). A 'higher degree by research' is in most cases a PhD/DPhil, but will also include some master's level research degrees (e.g. MPhil, MSc by thesis etc).

As shown in table 1, students from the wealthiest backgrounds (Higher managerial) are more likely than any other NS-SEC class to be enrolled in a taught higher degree 15 months after graduation, 2.6 and 2.3 percent points more likely than their Semi-routine and Routine counterparts. This is also the case regarding progression to research degrees, as the percentage of Higher Managerial students enrolled in a higher degree by research is 0.5 and 0.8 higher than for those from Semi-routine and Routine backgrounds. Additionally, it is also important to highlight that, even though progression rates across NS-SEC classes may not vary substantially, the bulk of students entering a postgraduate degree comes from the most privileged backgrounds. In our dataset, 56 percent of students progressing to a taught higher degree came from either Higher or Lower managerial backgrounds, 59 percent in the case of higher degrees by research.

We observe less pronounced patterns when looking at progression rates by POLAR4 quintiles, which are reported in Table 2. Here, graduates from local areas with the highest rate of participation in higher education (quintile 5) are only 0.44 percent points more likely to be enrolled in a taught higher degree 15 months after graduation than those students from areas with the lowest participation rates (quintile 1). In the case of research degrees, this difference reduces to 0.15 percent.

Table 2. Educational destinations of UK-domiciled 2017/18 graduates 15 months after graduation by POLAR 4 quintile.

	Higher degree, taught		Higher degree, research		Other qualification		Not aiming for a formal qualification or N/A	
POLAR4 quintiles	N	%	N	%	N	%	N	%
1 (lowest participation)	2,175	11.1	295	1.5	1,810	9.2	15,375	78.2
2	2,980	10.9	450	1.7	2,605	9.6	21,215	77.9
3	3,585	10.9	545	1.7	3,170	9.6	25,685	77.9
4	4,425	11.1	570	1.4	3,995	10.0	30,925	77.5
5 (highest participation)	6,255	11.5	895	1.7	5,455	10.0	41,755	76.8

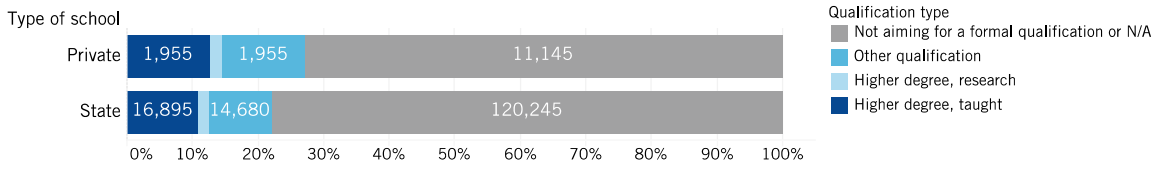
Conversely, we do see substantial variation in progression rates to higher degrees by ethnicity, as shown in table 3. Unsurprisingly, most UK-domiciled graduates are from White backgrounds, but they are not the group that is most likely to progress to a taught higher degree, with a progression rate of 10.7 percent. The ethnic group that is most likely to progress to a taught higher degree is Other (16.1 percent), followed by graduates from Black African backgrounds (13.8 percent). The only races/ethnicities that are less likely than White students to progress to a taught higher degree are Bangladeshi (10.2 percent) and Black Caribbean (9.4) students. Notwithstanding, White students are the group that is most likely to be enrolled in a research degree 15 months after graduation (1.7 percent).

Table 3. Educational destinations of UK-domiciled 2017/18 graduates 15 months after graduation by Ethnicity.

	Higher degree, taught		Higher degree, research		Other		Not aiming for a formal qualification or N/A	
Ethnicity	N	%	N	%	N	%	N	%
White	14,980	10.7	2,390	1.7	13,140	9.4	109,230	78.2
Black African	1,200	13.8	90	1.0	925	10.6	6,485	74.5
Mixed	850	12.7	105	1.6	655	9.8	5,065	75.8
Indian	685	10.7	65	1.0	835	13.0	4,825	75.3
Pakistani	690	12.7	60	1.1	710	13.1	3,980	73.2
Bangladeshi	270	10.2	20	0.8	310	11.7	2,055	77.4
Black Caribbean	235	9.4	15	0.6	265	10.6	1,995	79.5
Chinese	180	12.9	20	1.4	135	9.6	1,060	75.7
Other Asian	425	12.3	40	1.2	370	10.7	2,625	76.0
Other Black	70	12.6	0	0.0	70	12.6	415	74.8
Other	350	16.1	30	1.4	220	10.1	1,575	72.2

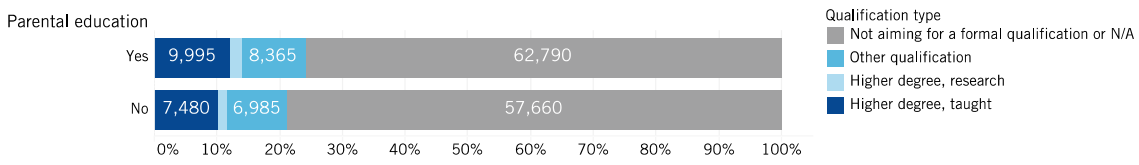
In terms of the type of school or college attended prior to entering higher education, UK-domiciled first-degree leavers that attended a private school are almost 2 percent points more likely to be enrolled in a taught higher degree 15 months after graduation than those who graduated from a state school, as shown in Figure 5. They are also 0.3 percent points more likely to be undertaking a research higher degree.

Figure 5. Educational destinations of UK-domiciled 2017/18 graduates 15 months after graduation by type of school or college attended prior to entering higher education.



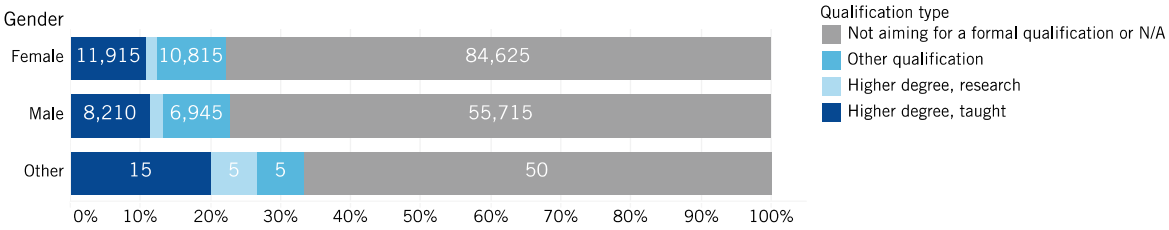
Regarding parental education, graduates with at least one parent, stepparent or guardian with higher education qualifications are also almost 2 percent points more likely to attend a taught higher degree 15 months after graduation than their first-generation counterparts, as shown in Figure 6. They are also 0.4 percent points more likely to be undertaking a research higher degree.

Figure 6. Educational destinations of UK-domiciled 2017/18 graduates 15 months after graduation by parental education.



Finally, in relation to gender, Figure 7 reports that those graduates that identify as female are slightly less likely to progress to a taught higher degree than their male and other counterparts, 0.4 and 9 percent points respectively. We observe similar patterns regarding research degrees, as females are 0.5 and 5 percent points less likely to enrol in such a programme than males and other respectively.

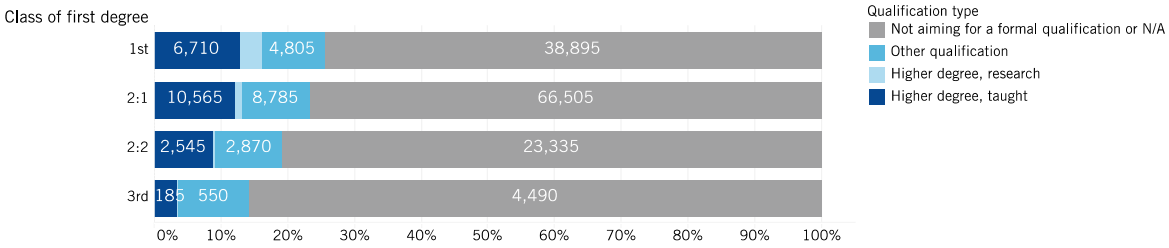
Figure 7. Educational destinations of UK-domiciled 2017/18 graduates 15 months after graduation by gender.



4.2. Prior attainment, institution of first-degree and access to postgraduate programmes

In this section, we explore how access to higher degrees varies across different performance levels at first-degree and whether the type of undergraduate institution attended can help us understand progression rates. First, Figure 8 plots progression rates to different types of higher degrees by undergraduate degree classification.

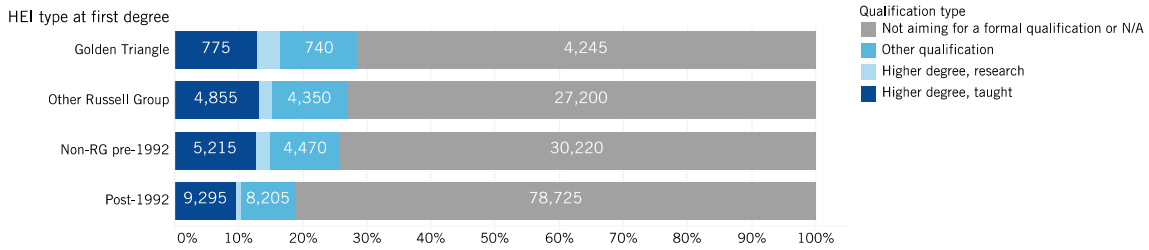
Figure 8. Educational destinations of UK-domiciled 2017/18 graduates 15 months after graduation by class of first degree.



Expectedly, Figure 8 reports that students who attained a first-class honours degree at the undergraduate level are the group of students that are more likely to progress to a higher degree, either taught or by research. Fifteen months after graduation, 12.8 percent of 2017/18 graduates with a first were pursuing a taught higher degree, compared to 12.2 percent of those with a 2:1, and 8.8 percent of those with a 2:2. Among these graduates, only 3.5 percent of those who attained third-class honours degree progressed to a taught higher degree. Regarding research degrees, 3.4 percent of 2017/18 graduates with a first progressed to a higher degree by research, 2.32 and 3 percent points more than their 2:1 and 2:2 counterparts respectively. Only 0.2 percent of graduates with third-class honours were undertaking a research degree.

The set of institutions whose first-degree graduates are more likely to enrol in a higher degree – both taught and by research – are Golden Triangle universities, as shown in Figure 9. Among 2017/18 UK-domiciled graduates, 15.3 percent of those who left a university from the latter group enrolled in a taught higher degree, and 3.9 percent did so in a research degree. Interestingly, the probability of enrolling in a higher degree decreases along UK's institutional hierarchy. In this sense, students who graduated at post-1992 institutions were 5.6 percent points and almost 3 percent points less likely than graduates from Golden Triangle institutions to progress to a taught higher degree and a research degree respectively.

Figure 9. Educational destinations of UK-domiciled 2017/18 graduates 15 months after graduation by institutional type at first degree



4.3. Socioeconomic characteristics and access to higher degrees by institutional type

In this section, we look at how access to higher degrees at different types of institutions differ based on various socioeconomic characteristics. To do so, we look at the percentages of students from each category of our socioeconomic variables that progress to a Russell Group institution, broken down into Golden Triangle and non-Golden Triangle.

In our dataset, we observe that an important portion of 2017/18 UK-domiciled graduates attended a Russell Group institution for a higher degree, with 8.1 percent of them being enrolled in a Golden Triangle institution to pursue a taught higher degree 15 months after graduation and 23 percent doing so in one of the other 18 Russell Group universities. This distribution is even more skewed regarding research students, as 13.8 percent and 31 percent of 2017/18 graduates who progressed to a research degree did so at a Golden Triangle university or at another Russell Group institution respectively. This is not surprising as research intensity and the weight of postgraduate education are both major dimensions of status differentiation in the UK.[66] That being said, there are substantial differences in progression rates to higher degrees in the UK's most prestigious institutions between graduates from different socioeconomic backgrounds.

Figure 10 shows the percentage of 2017/18 graduates that enrolled in a higher degree, either taught or by research, at a Golden Triangle institution or at another Russell Group university by NS-SEC class.

As shown in Figure 10, the percentage of higher degree –either taught or by research– students at Russell Group universities reduces as we go down NS-SEC classes. Among graduates from Higher managerial backgrounds that progressed to a taught higher degree, 11.2 percent were enrolled in a Golden Triangle institution, almost 6 percent points more than their Routine counterparts. They were also almost 11 percent points more likely to be attending another Russell Group university than Routine students. Regarding research degrees, almost 20 percent of Higher managerial graduates were pursuing a course at a Golden Triangle institution, almost 14 percent points more than their Routine counterparts.

We observe similar patterns when using POLAR4 quintiles as a measure of socioeconomic inequity, as reported in Figure 11.

[66] Boliver, V. (2015). Are there distinctive clusters of higher and lower status universities in the UK? *Oxford Review of Education* 41(5): 608-627.

Figure 10. 2017/18 graduates progressing to a higher degree, either taught or by research, at a Golden Triangle or other Russell Group institutions by NS-SEC class. In some categories, absolute number of graduates are not shown following HESA's rounding and suppression methodology to anonymise statistics. The category "Never worked" has been excluded due to the latter.

