Uni Connect target areas national analysis 2024

An updated analysis of young participation in higher education in England in the areas targeted by Uni Connect

Contents

Summary

1. This report provides an additional year of analysis contributing to the overall evidence base for participation in higher education in the areas targeted by Uni Connect. The scope of the analysis has not changed from the previous publication; it does not consider alternative pathways to higher education and continues to use national administrative data to present the higher education application outcomes of key stage 4 learners living in areas targeted by the Uni Connect programme. This updated quantitative analysis includes an additional cohort of learners applying to higher education courses in the 2022 UCAS application cycle. For the first time, students in the most recent cohort of data could potentially have received the full five years of Uni Connect outreach delivery during school years 9 to 13.[1]

2. Uni Connect is an Office for Students (OfS) funded programme that supports the delivery of sustained and progressive outreach to underrepresented learners in years 9 to 13 of state secondary education.[2] The programme brings together 29 partnerships of universities, colleges and other local partners to offer activities, advice and information on the benefits and realities of going to university or college.

3. This report is intended to contribute to the evidence base about young participation in higher education in the areas in which Uni Connect partnerships work. This report should not be viewed as an assessment of whether or not the programme is meeting its aims, but read alongside the range of national and local partnership evaluation activities that are contributing to this evidence base.[3] These include:

   a. Independent reviews of collaborative support for improving equality of opportunity in access to higher education.

   b. Independent economic analysis to assess the level of increased student participation and positive economic outcomes through human capital development and increased labour productivity.

   c. Independent impact evaluations to assess changes in learners' higher education knowledge, attitudes, intentions and behaviours that result from Uni Connect activity, including a review of impact evidence from partnerships' local evaluations.

   d. Independent formative evaluations to improve understanding of how the programme is working and drive improvements.

   e. Partnership local evaluations, including longitudinal tracking.

   f. Monitoring activity delivery and learner engagement.

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[1] The previous analysis was published in May 2022 and can be found at www.officeforstudents.org.uk/publications/uni-connect-national-evaluation/.

[2] For more information on Uni Connect, see www.officeforstudents.org.uk/advice-and-guidance/promoting-equal-opportunities/uni-connect/.

[3] See www.officeforstudents.org.uk/advice-and-guidance/promoting-equal-opportunities/uni-connect/evaluating-uni-connects-impact/.

g. Analysis of national administrative data (presented in this report).

4. This report:

    a. provides an updated analysis of one of the stated aims of the Uni Connect programme: to contribute to reducing the difference previously referred to as the 'gap' in higher education participation between the most and least represented groups of learners. Accordingly, it focuses on the differences between these two groups, rather than absolute numbers.

    b. investigates differences in participation between learners living in Uni Connect target areas and those not. Although this is not a specific programme aim, it provides a fuller understanding of the picture.

    c. considers some of the underlying factors associated with changes in these differences over time.

5. We have highlighted within the analyses presented where major national events, such as the COVID-19 pandemic, could have affected the outcomes of the cohorts considered.[4] While the wider context and limitations of this analysis can be found in the 'Methodology' section of this report, not every situation or eventuality will be covered, and it should be borne in mind that the changes in higher education participation presented cannot be attributed to the Uni Connect programme alone.

In this report we consider five 'application outcomes' measuring success in getting into higher education. They all relate to 18-year-old applicants applying to full-time undergraduate courses through UCAS.

Application outcomes for the key stage 4 population:

Application rates: The proportion of the key stage 4 population that apply to higher education through UCAS (calculated by dividing the number of applicants by the number of learners in the key stage 4 population).

High tariff application rates: The proportion of the key stage 4 population that apply through UCAS to selective higher education providers – those with high average 'tariff scores'[5] (calculated by dividing the number of applicants with at least one application to a high tariff provider by the number of learners in the key stage 4 population). Reducing the differences between these groups is not one of the stated aims of the programme, but is included here to provide a fuller understanding of the data.

Placed rates: The proportion of the key stage 4 population accepted to start higher education (calculated by dividing the number of accepted applicants by the number of learners in the key stage 4 population).

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[4] See our previous analysis for a discussion of the possible impacts that the COVID-19 pandemic could have had on our analysis: www.officeforstudents.org.uk/publications/uni-connect-national-evaluation-updated-analysis/.

[5] See our provider typology methodology for information on how tariff scores are calculated: www.officeforstudents.org.uk/publications/provider-typologies-2022/.

Application outcomes for the applicant population:

Offer rates: The proportion of applicants that receive at least one offer by 30 June or were recorded as being accepted by the end of the cycle (calculated by dividing the number of applicants that receive at least one offer by the total number of applicants).

Acceptance rates: The proportion of applicants that are accepted to start higher education by the end of the cycle (calculated by dividing the number of accepted applicants by the total number of applicants).

Findings

6. The findings of this analysis should be viewed in the context of the original engagement target set for the Uni Connect programme, which was 20 per cent of learners living in Uni Connect target areas. We have previously reported that around 17 per cent of learners living in Uni Connect areas received the full amount of engagement intended and just 11 per cent received no engagement.[6]

7. Application rates in areas with both the highest and lowest participation rates have increased since the Uni Connect programme launched in 2017. However, as the increase in the former group was slightly higher, this has resulted in the difference in rates between the two groups increasing to 28.3 percentage points in 2022. The same pattern is seen in high tariff application rates. Conversely, for placed rates there has been a small reduction in the difference between the two groups, which now stands at 24.6 percentage points.

8. While increases in application rates have also been observed for both areas targeted by Uni Connect and those living in other areas. The difference in rates between these groups has hovered around 16 percentage points, apart from the years affected by the COVID-19 pandemic, with a marginal increase seen since the programme launched. Again, for placed rates there has been a small reduction in the difference between the two groups, which now stands at 14.2 percentage points.

9. After taking into account differences in characteristics between the two groups of learners (using a statistical approach called 'exact matching', described in Annex D), we find that both the differences in application rates and the differences in placed rates reduce substantially. This suggests that the characteristics used to match the two groups of learners (GCSE results, free school meal eligibility, sex and ethnicity) are contributing towards the observed differences in application outcomes.

10. Nonetheless, after these underlying differences are taken into account, it is estimated that there has been no statistically significant change in the difference in application or placed rates between 2016 and 2022.[7] For high tariff application rates it is a different story. Since 2016, the difference has reduced by 1.1 percentage points and this is considered statistically significant.

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[6] See our previous analysis: www.officeforstudents.org.uk/publications/uni-connect-national-evaluation-updated-analysis/.

[7] Statistical significance is reported at the 95 per cent confidence level throughout this report.

This suggests that the Uni Connect programme is associated with a relative improvement in high tariff application rates in targeted areas.

11. GCSE attainment at key stage 4 continues to be strongly related to the likelihood of applying to higher education (see Annex A). Differences in application rates between learners from Uni Connect target areas and other learners were persistent for those with at least four or five 'standard pass' GCSEs (those at grade A* to C – or 9 to 4).

This report is an official statistic which falls under the Code of Practice for Statistics. We welcome any feedback on our approach. Please email any comments to Paula Duffin at official.statistics@officeforstudents.org.uk.

Introduction

Uni Connect programme

12. Uni Connect is an OfS-funded programme that supports the delivery of sustained and progressive outreach to target learners in years 9 to 13 of state secondary education.[8] It is being delivered in three phases:

    - phase one of the programme started in January 2017 and ran until July 2019

    - phase two started in August 2019 and finished in July 2021

    - phase three started in August 2021 and is due to finish in July 2025.

13. The programme's aims were to:

    a. Contribute to reducing the gap in higher education participation between the most and least represented groups.

    b. Equip young and adult learners from underrepresented groups to make an informed choice about their options in relation to the full range of routes into and through higher education and to minimise the barriers they may face when choosing the option that will unlock their potential, including barriers relating to academic attainment.

    c. Support a strategic local infrastructure of universities, colleges and other partners that can cut through competitive barriers, offer an efficient and low-burden route for schools and colleges to engage with higher education outreach, enable schools to engage with attainment raising activity (a recent addition to be delivered in 2023-24), and address outreach 'cold spots' for underrepresented groups.

    d. Contribute to a stronger evidence base around 'what works' in higher education outreach and strengthen evaluation practice across the sector.

14. The Uni Connect programme has undergone changes over the years in response to changing priorities, and as a result of implementing feedback from evaluations undertaken. There have also been reductions in funding in the last few years, from £40 million in 2021-22 to £30 million in 2022-23 and 2023-24. For 2024-25 there will be a further reduction to £20 million. The programme goal of engagement with 20 per cent of learners within identified wards was withdrawn as a consequence in 2022-23. However, the OfS still expects Uni Connect partnerships to seek to maximise engagement with learners who live in target areas and as a result the programme continues to engage more learners year on year (see the latest data snapshot).[9]

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[8] For more information on Uni Connect, see www.officeforstudents.org.uk/advice-and-guidance/promoting-equal-opportunities/uni-connect/.

[9] For more information on Uni Connect's yearly figures, see www.officeforstudents.org.uk/advice-and-guidance/promoting-equal-opportunities/uni-connect/evaluating-uni-connects-impact/.

15. Figure 1 below provides a visual representation of the various cohorts of learners engaged by the programme, from key stage 4 (KS4) through to higher education entry. It shows that the potential number of years of engagement that each cohort may have received has increased since the programme launched in 2017, with the latest (outlined) 2022 entry cohort being the first to potentially have received the full five years of sustained and progressive outreach intended in the programme design. The application outcomes for all cohorts up to and including the 2022 cohort have been included in this analysis, plus the 2016 cohort, which is chosen as the starting point as it was before the programme began.

Figure 1: Timing of higher education (HE) entry for Uni Connect cohorts
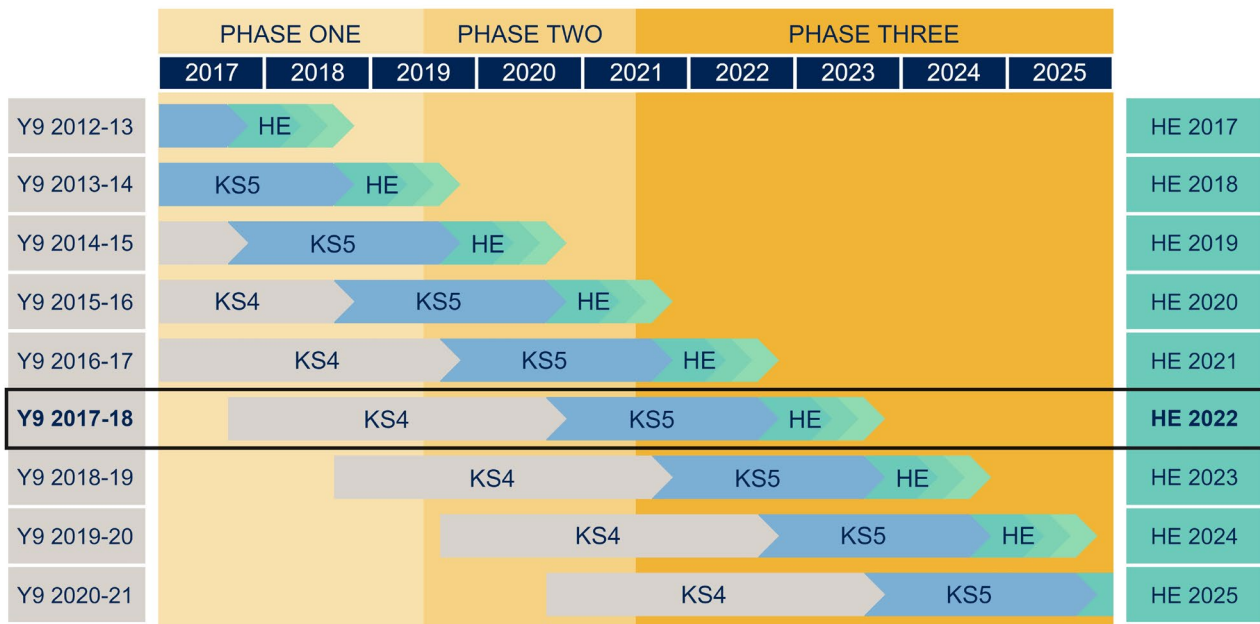
16. It should be noted that delivery of the programme was disrupted during the COVID-19 pandemic. The 2020 and 2021 cohorts would have been applying (or at least receiving offers) during this time.

Methodology

Population

17. This analysis uses linked National Pupil Database (NPD)[10] to UCAS data. The initial population includes seven cohorts of learners who obtained their key stage 4 qualifications (most commonly GCSEs) between summer 2014 and 2020, while they were in year 11 of secondary education. Subsequently, these cohorts c./ould have applied to higher education in years 2016 to 2022. Using the UCAS application cycle data allows us to take an earlier view of application outcomes than is otherwise possible using higher education participation data. The starting point for this analysis is 2016, the year before the Uni Connect programme launched.

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[10] The Department for Education (DfE) does not accept responsibility for any inferences or conclusions derived from the NPD data by third parties.

18. Learners in this population, which we refer to as the 'key stage 4 population' in this report, will have:

   a. Attended a state-funded mainstream school or college in England.

   b. Lived in England.

   c. Been 16 years old by the end of their key stage 4 academic year.

19. Table B1 in Annex B provides population counts of these learners, for those living in areas targeted by Uni Connect and those living in other areas.

20. NPD data for this population of key stage 4 learners was linked to UCAS applicant data using personal characteristics such as name and postcode. The linking approach is 'fuzzy', in that it takes account of differences in how personal characteristics are recorded between the datasets, by allowing for typos and misspelling of names, for example. Ultimately this enables us to track how many of the original population of 16-year-old learners in England applied through UCAS and were then accepted to start a higher education course by age 18.[11]

21. It should be noted that if a learner applies to higher education more than two years after their final key stage 4 year, this would not be captured. Additionally, some applicants may be accepted to start a higher education course without using the UCAS undergraduate scheme. For example, they may apply to a conservatoire, or to a part-time course. Nonetheless, most applications made by 18-year-olds will be through UCAS.[12]

Limitations

22. A number of limitations with this analysis should be noted:

   a. We were not able to identify the individuals with whom the partnerships have worked as part of the Uni Connect programme, only individuals who lived in the areas targeted by Uni Connect while in key stage 4. For this reason, this analysis cannot show the impact of Uni Connect in raising participation among learners who were directly engaged by the programme.[13] It can only show whether the programme appears to be associated with improved participation rates in targeted areas.

   b. It is possible that learners who are being engaged by the programme are benefitting, but that the scale of this outreach is too small to have any impact on the data at a national level, and therefore cannot be seen in the findings of this analysis. We have previously

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[11] The linking process does not use information from key stage 5. This is done to avoid introducing a time series bias, whereby more recent cohorts of learners are less likely to match than earlier cohorts because their key stage 5 information is not yet available. This means that the proportion of learners identified as having applied through UCAS (the application rate) is likely to be slightly underestimated in this report.

