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Issues paper

This publication reports on the trends in young participation from the mid-1990s to the present.

Trends in young participation in higher education: core results for England

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Trends in young participation in higher education: core results for England

To	Heads of HEFCE-funded higher education institutions
	Heads of HEFCE-funded further education colleges
Of interest to those responsible for	Increasing and widening participation, Policy development
Reference	2010/**03**
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Executive summary

Purpose

1. This publication reports on the trends in young participation in higher education from the mid-1990s to the present.

2. We have an established programme of analysis tracking the proportion of young people from different backgrounds who enter higher education at age 18 or 19 ('young participation'). Recent development of this work, including introducing provisional results based upon applications data, allows us for the first time to report on a consistent basis trends in young participation for the cohorts of young people reaching 18/19 years of age between 1994/1995 and 2009/2010.

3. This publication focuses on a set of core results to allow rapid reporting of trends following the finalisation (in December 2009) of applications data for the 2009 entry cycle. These core results cover young people from England and describe trends in young participation for England as a whole, for each sex, and for area-based groups differentiated by educational, occupational and financial advantage.

4. The report is divided into two sections. This executive summary outlines the findings through key points (paragraphs 5 to 18) and an overview (paragraphs 20 to 36). The main report describes the detailed results. It explains how we report young participation (paragraphs 37 to 41) followed by an account of the trends in young participation covering England (paragraphs 42 to 45), area-based groups differentiated by advantage (paragraphs 46 to 72), and sex (paragraphs 73 to 78).

Key points

Young participation has increased for England

5. Young participation has increased from 30 per cent in the mid-1990s to 36 per cent at the end of the 2000s, making young people today over +20 per cent more likely to go on to higher education than in the mid-1990s.

Large differences in participation rates by where young people live

6. There are large differences in participation rates by where young people live: currently fewer than one in five young people from the most disadvantaged areas enter higher education compared to more than one in two for the most advantaged areas.

Young people from disadvantaged areas substantially more likely to enter higher education since the mid-2000s

7. In the most disadvantaged areas there have been substantial and sustained increases in the proportion of young people entering higher education since the mid-2000s.

8. The recent increases in participation rates for young people living in disadvantaged neighbourhoods are found whether neighbourhood disadvantage is defined by participation rates themselves, or by measures of parental education, occupation or income.

9. The proportion of young people living in the most disadvantaged areas who enter higher education has increased by around +30 per cent over the past five years, and by +50 per cent over the past 15 years.

10. The increases in the proportion of young people living in the most disadvantaged neighbourhoods who enter higher education are consistent with other statistics including recent trends in GCSE attainment.

Young people from advantaged areas are also more likely to enter higher education

11. The proportion of young people from the most advantaged areas who enter higher education has also increased, typically by +5 per cent over the past five years and +15 per cent over the past 15 years.

Differences in participation rates between advantaged and disadvantaged neighbourhoods have reduced since the mid-2000s

12. The increases in the young participation rate for those living in the most disadvantaged areas have been greater in proportional terms and, since the mid-2000s, percentage point terms, than the rises for those living in advantaged areas.

13. Since the mid-2000s the majority of additional entrants to higher education have come from more disadvantaged areas.

14. Most ways of measuring the differences between the participation rates of advantaged and disadvantaged neighbourhoods have shown a reduction since the mid-2000s.

Participation rates higher for women, but recent substantial increases for men

15. Young women have been more likely to enter higher education than young men for every cohort in this analysis. Currently 40 per cent of young women enter higher education compared to 32 per cent of young men.

16. The participation rate of young men now trails that of young women by a decade and over the past 15 years around 270,000 fewer young men than young women have entered higher education as a result of their lower participation rate.

17. In the mid-2000s young women were +25 per cent more likely to enter higher education than young men, rising to +44 per cent more likely in disadvantaged areas.

18. Since the mid-2000s the participation rate of young men has increased materially – from 29 per cent to 32 per cent – for the first time since the early 1990s.

Action required

19. This report is for information: no action is required in response.

Overview of findings

Measuring young participation

20. Our established[1] programme of analysis of young participation in higher education (HE) reports on the proportion of young people who enter higher education at age 18 or 19, the 'young participation rate'. Further development of our methods since HEFCE 2005/03 allows us to report – on as consistent a basis as is possible – participation trends for an extended sequence of cohorts of young people: from those who were aged 18 in 1994 (with entrants to HE in academic years 1994-95 or, aged 19, 1995-96, we refer to this as the '94:95 cohort') to, using estimates based on UCAS admissions data, those who were aged 18 in 2009 and enter, or are estimated to enter, HE in academic years 2009-10 and 2010-11 (the '09:10 cohort').

21. We count young entrants to full-time and part-time HE-level courses at UK higher education institutions and further education colleges in England, Wales and Scotland using administrative HE student[2] and HE acceptance records. We estimate the population of each cohort for where they live when they are aged 15 using specially developed methods based on child benefit records.

22. Using HE admissions data instead of the HE student records enables us to report on the most recent cohorts but introduces some uncertainty. The results for the 07:08 and 08:09 cohorts are considered provisional but unlikely to change materially. They are therefore marked (p) in the figures in this report. The results for the 09:10 cohort involve some evidence-based projection, are consequently less certain, and could be materially revised when the full set of administrative student data is available (2012). They are therefore marked (e) in the figures in this report[3].

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[1] 'Young participation in higher education' (HEFCE 2005/03) gives an overview of our approach to this analysis. All HEFCE publications are available at www.hefce.ac.uk under Publications.

[2] This analysis draws upon data sets provided by the Higher Education Statistics Agency, Learning and Skills Council, Scottish Funding Council, Higher Education Funding Council for Wales, Welsh Assembly Government and UCAS. Additional data resources used are the Office for National Statistics' National Statistics Postcode Directory and 2001 Census: Standard Area Statistics (England and Wales). Census output is Crown copyright and is reproduced with the permission of the Controller of HMSO and the Queen's Printer for Scotland.

[3] For more discussion of the use of provisional and estimated figures in this report, see paragraph 40.

Young participation has increased for England

23. Young participation in higher education in England has increased from 30 per cent, for the 94:95 cohort, to 36 per cent for the 09:10 cohort (Figure 1). The increase in young participation has been more rapid in the later part of this period, rising from 32 per cent to 36 per cent between the 04:05 and 09:10 cohorts. Although there is an overall trend of increasing participation rates across the study period, a number of cohorts show no increase, or a decline, in their participation rate. These appear to be part of a pattern whereby larger than average increases in the young population act to depress the HE participation rate (and smaller than average increases, or declines, act to increase the participation rate). Taking this pattern into account, there is no indication from the national-level trends that changes to HE tuition fees or student support arrangements have been associated with material reductions in the overall HE participation rate.

24. We estimate that there will be 239,000 young entrants to higher education from the 09:10 cohort, which is 77,000 more than the 162,000 from the 94:95 cohort, an increase of nearly +50 per cent. The overall young population of England has increased by +21 per cent, from 550,000 to 665,000, across these cohorts. Taking this population change into account, there are 43,000 additional entrants from the 09:10 cohort attributable to the rise in the young participation rate since the mid-1990s.

Figure 1 **Trends in young participation for England**
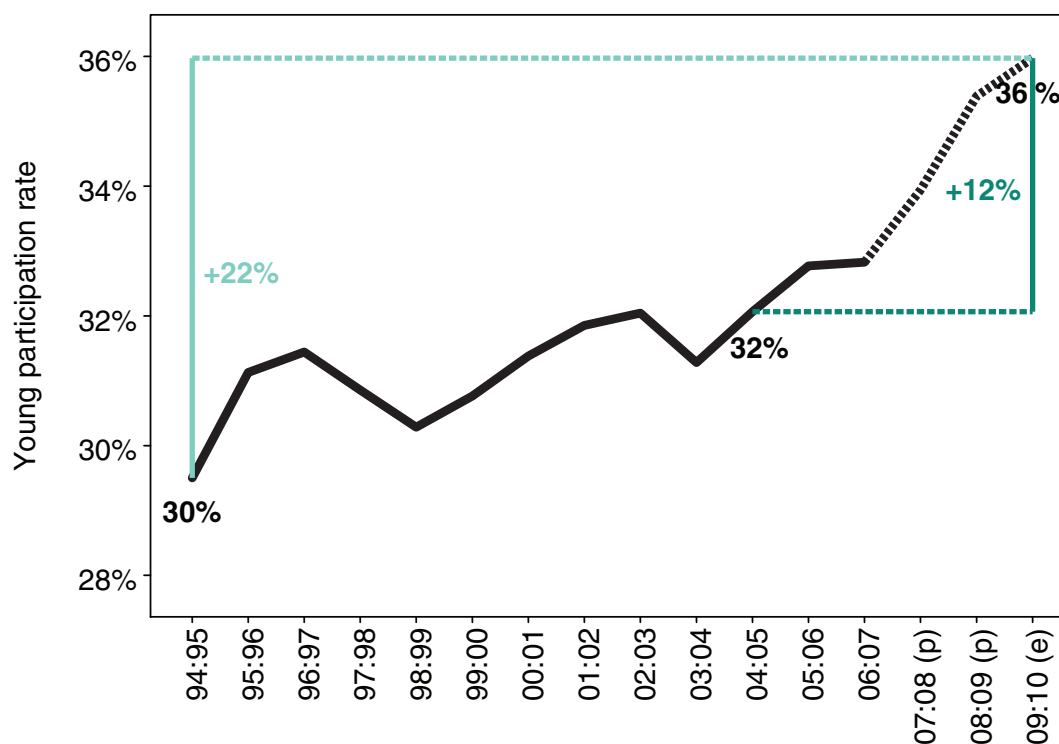
Large differences in participation rates between neighbourhoods

25. Young people from different backgrounds have different participation rates in higher education. One way of assessing these differences is to analyse participation rates for young people grouped together by a measure of the nature of the neighbourhood in which they live. In this analysis we form such groups by using classifications of the small areas where young people live, based upon measures related to their participation in HE and the education level, occupation and income of their parents. We use five-level classifications where each category represents around 20 per cent of the young population.

26. This analysis confirms that there are large differences in the participation rate of young people by where they live (for example, Figure 2). For cohorts from the late 2000s, typically fewer than one in five young people from the most disadvantaged 20 per cent of areas enter higher education, compared to more than one in two from the most advantaged 20 per cent of areas. Larger differences in participation rates are found across groups defined by measures of parental education than across groups defined by parental occupation or, especially, income.