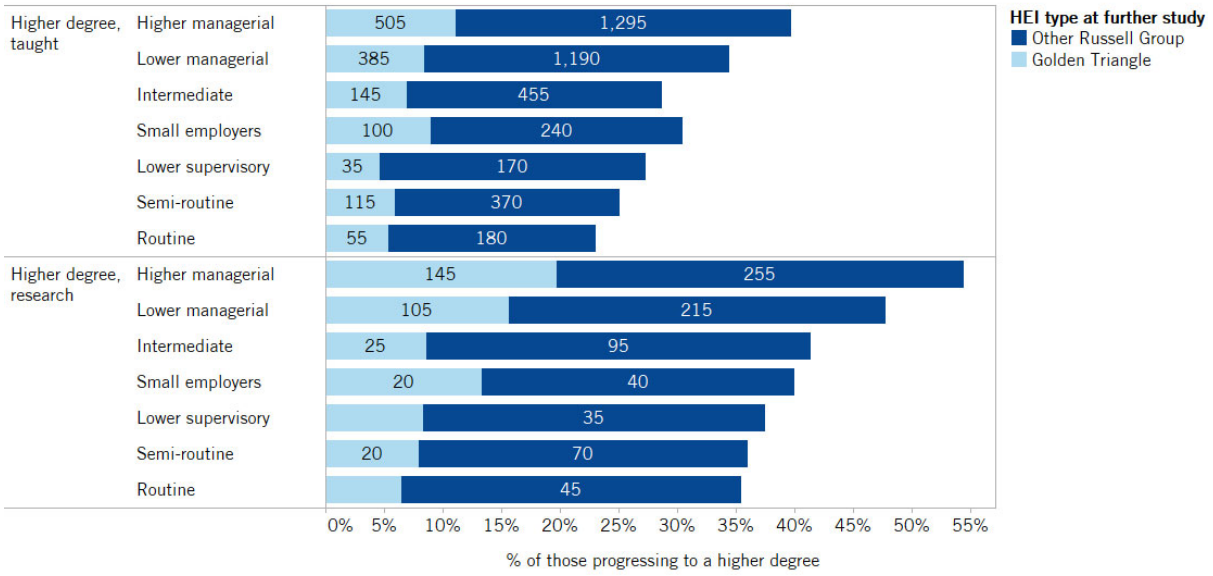
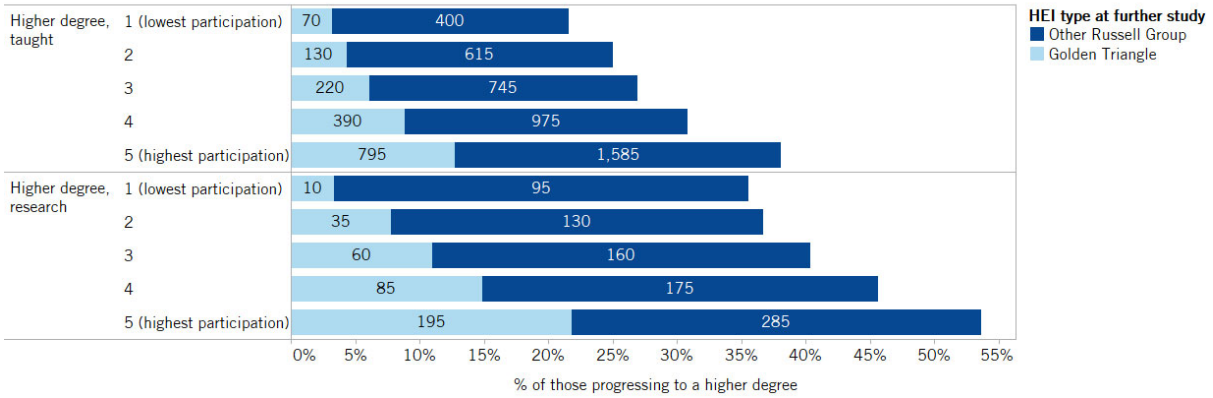


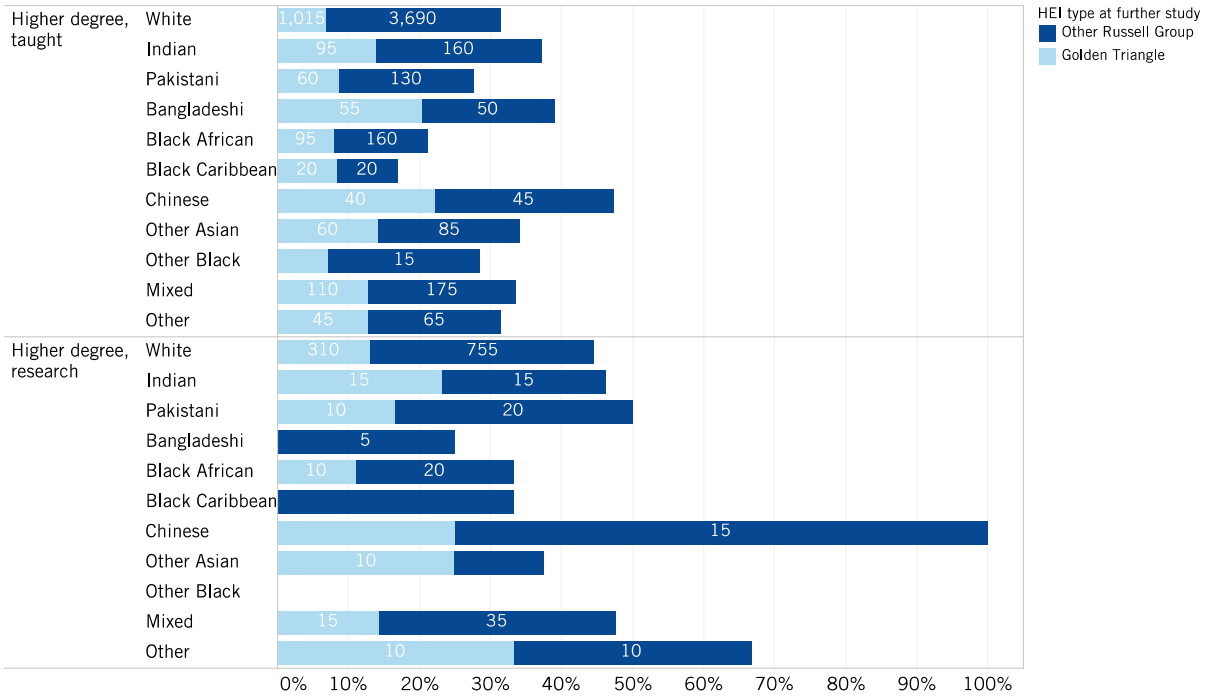
Figure 11. 2017/18 graduates progressing to a higher degree, either taught or by research, at a Golden Triangle or other Russell Group institutions by POLAR4 quintiles.



In this case, 12.8 percent of taught higher degree students from local areas with the highest participation rates (quintile 5) were enrolled in a Golden Triangle institution, compared to only 3.6 percent of those from the lowest participation areas. Regarding research degrees, almost 55 percent of students from a quintile 5 area were attending a Russell Group university, 17 percent points more than their quintile 1 counterparts.

Regarding ethnicity, the picture looks slightly different, and inequities in patterns of progression are not as clear-cut as with the measures of socioeconomic background analysed. Figure 12 reports the distribution of higher degree students at Golden Triangle and other Russell Group institutions by ethnicity.

Figure 12. 2017/18 graduates progressing to a higher degree, either taught or by research, at a Golden Triangle or another Russell Group institution by Ethnicity. In some categories, absolute number of graduates are not shown following HESA's rounding and suppression methodology to anonymise statistics.[67]

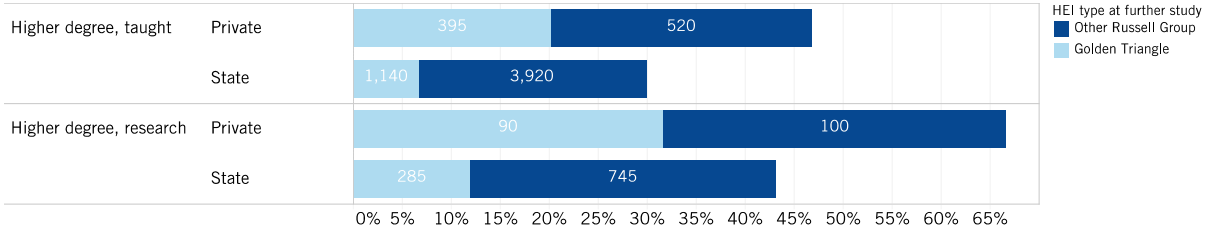


As reported in Figure 12, White taught higher degree students are the least likely group of students to be attending a Golden Triangle institution (6.8 percent), with British Chinese students being the most likely group (22.2 percent). They are followed by Bangladeshi students (20.4 percent) and Other Asian students (14.1 percent). Notwithstanding, the group of students that is least likely to attend a Russell Group university – including Golden Triangle institutions – are graduates from Black Caribbean backgrounds (17 percent), followed by Black African students (21.2 percent). We observe similar patterns for research students, although this time there were no Bangladeshi and Black Caribbean students progressing to a Golden Triangle institution, and no 'Other Black 'students were enrolled in a Russell Group university. Furthermore, British Chinese and Other Asian research students were equally likely to be attending a Golden Triangle institution (25 percent).

Regarding the type of school or college attended prior to entering higher education, we again observe clear differences in access to the UK's most prestigious institutions. As reported in Figure 13, students that attended a state school or college were almost 14 percent points less likely to be pursuing a taught higher degree at a Golden Triangle institution, and almost three percent points less likely to do so at another Russell Group university. In the case of research degrees, 2017/18 graduates that attended a private school or college were almost 20 percent points more likely to be enrolled in a Golden Triangle institution than those who attended a state school.

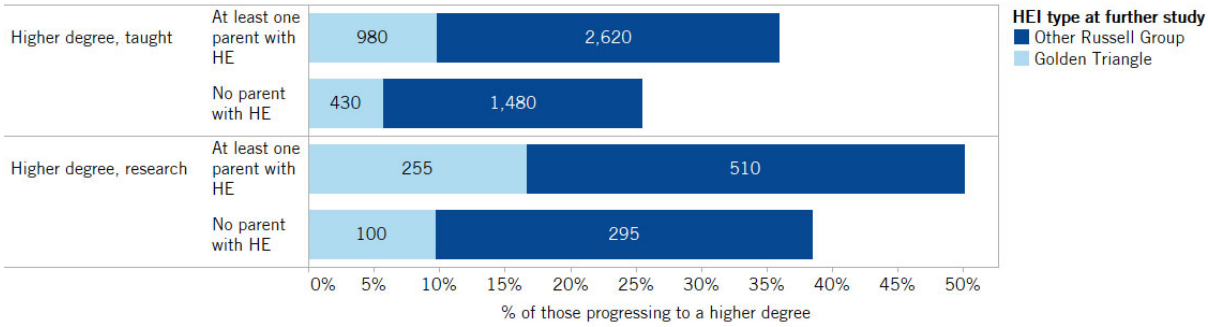
[67] As we are using only one year's worth of data in this figure, the absolute numbers in some of the ethnic categories are relatively small and may be subject to some volatility from year to year.

Figure 13. 2017/18 graduates progressing to a higher degree, either taught or by research, at a Golden Triangle or another Russell Group institution by type of school or college attended prior to entering higher education.



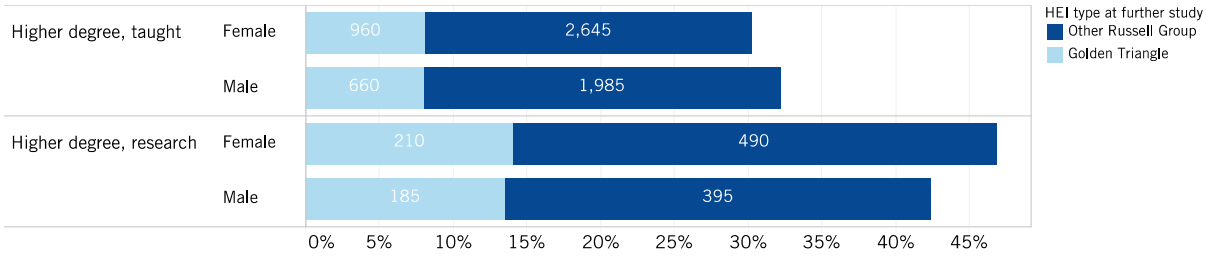
We observe similar, though less pronounced, differences when accounting for the higher education background of graduates' parents, stepparents or guardians, as reported in Figure 14. Taught higher degree students with at least one parent with a higher education qualification were four percent points more likely to attend a Golden Triangle institution than first-generation students, and 6.3 percent points more likely to do so at another Russell Group university. In the case of research degrees, first-generation students were almost 6 percent points less likely than those with at least one parent with higher education qualifications to be attending a Golden Triangle institution, and almost 5 percent points less likely to do so at another Russell Group university.

Figure 14. 2017/18 graduates progressing to a higher degree, either taught or by research, at a Golden Triangle or another Russell Group institution by parental education.



Finally, in the case of gender, we observe that females are equally likely to be enrolled in a taught higher degree at a Golden Triangle institution than males, and slightly more likely (0.55 percent points) to do so for a research degree, as shown in Figure 15. Moreover, males are more likely to be enrolled in a Russell Group institution than females for a taught higher degree, but this is reversed at the research degree level.

Figure 15. 2017/18 graduates progressing to a higher degree, either taught or by research, at a Golden Triangle or another Russell Group institution by parental education. The category "other" has been excluded due to its small numbers and cannot be shown following HESA's rounding and suppression methodology to anonymise statistics.



4.4. How much of any differences in progression rates across socioeconomic characteristics are due to variation in prior attainment and institution attended?

In section 4.1, we have seen that graduates from different socioeconomic backgrounds have different progression rates to higher degrees, although not as pronounced as expected. This could be due, as explored in section 3 of this report, to the positive impact that postgraduate loans have had in fostering access to postgraduate degrees for the least privileged groups of graduates. Notwithstanding, in section 4.3, we have seen that there are more substantial differences in access to higher degrees at UK's most prestigious institutions. Additionally, in section 4.2, we have reported that, unsurprisingly, students' grades and institution of first-degree have an effect on their progression rates to higher degrees. Therefore, in this section, we investigate whether any differences in progression rates across different measures of socioeconomic background may be due to graduates' prior attainment and institution attended at first-degree.

First, we look at whether there are any differences in progression rates to higher degrees by different socioeconomic characteristics for those individuals that graduated with top marks – i.e. a first-class honours degree. Table 4 reports this accounting for 2017/18 graduates NS-SEC background. As suggested by Table 4, there are still differences in progression rates to higher degrees between NS-SEC classes, even when controlling for prior attainment. Graduates from 2017/18 with top marks from higher managerial backgrounds were 3 and 2.1 percent points more likely to progress to a taught higher degree than their semi-routine and routine counterparts respectively. This difference is smaller in relation to research degrees: graduates from higher managerial backgrounds were only 1.3 and 0.2 percent points more likely to be enrolled in a research degree 15 months after graduation than their semi-routine and routine counterparts respectively.

Case Study 2

WIDENING POSTGRADUATE PARTICIPATION AT THE UNIVERSITY OF OXFORD

Building on its involvement in the Postgraduate Support Scheme 2013 – 2015, in 2019 Oxford established a **Graduate Access Working Group** to promote and co-ordinate efforts to widening participation to postgraduate study. To date, the Group, which has representation from across the University, has overseen significant developments across taught master's and research programmes.

UNIQ+

The UNIQ+ scheme builds on and adapts Oxford's UNIQ programme for widening undergraduate participation. It is designed to support students from backgrounds underrepresented at Oxford in preparing for and accessing postgraduate study. The programme is designed to bring students to Oxford for a summer residential (carried out remotely during Covid-19 restrictions), to enhance research skills through an internship project and to provide structured advice and guidance on postgraduate courses and research careers. Crucially, UNIQ+ participants are paid a stipend of £2,500 for the six-week programme to ensure that the scheme is attractive and affordable.

UNIQ+ is carefully targeted at underrepresented groups on the basis of ethnic background and/or socio-economic disadvantage, including 'first-generation' status. The scheme is particularly targeted at students who are studying at or have graduated from other universities. Strong interest has meant both that UNIQ+ has been oversubscribed, but also that Oxford has been able to prioritise acceptance for students with the most difficult circumstances.