[12] A small number of applicants are placed through UCAS routes outside of the main scheme, including Direct Clearing and Records of Prior Acceptance (RPA), which are both included in this analysis. Between 1,105 and 2,430 applicants were placed through Direct Clearing in each cycle between 2016 and 2021, compared with between 855 and 2,320 placed through RPA.

[13] To note, we did attempt to repeat this analysis for a more limited population of learners whose schools appeared to have been directly engaged by the programme as part of our sensitivity analysis. There was no difference in the overall conclusions.

reported that around 17 per cent of learners living in Uni Connect areas received the full amount of engagement intended and just 11 per cent received no engagement.

c. We cannot identify individuals who have engaged with other outreach programmes. Therefore, there will be some people who have benefited from other outreach programmes who we then compare against learners from Uni Connect areas or who are included in the 2016 comparator year.

d. To analyse cohorts earlier than would otherwise be available through the administrative higher education entry data, we based this analysis on applications through UCAS at age 18 for full-time undergraduate courses. But this is more narrowly defined than higher education participation, which includes more courses (such as part-time courses) and entry by age 19. Annex C begins to address this gap in evidence by using the available higher education data.

e. The quantitative administrative data does not capture all factors that are associated with participation in higher education. Therefore, even after matching learners on a set of personal characteristics as we do in the final section of this report, there will always be other factors that are associated with higher education participation which remain unbalanced across the two groups. For example, the data does not capture the level of school or parental support each learner received, or differences in attitudes of individual learners. It cannot capture all differences in pandemic-related behaviour between these two groups either.

f. Part of this analysis matches learners from Uni Connect areas with those from other areas according to the number of GCSEs they held at grades A* to C (or 9 to 4). Although it was not an aim of the Uni Connect programme to raise attainment among participating learners in either phase one or two, it is possible that it has indirectly had this effect for the three most recent cohorts of learners, who could have had some Uni Connect engagement prior to taking their GCSEs. It is therefore possible that matching learners on GCSE attainment disguises any knock-on effect of higher attainment on application outcomes.

g. Guidance during the COVID-19 pandemic has restricted our ability to identify schools within the NPD data. This means we have been unable to carry out the 'engagement in target areas' analysis previously conducted. This work estimated the proportion of cohorts in Uni Connect areas attending key stage 4 schools engaged in the Uni Connect programme. Around 17 per cent of learners in the 2021 cohort received the full level of engagement envisaged by the Uni Connect programme, and 90 per cent of learners received some form of engagement. For comparison, an engagement target of 20 per cent of learners living in Uni Connect target areas was agreed for Uni Connect partnerships in phases one and two of the programme.[14]

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[14] See 'Meeting targets and milestones' in 'NCOP: end of phase one report for the national formative and impact evaluations', available at www.officeforstudents.org.uk/publications/ncop-end-of-phase-one-evaluation-report/. For phase two, see paragraph 13 of 'National Collaborative Outreach Programme Phase two guidance' available at www.officeforstudents.org.uk/publications/national-collaborative-outreach-programme-phase-two-guidance/. National Collaborative Outreach Programme (NCOP) is the former name of Uni Connect.

h.   The omission of the school identifier in the NPD data has also restricted our ability to account for 'spillover effects' within the matched counterfactual analysis. This means we have been unable to remove pupils who may have benefitted from Uni Connect engagement within a school setting whose home address is in a non-Uni Connect area. To ensure consistency across the time series, we have not accounted for the spillover effect in any years considered. Therefore, our estimated modelled change in application outcomes for years prior to the 2022 UCAS application cycle are smaller than previously estimated.

23. Overall, these limitations mean that the analysis in this report cannot identify a truly causal relationship between the Uni Connect programme and trends in higher education participation at a national level. It does identify whether national differences in participation between the most and least represented areas are reducing, whether this is evident in areas targeted by Uni Connect, and whether these trends appear to be associated with other underlying differences in characteristics between groups of learners. But it cannot attribute causality to the Uni Connect programme.

24. Despite these limitations, we remain confident that this analysis represents an important contribution to the evidence base of the Uni Connect programme at a national level. It is the only part of the programme analysis which considers the long-term trend in participation rates at a national level using administrative data (as opposed to survey data). Unlike other parts of the programme evaluation, which are more locally focused, this national administrative data enables us to track all learners attending state-funded mainstream schools in England from key stage 4 through to the UCAS undergraduate scheme but does not identify those attending Uni Connect activities.

Application outcomes for key stage 4 population

Overview

25. In this section, we present summary statistics for the five application outcomes across the key stage 4 population, starting from 2016, the year before Uni Connect was launched, through to 2022, the sixth year of the programme.

26. We compare the application outcomes of learners living in the most represented (POLAR3 quintile 5) and least represented (quintile 1) areas for each application cycle from 2016 to 2022. More up to date participation measures, such as TUNDRA (Tracking Under Representation by Area), have not been used because one of the original aims of Uni Connect was raising higher education participation of young people from underrepresented groups, as measured by Participation of Local Areas (POLAR3).[15]

27. Although not one of the stated aims for the programme, we also consider application outcomes for 'Uni Connect target areas' (referred to as 'Uni Connect areas') compared with non-Uni Connect areas. Uni Connect partnerships focus their work on areas where higher education participation is not only low in absolute terms, but also lower than might be expected given the GCSE results of young people in that area.

28. As shown in Table 1, the application rate, which measures the level of demand for higher education among school and college leavers, has increased by 7.1 percentage points across the time period. Similarly, the proportion of the key stage 4 population applying to the most selective – 'high tariff' – universities and colleges has also increased by 7.3 percentage points. Placed rates rose by 5.2 percentage points, but between 2021 and 2022 actually fell by 1.1 percentage points.

29. The offer rate has been consistently high across the time series. Since 2017, when Uni Connect was launched, it has remained above 98 per cent. Similarly, a high proportion of applicants were accepted by the end of each application cycle, standing at 84.4 per cent in 2022, although this was a fall of 3.2 percentage points from the previous year.

Table 1: Application outcomes for the key stage 4 population

Application outcome	2016	2017	2018	2019	2020	2021	2022
Application rate	35.8%	36.4%	36.9%	38.8%	40.5%	42.6%	42.9%
High tariff application rate	22.3%	23.7%	24.2%	26.2%	27.4%	29.3%	29.6%
Placed rate	31.0%	31.7%	32.2%	33.7%	36.3%	37.3%	36.2%
Offer rate	97.6%	98.1%	98.4%	98.5%	98.7%	98.6%	98.4%

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[15] See www.officeforstudents.org.uk/data-and-analysis/young-participation-by-area/about-polar-and-adult-he/.

Application outcome	2016	2017	2018	2019	2020	2021	2022
Acceptance rate	86.6%	86.9%	87.1%	87.0%	89.7%	87.6%	84.4%

Note: the shaded columns indicate the two years most impacted by the COVID-19 pandemic, during which Uni Connect engagement would have been disrupted.

30. The following five sections take each of the application outcomes in turn. The difference in rates for learners living in the most represented (POLAR3 quintile 5) and least represented (quintile 1) areas are considered alongside the difference for learners in Uni Connect target areas and other (non-Uni Connect) areas.

31. There is considerable overlap between Uni Connect areas and POLAR3 quintile 1 areas, with roughly 84 per cent of learners in POLAR3 quintile 1 areas also living in Uni Connect areas. This is because these areas were specifically chosen as those with the greatest potential to increase participation from the least represented areas. Consequently, because of this high overlap, the majority of learners in the other non-Uni Connect areas are in POLAR3 quintiles 2 to 5, so application outcomes in the other areas tend to be an average of these four quintiles' outcomes.

Application rate

32. Figure 2 shows application rates from the 2016 to 2022 UCAS application cycles. In POLAR3 quintile 1 areas, rates grew from 22.7 per cent to 29.4 per cent (an increase of 6.7 percentage points), and from 50.4 per cent to 57.7 per cent in quintile 5 areas (up 7.3 percentage points). Therefore, the absolute increase in application rates was broadly similar for these two groups.

33. Figure 2 also shows a similar pattern when comparing application rates in Uni Connect target areas and other areas. Rates have been increasing by approximately the same amount each year in both groups, and the difference in rates between the groups has remained broadly unchanged.

34. The increase in application rates seen in the least represented groups aligns with findings published by UCAS at the end of the 2022 application cycle.[16]

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[16] See www.ucas.com/corporate/news-and-key-documents/news/record-applications-disadvantaged-students-higher-education.

Figure 2: Differences in application rates

Differences between POLAR3 quintiles 1 and 5

Differences between Uni Connect and non-Uni Connect areas
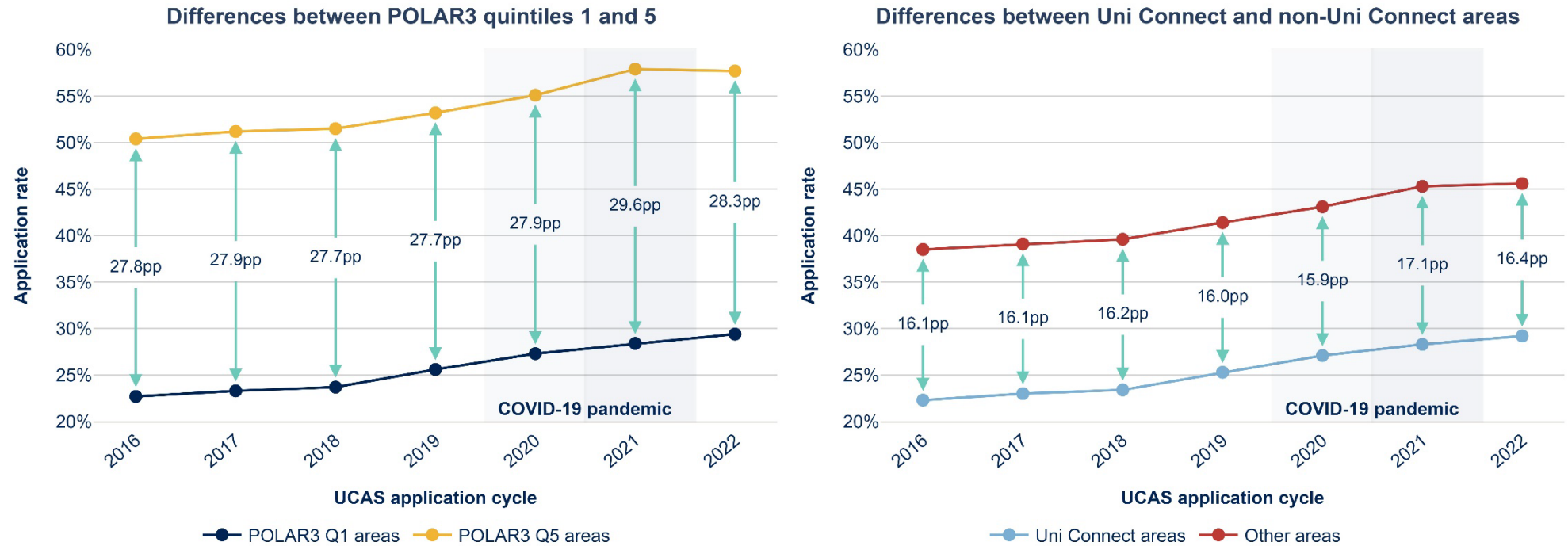
Note: Figure scales do not run from 0% to 100%. 'pp' stands for percentage point. The underlying data for all charts in this report are available in the datafile associated with this release.[17]

High tariff application rate

35. Figure 3 shows application rates from the 2016 to 2022 UCAS application cycles for those that applied to more selective higher education providers (those with high average 'tariff scores'). Reducing the differences between these groups is not one of the stated aims of the programme, but is included here to provide a fuller understanding of the data.

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[17] Available at www.officeforstudents.org.uk/publications/uni-connect-target-areas-national-analysis-2024/.

36. In 2022, learners from POLAR3 quintile 1 areas were 26.1 percentage points less likely to apply to a high tariff provider than learners from quintile 5. By comparison, the difference between these two groups was 24.5 percentage points in 2016, which means it has since widened by 1.6 percentage points.

37. Figure 3 also shows a comparison of high tariff application rates in Uni Connect target areas and other areas. This shows a similar pattern, although the difference in rates between the two groups is not as large. Between 2016 and 2022 the difference increased by 0.8 percentage points.

**Figure 3: Differences in high tariff application rates**
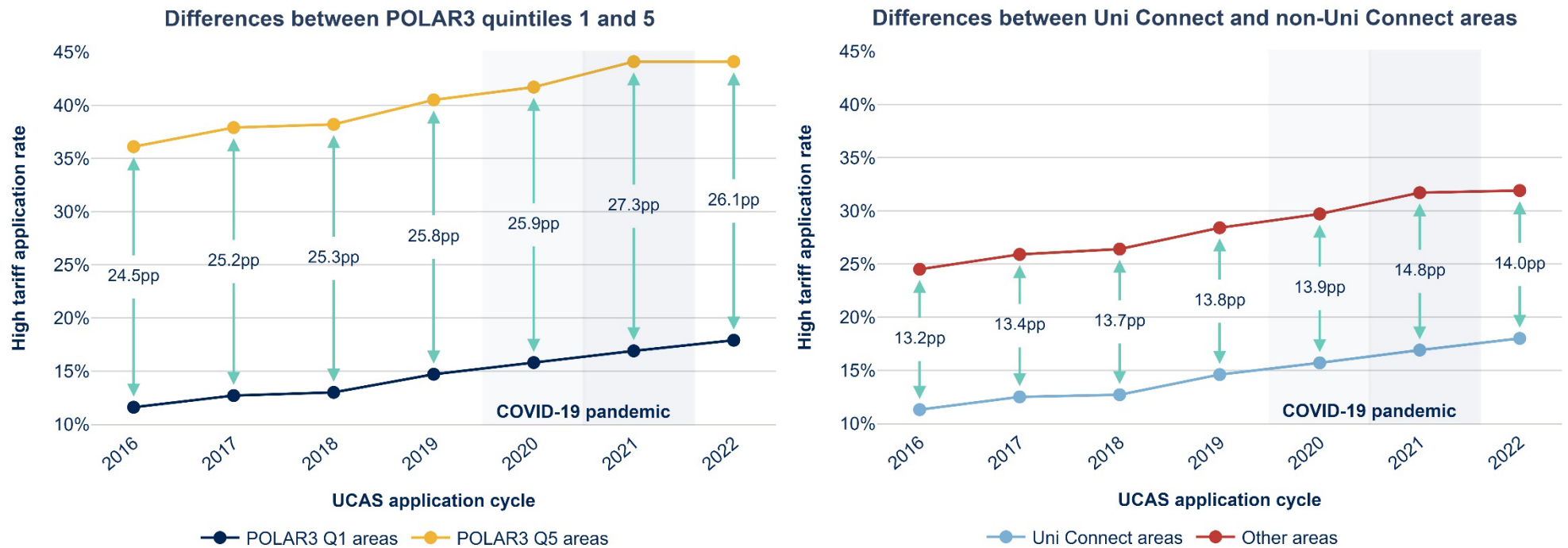
Note: Figure scales do not run from 0% to 100%. 'pp' stands for percentage point.