Figure 2 **Trends in young participation for areas classified by HE participation rates (POLAR2 classification, adjusted[4])**

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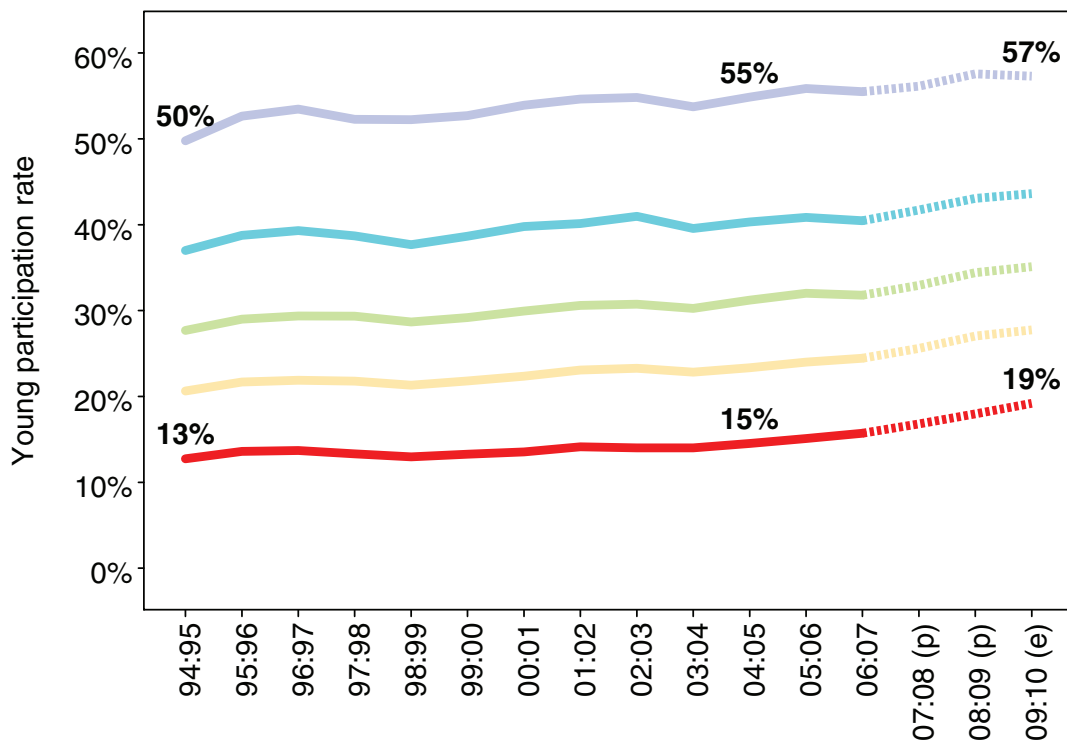
[4] See paragraphs 50 to 55.

Young people from disadvantaged areas substantially more likely to enter higher education since the mid-2000s

27. For young people living in the most disadvantaged 20 per cent of areas, HE participation rates are much lower than the national average. In the mid-1990s the young participation rate for these disadvantaged areas was typically 13 per cent (for example, Figure 3). The proportion of young people from these areas entering higher education has risen since the mid-1990s, especially since the mid-2000s where substantial and sustained increases have taken the participation rate to 19 per cent (09:10 cohort, estimated).

28. Substantial, sustained and materially significant participation increases for the most disadvantaged areas across the 04:05 to 09:10 cohorts are found regardless of whether educational, occupational or income disadvantage is considered. Typically, young people from the 09:10 cohort living in the most disadvantaged areas are around +30 per cent more likely to enter higher education than they were five years previously (04:05 cohort), and around +50 per cent more likely to enter higher education than 15 years previously (94:95 cohort).

29. Participation rates for young people living in advantaged areas have also increased across both the study period and since the mid-2000s. For example, the participation rate of young people living in the areas of highest participation was 50 per cent for the 94:95 cohort, 55 per cent for the 04:05 cohort and 57 per cent for the 09:10 cohort (Figure 4). Other ways of defining advantage give similar results: typically young people from the 09:10 cohort living in the most advantaged areas are around +5 per cent more likely to enter HE than five years previously and around +15 per cent more likely than 15 years previously.

30. The increases in the participation rate for those living in the more disadvantaged areas have been greater in proportional terms and, since the mid-2000s, percentage point terms, than the rises for those living in advantaged areas. Consequently, more of the recent additional entrants from the 09:10 cohort (resulting from participation increases since the mid-2000s) have come from disadvantaged neighbourhoods than from advantaged neighbourhoods. Since the mid-2000s the differences in the participation rates of advantaged and disadvantaged neighbourhoods, whether measured as a percentage point gap or the proportional difference, have declined.

Figure 3 Trends in young participation for the most disadvantaged areas determined by HE participation rates (POLAR2 classification, adjusted)
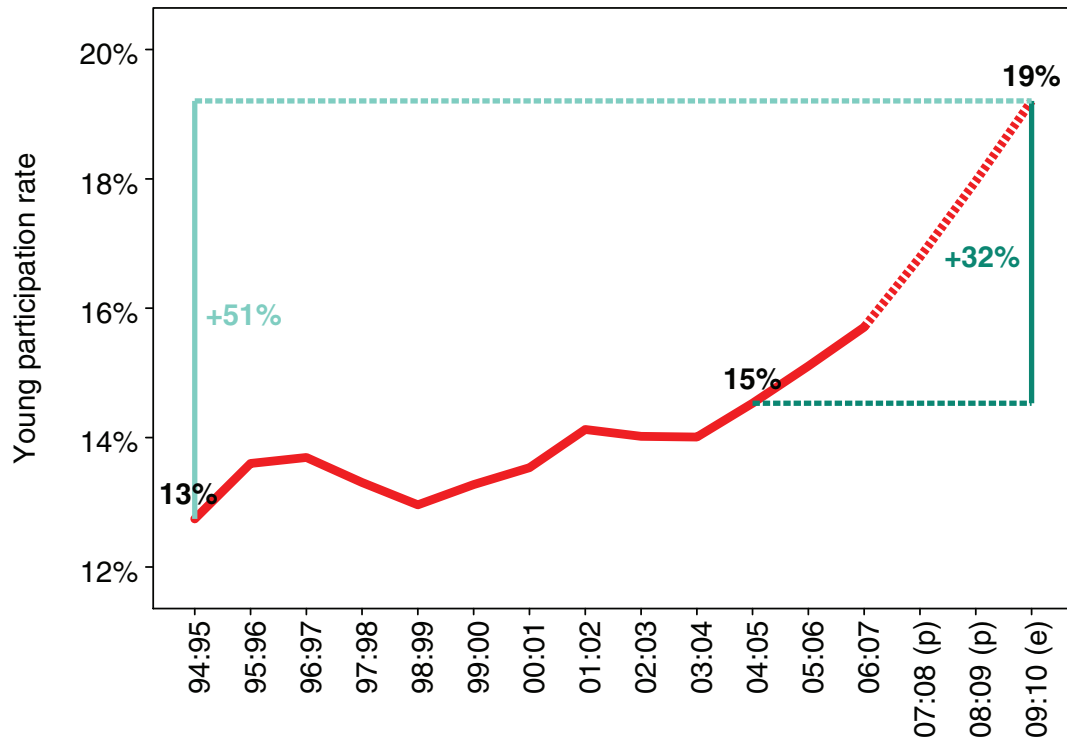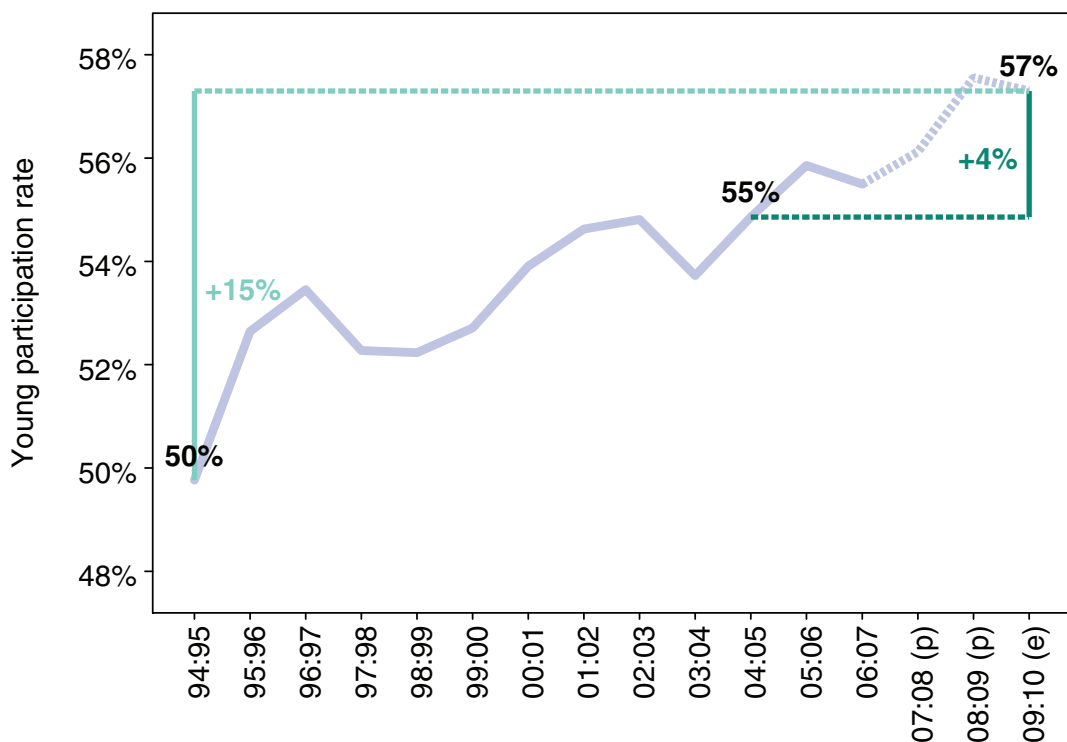