The scheme has benefited the students who have attended but has also helped the university to better understand the barriers and challenges faced by potential postgraduate students from underrepresented backgrounds.

MEASURING SOCIOECONOMIC DISADVANTAGE

Oxford's graduate access work has been built on analysis of evidence of its postgraduate applications, including which applicants tend to be successful, and which groups are missing from the pool of applicants in the first place. Postgraduate application forms have been reviewed and expanded to include data about widening participation characteristics. This is widely available for undergraduate students who enter through the UCAS system, but has rarely been collected for postgraduates, especially measures of socioeconomic disadvantage. Collecting data on parental education, secondary school sector, and parental occupational and neighbourhood measures has allowed comparison with undergraduate populations at Oxford and elsewhere. This work has informed interventions being developed by the university to address postgraduate access inequalities. In a related move, the use of socio-economic contextual flags is being trialled with some courses as one part of the selection process for places and scholarships.

In section 4.2 we also reported that students graduating from the UK's most prestigious institutions were also more likely to progress to a higher degree. In table 5 we show how progression rates vary by NS-SEC class for those 2017/18 graduates that attained a first-class degree from a Russell Group university.[68]

As shown in table 5, even when controlling for prior attainment and institutional type, there are differences in progression rates to higher degrees between NS-SEC classes. However, this time, students from the NS-SEC class that are more likely to progress to a taught higher degree are from Lower managerial backgrounds (17.1 percent). They are more than 3 percent more likely to do so than their Semi-routine (13.8) and Routine (13.7) counterparts. Notwithstanding, regarding research degrees, it appears that differences in progression rates between NS-SEC classes reduce substantially, and do not follow any clear pattern. In this case, more privileged students are not necessarily more likely to enrol in a research degree; Routine occupational background students are the most likely to pursue a research degree (6.9 percent), followed by graduates from lower supervisory backgrounds (6.5 percent).

Table 4. UK-domiciled 2017/18 graduates that attained a first-class honours degree progressing to a higher degree by NS-SEC class.

	Higher degree, taught		Higher degree, research	
NSSEC	N	%	N	%
Higher managerial	1,610	14.3	470	4.2
Lower managerial	1,605	13.5	410	3.5
Intermediate	685	11.5	175	2.9
Small employers	355	12.0	95	3.2
Lower supervisory	225	11.3	70	3.5
Semi-routine	580	11.3	150	2.9
Routine	320	12.2	105	4.0

Table 5. UK-domiciled 2017/18 graduates that attained a first-class honours degree from a Russell Group institution progressing to a higher degree by NS-SEC class.

	Higher degree, taught		Higher degree, research	
NSSEC	N	%	N	%
Higher managerial	640	15.6	235	5.7
Lower managerial	550	17.1	140	4.4
Intermediate	150	12.8	55	4.7
Small employers	90	15.7	30	5.2
Lower supervisory	45	14.5	20	6.5
Semi-routine	105	13.8	40	5.3
Routine	50	13.7	25	6.9

[68] We intended to report this table for those graduates that left a Golden Triangle institution, but the table yielded numbers that were too small, and had to be supressed following HESA's rounding and suppression methodology to anonymise statistics. Therefore, when controlling for graduates' institutional background, we select those who graduated from a Russell Group university, but without distinguishing between Golden Triangle and non-Golden Triangle institutions.

Regarding access to higher degrees at the most prestigious institutions, in section 4.3 we showed that students from working-class backgrounds were significantly less likely to pursue a postgraduate programme at Golden Triangle and other Russell Group universities. It appears that, when controlling for graduates' marks, this relationship remains, as shown in Figure 16.

Those 2017/18 graduates that finished their first-degree with first-class honours, come from Higher managerial backgrounds and progress to a taught higher degree were almost 9 percent points more likely to do so at a Golden Triangle institution than their Routine counterparts. They were also almost 7 percent points more likely to be enrolled at another Russell Group university. Moreover, the differences in percentages of students attending a Golden Triangle university for a research degree by NS-SEC class appear to be larger when controlling for previous educational performance. Students from Higher managerial backgrounds that graduated with a first and progressed to a research degree were almost 19 percent points more likely to do so at a Golden Triangle university than their Routine counterparts – this difference was 13 percent when we did not take past performance into account. Moreover, Higher managerial research students were also almost 5 percent more likely to be pursuing a degree at a non-Golden Triangle Russell Group university than their Routine counterparts. That being said, these differences reduce significantly when we also control for the type of institution attended at first-degree, as shown in Figure 17.

Figure 16. 2017/18 graduates that attained a first-class honours degree progressing to a higher degree, either taught or by research, at a Golden Triangle or other Russell Group institutions by NS-SEC class. In some categories, absolute number of graduates are not shown following HESA's rounding and suppression methodology to anonymise statistics.

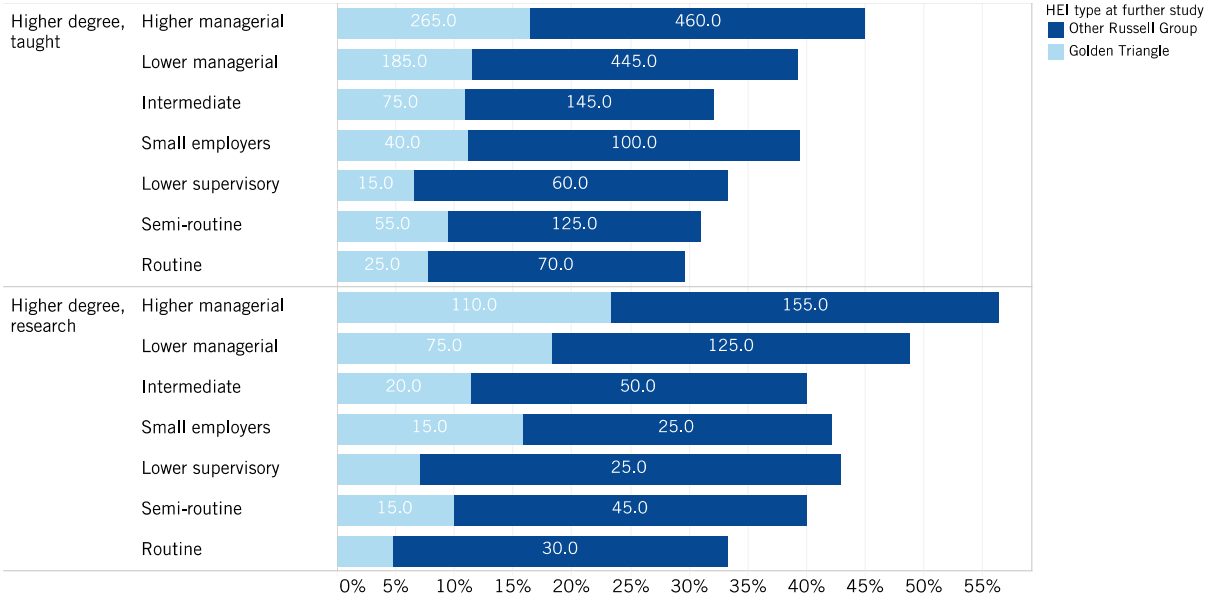
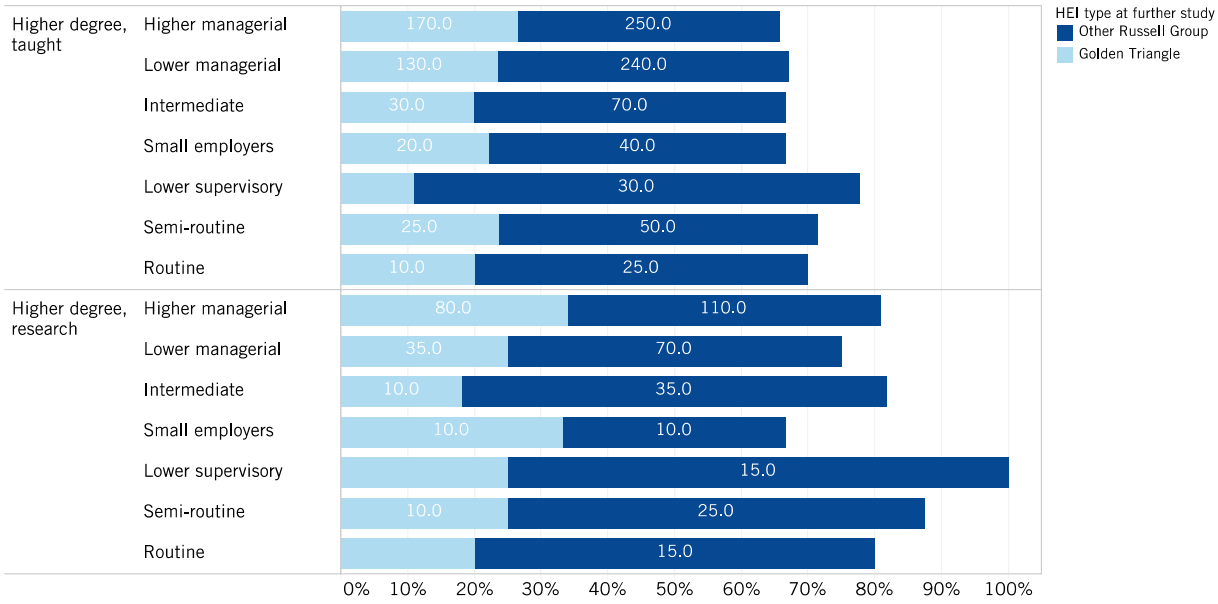


Figure 17. 2017/18 graduates that attained a first-class honours degree at a Russell Group university progressing to a higher degree, either taught or by research, at a Golden Triangle or other Russell Group institutions by NS-SEC class. In some categories, absolute number of graduates are not shown following HESA's rounding and suppression methodology to anonymise statistics.



The patterns reported above appear to be consistent with other measures of socioeconomic background. For instance, using graduates' POLAR4 quintiles, we observe that students from areas with the highest participation levels in higher education (quintile 5) that attained a first-class honours degree in their undergraduate study remain more likely to progress to a taught higher degree than those coming from quintile 1 areas, as shown in table 6. Interestingly, unlike what we discussed in section 4.1 – in which we did not observe a strong effect of participation areas on progression– when we control for prior attainment, students from higher participation areas are more likely to enrol in a taught higher degree 15 months after graduation. In relation to research degrees, these differences are not as straightforward. Graduates from most quintiles have more or less the same progression rates, with the exception of those from quintile 4, which have the lowest progression rates (2.9 percent).

Table 6. UK-domiciled 2017/18 graduates that attained a first-class honours degree progressing to a higher degree by POLAR4 quintiles.

	Higher degree, taught		Higher degree, research	
POLAR4 quintiles	N	%	N	%
1 (lowest participation)	635	12.4	175	3.4
2	925	11.9	275	3.5
3	1,195	12.6	355	3.7
4	1,510	13.0	340	2.9
5 (highest participation)	2,230	13.7	555	3.4

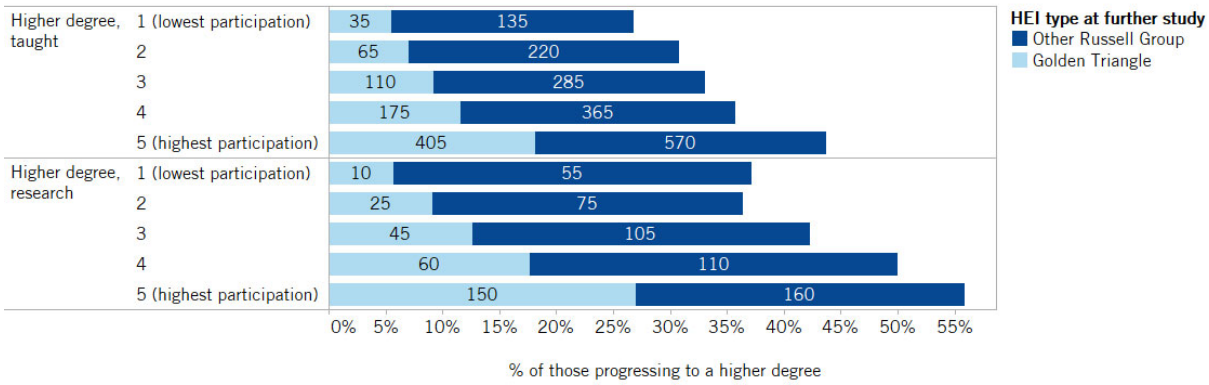
Similar patterns remain when we also controlling for prior institution attended. 2017/18 graduates that attained a first-class honours degree at a Russell Group university originally from areas with the highest participation rates were 3.5 percent points more likely to be pursuing a taught higher degree than their low participation counterparts, as shown in Table 7. Regarding research degrees, it appears that students from lower participation quintiles are more likely to progress to a research degree, with students from the lowest participation quintile being almost 1 percent point more likely to progress to a research degree than their quintile 5 counterparts. Furthermore, when controlling for prior attainment and institution attended at first degree, graduates from quintile 3 areas have the largest progression rates to research degrees (6.5 percent).

Table 7. UK-domiciled 2017/18 graduates that attained a first-class honours degree at a Russell Group university progressing to a higher degree by POLAR4 quintiles.

	Higher degree, taught		Higher degree, research	
POLAR4 quintiles	N	%	N	%
1 (lowest participation)	80	13.0	35	5.7
2	160	14.3	70	6.3
3	275	15.0	120	6.5
4	390	15.1	120	4.7
5 (highest participation)	900	16.5	260	4.8

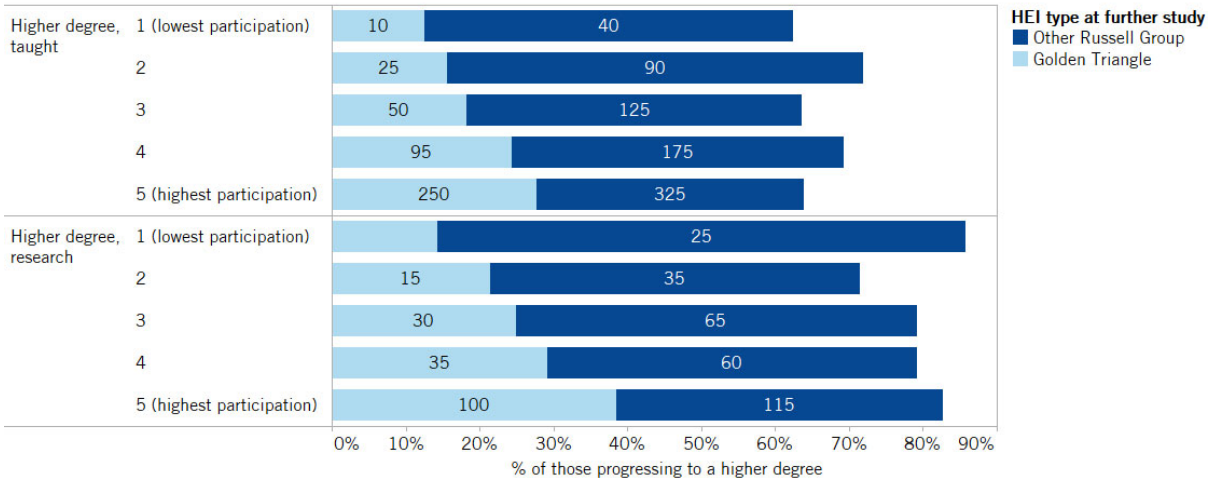
As in with NS-SEC categories, in section 4.3 we observed that graduates from low participation POLAR4 quintiles were less likely to access UK's most prestigious institutions to pursue a higher degree than their high participation counterparts. As shown in Figure 18, this issue appears to persist when controlling for the prior attainment of graduates. In this sense, 18 percent of quintile 5 graduates that progressed to a research degree did so at a Golden Triangle university, compared to only 5.5 percent of those from quintile 1 backgrounds. This difference is even larger at the research degree level, with quintile 5 research students being almost 21 percent points more likely than their quintile 1 counterparts to be pursuing a research degree at a Golden Triangle institution.