Placed rate

38. Figure 4 shows that young people from the most represented areas, those in POLAR3 quintile 5, were roughly twice as likely to be placed on a higher education course at age 18 than those from the least represented areas, quintile 1. In 2022, the placed rate for POLAR3 quintile 1 learners was 24.6 per cent, compared with 49.1 per cent for quintile 5 learners. The difference in rates between the two groups remained between 24 and 27 percentage points throughout the period.

39. Figure 4 also shows a comparison of placed rates in Uni Connect target areas and other areas. Although rates have risen in both groups between 2016 to 2022, from 18.8 per cent to 24.4 per cent in Uni Connect target areas and from 33.4 per cent to 38.5 per cent in other areas, the difference in rates between the two groups has remained broadly unchanged.

**Figure 4: Differences in placed rates**
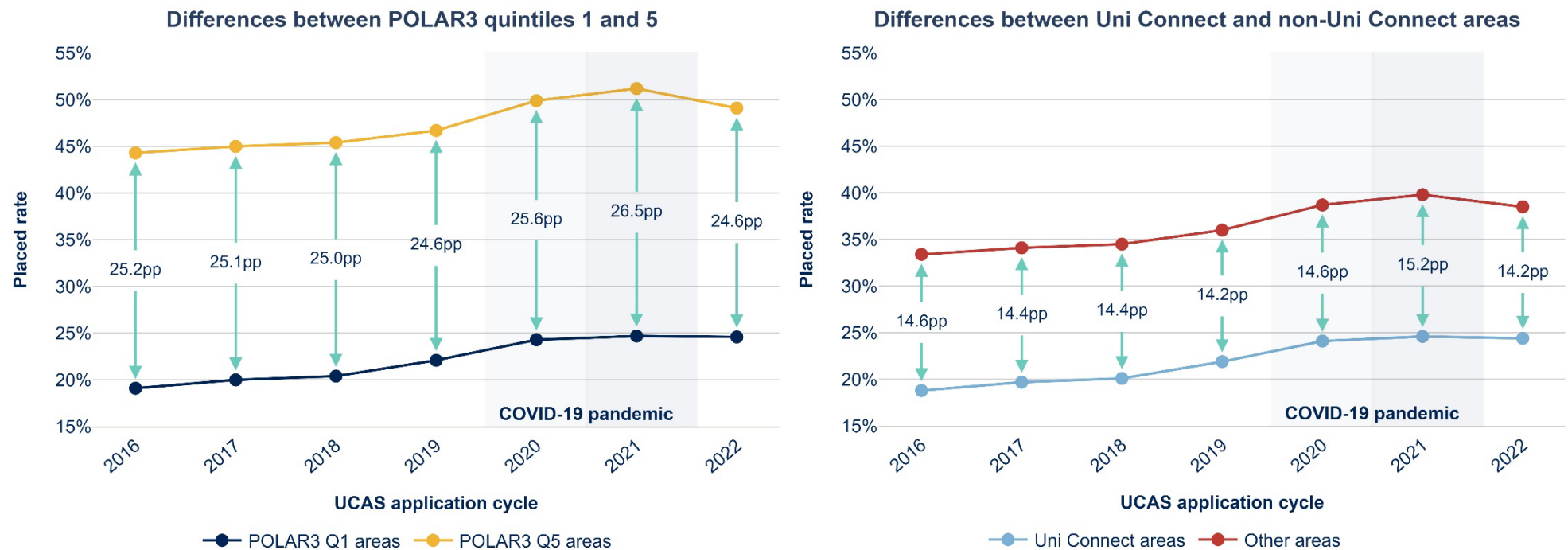
Note: Figure scales do not run from 0% to 100%. 'pp' stands for percentage point.

Offer rate

40. Table 1 shows that offer rates have historically been very high for all school leavers. Figure 5 shows the difference in offer rates between learners from POLAR3 quintile 1 and quintile 5 areas. In 2016 the difference in rates between the two groups was 1.4 percentage points and it tended to decrease up until 2021, but has since increased again in 2022 and stood at 0.8 percentage points. In 2022, 97.8 per cent of applicants from quintile 1 areas received at least one offer compared with 98.6 per cent of applicants from quintile 5 areas.

41. Figure 5 also shows a similar pattern when comparing offer rates in Uni Connect target areas and other areas. In 2022, 97.8 per cent of applicants from Uni Connect target areas received at least one offer compared with 98.4 per cent of applicants from other areas, a difference of 0.6 percentage points. At the start of the time period, in 2016, the difference in offer rates between the two groups was 1.0 percentage point.

Figure 5: Differences in offer rates
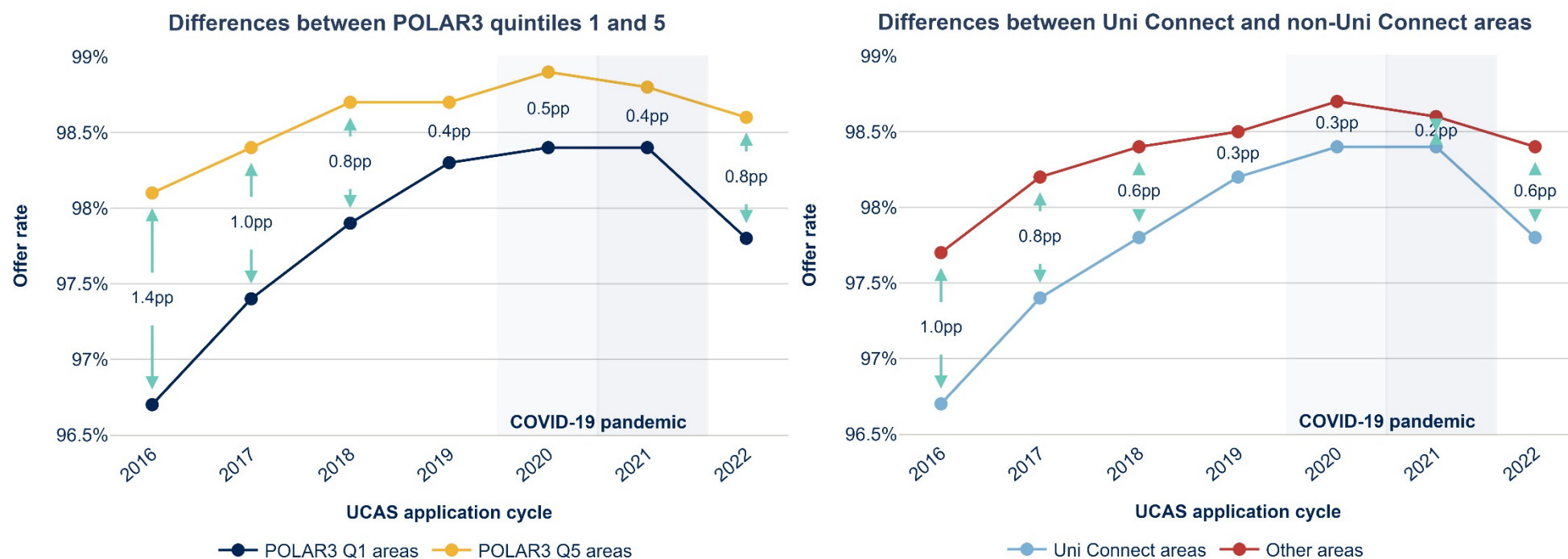
Note: Figure scales do not run from 0% to 100%. 'pp' stands for percentage point.

42. Offer rates for all groups have declined very slightly in this latest year. This could be a reflection of the more popular universities being more cautious with their offer-making.[18]

Acceptance rate

43. Table 1 shows that acceptance rates were also relatively high for all applicants. Figure 6 shows the difference in acceptance rates between POLAR3 quintile 1 and quintile 5 areas. In 2016 the rate for applicants from quintile 1 areas was 84.4 per cent and for applicants from quintile 5 areas it was 87.9 per cent, a difference of 3.5 percentage points. Since then, the difference in rates between the two groups has reduced and it stood at 1.6 percentage points in 2022. Acceptance rates for both groups have fallen since their peaks in 2020.

44. Figure 6 also shows a similar pattern when comparing acceptance rates in Uni Connect target areas and other areas. The difference in rates decreased from 2.5 percentage points in 2016 to 1.1 percentage points in 2022.

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[18] See www.ucas.com/corporate/news-and-key-documents/news/admissions-and-competition.

Figure 6: Differences in acceptance rates

Differences between POLAR3 quintiles 1 and 5

Differences between Uni Connect and non-Uni Connect areas
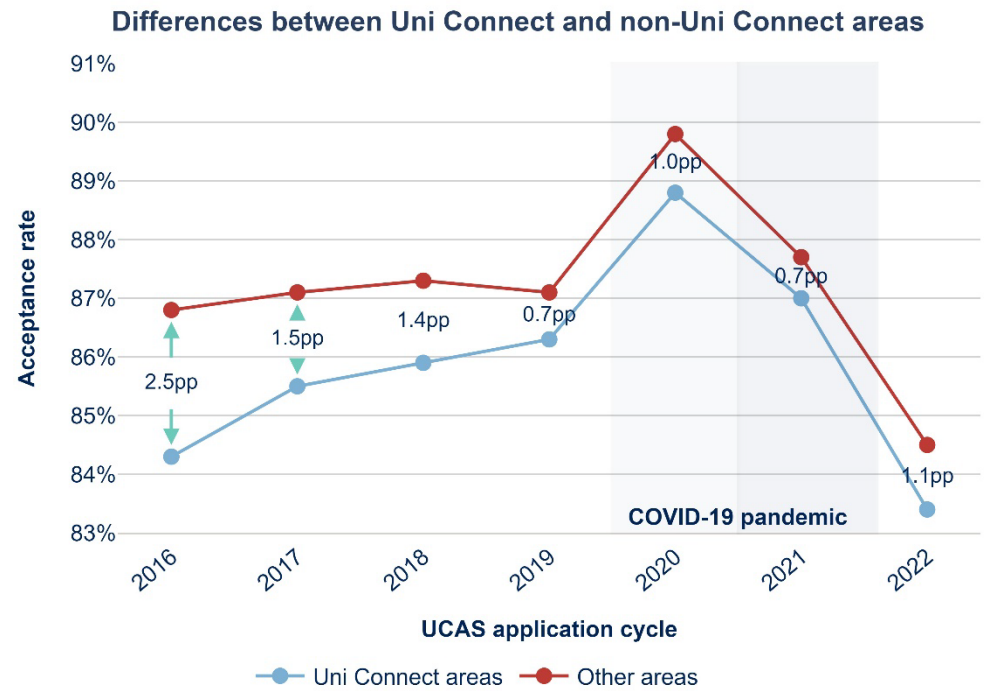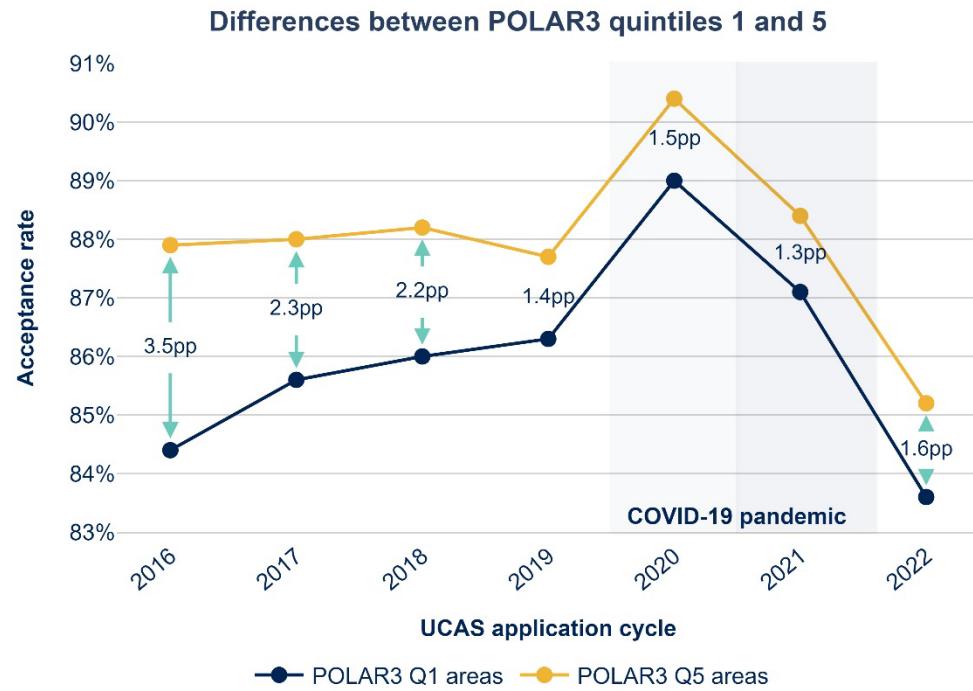
Note: Figure scales do not run from 0% to 100%. 'pp' stands for percentage point.

45. Table 2 summarises the differences in rates for the five application outcomes between learners from POLAR3 quintile1 and quintile 5 areas between 2016 and 2022.