Figure 4 Trends in young participation for the most advantaged areas determined by HE participation rates (POLAR2 classification, adjusted)
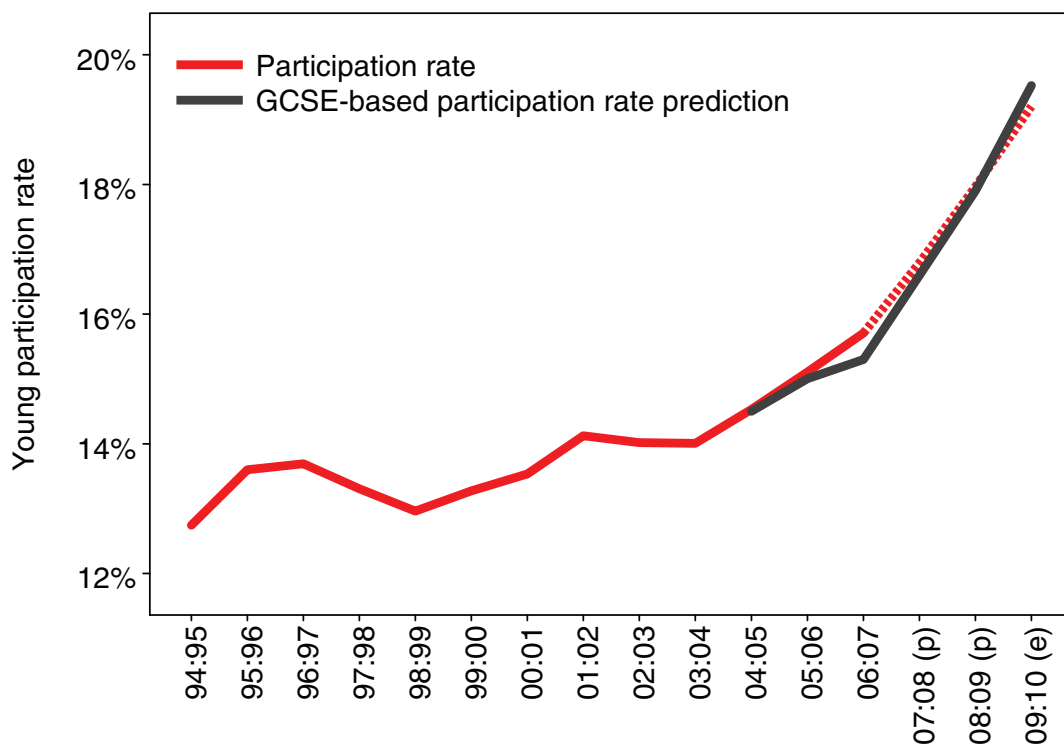
Increases in participation rates for disadvantaged groups are consistent with trends in GCSE attainment

31. Trends in social statistics – such as HE participation rates – that are associated with deeply rooted differences in advantage do not usually show rapid change. A set of robustness and credibility checks give confidence that the analysis in this report is faithfully describing HE participation trends. In particular, the unusually rapid increases in HE participation recorded since the mid-2000s for young people living in disadvantaged areas are supported by changes in the GCSE attainment of the matching cohorts of young people (Figure 5), and are also consistent with the profile of spending levels on maintained secondary schools.

32. This analysis does not attempt to identify the reasons for these changes in participation rates. Many factors that could plausibly influence participation rates in disadvantaged areas have changed simultaneously and may interact with each other: for example, spending on pre- and post-16 education; the educational maintenance allowance; demographic changes; widening participation activities; changes to tuition fees, student support and bursaries; new HE qualifications; the nature of HE provision. It is difficult or impossible to isolate what effect each might be contributing.

Figure 5 **Measured and predicted (GCSE-based model) young participation rates for young people in disadvantaged areas (POLAR2 classification, adjusted)**

Participation higher for women, but recent substantial increases for men

33.   In the mid-1990s young women were slightly more likely to enter HE than young men: participation rates were 30 per cent and 29 per cent respectively for the 94:95 cohort (Figure 6). The proportion of young women entering higher education increased over the following 10 years to reach 35 per cent for the 04:05 cohort. Over this same period the participation rate of young men remained unchanged at around 29 per cent. By the 05:06 cohort the participation rate of young women had passed 36 per cent, making them +25 per cent more likely to enter HE than young men.

Figure 6   **Trends in young participation by sex**
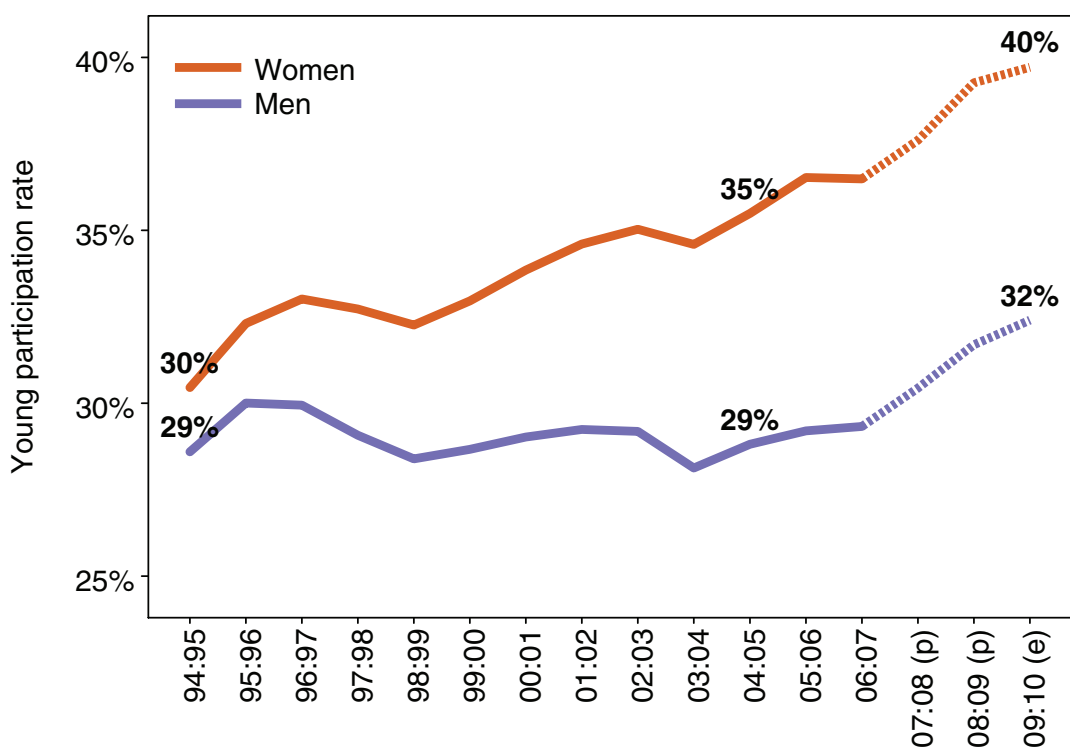
34.   Since the mid-2000s the participation rate of young women has increased further, reaching (an estimated) 40 per cent for the 09:10 cohort. For the first time in the study period, the participation rate of young men has also shown a substantial increase, from 29 per cent to 32 per cent. This increase has been sufficiently large for the trend, seen since the mid-1980s, for the participation of men to fall relative to that of women to be arrested. Women from the 09:10 cohort are +23 per cent more likely to enter HE than young men, which is no greater a difference than five years previously.

35.   Despite these recent increases in participation for young men, the difference in participation rates between men and women is substantial. The participation rate difference between young men and women from the 09:10 cohort is seven percentage points, and the participation rate for men in 09:10 is at a level that young women reached a decade earlier. An additional 25,000 young men would need to enter HE from the 09:10 cohort for young men to have the same participation rate as women. Between the mid-1990s and the late 2000s around 270,000 fewer young men entered HE than would have been the case if the HE participation rate for men had been the same as for women for each cohort.

Participation differences by sex relatively larger in disadvantaged areas

36.   The relative difference in the proportion of men and women entering HE is higher in disadvantaged areas. In the most disadvantaged neighbourhoods (in terms of entry to HE) young women increased their participation rate from 13 per cent for the 94:95 cohort to 17 per cent for the 04:05 cohort, while the participation rate of young men in these areas entering HE remained unchanged at 12 per cent. By the 05:06 cohort young women in these areas were +44 per cent more likely to enter HE than young men. In the late 2000s, young men in disadvantaged areas increased their participation rate from 12 per cent to (an estimated) 16 per cent for the 09:10 cohort. The participation rate of young women in these areas over this period also increased – to (an estimated) 22 per cent. These are similar percentage point increases leading to a reduction, from +44 per cent to +35 per cent, in the degree to which young women in these areas are more likely to enter HE than young men.

Figure 7 **Trends in young participation by sex for young people living in low HE participation areas (POLAR2 classification, adjusted)**
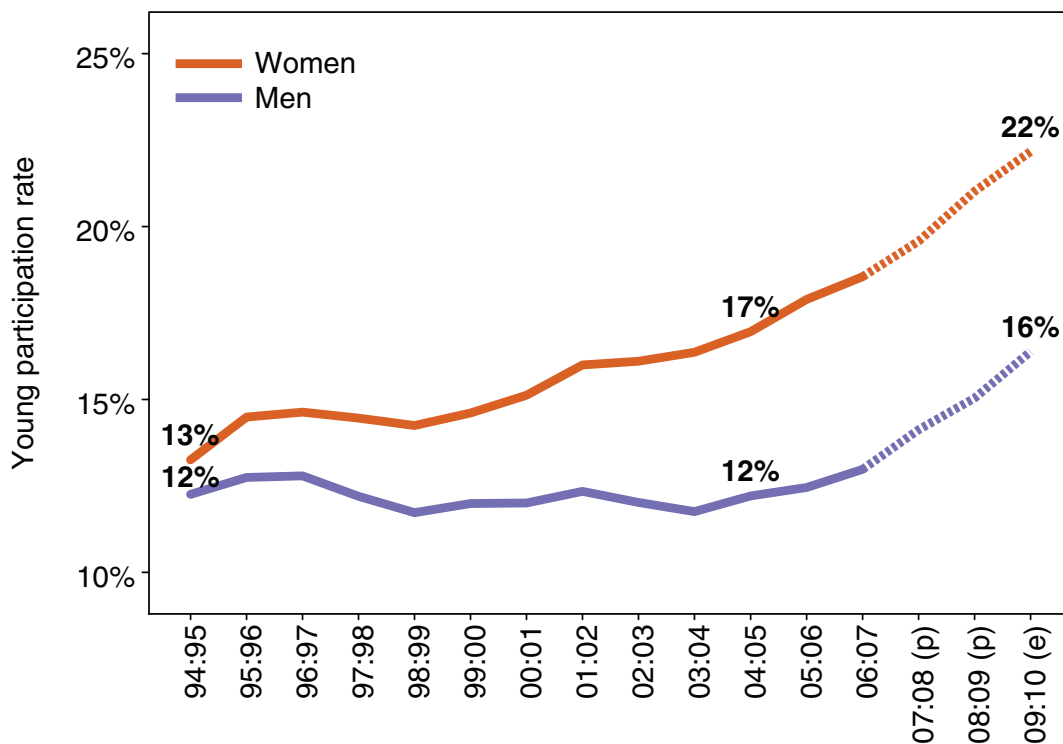
Detailed results

Understanding these results

37. The young participation rate measure used in this report is designed to be simple to understand and meaningful to interpret. The starting point is an estimate of the population size of the young cohort at age[5] 15, as they start their final year of compulsory education. We then allow three years for this cohort of young people to undertake their GCSEs and further education before entrants to higher education from the cohort (typically aged 18) are recorded followed by a further year before we record the second set of entrants (typically aged 19). The young participation rate is then simply the proportion that those HE entrants form of the population of that cohort when it was aged 15. We reference the cohorts by the two years in which they can enter HE. For example the participation rate for the 06:07 cohort relates to that group of young people who were aged 15 on 31 August 2003, aged 18 on 31 August 2006, with those who entered HE doing so in academic years 2006-07 or 2007-08.