Figure 18. 2017/18 graduates that attained a first-class honours degree progressing to a higher degree, either taught or by research, at a Golden Triangle or other Russell Group institutions by POLAR4 quintile.



The relationship between POLAR4 quintiles and access to UK's most prestigious institutions remains – although reduced in magnitude – when considering graduates' institution at first-degree, as shown in Figure 19. Graduates from quintile 5 areas that attained a first-class honours degree at a Russell Group university and progressed to a taught degree were over 15 percent points more likely to do so at a Golden Triangle institution than their quintile 1 counterparts. Similarly, quintile 5 research students were 34 percent points more likely to be studying at a Golden Triangle institution than those coming from quintile 1 areas.

Figure 19. 2017/18 graduates that attained a first-class honours degree at a Russell Group university progressing to a higher degree, either taught or by research, at a Golden Triangle or other Russell Group institutions by POLAR4 quintiles. In some categories, absolute number of graduates are not shown following HESA's rounding and suppression methodology to anonymise statistics.



In sections 4.1 and 4.3, we have shown that progression rates to higher degrees vary substantial across minority ethnic groups, with students from certain non-White backgrounds being more likely to enrol in a postgraduate degree than their White counterparts. As suggested by previous research, this could be due to the fact that non-White students may have to gain further education as they may have poorer labour market outcomes than White graduates.[69,70] However, do these patterns remain when taking prior attainment and institution attended into account? Tables 8 and 9 report this. First, Table 8 looks at progression rates by ethnicity for those 2017/18 graduates who graduated with a first-class honours degree.

[69] Lessard-Phillips, L., Boliver, V., Pampaka, M., and Swain, D. (2018). Exploring ethnic differences in the post-university destinations of Russell Group graduates. *Ethnicities* 18(4): 496-517.

[70] Regarding ethnicity, we were not able to provide figures nor tables reporting access to higher degrees at the most prestigious institutions. These yielded figures that were too small and would have had to be supressed following HESA's rounding and suppression methodology to anonymise statistics.

Table 8. UK-domiciled 2017/18 graduates that attained a first-class honours degree progressing to a higher degree by ethnicity.

	Higher degree, taught		Higher degree, research	
Ethnicity	N	%	N	%
White	5,450	12.6	1,540	3.6
Indian	190	12.0	30	1.9
Pakistani	165	14.2	30	2.6
Bangladeshi	70	13.2	10	1.9
Black African	195	15.1	30	2.3
Black Caribbean	60	13.6	5	1.1
Chinese	55	15.1	10	2.7
Other Asian	85	11.9	15	2.1
Other Black	20	20.0	0	0.0
Mixed	260	14.5	65	3.6
Other	90	18.8	20	4.2

Table 8 suggests that graduates from most ethnic minority backgrounds, even when we take prior attainment into account, are still more likely to progress to a higher degree than their white counterparts. Again, students from Other (18.8 percent), Chinese and Black African backgrounds (15.1 percent) are the most likely to progress to a taught higher degree, followed by graduates from Mixed (14.5 percent) and Pakistani (14.2) backgrounds. Conversely, White (12.6 percent), Indian (12 percent) and Other Asian (11.9 percent) are the groups least likely to progress to a taught degree. Regarding research degrees, White students appear to fare better, having the highest progression rate (3.6 percent) together with Mixed students and only behind students from Other backgrounds (4.2 percent).

Table 9 also controls for the type of institution attended at first-degree, reporting progression rates to higher degrees for those students that graduated with a first-class honours degree at a Russell Group university.

Table 9. UK-domiciled 2017/18 graduates that attained a first-class honours degree at a Russell Group university progressing to a higher degree by Ethnicity.

	Higher degree, taught		Higher degree, research	
Ethnicity	N	%	N	%
White	1,615	15.5	555	5.3
Indian	50	12.8	10	2.6
Pakistani	25	13.9	10	5.6
Bangladeshi	25	20.8	0	0.0
Black African	10	8.0	5	4.0
Black Caribbean	10	25.0	0	0.0
Chinese	20	15.4	5	3.9
Other Asian	15	10.0	5	3.3
Other Black	0	0.0	0	0.0
Mixed	85	16.4	30	5.8
Other	15	15.8	5	5.3

First, the most alarming feature of this table is the small numbers of ethnic minority students that attained a first-class honours degree at a Russell Group university, and an even smaller fraction of these eventually progressed to a higher degree. Second, we also observe that, again, students from several minority ethnic backgrounds are more likely than their White counterparts to progress to a taught degree. Graduates from Black Caribbean (25 percent) and Bangladeshi (20.8 percent) backgrounds were the groups most likely to progress to a taught higher degree. Regarding research degrees, we also observe that there were no students from Bangladeshi, Black Caribbean, and Other Black backgrounds that attained a first-class degree from a Russell Group university and progressed to a research degree. Graduates from the ethnic groups that were more likely to be enrolled in a research degree 15 months after graduation were Mixed (5.8 percent), Pakistani (5.6 percent) and White (5.3 percent).

Prior attainment and institution attended at first-degree may explain differences in progression rates by type of school attended prior to entering higher education and parental education. First, as reported in Table 10, we look at progression rates to higher degrees for those graduates that got top marks at the undergraduate level.

Table 10. UK-domiciled 2017/18 graduates that attained a first-class honours degree progressing to a higher degree by type of school or college and parental education.

	Higher degree, taught		Higher degree, research	
Type of school	N	%	N	%
Private	645	15.1	175	4.1
State	5,630	12.7	1,475	3.3
Parental education				
Yes	3,490	13.8	955	3.8
No	2,350	11.5	610	3.0

As shown in table 10, even when controlling for prior attainment, graduates that attended a private school or college before entering higher education were 3.4 percent points more likely to progress to a taught higher degree than those who studied in a state school and 0.8 percent points more likely to be enrolled in a research degree 15 months after graduation. Similarly, 13.8 percent graduates with at least one parent, stepparent or guardian with higher education qualifications were pursuing a taught higher degree 15 months after graduation, compared to 11.5 percent of first-generation graduates. The former were also 0.8 percent points more likely to progress to a research degree than the latter.

The effect of type of school attended and parental education appears to reduce significantly once we consider institution attended at first-degree, but with some caveats, as reported in Table 11. In the case of type of school attended, progression rates to taught higher degrees are virtually identical for both groups, and for research degrees, graduates who attended a state school or college are now one percent point more likely to enrol. Regarding parental education, differences in progression rates to taught higher degrees remain – by a two percent point difference – but progression rates to research degrees are identical.

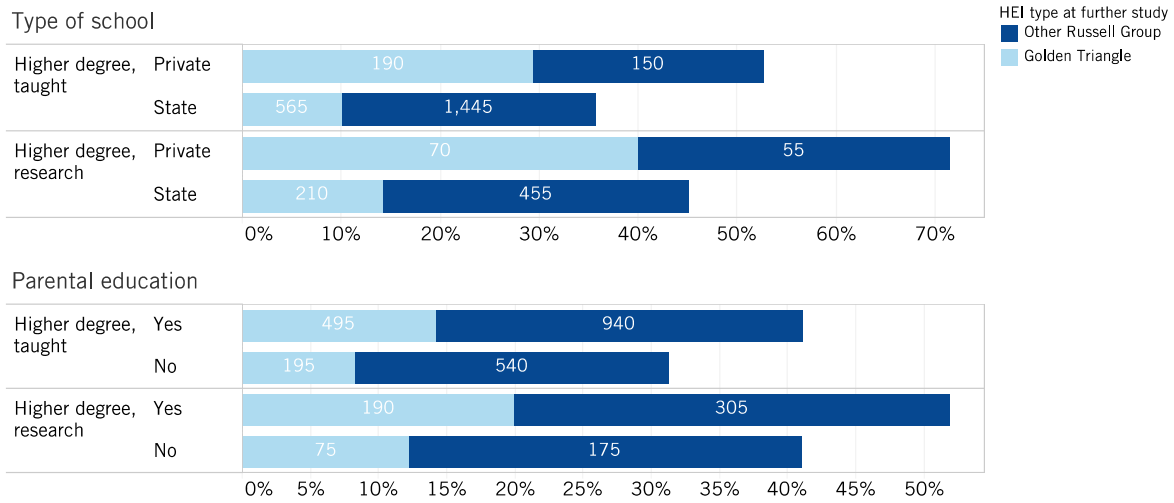
Table 11. UK-domiciled 2017/18 graduates that attained a first-class honours degree at a Russell Group university progressing to a higher degree by type of school or college and parental education.

	Higher degree, taught		Higher degree, research	
Type of school	N	%	N	%
Private	380	15.6%	105	4.3%
State	1,445	15.4%	495	5.3%
Parental education				
Yes	1,220	16.1%	405	5.3%
No	455	14.1%	170	5.3%

Regarding access to Golden Triangle and other Russell Group universities, Figure 20 shows that, even when taking prior attainment into account, 2017/18 graduates that attended a private school before starting their undergraduate degrees or whose parents have higher education qualifications are still more likely to be pursuing a higher degree at one of the UK's most prestigious institution. Graduates enrolled in a taught higher degree that attained a first-class honours degree and attended a private school or college were almost 20 percent points more likely to attend a Golden Triangle institution than those who attended a state school of college. For those who had a least one parent with higher education qualifications, they were almost 6 percent point more likely to do so than first-generation students.

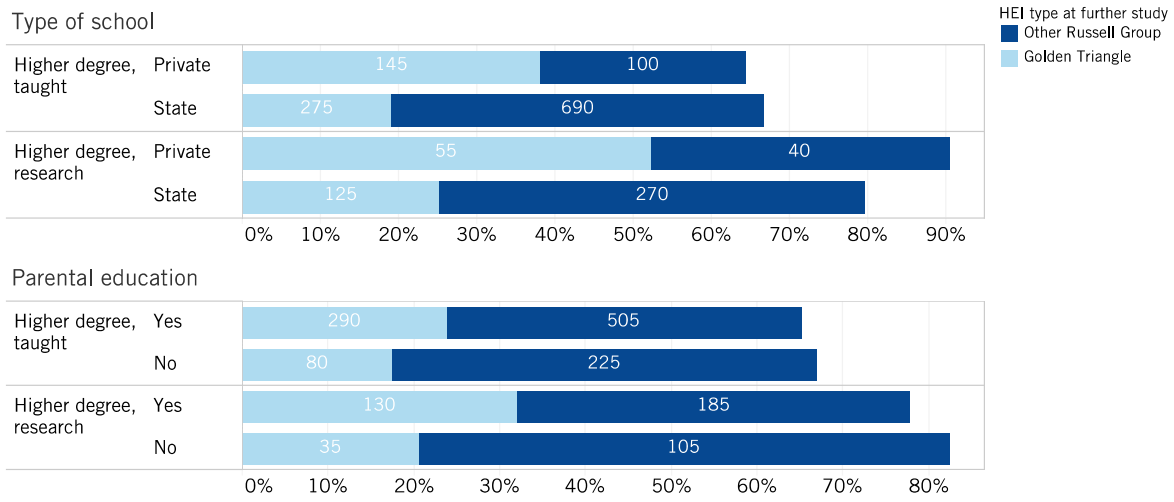
In relation to research degrees, state-educated graduates were almost 36 percent points less likely to be enrolled at a Golden Triangle institution than those who attended a private school. Furthermore, first-generation students were 7.5 percent points less likely to be pursuing a research degree at a Golden Triangle university.

Figure 20. 2017/18 graduates that attained a first-class honours degree progressing to a higher degree, either taught or by research, at a Golden Triangle or other Russell Group institutions by type of school attended and parental education.



Lastly, it is important to highlight that these differences remain when taking into account the type of institution attended at first degree, as attested in Figure 21. In this sense, graduates who progressed to a taught degree and attended a private school were almost 19 percent points more likely to be doing so at a Golden Triangle university than their state counterparts. Similarly, those with parental higher education were 6.2 percent points more likely to do so than first-generation students. Regarding research degrees, state-educated students were 25 percent points less likely to be enrolled at Golden Triangle institutions than those privately education.

Figure 21. 2017/18 graduates that attained a first-class honours degree at a Russell Group university progressing to a higher degree, either taught or by research, at a Golden Triangle or other Russell Group institutions by type of school attended and parental education.



Finally, regarding gender, Table 12 shows the progression rates to higher degrees for those graduates that got top marks at the undergraduate level by gender. In this sense, the slight difference between females and males in progression rates to higher degrees widen when we control for prior attainment, with males being 0.6 and 0.9 percent points more likely than females to progress to a taught and research degree respectively.

Table 12. UK-domiciled 2017/18 graduates that attained a first-class honours degree progressing to a higher degree by gender. The category "other" has been excluded due to its small numbers and cannot be shown following HESA's rounding and suppression methodology to anonymise statistics.

	Higher degree, taught		Higher degree, research	
Gender	N	%	N	%
Female	4,045	12.6%	945	3.0%
Male	2,660	13.2%	830	4.1%

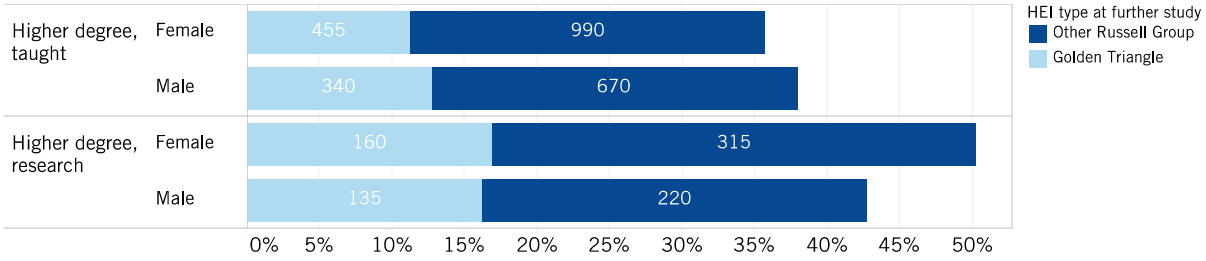
Additionally, when we also control for institution attended at first-degree, this gap in progression rates remains for taught degrees, but reduces for research degrees, with male students being 0.4 percent more likely to progress to a research degree.