Table 2: Differences in application outcomes between learners from POLAR3 quintile 1 and quintile 5 areas

Application outcome	2016	2017	2018	2019	2020	2021	2022
Difference in application rates	27.8pp	27.9pp	27.7pp	27.7pp	27.9pp	29.6pp	28.3pp
Difference in high tariff application rates	24.5pp	25.2pp	25.3pp	25.8pp	25.9pp	27.3pp	26.1pp
Difference in placed rates	25.2pp	25.1pp	25.0pp	24.6pp	25.6pp	26.5pp	24.6pp
Difference in offer rates	1.4pp	1.0pp	0.8pp	0.4pp	0.5pp	0.4pp	0.8pp
Difference in acceptance rates	3.5pp	2.3pp	2.2pp	1.4pp	1.5pp	1.3pp	1.6pp

Note: The shaded columns indicate the two years most impacted by the COVID-19 pandemic, during which Uni Connect engagement would have been disrupted. 'pp' stands for percentage point.

46. Table 3 summarises the differences in rates for the five application outcomes between learners from Uni Connect target areas and other areas between 2016 and 2022.

Table 3: Differences in application outcomes between learners from Uni Connect and non-Uni Connect areas

Application outcome	2016	2017	2018	2019	2020	2021	2022
Difference in application rates	16.1pp	16.1pp	16.2pp	16.0pp	15.9pp	17.1pp	16.4pp
Difference in high tariff application rates	13.2pp	13.4pp	13.7pp	13.8pp	13.9pp	14.8pp	14.0pp
Difference in placed rates	14.6pp	14.4pp	14.4pp	14.2pp	14.6pp	15.2pp	14.2pp
Difference in offer rates	1.0pp	0.8pp	0.6pp	0.3pp	0.3pp	0.2pp	0.6pp
Difference in acceptance rates	2.5pp	1.5pp	1.4pp	0.7pp	1.0pp	0.7pp	1.1pp

Note: The shaded columns indicate the two years most impacted by the COVID-19 pandemic, during which Uni Connect engagement would have been disrupted. 'pp' stands for percentage point.

47. It should be noted that out of the five application outcomes considered, the initial decision to apply to higher education continues to make the biggest contribution to the overall differences

in participation in higher education. Despite the fact that there remain differences in offer rates and acceptance rates, these contribute only a very small amount towards the overall differences in participation.

Estimating changes in differences in application outcomes after taking other factors into account

Matched counterfactual analysis

48. It is possible that the trends in application outcomes presented so far are the result of factors other than the Uni Connect programme itself. It might be that the composition and characteristics of the two groups of learners are changing over time, which is influencing the difference in application outcomes.

49. This section presents the findings of a statistical approach called 'exact matching', described in Annex D, which enables us to estimate the change in the difference in application outcomes between 2016 (before Uni Connect started) and 2022 (five years after its launch), after differences in characteristics between the two groups of learners are taken into account. This approach works by comparing learners from Uni Connect areas against a group of learners with the same mix of characteristics, thereby reducing underlying differences in characteristics between the two groups which might influence application outcomes over time.

Annex D provides a technical description of this statistical approach.

50. It should be noted that this approach can only account for underlying differences in characteristics between groups of learners to the extent that this information is available in the NPD data. There will of course be factors, such as family support or individual motivation, which we cannot control for because they are not captured in the data. Nonetheless, because we know that some underlying factors differ between learners from Uni Connect target areas and those from other areas – and that these factors are associated with application outcomes – it remains informative to account for these differences as far as possible.

51. In practice, this means that in the analysis that follows, the group of learners being compared with those from Uni Connect areas has the same mix of these listed characteristics. The key difference is that one group was living in Uni Connect areas in key stage 4, while the other was not. Although there will, of course, be other unobserved differences and even differences within the categories of matched characteristics, such as the exact GCSE grades achieved by each learner beyond the number of 'standard passes'. We have been unable to carry out adjustments for 'spillover effects' in this analysis (see limitations section).

52. The group of learners from non-Uni Connect areas is known as the 'matched counterfactual' group, because it represents a hypothetical situation where learners from Uni Connect areas had instead come from non-Uni Connect areas. We repeated this hypothetical situation 1,000 times to ensure the findings we obtained were not simply by chance. This gives us 1,000 different matched counterfactual groups whose application outcomes we can then compare against the same group of learners from Uni Connect areas each time.

53. The datafile associated with this report contains the estimates for all 1,000 matched counterfactual groups, in addition to the sampling rates for each of these groups.

Application rates

54. Figure 7 shows the difference in application rates between learners from Uni Connect areas and the average application rate of all 1,000 matched counterfactual groups. The differences in the rates are clearly much smaller than those observed for the whole population. As was shown in Figure 2, the observed difference in application rates for the whole population was 16.4 percentage points. This compares with just 4.5 percentage points after underlying differences in characteristics between the two groups were taken into account. In fact, the only known difference between these two groups is that the members of one group were living in a Uni Connect target area and the members of the other were not (although there will remain other unobserved differences).

55. Therefore, any reduction in the difference in application rates over time would suggest that the Uni Connect programme is associated with a relative improvement in application rates in targeted areas. Figure 7 shows that the difference in rates has remained broadly the same across the time period.

Figure 7: Difference in application rates between learners from Uni Connect areas and the average application rate of 1,000 matched counterfactual groups of learners from non-Uni Connect areas
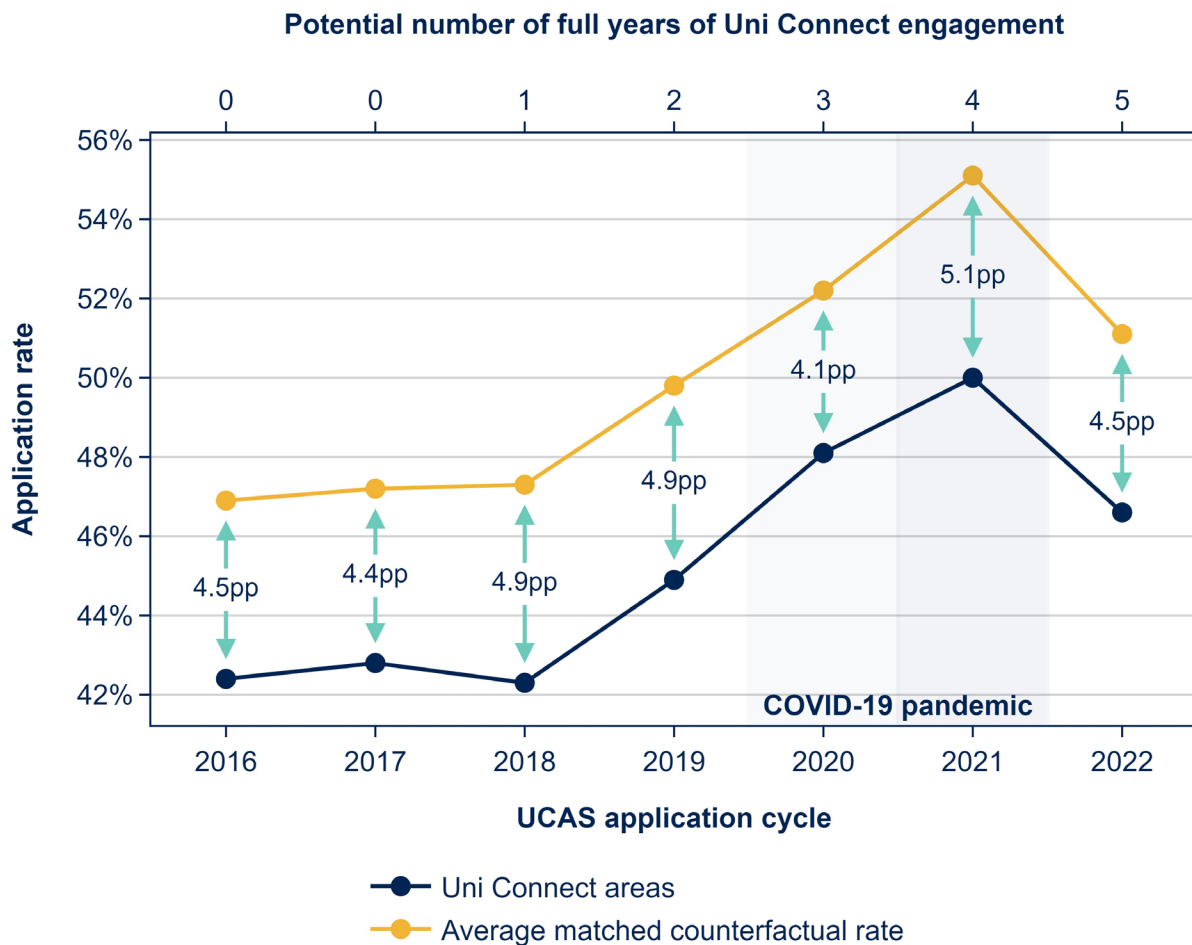

Note: Figure scale does not run from 0% to 100%. 'pp' stands for percentage point.

56. However, Figure 7 does not show the statistical uncertainty around these estimates, only the difference in rates between learners from Uni Connect areas and the average of all 1,000 matched counterfactual groups. For some of the matched counterfactual groups, the difference was larger, while for others it was smaller.

57. Figure 8 below, known as a 'violin plot', shows the full range of estimated changes in the differences in application rates across all 1,000 matched counterfactual groups within each cohort. The shaded areas show the range of estimated changes in the difference for each year since 2016, with wider sections indicating a higher probability that the change is equal to the value along the vertical axis. The labels in bold represent the average estimated change in the difference, which correspond exactly to the change in the differences since 2016, which are shown in Figure 7 above.

58. To give a sense of the range within which we can be confident that the true value lies, the upper and lower labels on the chart indicate the 25th and 975th estimates in order of size. These are equivalent to confidence intervals at the 95 per cent level; we can be 95 per cent confident that the true change in the difference lies within this range.[19]

59. As Figure 8 shows, in the 2022 application cycle we are unable to conclude that the difference in application rates has changed at all since 2016, with estimates ranging between -0.6 and 0.6 percentage points at the 95 per cent confidence level.

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[19] Equivalently, if we were to take new random samples, we would expect the change in the difference to lie within that range 19 times out of 20. We have made no adjustment for multiple comparisons in the calculation of these non-parametric intervals.

Figure 8: Estimated percentage point change in difference in application rates since 2016 after taking into account differences in matched characteristics between learners
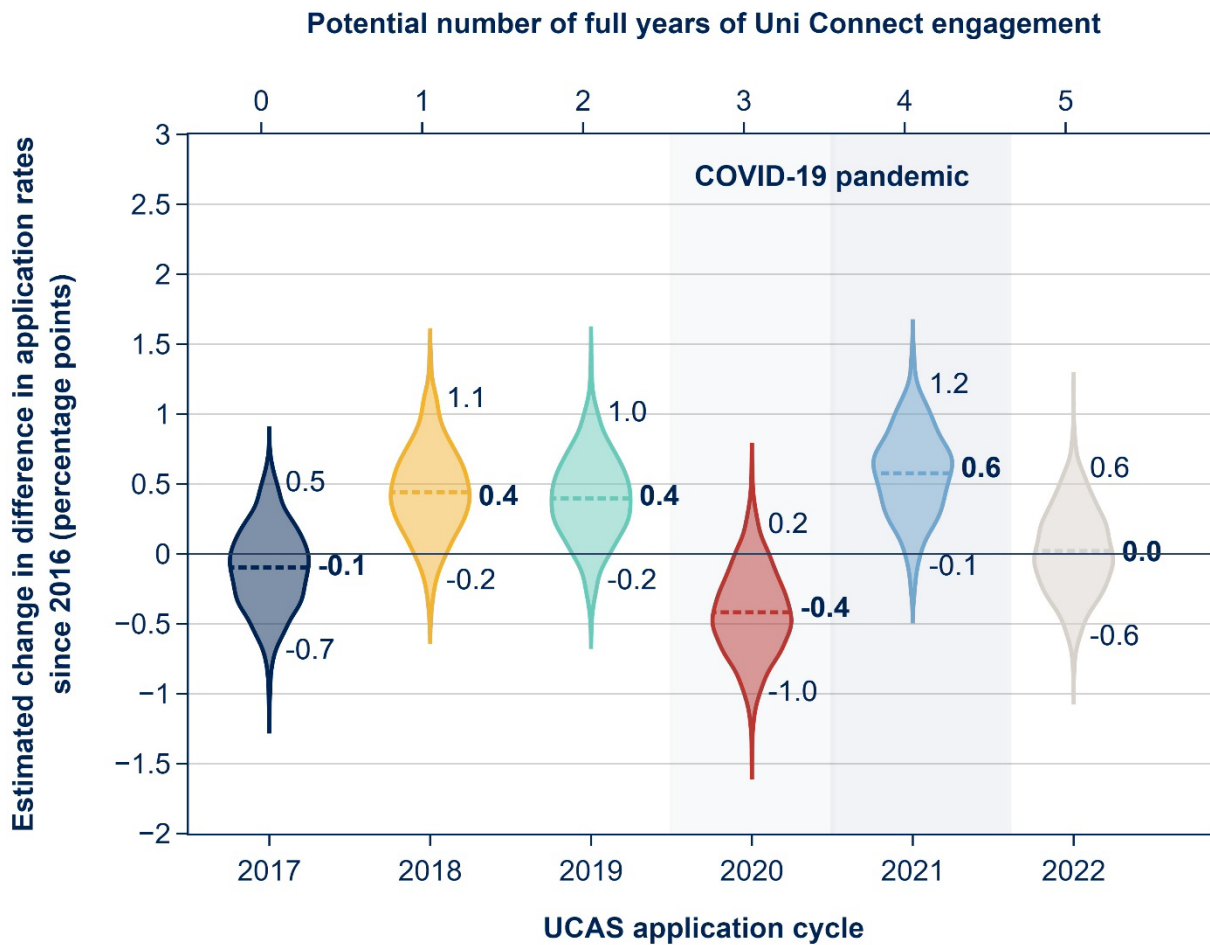
Placed rates

60. Figure 9 shows the difference in placed rates after differences in matched characteristics are taken into account. Since 2016, the difference has reduced from 4.3 percentage points to 3.8 percentage points, suggesting that the Uni Connect programme is associated with a relative improvement in placed rates in targeted areas.

Figure 9: Difference in placed rates between learners from Uni Connect areas and the average placed rate of 1,000 matched counterfactual groups of learners from non-Uni Connect areas

Note: Figure scale does not run from 0% to 100%. 'pp' stands for percentage point.