38. This young participation rate can then be directly interpreted as the proportion of a particular cohort of young people who enter higher education. Since the population estimate is based on where the cohort lived as they were completing secondary education, the rate can be meaningfully interpreted as reflecting the likelihood of children growing up in that area entering HE[6]. The HE entrants in the measure are drawn from a single real cohort of young people followed across academic years – rather than combining young entrants from different cohorts who enter HE in a single academic year. This makes the participation rate less susceptible to distortions from demographic or behaviour changes (for example, from young people bringing forward their entry to HE to age 18 rather than age 19) that do not reflect a change in the proportion of young people entering HE.

39. For most of the study period the participation rates are based on entrant counts from the administrative HE records and small area population estimates based on child benefit records controlled to realigned official national totals[7]. For the early part of the period (94:95 to 97:98 cohorts) some of these data sources are not available. In this period the small area population estimates are supplemented by 1991 Census data and a small portion of the HE entrants (those who study HE in further education colleges) are estimated to make the participation rates comparable with later cohorts.

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[5] Throughout this work ages are defined – for English young people – on the 31 August. This ensures that the cohorts reported upon are aligned to school years and maximises the discrimination between cohorts of changes that are specific to school or academic years (such as changes to student support).

[6] The geographical mobility of young people – especially between different types of areas – between starting their final year of compulsory schooling and supplying their pre-entry residential address for the HE student records is low. If instead the cohort population was estimated based on residence at age 18 or 19 then the participation rates would be distorted by the high levels of migration flows (both intranational and international) at those ages.

[7] The Office for National Statistics 'Population Estimates for UK, England and Wales, Scotland and Northern Ireland' series is used. These estimates are based on age at mid-year; they are converted to age on 31 August by reference to the pattern of monthly births for each cohort reported in 'Birth statistics: Births and patterns of family building England and Wales' (FM1 series). The controls to the national population are done separately for Great Britain and Northern Ireland.

40. To be able to report on recent participation trends, HE applications data[8] are used to supplement or substitute for the administrative student records for cohorts where they are not yet fully available. The way the applications data are used in the analysis varies according to how recent the cohort is. The method used for the 07:08 and 08:09 cohorts in this report has proved reliable across recent years and the results for these cohorts are not expected to change materially; these results are termed 'provisional', denoted (p) on the figures. The estimate method for the most recent 09:10 cohort in this report involves an estimate of the number of entrants to the (future) 2010-11 academic year and is consequently less certain. The method employed for this is usually a good indicator of the final young participation rate, but can have material error if the relative pattern of acceptances between ages 18 or 19 deviates from normal[9]. Accordingly the results for the 09:10 cohort are considered estimates, denoted (e) on the figures, and may be subject to material revisions once the full set of administrative HE student records are available for analysis (in early 2012). Trend lines in the results that rely upon any of the provisional or estimated results are shown with broken lines.

41. A number of conventions are used in the results to avoid the ambiguity that can occur when reporting changes in a statistic that is itself a percentage:

a. Participation rates are reported in percentage format: for example, 'the participation rate for women was 36 per cent'.

b. A proportional difference between participation rates, typically between different points in time, is reported as the percentage that the change represents on the initial value. To distinguish these values from the participation rates they are prefixed by a '+' or '-', indicating an increase or decrease respectively, in both the figures and the text: for example, 'the participation rate changed by +10 per cent from 30 per cent to 33 per cent'.

c. The gap, or absolute difference, between two participation rates is reported as percentage points: for example, 'the participation rate increased by three percentage points from 30 per cent to 33 per cent'.

d. Percentage figures are reported to the nearest whole number unless further precision is required for a particular comparison. Figures for changes in participation rates are always calculated from full precision figures and so may not always match the difference between the reported rounded whole number participation rates.

e. Sometimes it is useful to assess the scale of a change in a participation rate though an estimate of the number of entrants attributable to that change (that is, after accounting for changes in entrant numbers attributable to a change in the population size). We do this by multiplying the percentage point change in the participation rate by the population of the group (after the participation change) and use the term 'additional entrants': for example, 'after accounting for the change in the population size, there are 9,000 additional entrants from the 09:10 cohort compared to the participation rate of the 04:05 cohort'.

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[8] UCAS is the organisation responsible for managing applications to higher education courses in the UK and – under an agreement for collaboration for research and analysis purposes – provides HEFCE with data on higher education applications and acceptances. For more information on UCAS see www.ucas.com

[9] As it did for the 05:06 cohort, where the number of entrants aged 18 relative to entrants aged 19 was higher than normal. The acceptance-based estimate method used for the 09:10 cohort in this report would have over-estimated young participation by around one percentage point in this case.

Trends in young participation for England

42. Young participation in England has increased (Figure 8). For the 94:95 cohort 30 per cent of young people entered HE; this rate rose over the next decade to 32 per cent for the 04:05 cohort. Over the next five cohorts, young participation rose further to (an estimated) 36 per cent of the 09:10 cohort. Young people from the 09:10 cohort are +12 per cent more likely to enter HE than those from five years previously (04:05 cohort) and +22 per cent more likely than those from the 94:95 cohort.

Figure 8 **Trends in young participation for England**
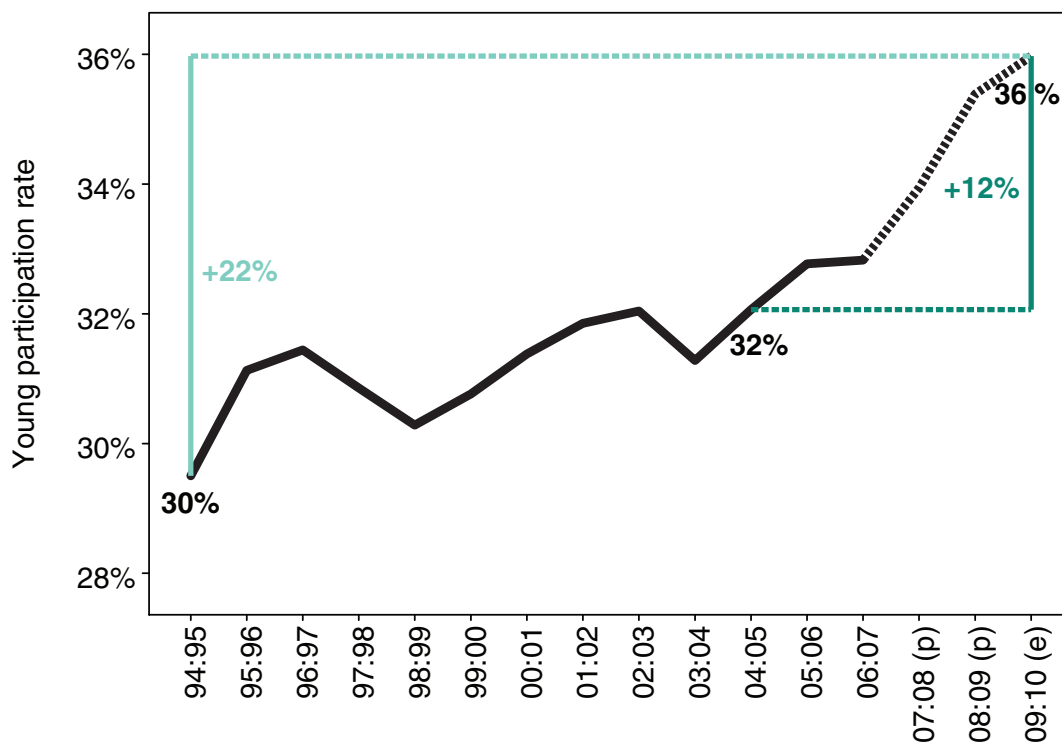
43. The number of young entrants to higher education (Figure 9) has risen by 77,000 (+47 per cent) from 162,000 (94:95 cohort) to 239,000 (09:10 cohort, estimated). Of this 77,000 increase in young entrants over half (43,000) are additional entrants attributable to the six percentage point increase in the young participation rate. The remaining 34,000 are attributable to the +21 per cent increase – from 550,000 to 665,000 – in the population size of the young cohort (Figure 10).