Table 13. UK-domiciled 2017/18 graduates that attained a first-class honours degree at a Russell Group university progressing to a higher degree by gender. The category "other" has been excluded due to its small numbers and cannot be shown following HESA's rounding and suppression methodology to anonymise statistics.

	Higher degree, taught		Higher degree, research	
Gender	N	%	N	%
Female	1,105	15.3	365	5.1
Male	695	15.9	240	5.5

Regarding access to Golden Triangle and other Russell Group universities, Figure 22 shows that, even when taking prior attainment into account, 2017/18 graduates that identified as males are still more likely to be pursuing a higher degree at one of the UK's most prestigious institution. Male graduates enrolled in a taught higher degree that attained a first-class honours degree were 1.5 percent points more likely to attend a Golden Triangle institution than those who identified as females.

Figure 22. 2017/18 graduates that attained a first-class honours degree progressing to a higher degree, either taught or by research, at a Golden Triangle or other Russell Group institutions by gender. The category "other" has been excluded due to its small numbers and cannot be shown following HESA's rounding and suppression methodology to anonymise statistics.



Finally, we explore whether these differences remain when taking into account the type of institution attended at first degree, as shown in Figure 23. In this sense, graduates who progressed to a taught degree and identified as male were 5 percent points more likely to be doing so at a Golden Triangle university than their female counterparts. Regarding research degrees, female students were 8 percent points less likely to be enrolled at Golden Triangle institutions than males.

4.5. What is the available pool of potential postgraduate students?

This subsection looks at the distribution of undergraduate degree classifications of those graduates that progressed either to a taught or research higher degree. We do this in order to identify the typical academic achievement required to be offered a place in a UK postgraduate course.[71] We then look at how this distribution varies across different types of universities, and also how grades differ across different socioeconomic groups.

In the year 2017/18, there were 181,170 UK-domiciled first-degree leavers. The vast majority of them graduated with a so-called "good degree" (76.7 percent), that is with either a first (28.8 percent) or an upper second-class degree (47.9 percent). Consistent with the findings of the Institute for Fiscal Studies, 'students studying for postgraduate qualifications tend to have done very well in their undergraduate degree',[72] with those progressing to a higher degree having a higher concentration within the good degree

[71] Unlike undergraduate admissions, there is no systematic data on universities' entry standards at the postgraduate level.
[72] Britton, J., Buscha, F., Dickson, M., van der Erve, L., Vignoles, A., Walker, I., Waltmann, B., and Zhu, y. (2020). *The earnings and returns to postgraduate degrees in the UK.* London: Institute for Fiscal Studies.

range. The academic achievement of those who progressed to a higher degree can be seen in Table 14, together with the distribution of grades of all 2017/18 graduates.

Table 14: Distribution of class of first degree for all 2017/18 graduates, those who progressed to a taught higher degree, and a higher degree by research.

Class of first degree	Total graduates		Higher degree, taught		Higher degree, research	
	N	%	N	%	N	%
1st	52,185	28.8	7,985	34.3	1,825	60.4
2:1	86,790	47.9	12,095	51.9	1,030	34.1
2:2	28,865	15.9	2,890	12.4	135	4.5
3rd	5,235	2.9	175	0.8	10	0.3
Unclassified	8,090	4.5	145	0.6	25	0.8

Case Study 3

NEON'S WIDENING PARTICIPATION IN POSTGRADUATE STUDY WORKING GROUP: SHARING BEST PRACTICE

Established in 2019, this working group brings together representatives from institutions across the sector with a shared interest in widening postgraduate participation. Led by the University of Leeds and the University of Manchester, members include widening participation officers, careers advisers, finance officers, postgraduate admissions specialists and others. The group's initial meetings have involved information gathering, with presentations from the Student Loans Company and academic researchers, as well as sharing of best practice and institutional experiences.

The working group's attention is now on developing in three related areas, following the postgraduate 'lifecycle'. The first is to agree a consistent set of indicators for measuring postgraduate widening participation which are both fit for purpose, and simple to collect and understand. The second is to consider students' success on their courses to ensure that widening access does not lead to a dead end. The third focus is on careers and employability of postgraduates, since securing social mobility requires attention to destinations, not just access.

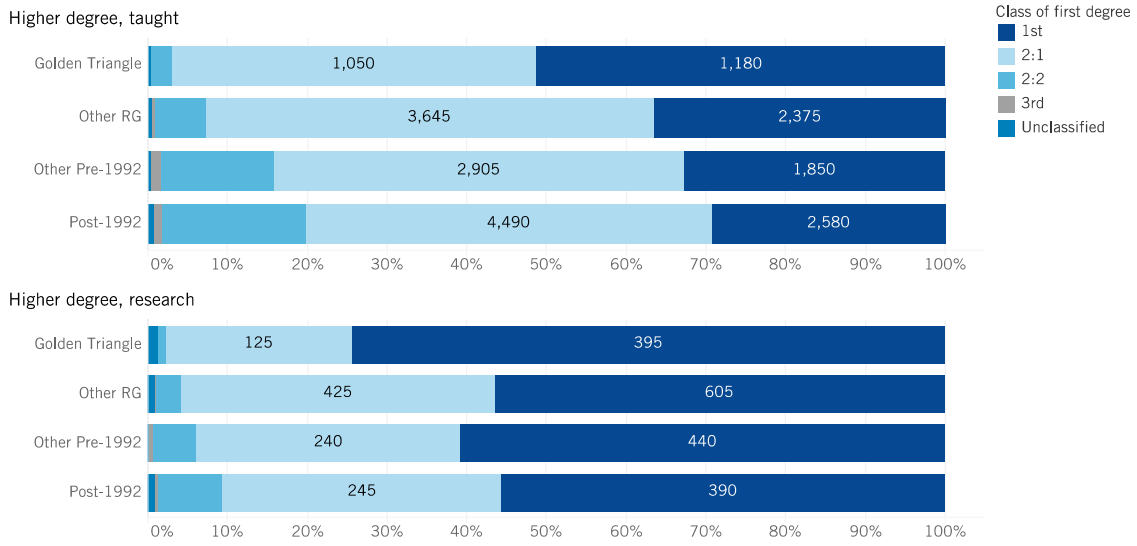
Examples of action to support widening participation from members of the group include:

- The University of Leeds' 'Leeds Masters Scholars' cohort. In addition to a £5,000 bursary, alumni-funded UK Masters Scholars (students from underrepresented groups) are given dedicated support and information, mentoring, access to professional opportunities funds and are engaged in activity to support Leeds' undergraduate widening participation work
- The University of Manchester offers 75 Manchester Master's Bursaries of £4,000 for UK students from underrepresented groups, including care leavers, refugee background students and those from low-income households and/or low-participation neighbourhoods
- The South East Network for Social Sciences Doctoral Training Partnership, led by the University of Essex, had innovated with changes to selection processes for doctoral study and taking forward a widening participation strategy across the partnership

As shown in table 14, 86.2 percent of graduates progressing to a taught higher degree had a first or an upper second-class degree, while 94.5 percent of those who started a research degree did so. However, the academic achievement of graduates varies significantly depending on the type of their postgraduate institution. The distribution of grades of postgraduate students across different types of institutions can be found in Figure 22. Regarding taught higher degrees, of those graduates who progressed to a Golden Triangle institution, 97 percent had a "good degree", with only 2.6 percent having achieved a 2:2. The proportion of students with a "good degree" gradually decreases in other institutional types. For non-Golden Triangle Russell Group institutions, these make up 92.5 percent of postgraduate students, 84 percent at other old universities, and 80 percent at post-1992 institutions.

Based on Figure 22, we can safely assume that graduates wishing to progress to a postgraduate degree need at least a "good degree", especially if they want to enrol in a higher degree by research and/or in an institution sitting at the top of UK's institutional hierarchy.

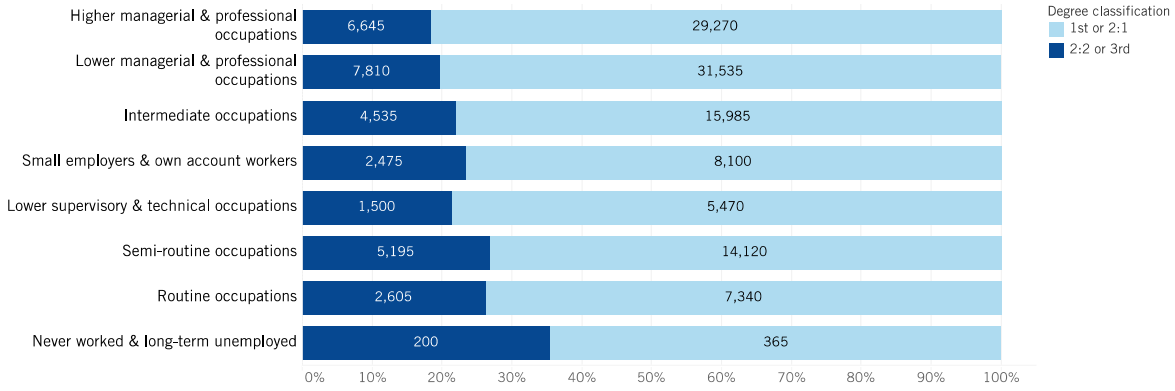
Figure 22. Class of first-degree of 2017/18 graduates enrolled in a higher degree, taught and by research, by institutional type.



We now identify the pool of potential postgraduate students across different socioeconomic groups. In particular, we look at the number of 2017/18 graduates with a good degree using a variety of variables that measure their socioeconomic background, namely: NS-SEC class, POLAR 4 quintiles, type of school attended, parental education, ethnicity, and gender.

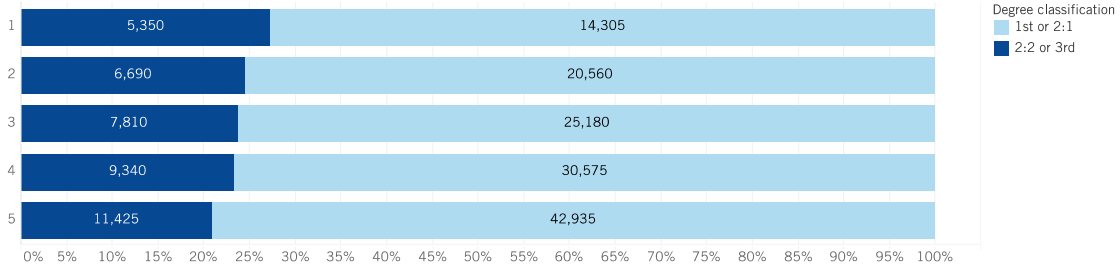
Figure 23 reports the number and proportion of undergraduate leavers with a "good degree" by NS-SEC class. As seen in Figure 23, there is indeed variation between NS-SEC classes, with students from higher managerial backgrounds being almost 8 percent points more likely to earn a good degree than their semi-routine and routine counterparts.

Figure 23. Distribution of academic grades of 2017/18 graduates by NS-SEC class.



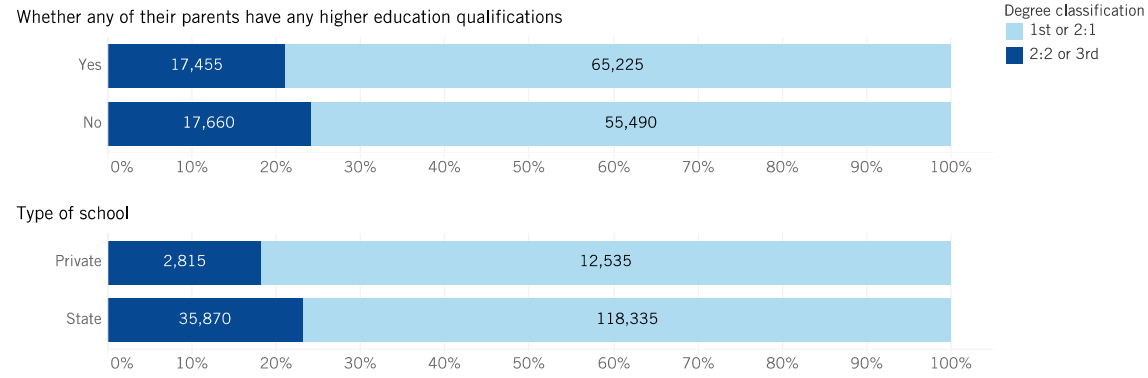
We observe similar patterns for other measures of social and educational disadvantage. Students from areas with the highest levels of participation in higher education (POLAR 4 quintile 5) are almost 6 percent points more likely to earn a "good degree" than those graduates from areas with the lowest levels of participation, as shown in Figure 24.

Figure 24. Distribution of academic grades of 2017/18 graduates by POLAR 4 quintiles.



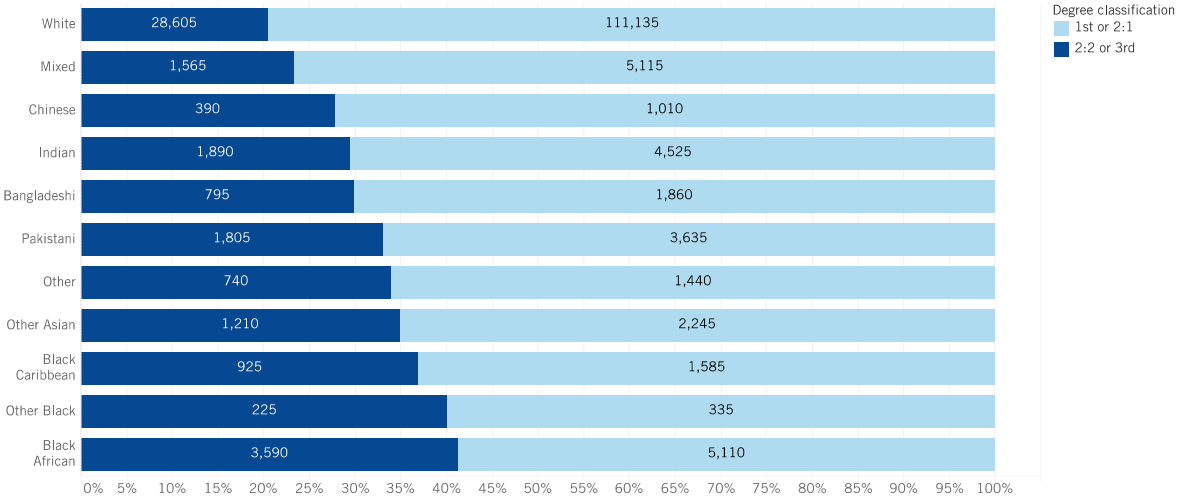
Additionally, there are 3 percent more students with a "good degree" that had at least one parent with higher education qualification than first-generation students, and graduates that attended a private school prior to entering higher education were almost 5 percent points more likely to gain either a first or an upper second-class degree (Figure 25).