61. Figure 10 below shows the full range of estimated changes in the difference in placed rates since 2016, across all 1,000 matched counterfactual samples. Similar to application rates, we are unable to conclude that the difference in placed rates has changed since 2016, with estimates ranging between -1.1 and 0.1 percentage points at the 95 per cent confidence level.
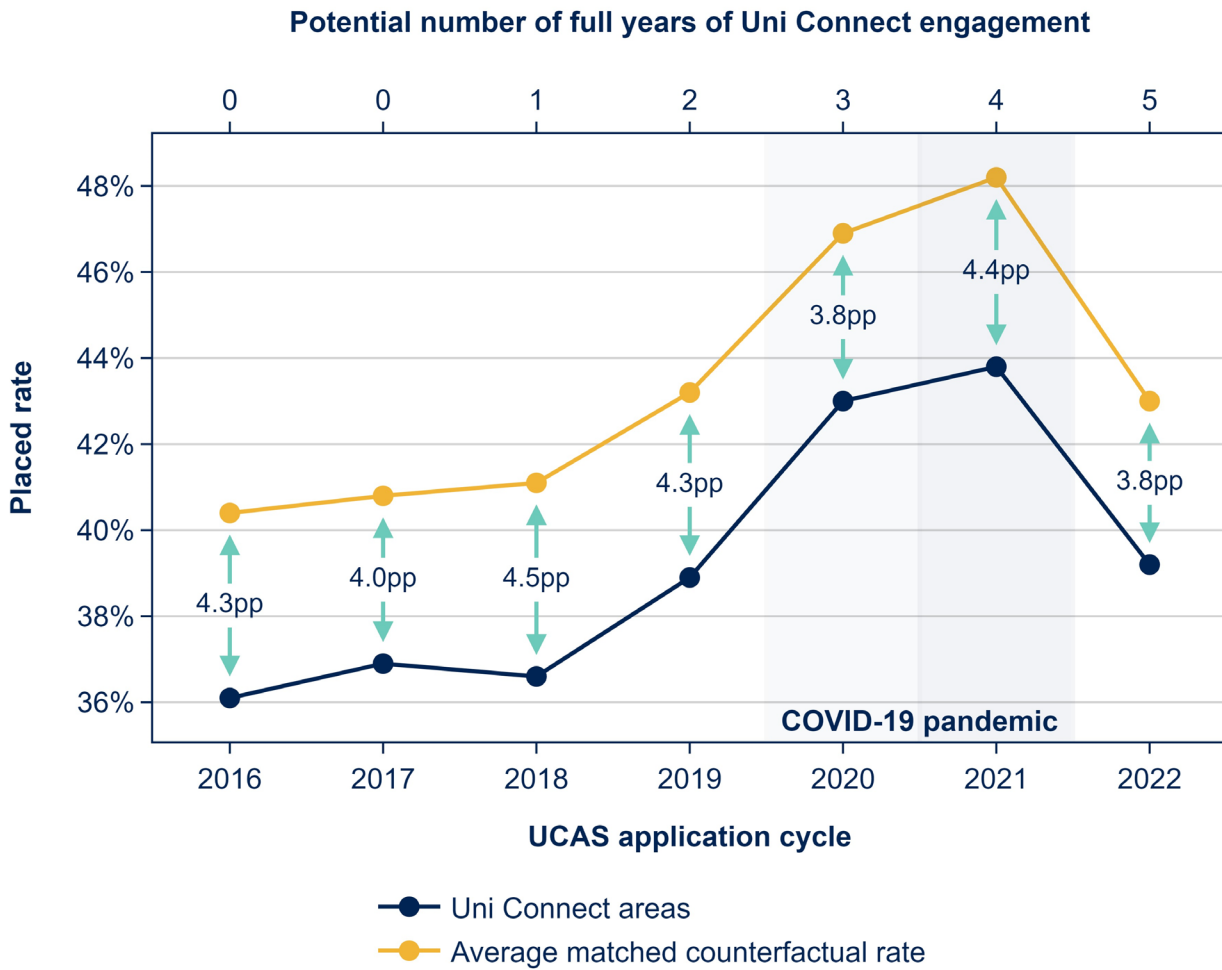
Figure 10: Estimated percentage point change in difference in placed rates since 2016 after taking into account differences in matched characteristics between learners

High tariff application rates

62. Figure 11 shows the difference in high tariff application rates after differences in matched characteristics are taken into account. Since 2016, the difference has reduced from 4.7 percentage points to 3.6 percentage points, suggesting that the Uni Connect programme is associated with a relative improvement in high tariff application rates in targeted areas.
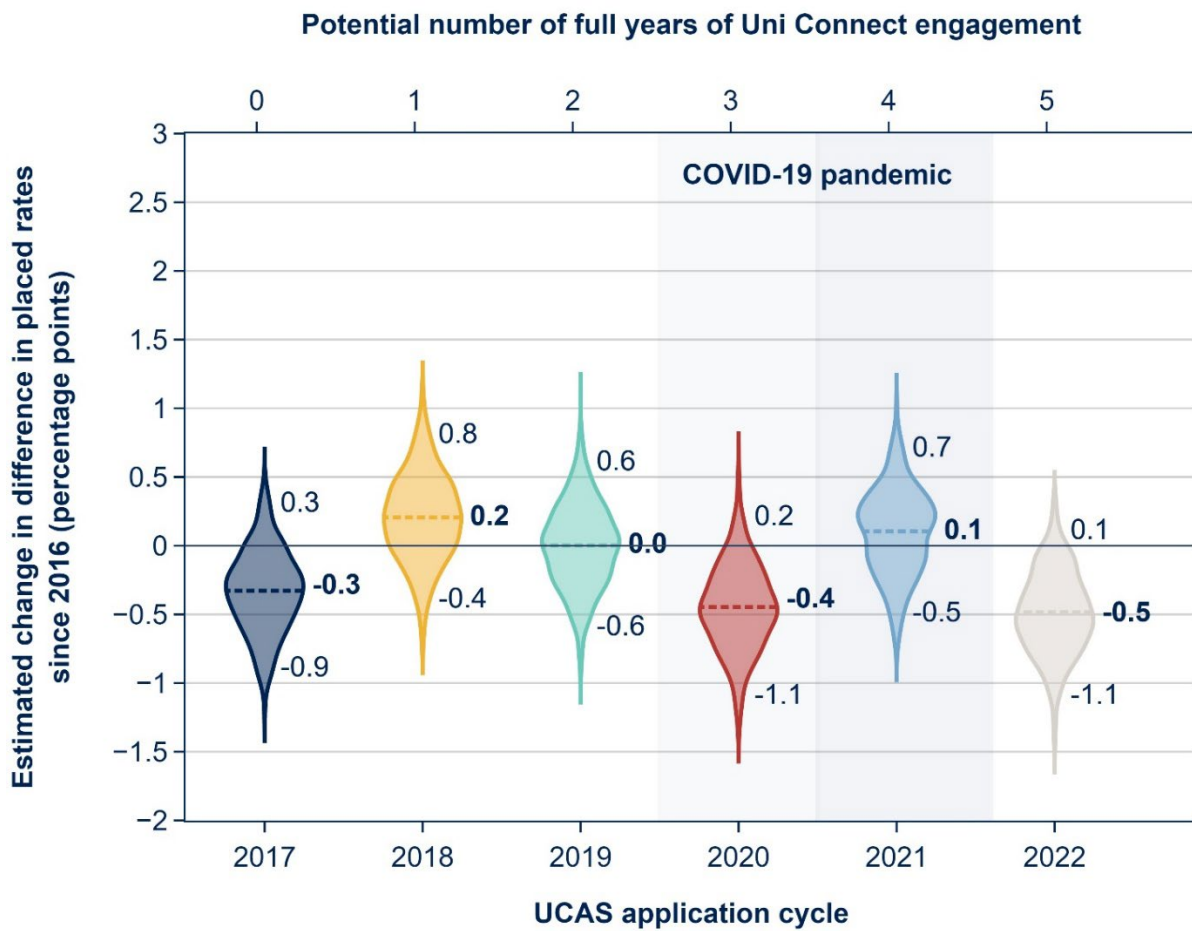
Figure 11: Difference in high tariff application rates between learners from Uni Connect areas and the average high tariff application rate of 1,000 matched counterfactual groups of learners from non-Uni Connect areas
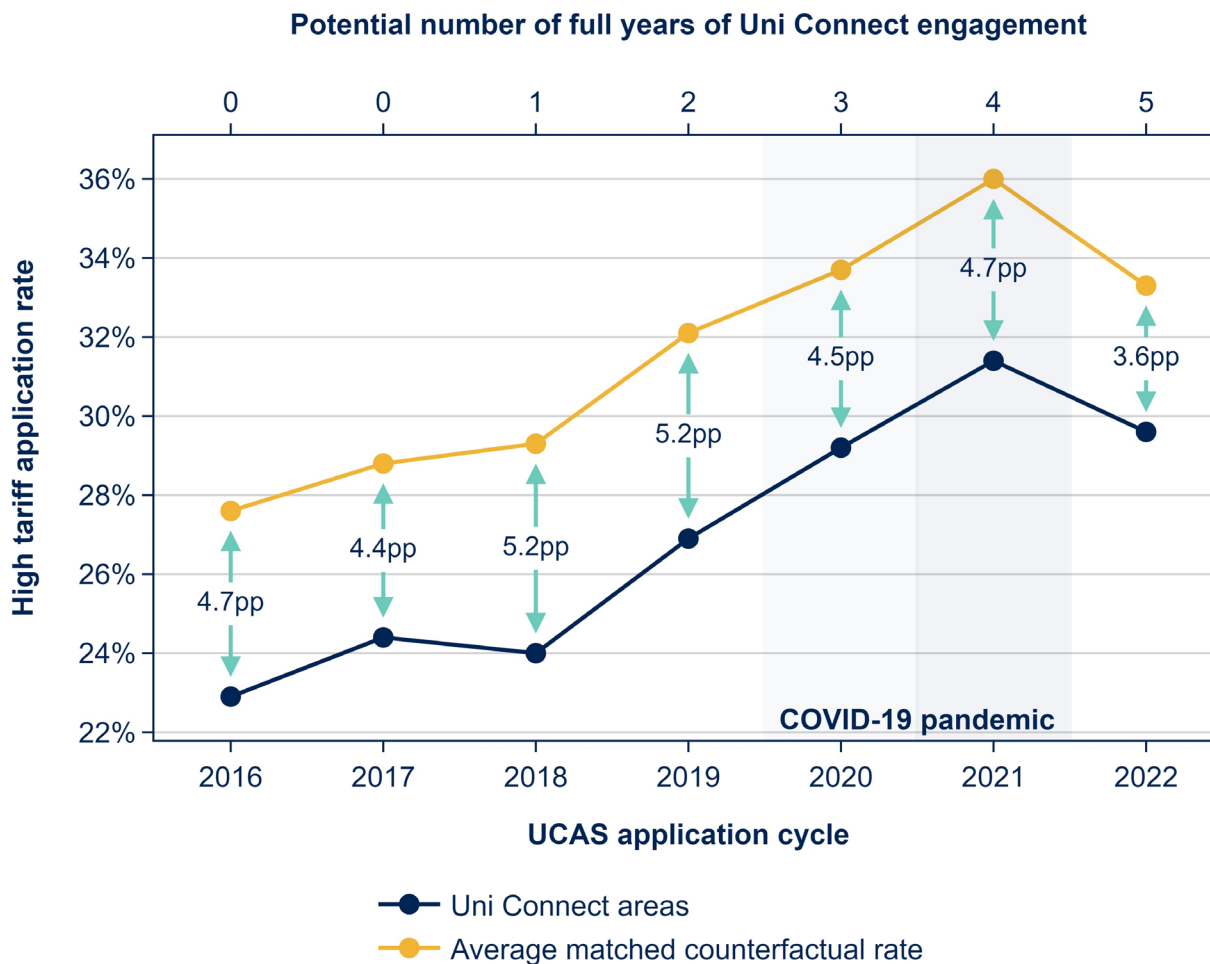
Note: Figure scale does not run from 0% to 100%. 'pp' stands for percentage point.

63. As Figure 12 shows, we can conclude that this 1.1 percentage point decrease in the difference in high tariff application rates since 2016 is statistically significant (at the 95 per cent confidence level).

Figure 12: Estimated percentage point change in the difference in high tariff application rates since 2016 after taking into account differences in matched characteristics between learners
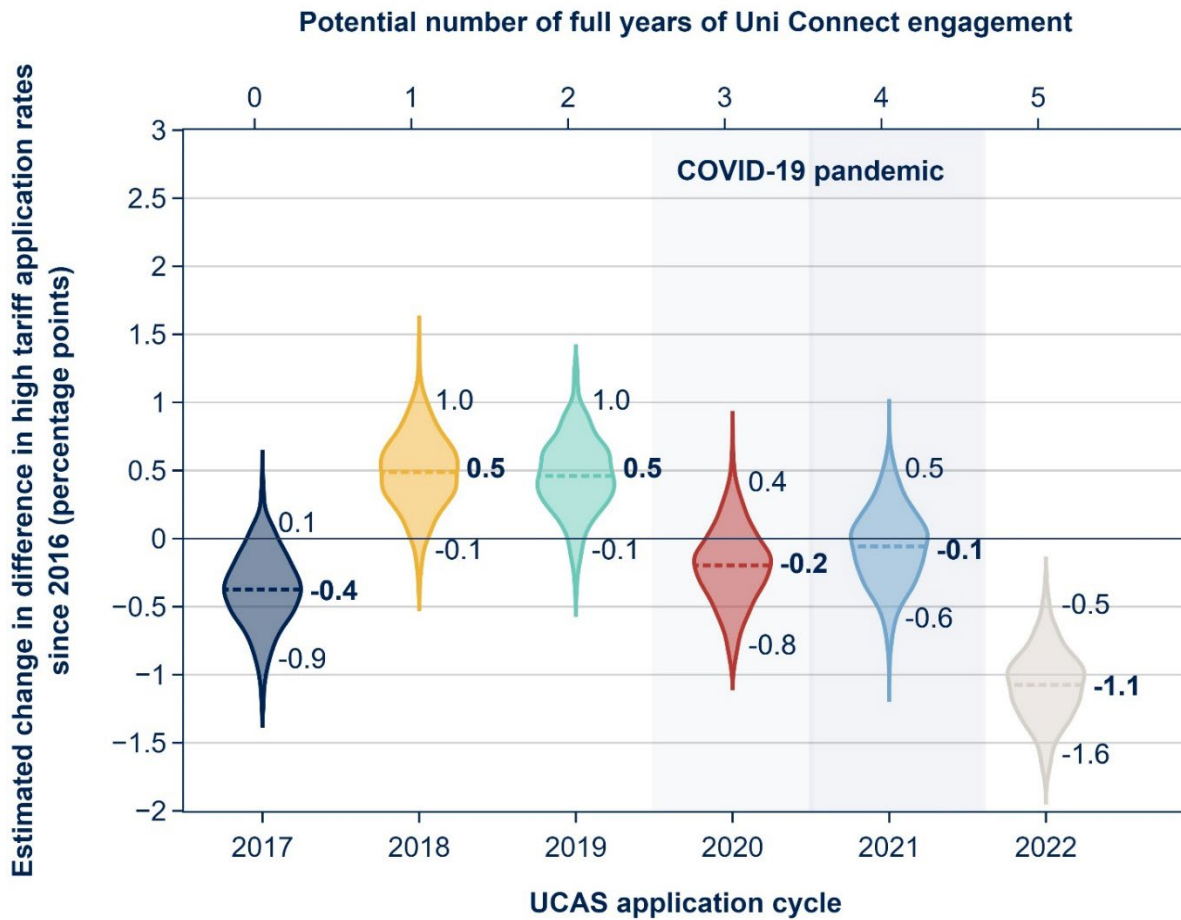
64. Annex D provides details of a range of checks and sensitivity analyses that we conducted to ensure that the findings from this matched counterfactual analysis were robust to changes in our approach. The datafile associated with this report contains the estimated changes in all differences since 2016, across all 1,000 matched counterfactual groups.