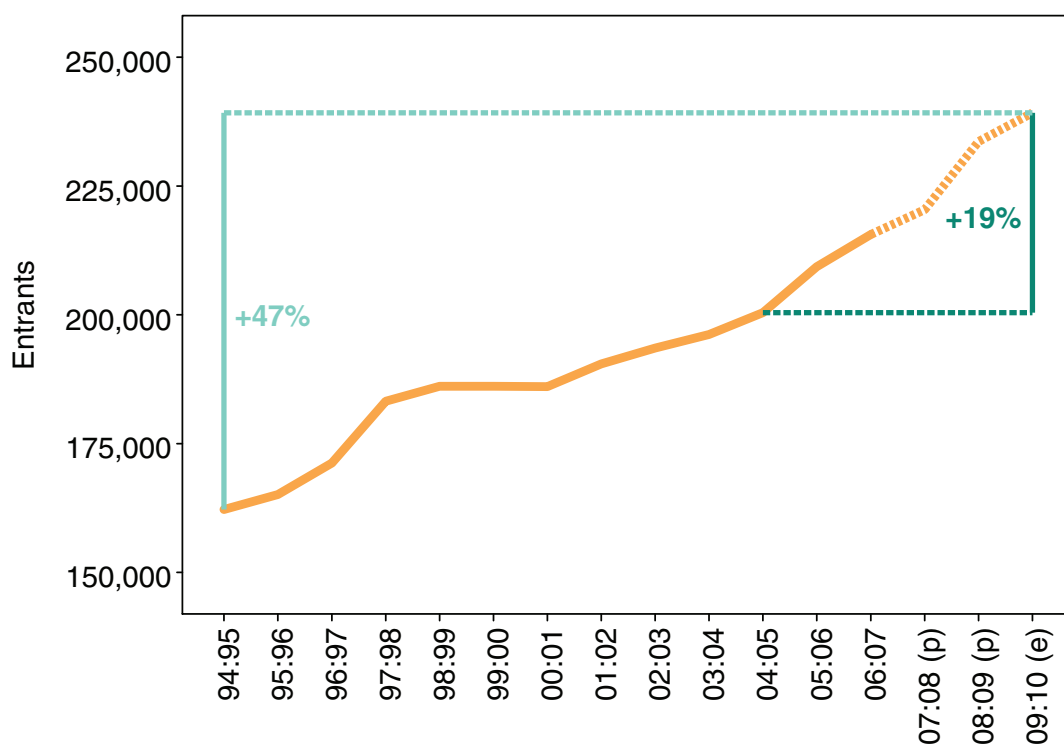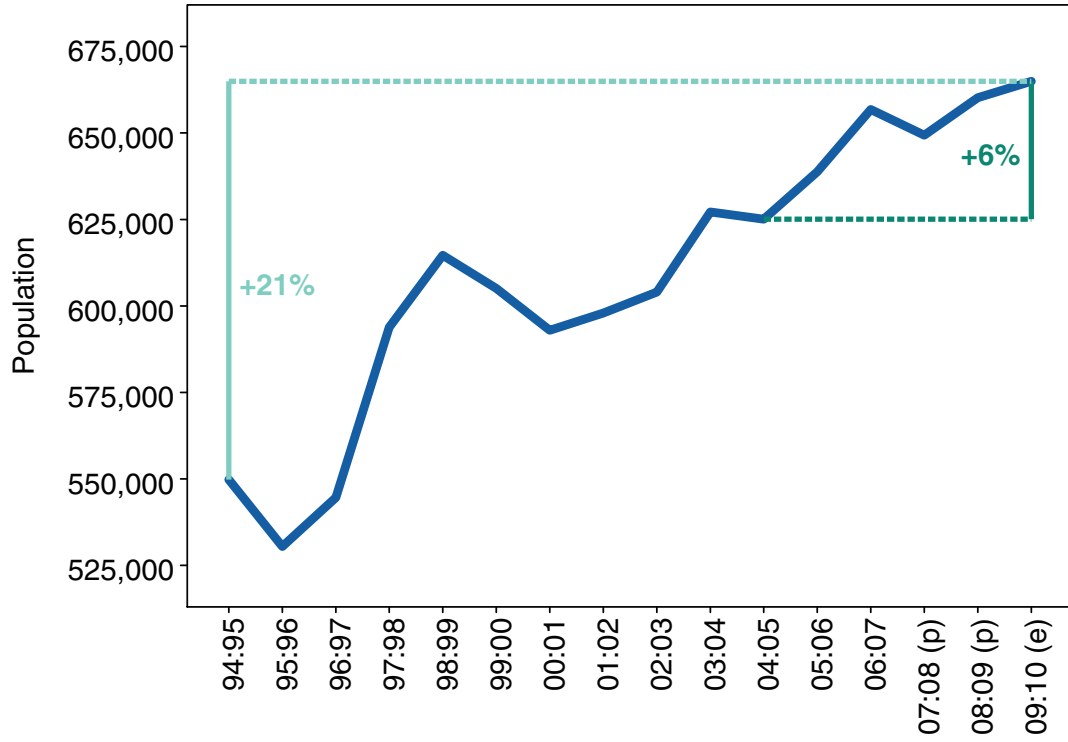Figure 9 **Trends in young entrants to higher education (from England)**

Figure 10 **Trends in the young population**

44.   Although the young population, number of young entrants, and the participation rate have all increased across the 94:95 to 09:10 cohorts, this has not been a steady process. Figure 11 shows the cohort-to-cohort proportional changes in the young population size, the number of young HE entrants and the young participation rate. The change in young population has been variable over the period: several cohorts were smaller than the previous cohort, but three cohorts were +4 per cent or more larger. The change in the number of entrants varies from 0 to +7 per cent, never declining. The cohort-to-cohort proportional change in the participation rate varies from +6 per cent to -2 per cent. The young participation rate has increased for each cohort between 04:05 and 09:10.

45.   During the study period there were three cohorts that experienced a decline in young participation compared to the preceding cohort: 97:98, 98:99 and 03:04. These three cohorts also saw the largest cohort-to-cohort increases in the size of the young population (+9 per cent, +4 per cent and +4 per cent respectively). Figure 12 shows the relationship between cohort-to-cohort changes in the participation rate and population size across the study period. Although many factors will affect the rate for each cohort, Figure 12 supports a general negative association between cohort-to-cohort population changes and young participation rates. The cohorts that recorded a decline in young participation appear to be within this broad pattern. In particular, after taking the population changes into account, the cohort-to-cohort patterns do not suggest any substantial reduction in young participation coincident with changes to HE tuition fees and student support arrangements.

Figure 11 Cohort-to-cohort proportional changes in population, entrants and young participation
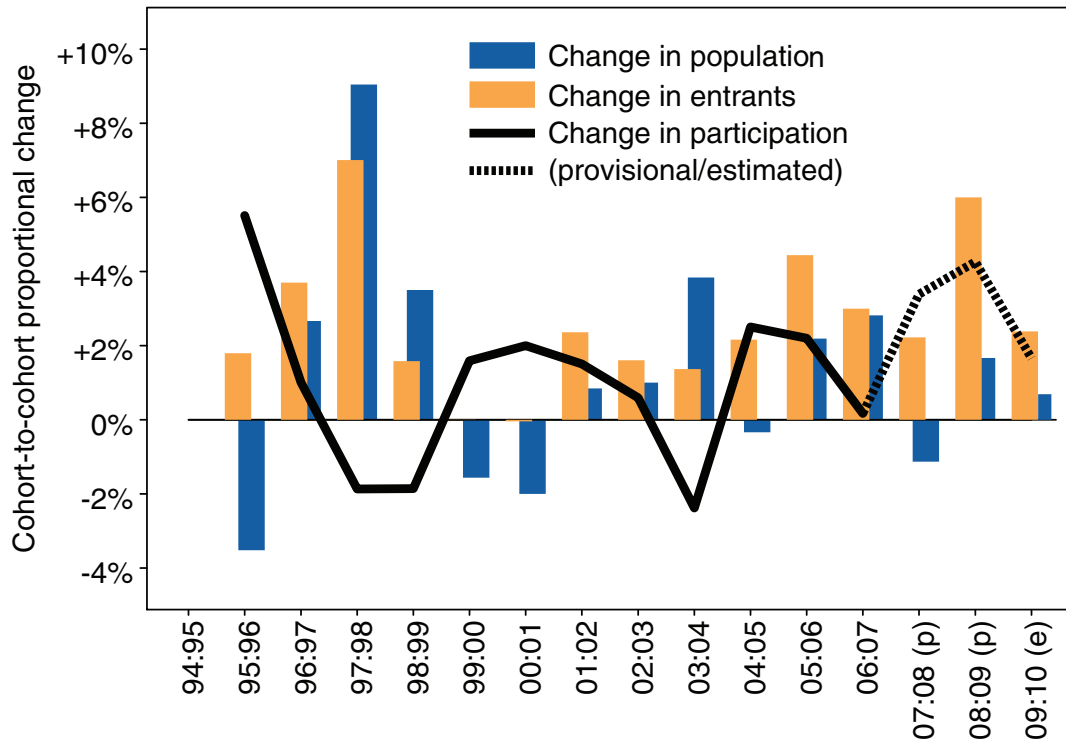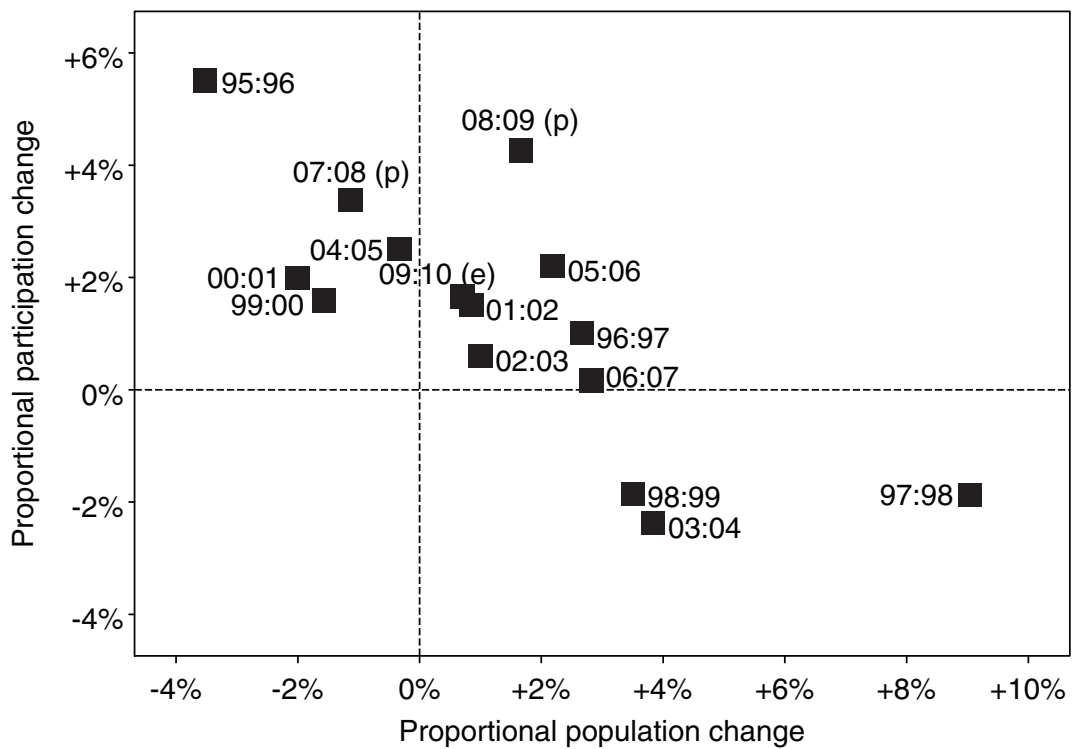

Figure 12 Cohort-to-cohort proportional changes in population and young participation

Trends in young participation for area-based groups differentiated by advantage

46. Young people from different backgrounds have different young participation rates. Assessing trends in young participation between these groups is difficult because often the likely changes through time are smaller than the uncertainty in defining and measuring the group participation rates. One way of assessing trends in young participation for young people from different backgrounds is to group them by the neighbourhoods in which they live. This approach offers a number of analytical advantages including near-complete (99 per cent or better) coverage of the required postcode data on annual administrative data sets that cover both young entrants to HE and the cohorts from which they are drawn. This data availability, together with being able to use area-based groupings over long periods, allows the development of measurement methods that are sufficiently accurate to securely identify trends in young participation rates.