Figure 25. Distribution of academic grades of 2017/18 graduates by parental education and type of school attended prior entering higher education.



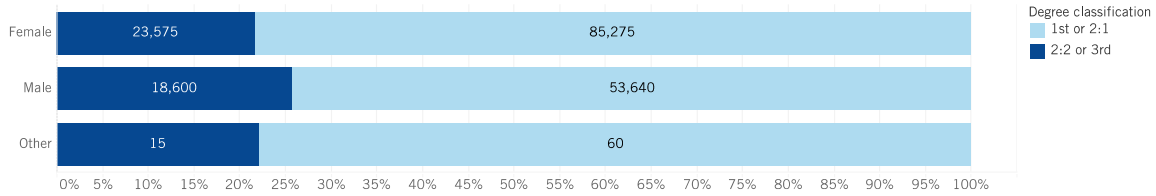
In terms of ethnicity (Figure 26), the group of 2017/18 graduates with the highest proportion of "good degrees" are White students (80.5), almost 21 percent more than the group with the lowest proportion –graduates from Black African backgrounds.

Figure 26. Distribution of academic grades of 2017/18 graduates by ethnicity.



Finally, 2017/18 graduates that identify as female are almost 5 percent points more likely than their male counterparts to achieve a "good degree", with the proportion of students identifying as other[73] with a "good degree" being virtually the same as for females (Figure 27).

Figure 27. Distribution of academic grades of 2017/18 graduates by gender.



The Figures presented in this section indicate that graduates with higher degree classifications are indeed more likely to progress to a postgraduate degree, particularly at elite institutions. However, academic achievement at undergraduate study appears to be associated with various socioeconomic characteristics, with White students, those from better-off backgrounds, and those identifying as females being more likely to attain a "good degree".

Indeed, as shown in previous sections of this report and consistent with past research,[74] once we take into account prior academic achievement, the effect of socioeconomic characteristics wanes. However, students from worse-off backgrounds and non-White ethnic groups are still less likely to attain a "good degree".

KEY POINTS

While differences in progression rates to higher degrees across different socioeconomic characteristics are small, graduates from less privileged backgrounds appear to be less likely to progress than their better-off counterparts, even when controlling for prior attainment and institution attended at first degree. This is true for different measures of socioeconomic and demographic background, including NS-SEC, POLAR4, type of school attended prior to higher education, parental education, and gender.

Among those who enrol at a higher degree, there are important differences across socioeconomic groups in access to the UK's most prestigious institutions, differences that tend to persist even among those students that graduate with top marks and from a Russell Group institution.

The large majority of graduates progressing immediately to postgraduate study have achieved a "good" degree result, meaning a first-class or upper-second-class honours degree. Most of those entering a research degree gained first-class honours. Institutions with the highest status also have the highest proportion of entrants with "good" degrees.

The likelihood of attaining a "good" degree varies according to background characteristics. Students from Semi-routine and Routine occupational groups, from low participation neighbourhoods, whose parents did not attend higher education, who attended a state school and who are from a non-White ethnic group are all less likely to attain a good degree.

Taken together, these two observations suggest that part of the explanation for underrepresentation of some groups at postgraduate level is differential attainment.

[73] HESA records as other those students 'whose sex aligns with terms such as intersex, androgyne, intergender, ambigender, gender fluid, polygender and gender queer' (https://www.hesa.ac.uk/support/definitions/students)
[74] See the Introduction of this report for a review of the literature dealing with socioeconomic inequalities and access to postgraduate education.

5. The cost of postgraduate education

This part of the report looks at tuition fee levels for postgraduate courses delivered in UK higher education institutions, provides an approximation of the maintenance costs students need to incur when pursuing a postgraduate degree away from home, and compares these with the amount of loan and grant funding available in England, Scotland, Wales and Northern Ireland.

As explained in section 2 (Data and Methods), we utilise two main sources of data: the Reddin survey of university tuition fees[75] to gain an approximation of tuition fee levels for taught postgraduate courses (PGT)[76] and the *Which?*[77] student budget calculator, which provides the average monthly maintenance costs for students living outside the parental home to pursue a degree at each UK institution.

Furthermore, as explained in section 3 of this report (Postgraduate loans and access to postgraduate study), since the early 2010s, discussions on postgraduate funding have been brought to the fore, highlighting the necessity to promote further study in order for the UK to acquire 'the higher levels of skills to support the UK economy',[78] reverse a trend of decline of PGT student numbers in UK universities,[79] and mitigate the debt deterrent brought about by the introduction of £9,000+ variable fees in England in 2012.[80] To address these issues, England took the lead and decided to launch, in June 2016, a loan scheme to contribute to costs for postgraduate master's study. Since then, students who are permanently resident in England have been able to borrow up to £10,000[81] –increasing every year with inflation– as a contribution to their postgraduate fees and living costs. In the following academic year, Scotland and Wales, and Northern Ireland followed suit. The amounts available at each home nation, and their evolution over time, are displayed in Table 15.

Table 15: Postgraduate loans available by home nation of domicile, 20016/17 – 2020/21. Note that students can use postgraduate loans to attend a postgraduate degree at any UK institution, regardless of their home nation of domicile.

	Student domicile			
Year	England	Scotland	Wales	Northern Ireland
2016/17	£10,000	£0	£0	£0
2017/18	£10,280	£10,000	£10,280	£5,500
2018/19	£10,609	£10,000	£13,000	£5,500
2019/20	£10,906	£10,000	£17,000	£5,500
2020/21	£11,222	£10,000	£17,489	£5,500

Sources: HM Government, Student Awards Agency Scotland, Student Finance Wales and Student Finance Northern Ireland.

[75] The Reddin survey of university tuition fees is now compelled by the Complete University Guide. Link to the survey: https://www.thecompleteuniversityguide.co.uk/sector/insights/reddin-survey-of-university-tuition-fees
[76] Unfortunately, the Reddin survey does not collect tuition fee data for research degrees.
[77] https://www.which.co.uk/money/university-and-student-finance/student-budget-calculator/
[78] Department for Business Innovation and Skills. (2015). *Higher education: consultation on support for postgraduate study.* https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/479703/bis-15-573-support-postgraduate-study-response.pdf
[79] Higher Education Funding Council for England. (2013). *Postgraduate education in England and Northern Ireland: Overview report, 2013* (Issues paper 2013/14). http://webarchive.nationalarchives.gov.uk/20130704105924/http://www.hefce.ac.uk/pubs/
[80] National Union of Students. 2012. *Steps toward a fairer system of postgraduate taught funding in England.* London: National Union of Students.
[81] https://www.gov.uk/masters-loan

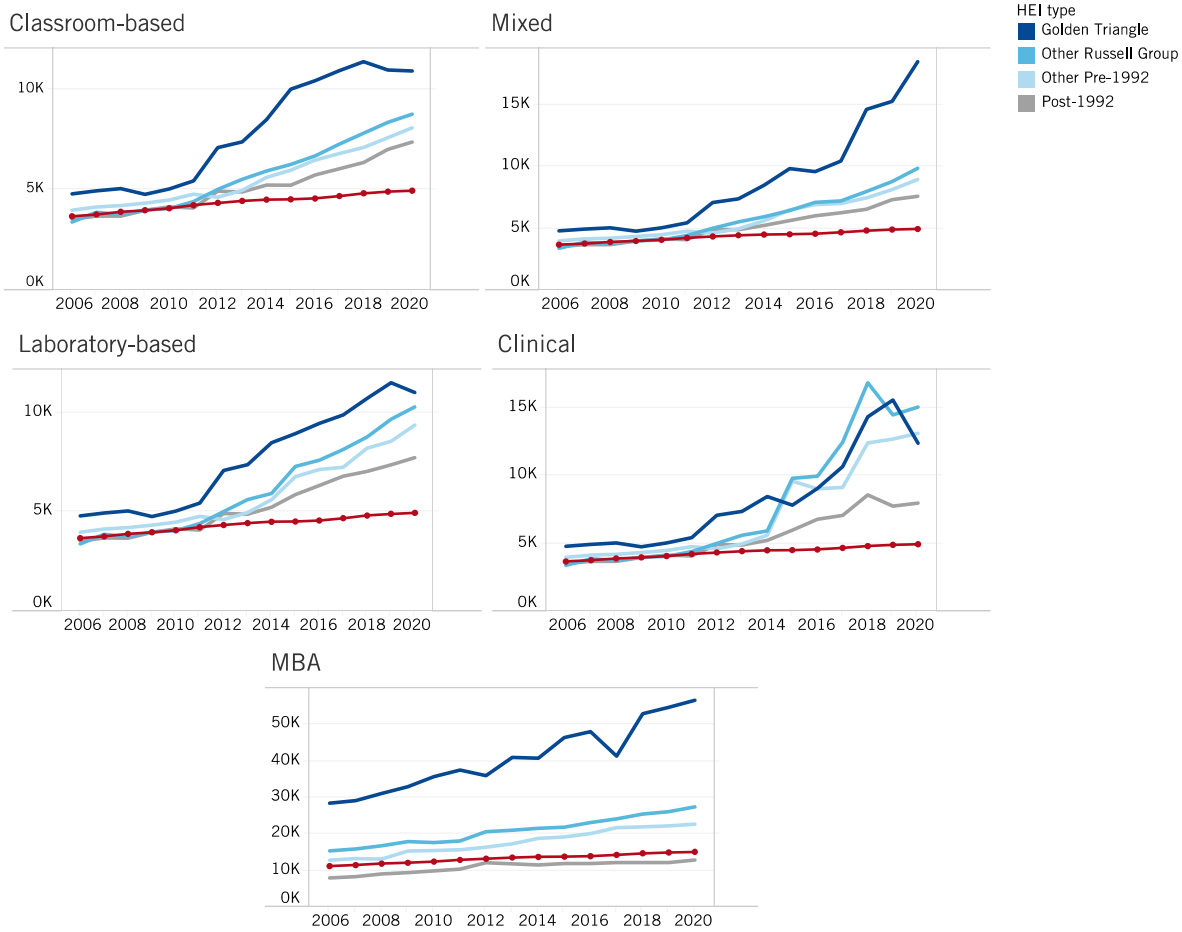
As already stated in section 3, there are substantial differences between home nations in terms of loan amount available. Additionally, the terms and conditions of these loans also vary nation to nation. For instance, in the case of Wales, the amount shown in table 15 is a combination of grant and loan, with the weight of the former being dependent on household income. In the case of Scotland, students can only spend £5,500 of the loan in tuition fees, with the remainder being a contribution to living costs.

5.1. The evolution of PGT tuition fee levels

As explained in section 2, the Reddin survey only provides data on tuition fees for a range of taught postgraduate courses (PGT). In this subsection, we look at the evolution of PGT tuition fees and how these differ by type of institution.

Figure 28 plots the evolution of average tuition fee levels for different types of PGT courses between 2006/07 and 2020/21 by institutional type. Additionally, the plots contained in Figure 28 include a line (dotted, red) displaying the average tuition fee level for each type of PGT course in 2006/07 and its evolution if growth followed inflation levels.[82]

Figure 28. The evolution of average tuition fee levels for different types of PGT courses by institutional type. The red dotted line shows a hypothetical evolution of average tuition fee levels if they had followed inflation.



[82] To do so, we have used data on inflation measured by consumer price index (CPI) in terms of annual growth, provided by the OECD. Link: https://data.oecd.org/price/inflation-cpi.htm.

There are two issues that we would like to highlight from Figure 28. First, that during the period at stake, the average fee for all types of PGT programmes at all types of institutions have grown well beyond inflation (with the exception of MBAs at post-1992 universities). For instance, if classroom-based PGT prices would have followed inflation, these would have grown by 34.6 percent. Instead, average fees at Golden Triangle institutions grew, between 2006/07 and 2020/21, by 128 percent, 158 percent in the case of other Russell Group universities, 103 percent for other pre-1992 institutions, and 109 percent for post-1992 institutions. Putting this into pounds sterling, while average tuition fees for a classroom-based taught postgraduate programme in 2011 were £5,435 at a Golden Triangle university and £4,408 in the other Russell Group universities, by 2020 they had risen to £10,898 and £8,744 respectively. Second, it appears that the gap in prices between the most prestigious UK universities and the rest of the sector has widened throughout the past decade. Again, in the case of classroom-based courses, in 2006/07, the difference between the most expensive group of institutions (Golden Triangle) and the least costly (interestingly, these were other Russell Group universities) was £1,404, and the differences in fees between other Russell Group universities, pre-1992 and post-1992 universities were relatively small. In 2020/21, the difference between the most and the least expensive group of institutions, this time between Golden Triangle universities and post-1992 institutions, was 2.5 times higher: £3,532. We observe similar patterns in other types of PGT courses, with the exception of clinical ones. In the case of the latter programmes, it appears that tuition fee levels in the three categories containing "old" universities is relatively similar, but the gap between the latter and post-1992 institutions is substantial.

5.2. Tuition fees, living costs and student loans

Finally, in this subsection we look at the relationship between tuition fees, living costs and the amount of loan funding – and grants in the case of Wales – available. As stated in the Data and Methods section (section 2), we do so for the academic year 2019/20, as this was the year for which data on student living costs was available.

First, we look at PGT tuition fees for different types of courses and whether different postgraduate loan regimes may allow students to cover for these in case they may be able to attend a UK university without incurring any other expense – e.g. living at home. We understand this may not be a reasonable assumption for some students: for instance students that stay at their parental home when undertaking a postgraduate degree will have some expenses such as transportation.

Figures 29, 30, 31, 32 and 33 show the distribution of tuition fees for different types of PGT programmes by institutional type, with each data point representing one institution within that type. Additionally, these figures include reference lines indicating the loan amount available at each home nation. Please, note that, in the case of Scotland, the reference line is set at £5,500, as this is the loan amount students are allowed to use in order to pay for postgraduate tuition fees.

Figure 29. Distribution of classroom-based PGT fees by institutional type. Lines indicate loan availability at each home nation.