This report is an official statistic which falls under the Code of Practice for Statistics. We welcome any feedback on our approach. Please email any comments to Paula Duffin at official.statistics@officeforstudents.org.uk.

Annex A: Relationship between application rates and GCSE attainment

1. Most individuals take GCSE exams at the end of key stage 4, roughly one year before starting to make decisions about applying to higher education. GCSE attainment therefore defines the context in which the application decision is made and is one of the most important factors associated with participation in higher education.

2. This annex repeats analysis from our previous report, showing that there continues to be a strong positive relationship between prior academic attainment and application rates, and that this relationship differs between learners from Uni Connect areas and those from other areas.[20]

3. In this analysis, we have used GCSE results recorded at key stage 4. Some learners will improve their GCSE results during key stage 5, but we do not include those results here.

4. Key stage 4 qualifications (such as GCSEs) have been reformed since 2017, the year in which the Uni Connect programme was launched.[21] The methods of assessment were changed to include more emphasis on examinations at the end of the course and grades were re-categorised from A* to G to grades of 9 to 1. English and Maths were the first subjects to be reformed, with the first new results awarded to learners in the summer 2017 GCSE cohort, who could have first applied aged 18 in the 2019 UCAS application cycle. Other subjects were reformed in subsequent years, meaning that, in some years, there was a combination of both new and original grades awarded.

5. We were mindful of these reforms when establishing a measure of GCSE attainment that was consistent over time. We first adopted the same list of approved key stage 4 qualifications used by the Department for Education (DfE) in its school and college performance tables, in order to determine which qualifications should count as GCSE equivalences.[22] This then allowed us to identify the overall number of GCSEs (or equivalences) at grades A* to C (or 9 to 4) that were held by each learner. This is the primary measure of prior attainment used throughout this analysis.[23]

6. In designing this measure of prior attainment, we balanced the need for granularity with the risk of creating unique groups of learners which were too small when later being used for the

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[20] See www.officeforstudents.org.uk/publications/uni-connect-national-evaluation-updated-analysis/.

[21] See www.gov.uk/government/publications/get-the-facts-gcse-and-a-level-reform/get-the-facts-gcse-reform.

[22] This list of approved key stage 4 qualifications is available at www.gov.uk/government/publications/key-stage-4-qualifications-discount-codes-and-point-scores. To ensure greater consistency over time in our measure of attainment, we deviated from one aspect of the DfE methodology, namely that 'entries into Combined science count as one entry [from 2018 onwards], whereas in previous years entry into core and additional would count as two entries.' We instead decided to count double awards twice for the 2018 and 2019 GCSE cohorts, because counting them once created a noticeable discontinuity in the time series. Even with this change, it is inevitable that GCSE reforms will have created other discontinuities in our measure of attainment over time, which are not possible to account for. Further information about the impact of GCSE reforms is available at www.gov.uk/government/statistics/gcse-and-equivalent-results-2017-to-2018-provisional. A timeline of key stage 4 attainment changes are available in the 'Quality and methodology information' document at www.gov.uk/government/statistics/key-stage-4-performance-2019-provisional.

[23] Grade '4', rather than '5', was chosen as the equivalent of grade 'C', because this resulted in similar progression rates for learners with similar attainment in the earlier years in the time series.

matched counterfactual analysis. It is of course possible that the exact grade profile of two learners with the same number of grades A* to C (or 9 to 4) will differ. Nonetheless, as the analysis in this section shows, this measure holds a strong relationship with application outcomes.

7. Figure A1 below shows that the number of GCSEs at grades A* to C (or 9 to 4) is very strongly related to the proportion of a cohort that applies to higher education.

8. It also shows that this relationship is very similar for each year, but that in more recent cohorts, learners with more grades A* to C (or 9 to 4) have been increasingly likely to apply to higher education, as previously shown in Table 1.

9. Although it was not an aim of the Uni Connect programme to raise attainment among participating learners, it is possible that it has indirectly had this effect for the three most recent cohorts of learners, whose Uni Connect engagement potentially began in school years 9 or 10.

Figure A1: Application rate by number of GCSEs at grades A* to C (or 9 to 4) by summer of key stage 4 completion
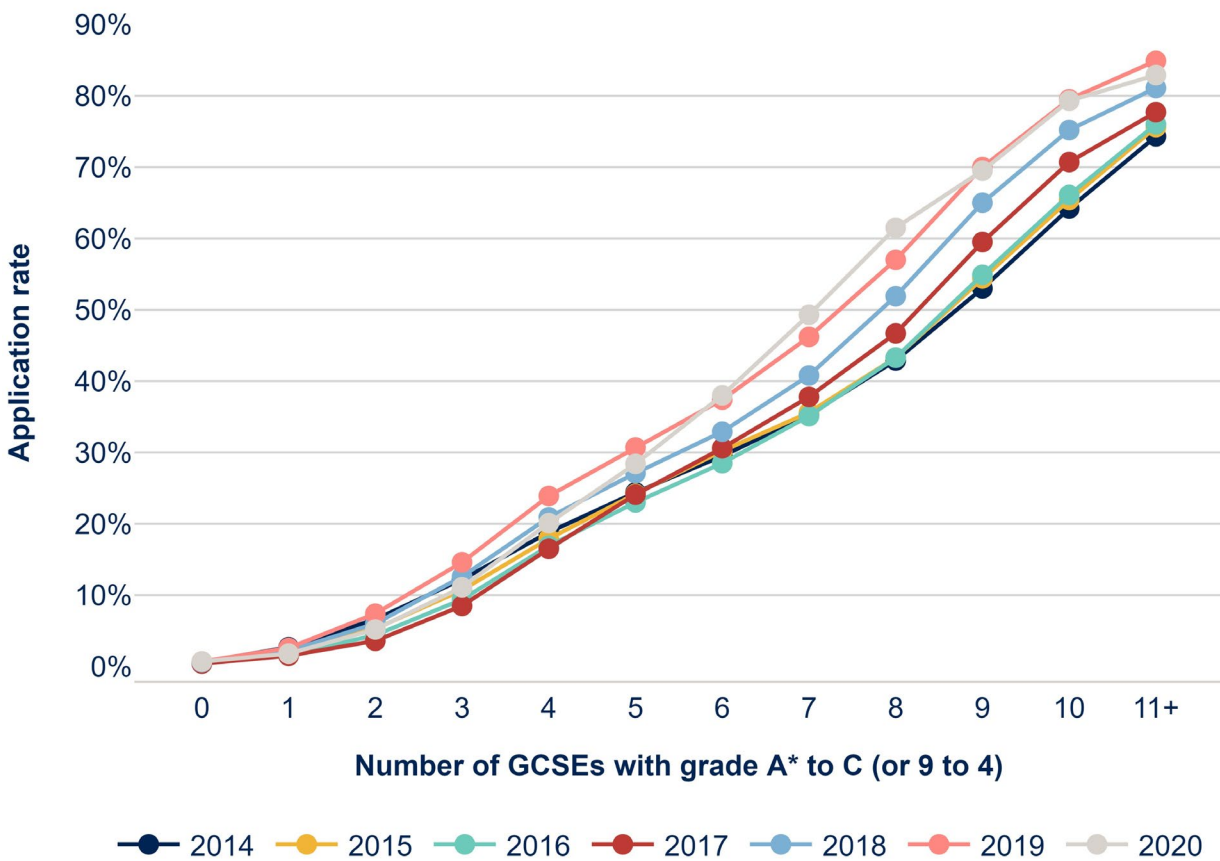
10. Figure A2 below compares the application rates between learners from Uni Connect and those from other areas, for the 2014 and 2020 GCSE cohorts. It is clear that a difference in application rates opens up at higher levels of attainment between those from Uni Connect areas and those from other areas. After more than four or five GCSEs at grades A* to C (or 9 to 4) are held, application rates are consistently lower among learners from Uni Connect areas compared with learners from other areas. This is the difference that defines the targeting of Uni Connect areas; an area is targeted if it has low participation rates relative to the GCSE results of the young people living there.

11. If the Uni Connect programme were successful and all else were equal between the two groups of learners, we would expect to see narrower differences in application rates in more recent cohorts, which have had the most potential years of Uni Connect engagement. We do see that the shape of the profile has changed over time. However, the GCSE summer 2020 examinations were cancelled and grades were based on centre assessed grades.

12. This difference is important, because it suggests that any improvement in participation rates is most likely to be brought about by convincing higher attaining learners from low participation areas to apply to higher education when they otherwise would not have. This provides a clear motivation for limiting the key stage 4 population to those with at least five GCSEs at grade A* to C (or 9 to 4), which we adopt in the matching analysis in this report, in order to focus on the population for whom we would expect to see any impact from the Uni Connect programme.

Figure A2: Application rate by number of GCSEs at grades A* to C (or 9 to 4) for learners from Uni Connect areas and other areas who completed key stage 4 comparing 2014 and 2020
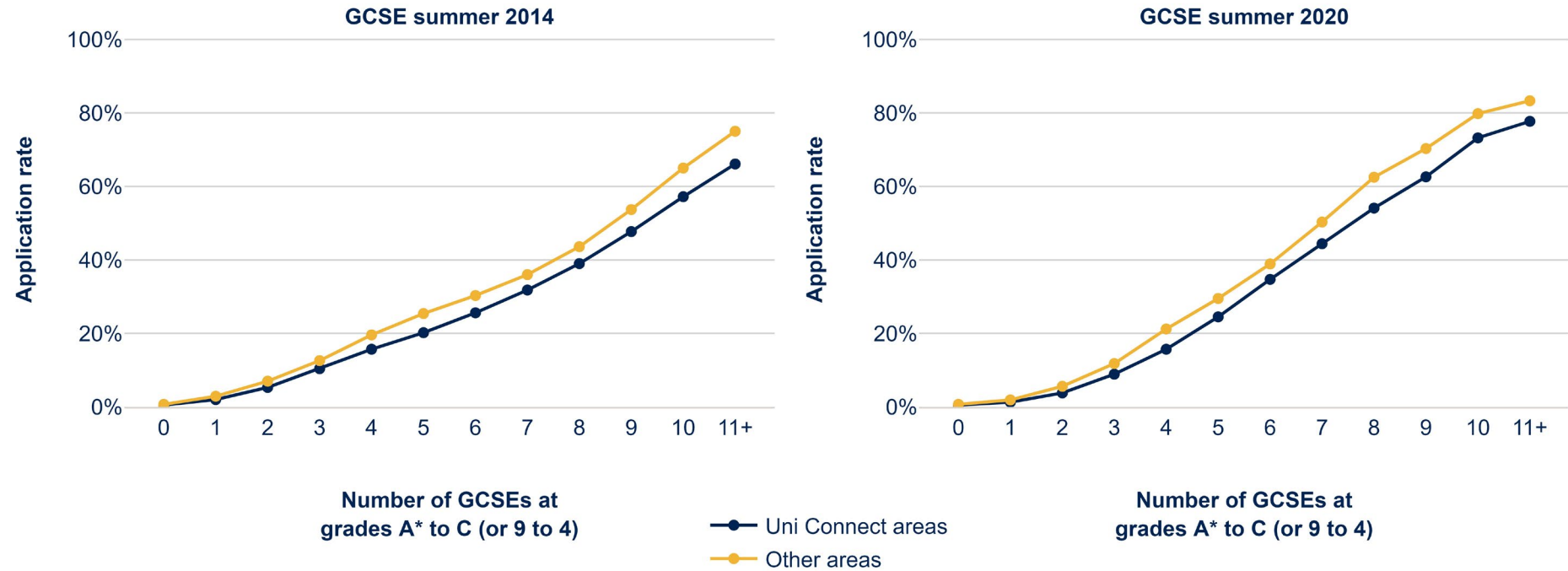
Note that data for the charts above, plus for all the intermediate years, is included in the accompanying datafile.[24]

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[24] The datafile is available at www.officeforstudents.org.uk/publications/uni-connect-target-areas-national-analysis-2024/.

Annex B: Proportion of learners with different characteristics

1. Table B1 shows the numbers and proportions of English 16-year-old learners in the key stage 4 population with different characteristics, according to whether they lived in a Uni Connect area, for all GCSE cohorts between summer 2014 and 2020 combined.