47. This section reports on trends in young participation of groups of young people differentiated by the degree of educational, occupational or economic advantage of their immediate neighbourhood. Small areas[10] are grouped into a five-level classification ('quintiles', each representing areas where about 20 per cent[11] of young people live) where the groups are differentiated by a particular aspect of advantage. Small areas are assigned to a category in the classification using a small area statistic that captures a dimension of advantage of interest to looking at differences in HE participation.

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[10] This report uses 2001 Census Area Statistics wards of which there are around 8,000 in England typically with 60 young people and 20 young entrants in each cohort. Greater participation rate differentials can be obtained by forming groups on smaller, more numerous geographies (for example, Super Output Areas) but their smaller populations make it more difficult to make some aspects of the time series consistent. The participation trends found using smaller geographies are broadly the same as for wards.

[11] The quintiles are defined with reference to a population relevant to the measure being used. For example, for the parental education grouping the defining population is 10 to 14 year-olds in 2001 so the quintiles are set to each hold 20 per cent of that population. The population shares of 15 year-olds can differ slightly from the defining population in the reference year so that the quintiles may not always contain exactly 20 per cent of young population for each cohort. This does not have a material effect on the analysis (see paragraphs 56 to 57).

48. Using different measures – such as the proportion of children with graduate parents, or the measured level of young HE participation – forms a series of classifications capturing different aspects of advantage. Reporting on these in turn avoids over-reliance on any one particular measure and – because the measures are defined through data from different points in time – helps, as a set, in minimising the effect on the interpretation of the trends from areas changing through time.

49. There are several ways to assess young participation trends. For clarity this analysis focuses on changes in the young participation rate for the most disadvantaged group. In particular the proportional change in the participation rate of young people from this group entering higher education, both over the whole study period (94:95 to 09:10 cohorts) and over the past five years (the 04:05 to 09:10 cohorts). Interventions to target low young participation often define disadvantage more broadly than just the most disadvantaged 20 per cent[12]. Accordingly, and to reflect the importance of the trends for young people from all types of areas, the participation rates for all five quintile categories of each classification are shown.

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[12] For example, the HEFCE widening access funding and the Aimhigher funding model relate to the most disadvantaged 40 per cent of the population.

Trends in young participation for areas grouped by participation rates (POLAR2 classification, adjusted)

50. Central to the policy issue of widening participation in HE is concern with the low proportions of people from certain backgrounds who enter higher education. This makes a measure of young participation itself particularly appropriate for forming the small area classification: doing so highlights areas where young people have the lowest participation rates without needing to impose assumptions for what is causing low participation in those areas. The POLAR2[13] classification developed by HEFCE is defined by grouping small areas across the UK by their young participation rates for the combined 00:01 to 04:05 cohorts.

51. The POLAR2 classification is used for widening participation funding allocations, activity targeting and institutional statistics and so there is particular interest in reporting participation trends by it. However, there is a difficulty in using this classification to report participation trends directly. Since the classification is defined by young participation rates from part of the study period (the 00:01 to 04:05 cohorts) the unadjusted participation trends will be slightly distorted (due to 'regression to the mean' effects on the boundary of the POLAR2 definition period[14]). Comparisons of participation trends between POLAR2 and other groupings, confirmed by data simulations, have given a series of adjustment factors[15] to materially remove this distortion. These factors are applied when trends by POLAR2 groupings are used in this analysis and are identified as 'POLAR2 classification, adjusted'.

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[13] The POLAR classification was first released in 2005, based on the 1997-1999 cohorts. In 2008 it was rebased to the 2000-2004 cohorts (POLAR2) and the method revised to be similar to that used in this report. For more information see www.hefce.ac.uk under Widening participation/POLAR and participation rates/POLAR2.

[14] For example, the group of wards with the lowest participation rates in the POLAR2 definition period will tend to include those wards that had, randomly, lower participation rates for those particular cohorts than they would usually have at other times. The random component of these lower rates does not persist outside of the definition period causing the participation rates for the group of wards to revert closer to the overall mean (upwards in this case).

[15] The participation rates for the POLAR2 quintiles 1 to 5 are, respectively, adjusted by +0.5, +0.3, 0, 0 and -0.9 percentage points for each of the 00:01 to 04:05 cohorts. The adjustments are applied as proportional weights to entrants so that the approximation can be extended to subgroup rates (for example, by sex).

Figure 13 **Trends in young participation for disadvantaged areas determined by HE participation rates (POLAR2 classification, adjusted)**
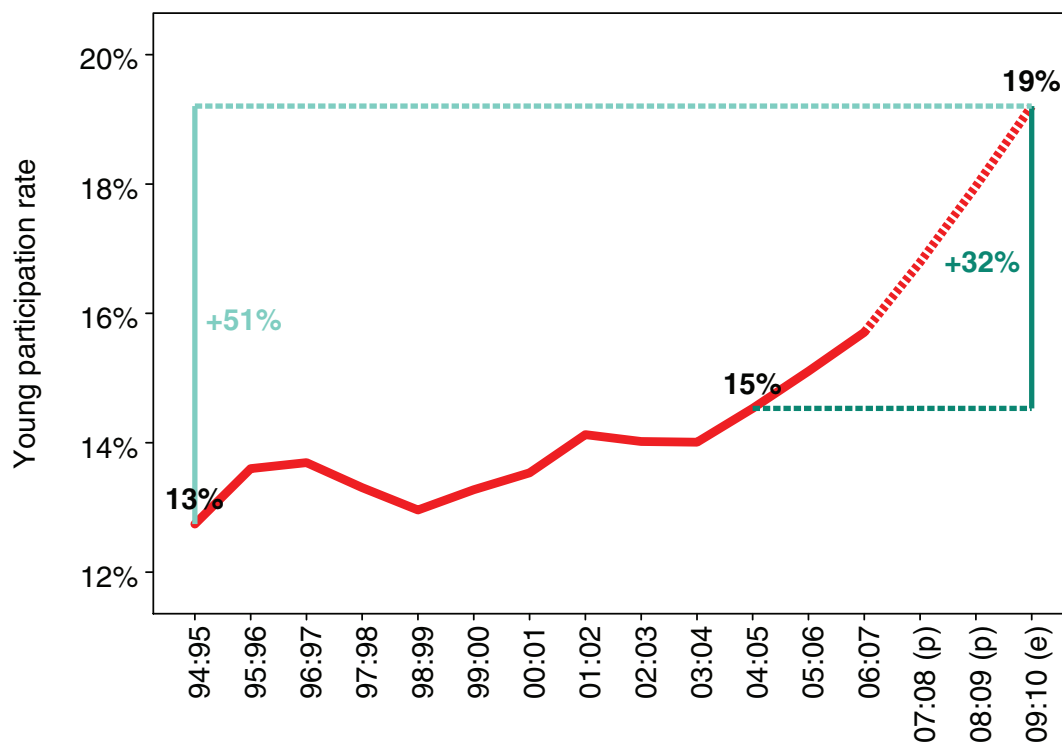
52. Figure 13 shows the young participation rate trend for the most disadvantaged quintile; that is, young people living in those wards that had the lowest young participation rates across the 00:01 to 04:05 cohorts. Around 13 per cent of the 94:95 cohort of young people living in these disadvantaged areas entered higher education. Over the next decade the participation rate increases relatively slowly and unevenly, leaving the participation rate two percentage points higher at 15 per cent for the 04:05 cohort. Subsequent cohorts show a stronger increasing participation trend; the participation rate increases by around one percentage point a year, taking it to (an estimated) 19 per cent for the 09:10 cohort. The proportion of young people living in these low-participation areas entering HE has increased by +32 per cent across the five cohorts 04:05 to 09:10 and by +51 per cent over the 94:95 to 09:10 cohorts.

53. The number of young entrants to higher education from these low-participation areas has nearly doubled from 14,000 for the 94:95 cohort to (an estimated) 27,000 for the 09:10 cohort. After allowing for changes in the cohort size, there are 9,000 additional entrants from the 09:10 cohort as a result of the increased young participation rate compared to the 94:95 cohort. The majority of these additional entrants (6,600) are attributable to participation increases across the last five cohorts.

54.   Figure 14 plots the trends in young participation for all five POLAR2 quintiles. There are large differences in the proportion of young people entering HE by where they live. Even after the recent increases, fewer than one in five young people from the most disadvantaged areas enter HE; young people in the most advantaged areas are three times more likely to enter HE with more than one in two doing so. In particular, the percentage point differences in participation rates across these area-based groups remain large compared to changes in the differences over time.

55.   Both advantaged and disadvantaged areas have seen increases in young participation rates but the more disadvantaged areas have seen both larger proportional rises and more pronounced concentration of these increases into the cohorts since the mid-2000s. Since the 04:05 cohort the most disadvantaged quintile has shown a larger participation rate increase compared to the most advantaged areas (Figure 15) whether measured in terms of proportional increases (+32 per cent against +4 per cent) or the absolute percentage point increase (4.7 percentage points against 2.4 percentage points). The pattern across the other quintiles is similar so that consequently most of the additional entrants in the 09:10 cohort – attributable to increases in participation rates since the 04:05 cohort – have been from the more disadvantaged areas[16].

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[16] The additional entrants from the 09:10 cohort compared to the participation rates of the 04:05 cohort are, by quintile, 1 (most disadvantaged): 6,600; 2: 6,100; 3: 5,200; 4: 4,300; and 5 (most advantaged): 3,000.