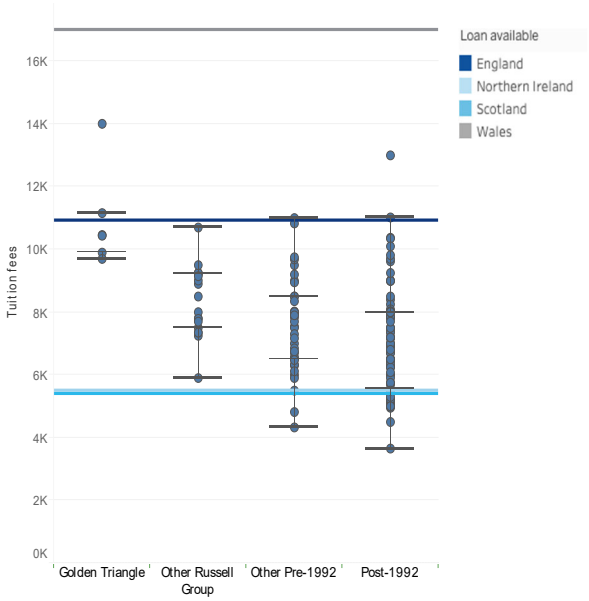


Figure 30. Distribution of mixed PGT fees by institutional type. Lines indicate loan availability at each home nation.

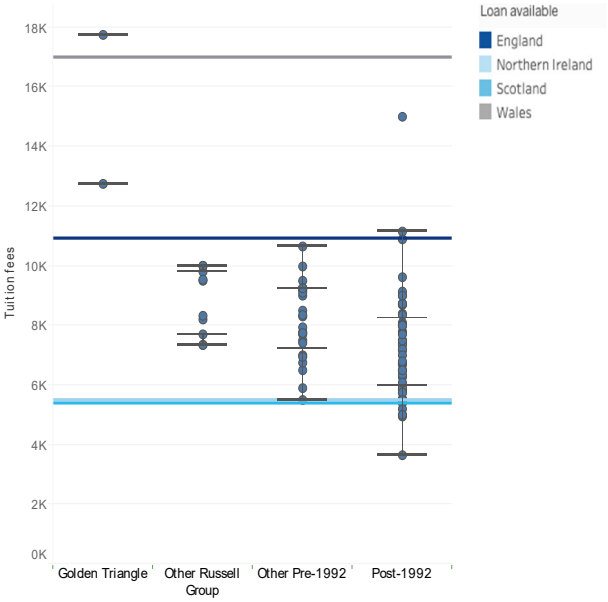


Figure 31. Distribution of laboratory PGT fees by institutional type. Lines indicate loan availability at each home nation.

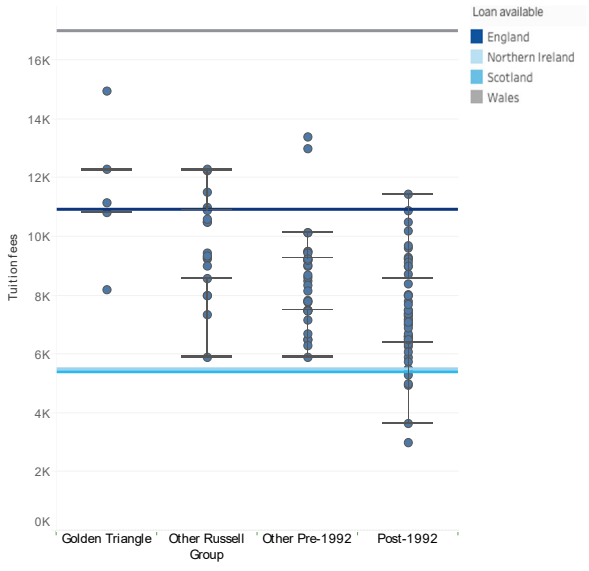


Figure 32. Distribution of clinical PGT fees by institutional type. Lines indicate loan availability at each home nation.

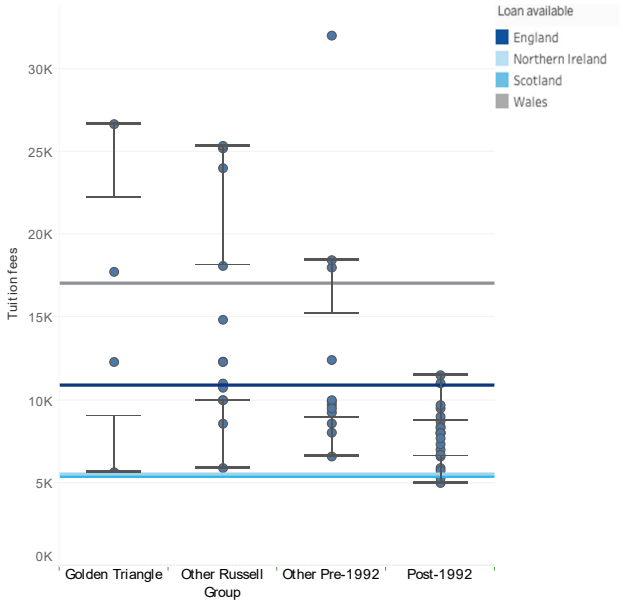
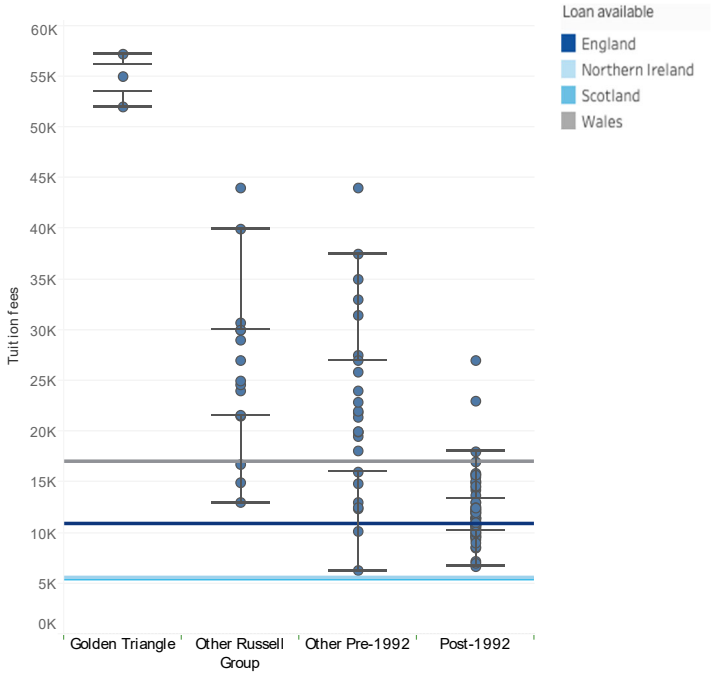


Figure 33. Distribution of MBA fees by institutional type. Lines indicate loan availability at each home nation.



As seen in Figures 29 to 33, the loans available to pay for postgraduate fees in Scotland and Northern Ireland barely cover the cost of a PGT programme, regardless of the type of course. In the case of classroom-based courses, individuals domiciled in these home nations would need to acquire additional resources to pay for PGT fees at any Golden Triangle and other Russell Group institution, and their loans would only cover the fees at three other pre-1992 universities and 20 post-1992 institutions. For mixed and laboratory-based PGT programmes, students from Scotland and Northern Ireland would only be able to afford tuition fees using loan money at one pre-1992 university and at eight post-1992 universities. Finally, this subset of students would only be able to pay for their full fees for a clinical programme using loans at only three post-1992 institutions; no MBAs cost £5,500 or less.

SOCIAL INEQUALITIES AND ACCESS TO TAUGHT POSTGRADUATE STUDY: NARRATIVES FROM FIRST-GENERATION STUDENTS

Dr Rosa Marvell, Oxford Brookes University

Recent ESRC-funded doctoral research has explored the intersection between social inequalities and progression into PGT study. Drawing on narratives from 41 first-generation students who had transitioned to master's-level study, the data illustrates how lived inequalities extend into taught postgraduate study.

'PRICE WAS A BIG FACTOR': FEE LEVELS AND THE MASTER'S LOAN

The introduction of the Master's loan was significant and allowed previously impossible avenues to open up, especially for younger interviewees. However, the loan cap, cost of living, uneven and patchy bursary support and unregulated master's fees meant access to opportunities was segmented geographically and sectorally, embedding inequalities. As a result, those without personal savings or support networks were demonstrably priced out of certain spaces, notably 'high status' universities in central London.

I looked at [London-based university], I think it was like £18,000. I really wanted to do it, they have like a gender department there, and that's what I had my heart set on doing […] there was just absolutely no way that I could afford the fees and to live in London

It really bothers me that there are so many opportunities down south. It's almost like a measurement to keep people up north […] it just feels like the reason there's such a north-south divide in the UK is because of money

'IT HAD TO BE LOCAL': GEOGRAPHICAL (IM)MOBILITY AND POSTGRADUATE 'CHOICES'

At the point of PGT transition, there was a clear 'stickiness' to place as decision-making about master's-level study was undertaken in relation to work, caring responsibilities, relationships and wanting to feel 'at home'. Despite enticing courses or work opportunities in other locales, the idea of moving was ill-favoured or inaccessible, symptomatic of a real shift in life priorities at a more complex stage of life.

I'm with my girlfriend three years at this point, very happy, long-term renting, we've been living together for ages, we've got a cat… it's not really fair on her and the cat to uproot them

I had to stay local because I had things settled down […] It's that commitment – you're in a relationship and you want to keep that up, so you have to stay local

I'm a very local person […] it's not like London was bad, it's just that nowhere compared to home

'I HAD TO BE IN THE RIGHT PLACE AT THE RIGHT TIME': DIVERSE TRAJECTORIES INTO POSTGRADUATE STUDY

Master's cohorts are a broad church and students' trajectories were rarely (if ever) linear. Students came to master's-level study at any point in life, from their early 20s to early 70s, where most had a gap in studying. Others had no prior university experience, suggesting a continuum of different journeys towards postgraduate study. 'Returners' (and first-timers) may face distinct challenges around entry requirements, finding time to study, understanding contemporary HE institutions and practices and (re)engaging with HE teaching.

[My line manager] sat me down, we had a chat, and he said, "Well, if you're willing to spend nine months and that amount of money on a diploma, you should consider doing a master's degree", and I said, "Yes, that's fine, but I left school at 18 with not even A-Levels, I had four GCSEs, two since then, but I can't enter that route", and he said, "That's rubbish, you've got 20 years' experience"

That was a real culture shock to discover how these things are done these days. Everything, of course, is done electronically…

I feel like it's just been a series, in terms of what could be a career, a continuous amount of setbacks, if you know what I mean. And, you know, I don't wish they'd not happened, because then I wouldn't be where I am now, and, you know, that would be different, but that's how it feels

In the case of students with residence in England, the picture looks slightly better. Using postgraduate loans, they would be able to attend a classroom-based programme at almost all Golden Triangle institutions (with the exception of Cambridge and LSE) and all other Russell Group institutions, assuming that they do not have to incur any other additional expense. The distribution of fees is also relatively similar for mixed programmes, with the exception of Golden Triangle institutions. There are only two Golden Triangle universities that delivered, in 2019/20, mixed PGT courses (Oxford and UCL), and in both cases the fee level exceeded the loan amount available for English students. Regarding laboratory-based courses, English students would be able to afford PGT fees using postgraduate loans at Cambridge and Imperial, at most other Russell Group universities, with the exception of Sheffield, Edinburgh, Birmingham, and Manchester, and at most pre-1992 and post-1992 institutions. In relation to clinical programmes, prospective English graduates that relied exclusively on student loans to pay for fees, would have been excluded from UCL, King's College and Oxford, seven other Russell Group universities, Buckingham, Swansea, the Royal Veterinary College, Dundee, Roehampton and Plymouth Marjon. Finally, it is clear that MBAs are the most exclusive type of PGT programme, with English loans covering only a fraction of the fees charged at all Golden Triangle and Russell Group universities, most pre-1992 institutions, and a third of post-1992 universities.

Finally, as seen in figures 29 to 33, the Welsh loan arrangement is the most generous one, allowing Welsh students to afford tuition fees virtually at all UK universities for classroom-based, mixed, and laboratory-based PGT programmes. In the case of clinical courses, they would only be excluded from UCL and Oxford, four other Russell Group universities, and three other pre-1992 institutions. Unfortunately, due to the costly nature of MBAs, even students with access to the generous Welsh package would only be able to afford fees at three Russell Group universities, seven other pre-1992 institutions and at almost three quarters of post-1992 institutions offering MBAs in 2019/20.

Now, we look at how different loan arrangements compare to the total average costs of attending a PGT course at different types of UK universities, assuming that a student living away from the parental home would need, approximately, the resources suggested by *Which?* student budget calculator. The distribution of these costs for all UK universities are displayed in Figures 33, 34, 35, 36 and 37. These figures also report reference lines for the different loan amounts available at UK home nations. This time, Scotland's reference line is set at £10,000, as these plots also report maintenance costs.

Figure 33. Distribution of classroom-based PGT fees and living costs by institutional type. Lines indicate loan availability at each home nation.

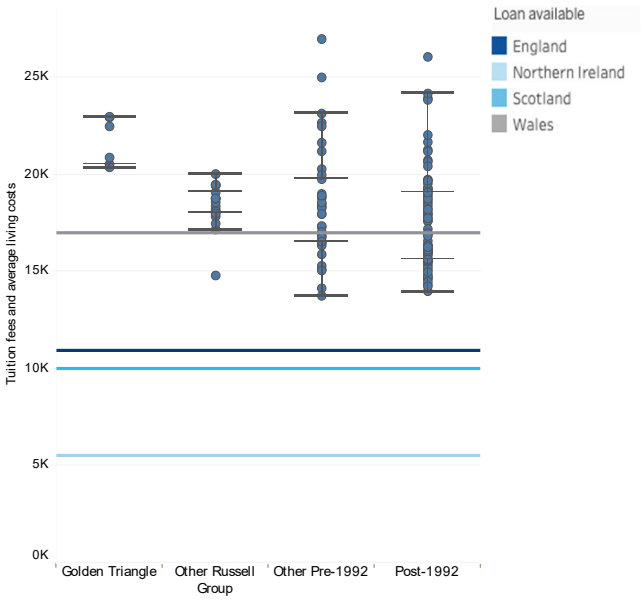


Figure 34. Distribution of mixed PGT fees and living costs by institutional type. Lines indicate loan availability at each home nation.

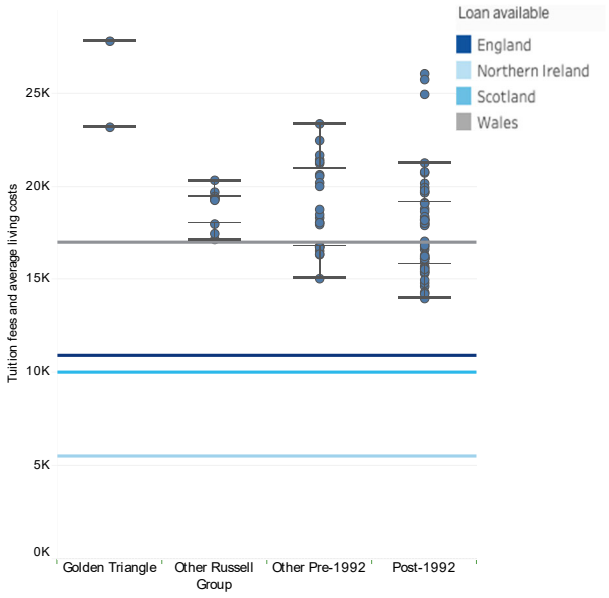


Figure 35. Distribution of laboratory PGT fees and living costs by institutional type. Lines indicate loan availability at each home nation.