2. Numbers are rounded to the nearest five and proportions are rounded to one decimal place.

Table B1: Number and proportion of English 16-year-old learners in key stage 4 population with different characteristics for all GCSE cohorts between summer 2014 and 2020 combined

Factor	Number of learners from Uni Connect areas	Proportion of learners from Uni Connect areas	Number of learners from non-Uni Connect areas	Proportion of learners from non-Uni Connect areas
GCSEs summer 2014	90,450	14.9%	453,960	14.7%
GCSEs summer 2015	89,475	14.7%	449,530	14.5%
GCSEs summer 2016	86,410	14.2%	439,150	14.2%
GCSEs summer 2017	83,440	13.7%	429,335	13.9%
GCSEs summer 2018	82,815	13.6%	425,675	13.8%
GCSEs summer 2019	85,860	14.1%	441,450	14.3%
GCSEs summer 2020	89,760	14.8%	455,590	14.7%
GCSEs: 0 GCSEs A* to C (or 9 to 4)	107,510	17.7%	309,525	10.0%
GCSEs: 1 GCSEs A* to C (or 9 to 4)	62,095	10.2%	199,110	6.4%
GCSEs: 2 GCSEs A* to C (or 9 to 4)	46,035	7.6%	160,760	5.2%
GCSEs: 3 GCSEs A* to C (or 9 to 4)	40,610	6.7%	152,485	4.9%
GCSEs: 4 GCSEs A* to C (or 9 to 4)	38,465	6.3%	152,820	4.9%
GCSEs: 5 GCSEs A* to C (or 9 to 4)	39,440	6.5%	163,485	5.3%
GCSEs: 6 GCSEs A* to C (or 9 to 4)	42,915	7.1%	191,325	6.2%
GCSEs: 7 GCSEs A* to C (or 9 to 4)	49,195	8.1%	241,500	7.8%
GCSEs: 8 GCSEs A* to C (or 9 to 4)	54,610	9.0%	322,685	10.4%
GCSEs: 9 GCSEs A* to C (or 9 to 4)	54,770	9.0%	413,260	13.4%
GCSEs: 10 GCSEs A* to C (or 9 to 4)	41,800	6.9%	423,100	13.7%
GCSEs: 11 or more GCSEs A* to C (or 9 to 4)	30,760	5.1%	364,630	11.8%
English GCSE: No	240,060	39.5%	824,410	26.6%
English GCSE: Yes	368,150	60.5%	2,270,275	73.4%
Maths GCSE: No	241,805	39.8%	821,660	26.6%
Maths GCSE: Yes	366,400	60.2%	2,273,030	73.4%

Factor	Number of learners from Uni Connect areas	Proportion of learners from Uni Connect areas	Number of learners from non-Uni Connect areas	Proportion of learners from non-Uni Connect areas
Sex: Female	304,355	50.0%	1,527,330	49.4%
Sex: Male	303,855	50.0%	1,567,355	50.6%
Ethnicity: Any other white background	27,715	4.6%	143,540	4.6%
Ethnicity: Asian or Asian British - Bangladeshi	4,530	0.7%	57,230	1.8%
Ethnicity: Asian or Asian British - Chinese	1,575	0.3%	11,750	0.4%
Ethnicity: Asian or Asian British - Indian	6,730	1.1%	92,305	3.0%
Ethnicity: Asian or Asian British - Other	6,860	1.1%	52,735	1.7%
Ethnicity: Asian or Asian British - Pakistani	14,425	2.4%	132,895	4.3%
Ethnicity: Black or Black British - African	16,605	2.7%	106,520	3.4%
Ethnicity: Black or Black British - Caribbean	4,550	0.7%	45,000	1.5%
Ethnicity: Black or Black British - Other	4,145	0.7%	19,630	0.6%
Ethnicity: Gypsy, Roma or Traveller	2,125	0.3%	6,175	0.2%
Ethnicity: Mixed - other	7,745	1.3%	52,520	1.7%
Ethnicity: Mixed - white and Asian	4,265	0.7%	32,930	1.1%
Ethnicity: Mixed - white and black African	3,215	0.5%	16,460	0.5%
Ethnicity: Mixed - white and black Caribbean	9,060	1.5%	40,970	1.3%
Ethnicity: Other ethnic group	5,765	0.9%	52,280	1.7%
Ethnicity: Unknown or refused	6,925	1.1%	33,930	1.1%
Ethnicity: White - English/Welsh/Scottish/Northern Irish/British	480,900	79.1%	2,187,005	70.7%
Ethnicity: White - Irish	1,070	0.2%	10,810	0.3%
Free School Meal Status: Not Receiving FSM	380,490	62.6%	2,385,345	77.1%
Free School Meal Status: Receiving FSM	227,715	37.4%	709,345	22.9%

3. Table B2 shows the numbers and proportions of English 16-year-old learners in the key stage 4 population with different characteristics, according to whether they lived in a Uni Connect area, for those who obtained five or more GCSEs at grades A* to C (or 9 to 4) between summer 2014 and 2020.

4. Numbers are rounded to the nearest five and proportions are rounded to one decimal place.

Table B2: Number and proportion of English 16-year-old learners in key stage 4 population with different characteristics who obtained five or more GCSEs at grades A* to C (or 9 to 4) and completed their GCSEs between summer 2014 and 2020

Factor	Number of learners from Uni Connect areas with at least five GCSEs at grades A* to C (or 9 to 4)	Proportion of learners from Uni Connect areas with at least five GCSEs at grades A* to C (or 9 to 4)	Number of learners from non-Uni Connect areas with at least five GCSEs at grades A* to C (or 9 to 4)	Proportion of learners from non-Uni Connect areas with at least five GCSEs at grades A* to C (or 9 to 4)
GCSEs summer 2014	42,235	13.5%	298,820	14.1%
GCSEs summer 2015	43,865	14.0%	301,595	14.2%
GCSEs summer 2016	44,240	14.1%	299,980	14.2%
GCSEs summer 2017	44,175	14.1%	297,245	14.0%
GCSEs summer 2018	42,765	13.6%	290,125	13.7%
GCSEs summer 2019	43,930	14.0%	298,150	14.1%
GCSEs summer 2020	52,275	16.7%	334,070	15.8%
GCSEs: 5 GCSEs A* to C (or 9 to 4)	39,440	12.6%	163,485	7.7%
GCSEs: 6 GCSEs A* to C (or 9 to 4)	42,915	13.7%	191,325	9.0%
GCSEs: 7 GCSEs A* to C (or 9 to 4)	49,195	15.7%	241,500	11.4%
GCSEs: 8 GCSEs A* to C (or 9 to 4)	54,610	17.4%	322,685	15.2%
GCSEs: 9 GCSEs A* to C (or 9 to 4)	54,770	17.5%	413,260	19.5%
GCSEs: 10 GCSEs A* to C (or 9 to 4)	41,800	13.3%	423,100	20.0%
GCSEs: 11 or more GCSEs A* to C (or 9 to 4)	30,760	9.8%	364,630	17.2%
English GCSE: No	22,720	7.2%	123,245	5.8%
English GCSE: Yes	290,770	92.8%	1,996,740	94.2%
Maths GCSE: No	19,275	6.1%	106,375	5.0%
Maths GCSE: Yes	294,210	93.9%	2,013,610	95.0%

Factor	Number of learners from Uni Connect areas with at least five GCSEs at grades A* to C (or 9 to 4)	Proportion of learners from Uni Connect areas with at least five GCSEs at grades A* to C (or 9 to 4)	Number of learners from non-Uni Connect areas with at least five GCSEs at grades A* to C (or 9 to 4)	Proportion of learners from non-Uni Connect areas with at least five GCSEs at grades A* to C (or 9 to 4)
Sex: Female	173,895	55.5%	1,123,815	53.0%
Sex: Male	139,590	44.5%	996,170	47.0%
Ethnicity: Any other white background	15,320	4.9%	94,310	4.4%
Ethnicity: Asian or Asian British - Bangladeshi	3,000	1.0%	41,870	2.0%
Ethnicity: Asian or Asian British - Chinese	1,345	0.4%	10,515	0.5%
Ethnicity: Asian or Asian British - Indian	5,215	1.7%	75,315	3.6%
Ethnicity: Asian or Asian British - Other	4,905	1.6%	40,720	1.9%
Ethnicity: Asian or Asian British - Pakistani	7,980	2.5%	84,380	4.0%
Ethnicity: Black or Black British - African	10,900	3.5%	73,085	3.4%
Ethnicity: Black or Black British - Caribbean	2,280	0.7%	24,890	1.2%
Ethnicity: Black or Black British - Other	2,330	0.7%	11,885	0.6%
Ethnicity: Gypsy, Roma or Traveller	265	0.1%	895	0.0%
Ethnicity: Mixed - other	4,620	1.5%	37,795	1.8%
Ethnicity: Mixed - white and Asian	2,560	0.8%	25,375	1.2%
Ethnicity: Mixed - white and black African	1,855	0.6%	11,460	0.5%
Ethnicity: Mixed - white and black Caribbean	4,275	1.4%	24,165	1.1%
Ethnicity: Other ethnic group	3,410	1.1%	35,460	1.7%
Ethnicity: Unknown or refused	3,290	1.0%	22,220	1.0%
Ethnicity: White - English/Welsh/Scottish/Northern Irish/British	239,365	76.4%	1,497,225	70.6%
Ethnicity: White - Irish	585	0.2%	8,425	0.4%

Factor	Number of learners from Uni Connect areas with at least five GCSEs at grades A* to C (or 9 to 4)	Proportion of learners from Uni Connect areas with at least five GCSEs at grades A* to C (or 9 to 4)	Number of learners from non-Uni Connect areas with at least five GCSEs at grades A* to C (or 9 to 4)	Proportion of learners from non-Uni Connect areas with at least five GCSEs at grades A* to C (or 9 to 4)
Free School Meal Status: Not receiving FSM	230,150	73.4%	1,775,525	83.8%
Free School Meal Status: Receiving FSM	83,340	26.6%	344,460	16.2%

5. Table B3 below shows the number of learners in the key stage 4 population living in POLAR3 quintile 1 areas and the number living in quintile 5 areas for each cohort applying at age 18 between the 2016 and 2022 UCAS application cycles. These are the underlying numbers of learners from which the application rates, high tariff application rates and placed rates in Figures 2 to 4 are calculated.
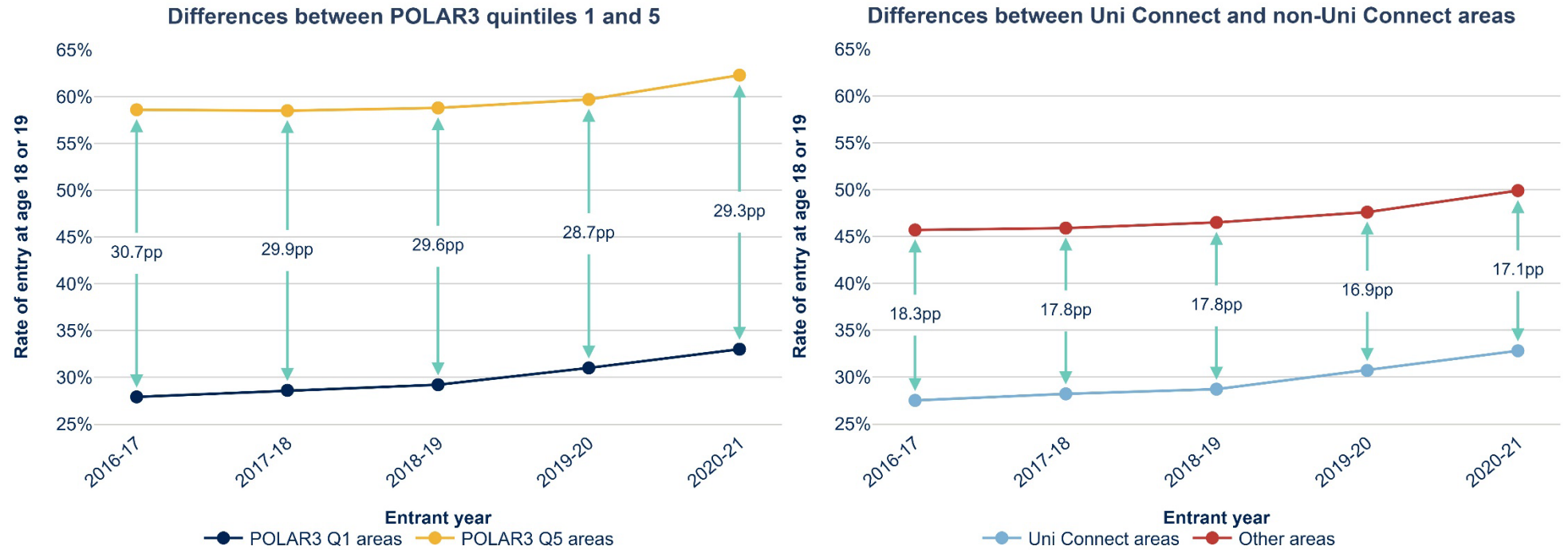
6. Numbers are rounded to the nearest five.

Table B3: Number of English 16-year-old learners in key stage 4 population living in POLAR3 quintiles 1 and 5

UCAS application cycle	GCSE summer	Number of key stage 4 learners in POLAR3 quintile 1 areas	Number of key stage 4 learners in POLAR3 quintile 5 areas
2016	2014	107,885	100,795
2017	2015	106,535	100,370
2018	2016	103,175	98,925
2019	2017	99,245	97,175
2020	2018	98,655	96,725
2021	2019	102,280	100,320
2022	2020	106,960	103,110

Annex C: Entry into higher education by age 19

1. This annex provides an early assessment of the available higher education entry data, which, although slightly more lagged, includes information on higher education participation that is otherwise out of scope in the UCAS application data. This provides insight into alternative routes of entry into higher education courses, such as part-time study and entry into higher education by age 19.

2. We find that the difference in rates of entry by age 19 appears to have narrowed over the available period, which is two years shorter than in our analysis of application rates. After differences in characteristics are taken into account by matching learners from each group, this narrowing trend was not statistically significant.

3. This information may be of particular interest given the additional aim of the Uni Connect programme to 'support young people to make well-informed decisions about their future education'. For some young people, alternative routes of entry into higher education, such as entry by age 19 or part-time study, may represent better informed decisions. Therefore, in this annex, we begin to examine whether patterns in these types of entry vary between learners from Uni Connect areas and elsewhere.

4. However, the most recent academic year for which higher education entry data is available is 2021-22. This means that the latest GCSE cohort for which we can calculate rates of entry by age 19 is that of learners who were in key stage 4 in summer 2018, many of whom will have already made their application decisions by the time their Uni Connect engagement began. This annex therefore sets out a methodology which could be adopted in future evaluation, when more recent higher education administrative data becomes available.

5. As with the linked NPD and UCAS data, key stage 4 pupils on the NPD were linked to records in the higher education data from the Higher Education Statistics Agency (HESA) and the Individualised Learner Record (ILR) by 'fuzzy matching' of personal characteristics. This allows us to track which key stage 4 learners were recorded as having started a higher education course by age 19.

6. Figure C1 below shows the proportion of key stage 4 learners who were identified as having entered higher education by age 19, split both by their POLAR3 quintile and also whether they were in a Uni Connect target area or other area. As with application rates, there was a substantial difference in rates of entry by age 19 between learners from the most represented areas (POLAR3 quintile 5) and the least represented areas (quintile 1) and also between Uni Connect areas and target areas.