Figure 14 Trends in young participation for areas classified by HE participation rates (POLAR2 classification, adjusted)
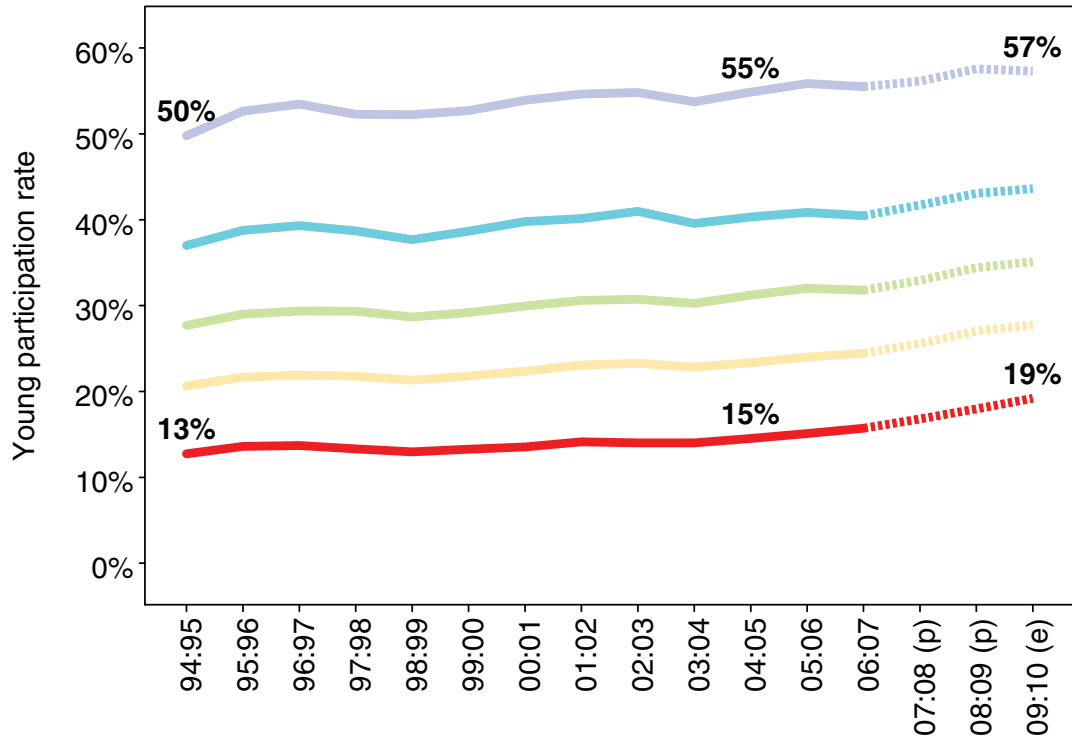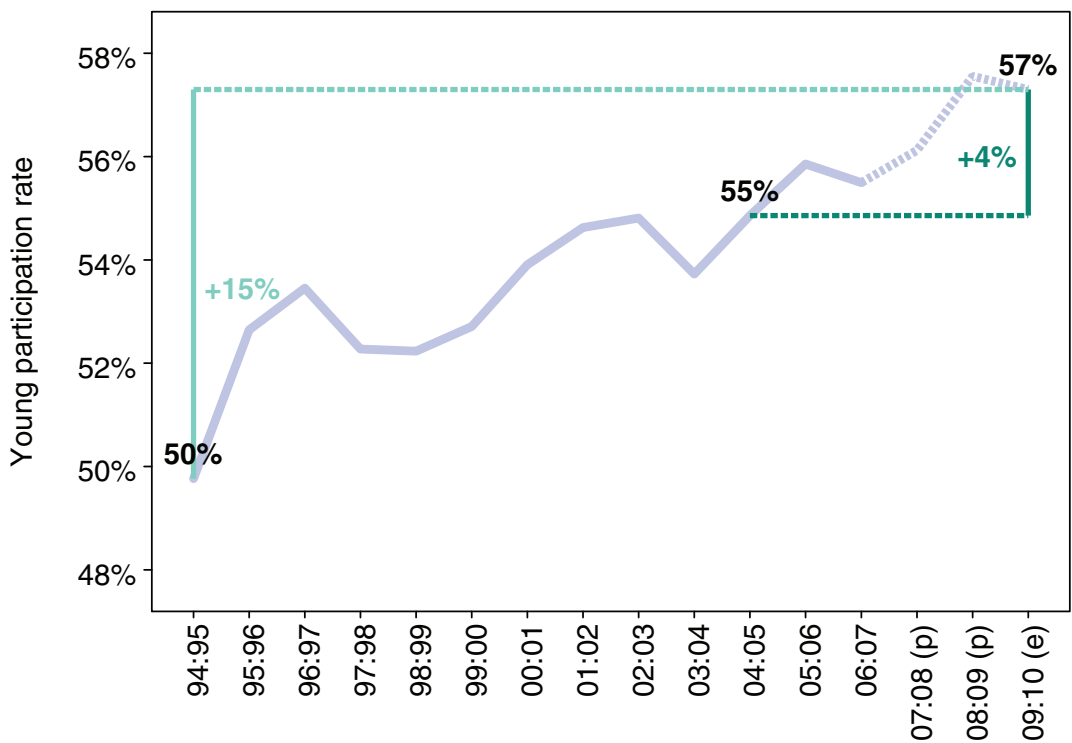

Figure 15 Trends in young participation for the most advantaged areas determined by HE participation rates (POLAR2 classification, adjusted)

Trends in young participation for areas grouped by participation rates (preceding five cohorts)

56. Most of the classifications used in this analysis are defined as a fixed set of areas, the same for each cohort. This stability is helpful in interpreting the results but does have a potential disadvantage: the reported trends could be reflecting shifting locations of disadvantage or population shares[17] as well as any changes in participation rates. An alternative approach is to reform the small area classification for each cohort; this way it can capture any changes in the location of disadvantaged areas and ensure that the quintile population shares remain constant at 20 per cent. Figure 16 and Figure 17 report trends for an area-based grouping defined in this way. The classification here is similar to the POLAR2 classification in that it is based on participation rates. But it differs in that it is reformed for each cohort with the categories being defined by the measured young participation over the preceding five cohorts[18] rather than the five fixed (00:01 to 04:05) cohorts used in POLAR2. As such it reports the participation rates of the most advantaged and least advantaged neighbourhoods at each point in time.

57. The participation rate for the most disadvantaged quintile (Figure 16) is 12 per cent for the 94:95 cohort, rising to 18 per cent for the 09:10 cohort. These rates are slightly lower than in the analogue POLAR2 analysis that uses a grouping of areas that is fixed through time and the participation rates for the most advantaged areas are slightly higher than in the POLAR2 analysis. This is as expected since this classification will be selecting the most disadvantaged or advantaged areas at each point[19]. The profile of participation rate increase for the most disadvantaged group matches that for the POLAR2 analysis: in particular young people living in the most disadvantaged areas show a relatively small, uneven, increase in participation for the first decade (from 12 per cent to 14 per cent) followed by a more consistent and rapid increase (to 18 per cent) across the final five cohorts. Young people from the 09:10 cohort living in the most disadvantaged quintile are +51 per cent more likely to enter HE than those from the 94:95 cohort and +31 per cent more likely than for the 04:05 cohort. That these trends are so similar to the other results indicates that the participation trends from fixed groupings such as POLAR2 are not a consequence of either the location of most disadvantaged wards or the population shares changing through time.

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[17] The quintiles of the fixed classifications are defined to represent 20 per cent of the appropriate population for a particular period (for instance, 10 to 14 year-olds in 2001 in the case of the parental education grouping). Differential demographic trends between areas can cause the proportion of the young population living in each fixed quintile to change slightly over the period. For example, the proportion of young people living in the most disadvantaged quintile in terms of the parental education was 19.6 per cent for the 94:95 cohort, rising to 20.6 per cent for the 03:04 cohort and then falling to 20.0 per cent for 09:10 cohort.

[18] Where it is not possible to have the full five preceding cohorts, the defining base includes the closest subsequent cohorts. Five cohorts are used here to be comparable with POLAR2. A single-cohort specification is more responsive to changes but has some disadvantages relating to the smaller population base: the trends are materially the same as reported here.

[19] For the 05:06 cohort, where the definition period is the same for both classifications, the measured participation rates are near-identical, reflecting only the different country scope of the classifications (POLAR2 is defined on UK populations).

Figure 16 Trends in young participation for disadvantaged areas determined by participation rates (preceding five cohorts)
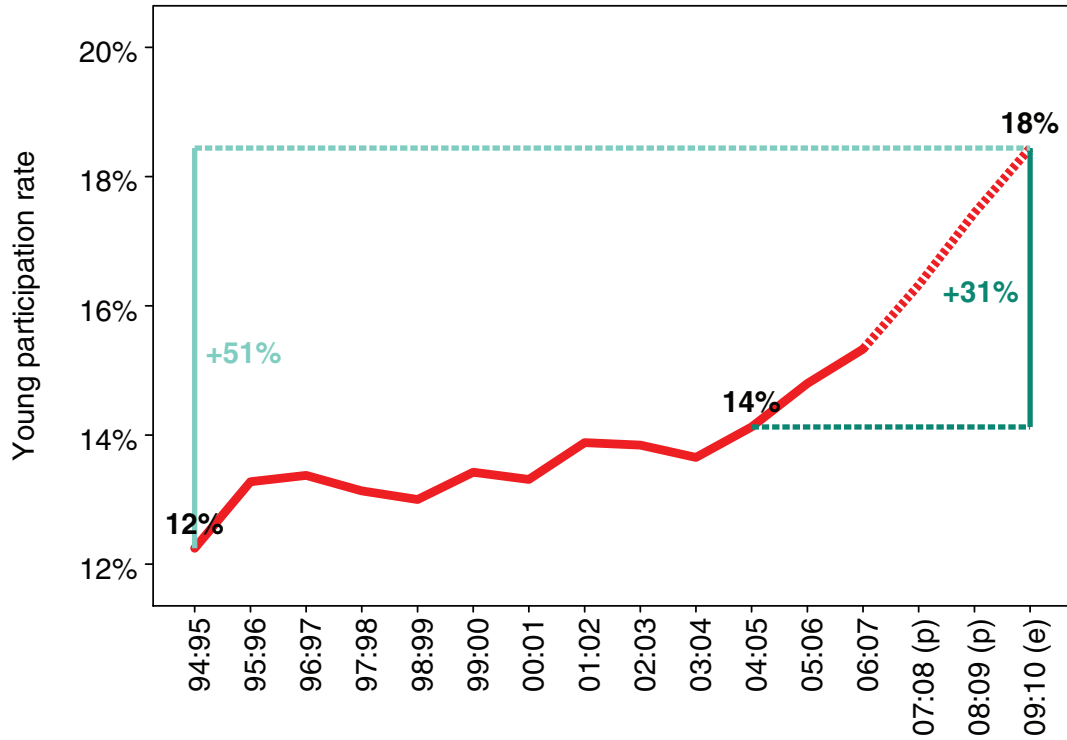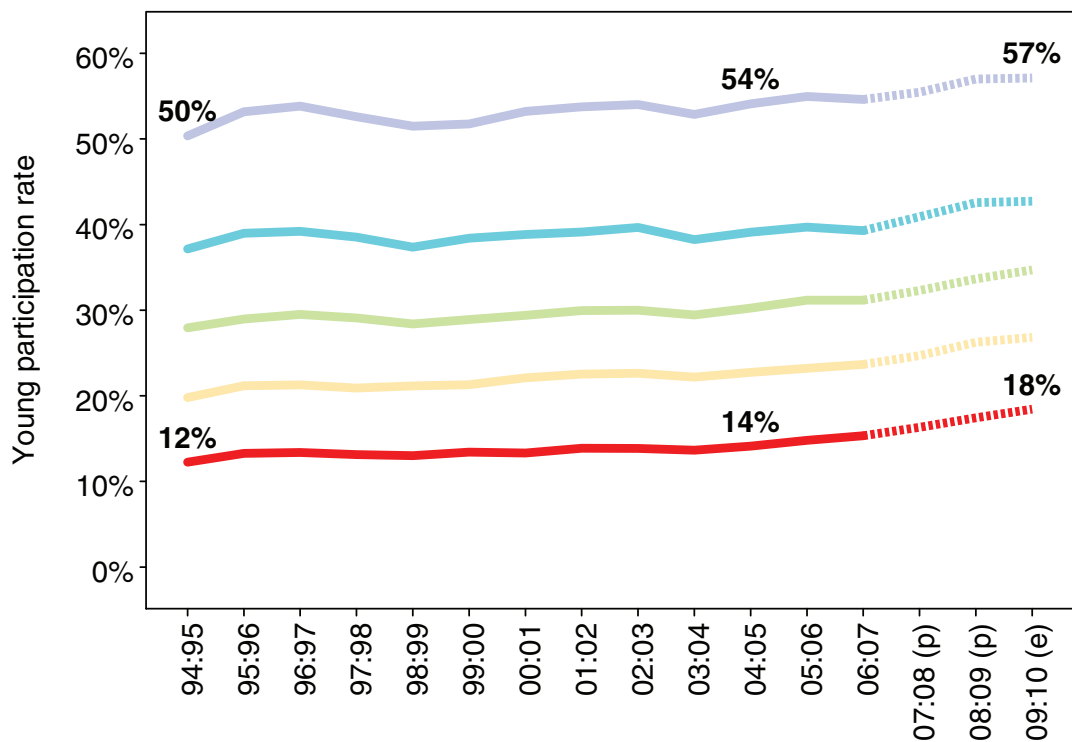