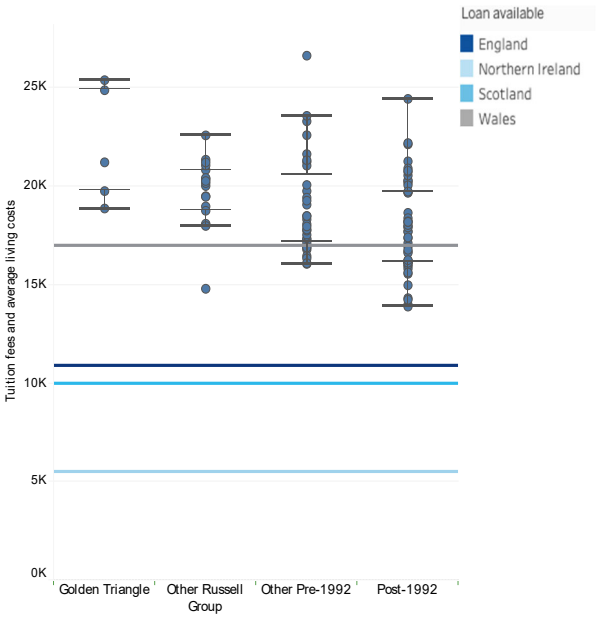


Figure 36. Distribution of clinical PGT fees and living costs by institutional type. Lines indicate loan availability at each home nation.

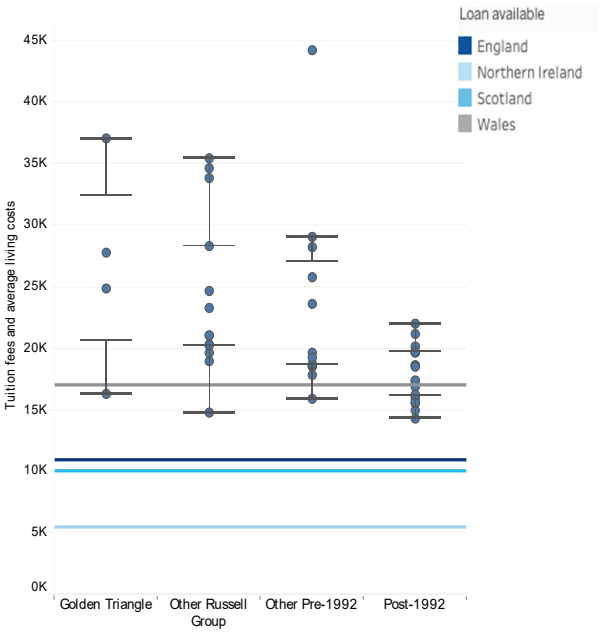
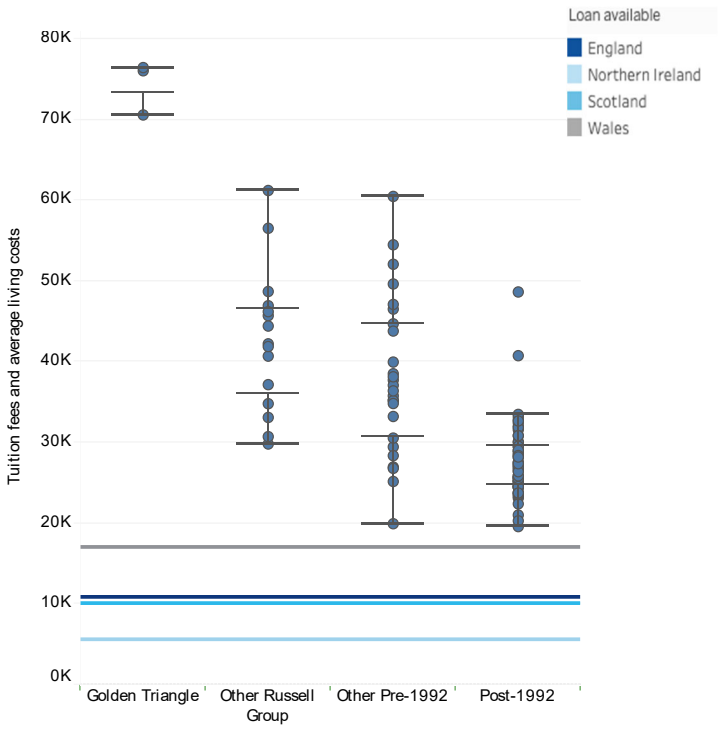


Figure 37. Distribution of MBA fees and living costs by institutional type. Lines indicate loan availability at each home nation.



As seen in Figures 33 to 37, students from Scotland, England and Northern Ireland would not be able to cover the full cost of attending a PGT course at any UK university and for any type of PGT programme with the loan amount available in their home nations. In fact, it is apparent that they would need to top their loans up with substantially more resources. For instance, if an English student would like to attend the cheapest UK university for a classroom-based PGT course – Keele University (£13,759)– they would need almost £3,000 more than what is available to them in the form of loans. If they wanted to attend a Golden Triangle institution, this difference would be even higher. For instance, an English student seeking to enrol in a classroom-based PGT course at Cambridge would need to find £12,042 to supplement their loan. If they were Northern Irish, this amount would have to be almost £17,500. The difference between the loan available and the resources that UK students need to acquire to supplement it tends to increase depending on the type of institution attended and the type of PGT programme.

Furthermore, when we take tuition fees and living costs into account, even the most generous postgraduate loan regime –that is, Wales – is not sufficient to cover the price of attending a PGT course at the most prestigious UK institutions. A Welsh student taking up the full loan or grant available to them would only be able to attend one Russell Group institution for a classroom-based course: Queen's University, Belfast. In the case of clinical courses, they would only be able to afford a degree in the lower bound of the range provided by Imperial and, again, at Queen's University, Belfast. Finally, the Welsh postgraduate loan would not be able to cover the full cost –including maintenance costs– of an MBA at any UK institution.

The significant inflation in tuition fee costs we have demonstrated is concerning. Equally troubling is the very wide variation in charges across institutions. While the cost of postgraduate courses will vary somewhat according to content and structure, the disparities evident between institutions seem to go considerably beyond any reasonable bounds. It is not clear to us why courses at some institutions are twice as expensive as those at others. Similarly, although there has been some reduction in the core

teaching grants available to support taught postgraduate courses, the rate of tuition fee inflation goes beyond what we would expect to see to mitigate those changes. We have to question whether good value for money is being achieved for the public subsidy which master's loans represent. We believe there is a clear justification for more regulation of taught postgraduate tuition fee levels as a quid pro quo for the additional funds made available through the post-2016 loan and grant settlements in the UK.

KEY POINTS

Tuition fee levels at UK higher education institutions for taught postgraduate courses have increased, in the past 14 years, well beyond inflation, and the price differences between different types of universities have widened.

The loan amounts available to Scottish and Northern Irish students can only cover tuition fees for a handful of institutions and for particular types of programmes. Moreover, students domiciled in Scotland and Northern Ireland would not be able to afford tuition fees in a Russell Group institution using postgraduate loans alone.

With the exception of Wales and for a handful of institutions, no student loan regime would allow postgraduate students to cover the full cost, including maintenance, of studying a one-year PGT programme in a UK institution.

6. Discussion

Our analysis shows that inequalities in access continue to be found at postgraduate level. Those from disadvantaged socio-economic backgrounds and (especially for research degrees) certain minority ethnic groups are less likely to progress from an undergraduate to a postgraduate degree than their more advantaged counterparts. Although these differences are not as stark as those found at earlier levels of education, they are nevertheless clear and persistent. It is true that differences in degree-level attainment between groups account for part of the difference observed. Addressing the degree classification 'awarding gap' would certainly reduce inequalities of postgraduate access but would not remove them. Sometimes in the past the higher education sector has argued that undergraduate access problems are inherited from earlier levels of education; that argument does not bear scrutiny when it comes to postgraduate access, since universities have a responsibility for addressing inequitable outcomes arising on the courses they themselves teach.

Besides undergraduate attainment, questions of finance, funding and affordability also feature in our analysis. The introduction of master's loans in the UK's four nations has meant, for the first time, that graduates without other sponsorship or their own independent resources have been enabled to participate at master's level. In the case of England, which we examined here in detail, this has had some success in narrowing the gap in participation between the most and least advantaged socio-economic groups, which should be a cause for celebration. This judgement needs to be tempered, however, with some less welcome side effects of the policy. Funding through loans means those with the least resources to begin with must take on the largest debts, putting a brake on their social mobility through an increased repayment burden. Loans also subsidise, from the public purse, those who could have afforded to pay their own way. Perhaps of most concern though are the substantial increases we have found in master's degree tuition fee levels over time, especially in high-status institutions. Arguably there has been an element of correction in 'home' postgraduate tuition fee levels by institutions in favour of economic viability. However, the level of inflation seen and the gap in affordability this has opened up threaten to erode any gains in access made through master's loans. The difference in affordability across institutions of different status should be a particular cause for concern. It may go some way to explaining why we see apparent inequalities by socio-economic background in the type of institution attended at postgraduate level. Even with the more generous Welsh postgraduate funding package, the total cost of studying and living as a full-time master's student at a Russell Group university is not fully covered and in many cases the affordability gap is considerable. There is a clear risk that disadvantaged students are being priced out of postgraduate study at higher-status universities.

In our view, there is a case for intervention to counter-act these trends. Offering an enhanced student funding package which covers more of the full cost of postgraduate study – especially if targeted at students from lower-income backgrounds – would be one positive step, bringing postgraduate study more into line with undergraduate arrangements. Controlling costs by acting to supress further above-inflation increases in postgraduate tuition fees is another option and these two measures together would go a long way to improving affordability. We think there is also a case for extending the Office for Students' oversight of access to include taught postgraduate qualifications, including over course and application fees, with action taken where these costs are acting as barriers to lower-income students. As we have noted in this report, there are some promising examples of 'bottom up' actions by some universities to extend their widening participation and fair access work to postgraduate level. Currently though, these efforts are voluntary and perhaps as a consequence they are by no means widespread. Were postgraduates to be formally included in institutional Access and Participation Plans and given similar oversight by the devolved governments there would be greater incentives for institutions to prioritise and develop their efforts.

Through better co-ordination and publishing of data on the background characteristics of postgraduates it should be possible for institutions, funders, policymakers and students to build a fuller picture of postgraduate access and participation. Achieving a working consensus on how to measure socio-economic background at postgraduate level will be an important element of this. We suggest that alternatives to the POLAR participation measure will be more valid and reliable for this task; an issue explored in a recent report from the Sutton Trust,[83] and which will also be examined in work on this issue by NEON's Widening Participation in Postgraduate Study Working Group. Better data is especially needed to address two currently under-researched areas when it comes to postgraduate access. First, we know far less about patterns of access among graduates who do not make a quick transition to a postgraduate course – what little evidence we do have suggests that inequalities sharpen among these 'returners',[84] who make up the majority of all postgraduates. Second, we do not know if graduates from underrepresented groups do not apply in the first place, or rather that they do apply but then are either rejected or otherwise unable to enrol.

To support widening postgraduate participation and fair postgraduate admissions, the UK needs a more joined-up and straightforward postgraduate admissions system, especially for taught postgraduate courses. Effectively at present, there is no 'system', but rather a set of disparate arrangements at individual institutions. Some even charge high application fees just to apply, which constitute a likely barrier for the disadvantaged.[85] Clear information about the process of applying for postgraduate courses and the funding available will be invaluable for those who lack the social capital to support postgraduate ambitions. While UCAS currently collates information on available postgraduate courses,[86] ensuring that all institutions consistently list all their courses there would provide a single search portal for those exploring their options. A systematic approach to collecting postgraduate application data will help to identify demographic and institutional 'cold spots' for postgraduate participation. Understanding these patterns would inform a policy of contextualised admissions, for which we believe there is a case. As at undergraduate level, if we do not take corrective action to recognise potential among students, then progress in achieving fairer and wider access at postgraduate level will be much slower.

For recent graduates from underrepresented backgrounds, we believe there is a need for outreach and 'demystification' work, mirroring that which takes place at undergraduate level. It is wrong to assume that those without any prior exposure to postgraduate study will be aware of what it is, why it is likely to be beneficial and how to become a postgraduate student simply by dint of having taken an undergraduate degree. Postgraduate studies, and the application process for courses at this level, can be very different to an undergraduate degree, and so extra support at this level has the potential to improve access. As we have highlighted through the case studies presented here, some universities have begun such activities, but we think there is substantially more scope for targeted outreach work directed to those from underrepresented backgrounds. This might include forms of information, advice and guidance including summer schools, as well as considering what barriers there are internal to universities which could be addressed through contextualised admissions and the avoidance or reduction of application fees.

Much of what we have focussed on in this report pertains to students who have recently completed their undergraduate study, and who will generally be in their twenties or early thirties. That is partly a consequence of the available data, which as we have explained, is most complete at comprehensive for those making swift undergraduate to postgraduate transitions. Mature postgraduates, especially those

[83] J. Jerrim (2020) Measuring Disadvantage. The Sutton Trust. Available at: https://www.suttontrust.com/our-research/measuring-disadvantage-higher-education-polar-fsm/
[84] Higher Education Funding Council for England (HEFCE) 2013a *Trends in Transition from First Degree to Postgraduate Study: Qualifiers Between 2002–03 and 2010–11*, Bristol: HEFCE.
[85] Stubbs, J. and Wakeling, P. (2017) The hidden costs of applying for postgraduate study. *Times Higher Education,* 22 August https://www.timeshighereducation.com/blog/hidden-costs-applying-postgraduate-study
[86] https://digital.ucas.com/coursedisplay/results/providers?destination=Postgraduate

who have spent a long period away from university since their first degree, will have a different set of needs. Some may have practical limitations to their postgraduate study choices, based on their work and family commitments, and their location. For these practical reasons, or for preference, many postgraduates will only apply to a single institution and this would need to be taken into account in any postgraduate application system. However, we believe that potential advantages remain for all postgraduate applicants in a shared postgraduate application system, which makes clear what other options are available to them, and which is simple to understand and use.

Taken together, we think the changes we have suggested here have the potential to open-up access to postgraduate study, so that talented young people are able to progress to this level of study regardless of their socio-economic background.

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