7. However, unlike the difference in application rates, the difference in rates of entry by age 19 appears to have narrowed over the available period, which is two years shorter than in our analysis of application rates. The difference in rates of entry by age 19 between POLAR3 quintiles 5 and 1 reduced from 30.7 percentage points in the 2016-17 entrant year to 29.3 percentage points in the 2020-21 entrant year. Similarly, the difference in rates of entry by age 19 between Uni Connect target areas and other areas reduced from 18.3 percentage points in the 2016-17 entrant year to 17.1 percentage points in the 2020-21 entrant year.

Figure C1: Differences in rates of entry by age 19

Differences between POLAR3 quintiles 1 and 5

- POLAR3 Q1 areas
- POLAR3 Q5 areas

30.7pp, 29.9pp, 29.6pp, 28.7pp, 29.3pp

Differences between Uni Connect and non-Uni Connect areas

- Uni Connect areas
- Other areas

18.3pp, 17.8pp, 17.8pp, 16.9pp, 17.1pp

Note: Figure scales do not run from 0% to 100%. 'pp' stands for percentage point.

8. Figure C2 shows however, that after differences in a set of underlying characteristics are taken into account by matching learners from these two groups, the size of the overall difference reduces substantially, to just over 4 percentage points. It is 0.4 percentage points lower than it was in 2016-17.

Figure C2: Difference in rates of entry by age 19 between learners from Uni Connect areas and the average rate of 1,000 matched counterfactual groups of learners from non-Uni Connect areas
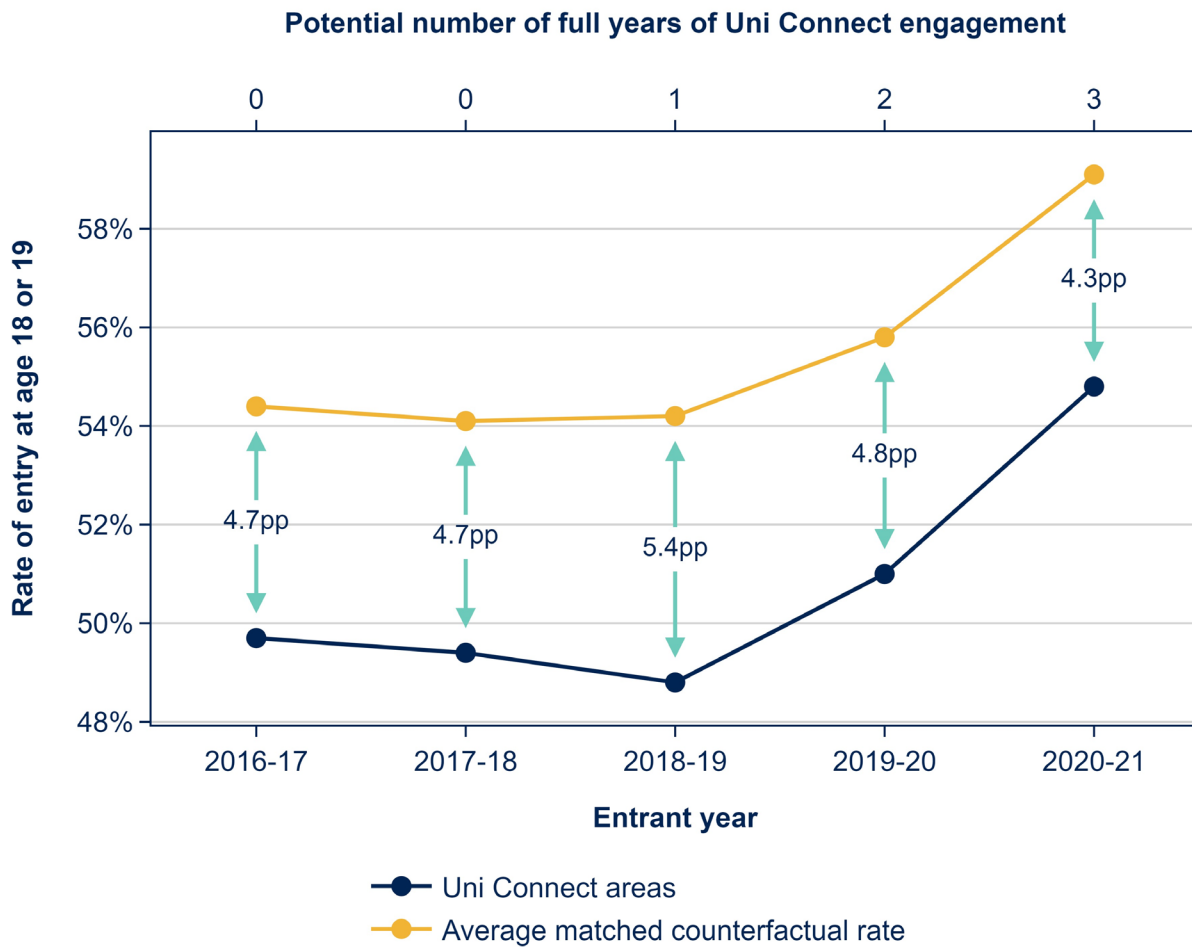
Note: Figure scale does not run from 0% to 100%. 'pp' stands for percentage point.

9. The full range of estimated changes in this difference for each entrant year since 2016-17 is presented in Figure C3 below. This shows that the change in the difference by 2020-21 is not statistically significant at the 95 per cent confidence level, with estimates ranging between -1.0 and 0.1 percentage points.

Figure C3: Estimated change in difference in rates of entry by age 19 since 2016-17 after taking into account differences in matched characteristics between learners
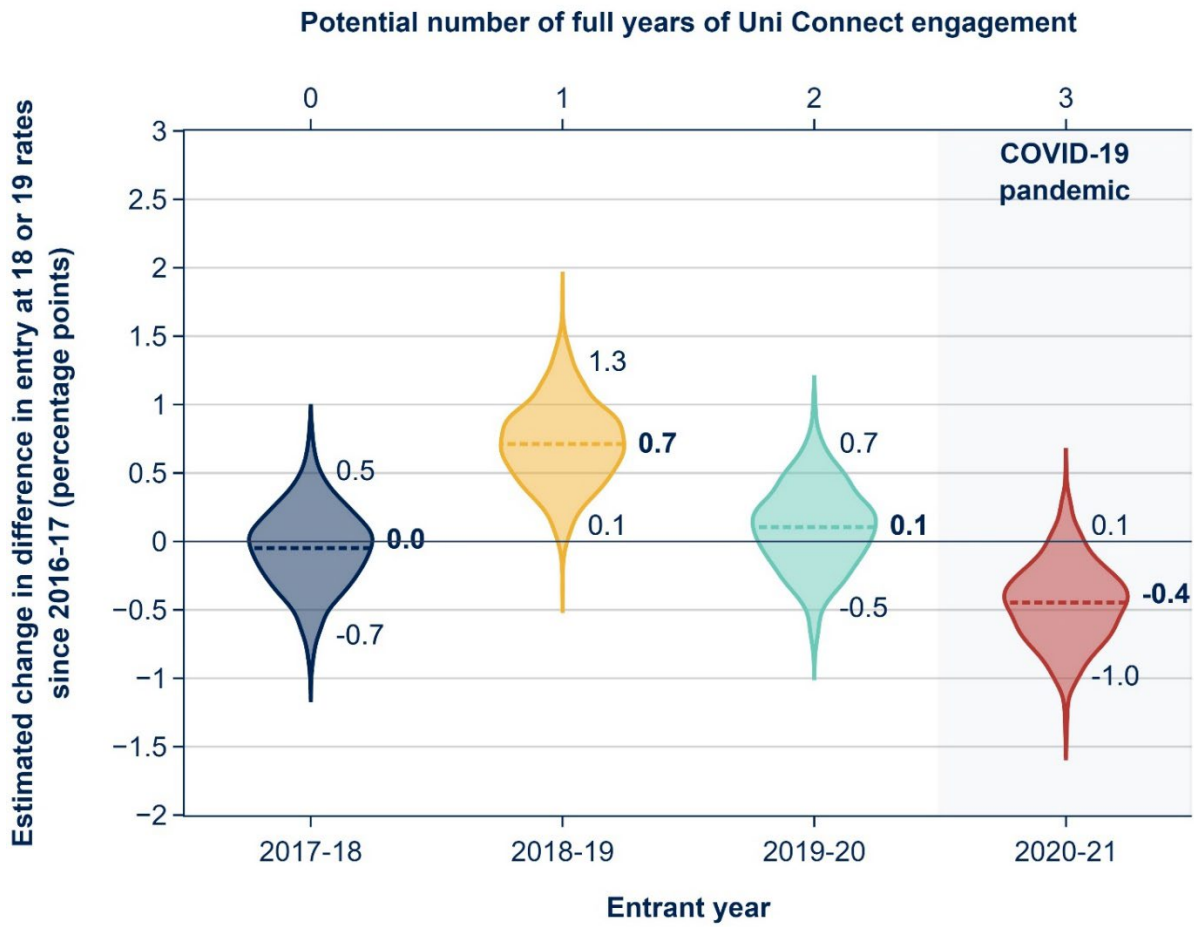
Annex D: Matched counterfactual analysis

Technical description

1. The matched counterfactual approach involves comparing two equally sized groups which are forced to have an identical mix of certain characteristics. In this case, we compare all learners from Uni Connect areas with another equally sized group of learners from non-Uni Connect areas. This second group of learners from non-Uni Connect areas is carefully chosen to match the original group on a pre-defined set of characteristics. This matched group is then known as the 'matched counterfactual', because it represents a hypothetical situation where learners from Uni Connect areas had instead come from non-Uni Connect areas.

2. This matched counterfactual group was created by randomly sampling (with replacement) from the population of learners from non-Uni Connect areas. This was done such that each learner from a Uni Connect area matched one other learner from a non-Uni Connect area in the same cohort on the following characteristics: their number of GCSEs at grade A* to C (or 9 to 4), whether they achieved a standard pass in GCSE English, a standard pass in GCSE Maths, their sex, their ethnicity and their free school meal status. Evidence from OfS analysis 'Association Between Characteristics of Students' (ABCS),[25] and that presented in Annex A, show that these characteristics are all associated with young participation in higher education. No further area-based measures, such as Index of Multiple Deprivation (IMD) or Income Deprivation Affecting Children Index (IDACI) quintiles, were included as matching criteria because it was our aim to focus on Uni Connect areas as the area-based measure of background. A summary of the numbers and proportions of learners with each of these characteristics can be found in Annex B of this report.

3. Matching in this way meant there would always be the same number of learners from Uni Connect areas and non-Uni Connect areas within each combination of the characteristics listed above. In other words, both groups were guaranteed to have the same mix of these characteristics.

4. The key difference is that one group was living in Uni Connect areas in key stage 4, while the other was not. This should allow for a fairer comparison of outcomes between these two groups over time, which can begin to shed light on the impact, if any, of the Uni Connect programme. Of course, there will remain other differences that are not possible to account for, such as the amount of support each learner received from their school or family. If these unobserved differences in characteristics between the two groups change over time, this will distort our understanding of the impact of the Uni Connect programme. Also, there will be differences within the categories of matched characteristics, such as the exact GCSE grades achieved by each learner beyond the broad number of 'standard passes' by which they are grouped.

5. The choice of the two groups was determined as follows. Because there are far more learners from non-Uni Connect areas, 99.9 per cent of learners from Uni Connect areas had a combination of characteristics which could be exactly matched with at least one learner from a non-Uni Connect area, meaning only 0.1 per cent of learners from Uni Connect areas had to be

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[25] See the ABCS dashboard at www.officeforstudents.org.uk/data-and-analysis/associations-between-characteristics-of-students/access-to-higher-education/.

discarded for this reason. A further 0.6 per cent of learners from Uni Connect areas were discarded because, although there was at least one learner from a non-Uni Connect area with the same mix of characteristics, there were enough to match each learner one-to-one. We would otherwise have been forced to sample some learners from non-Uni Connect areas more than once, which would have artificially reduced the sampling variation and resulting estimates of statistical uncertainty. This means we created a single unique group of learners living in Uni Connect areas for each cohort of school leavers, for which there were at least as many learners in non-Uni Connect areas with each unique combination of the matching characteristics.

6. Similarly, 0.8 per cent of learners from non-Uni Connect areas were also discarded, since they held a combination of matching characteristics which was not held by at least one learner living in a Uni Connect area. However, unlike the group of learners from Uni Connect areas, the matched counterfactual group is not unique, because it is selected by random sampling (with replacement) from the much larger population of learners from non-Uni Connect areas (see Table B2). As a result, if only one random sample is taken, there is a risk that it happens to be an 'unusual' group of learners, who are not typical of the population as a whole.

7. To mitigate against this, we took 1,000 random samples of learners from non-Uni Connect areas, such that a selected learner living in a non-Uni Connect area matched with one other unique learner living in a Uni Connect area in each sample, based on the characteristics described previously.[26]

8. Our analysis was then conducted 1,000 times, by separately comparing the application outcomes of each matched counterfactual group with the same unique group of learners from Uni Connect areas every time. The full range of results from all 1,000 analyses are presented in this report. This approach gives us confidence that the results we are seeing are not simply by random chance.

9. In practice, within each of the 1,000 random samples, roughly 20 per cent of unique learners from non-Uni Connect areas are randomly selected and matched with learners from Uni Connect areas in each cohort. Around 15 per cent of those selected appear more than once in each matched counterfactual group. The datafile associated with this report contains details of the sampling rates for each of the 1,000 matched counterfactual groups.[27]

10. As in our previous work, we conducted a series of checks and sensitivity analyses to ensure that the findings from the matched counterfactual analysis were robust to changes in our approach. These adjustments did not substantially alter the findings of this analysis.

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[26] Sampling was done with replacement because there were only a limited number of learners from non-Uni Connect areas who were eligible for matching. Sampling without replacement could therefore have resulted in selecting the same handful of eligible leaners from non-Uni Connect areas in each of the 1,000 repeated samples, which would ultimately understate the variation in the distribution of estimates. Sampling with replacement also had the benefit of allowing us to use an established method for estimating statistical uncertainty, namely 'bootstrapping'. Although sampling with replacement will sometimes mean the same individual is selected more than once within a given sample (roughly 15 per cent of learners in each matched counterfactual group), sufficient variation should be achieved if enough resamples are taken.

[27] Available at www.officeforstudents.org.uk/publications/uni-connect-target-areas-national-analysis-2024/.