Figure 17 Trends in young participation for areas classified by participation rates (preceding five cohorts)

Trends in young participation for areas grouped by parental education

58. Measures of the qualification level of adults, especially whether or not they hold an HE qualification, are important predictors of young participation rates for areas[20]. This aspect of educational advantage is captured in this analysis through a commissioned 2001 Census table that allows areas to be classified according to the proportion of children living in families with at least one graduate parent[21]. In the most disadvantaged quintile in this classification, 10 per cent of 10 to 14 year-olds in 2001 had at least one HE-level qualified parent. In the most advantaged quintile 48 per cent of 10 to 14 year-olds had at least one HE-level qualified parent.

59. Figure 18 shows the young participation rate for the most disadvantaged quintile – those areas with the lowest proportion of children with graduate parents. Young participation rates in these areas are low, confirming the strong area-level association between young participation and parental education. Around 13 per cent of the 94:95 cohort from these lower-qualified areas entered higher education. That participation rate has increased over the period, reaching 16 per cent for the 04:05 cohort and then increasing more rapidly to (an estimated) 20 per cent for the 09:10 cohort. The proportion of young people from these lower-qualified areas entering HE has increased by +30 per cent over the past five cohorts (04:05 to 09:10), and by +53 per cent over the 94:95 to 09:10 cohorts. Both the size and profile of these increases are similar to those reported for areas with the lowest HE participation rates.

60. The pattern of large differences in the participation rates across all five quintiles from the classification of areas by graduate parents (Figure 19) is similar to that for the young participation area classification. The absolute increase in young participation across 94:95 to 09:10 cohorts has been around seven percentage points for each quintile, but the very different participation rates of the quintiles mean that the proportional increase has been much larger for the least advantaged group (+53 per cent) than the most advantaged (+14 per cent). Increases in young participation for the less advantaged groups have been particularly strong across the most recent cohorts: between 04:05 and 09:10 the less advantaged groups have had not just higher proportional increases but higher percentage point increases as well. This means that more of the additional entrants[22] to HE over this period have come from neighbourhoods where relatively few parents are graduates compared to neighbourhoods where relatively many parents are graduates.

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[20] Corver, M (2007) 'Patterns of young participation in higher education: A geographical analysis of England 1994-2000'. PhD thesis. Bristol: University of Bristol.

[21] 2001 Census commissioned table C0821. Ranking measure is the proportion of 10 to 14 year-olds in 2001 living in families with a parent holding a higher education qualification.

[22] The additional entrants from the 09:10 cohort compared to the participation rates of the 04:05 cohort are, by quintile, 1 (most disadvantaged): 6,200; 2:5,700; 3: 5,500; 4: 4,000; and 5 (most advantaged): 3,600.

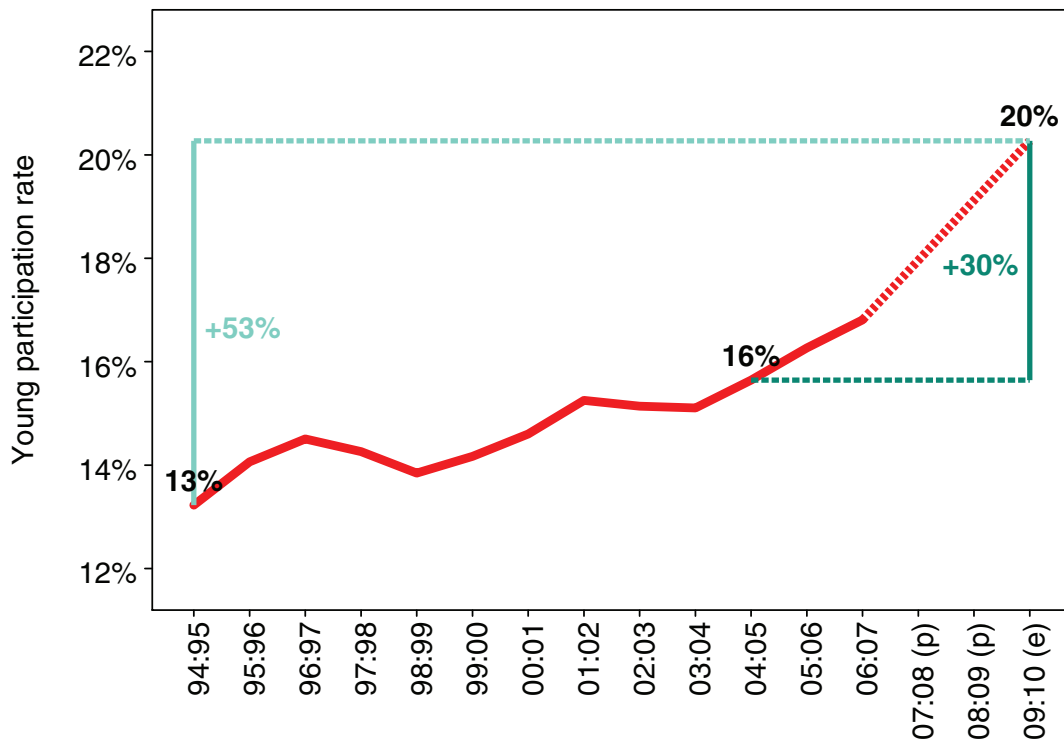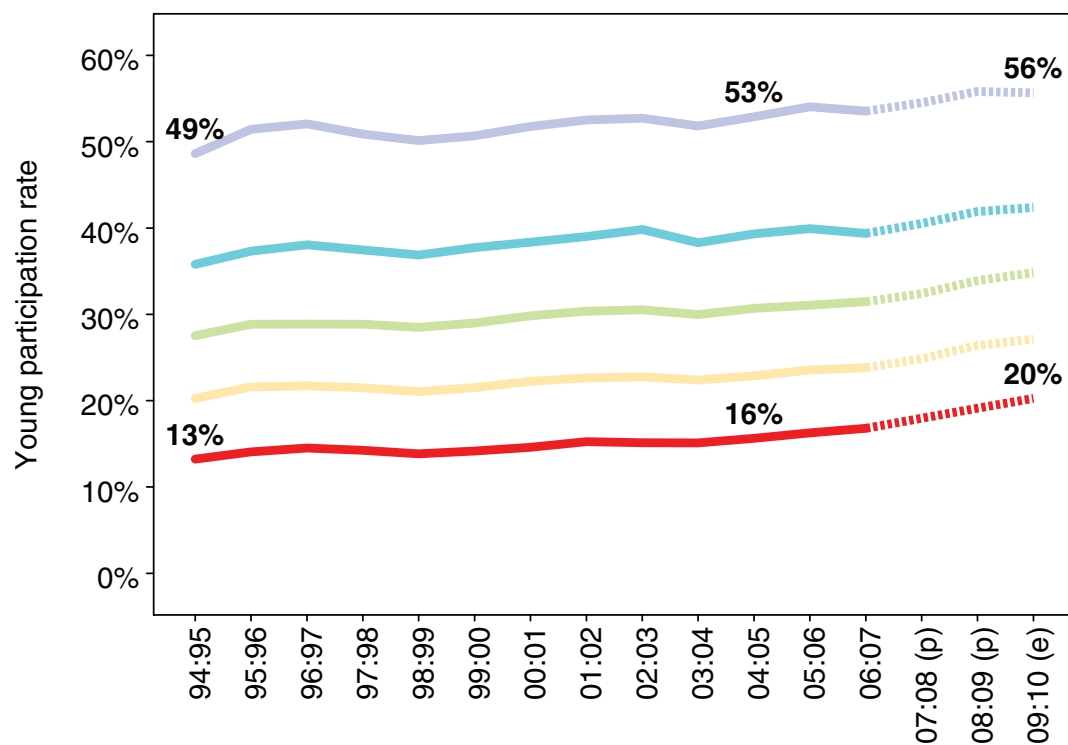Figure 18 **Trends in young participation for areas with the lowest proportions of children with graduate parents**

Figure 19 **Trends in young participation for areas grouped by the proportion of children with graduate parents**

Trends in young participation for areas grouped by parental occupations

61. Grouping young people by the occupation of their parents (often described as 'social class') is used in the reporting of HE statistics. An area analogue to this dimension of parental occupational advantage can be formed by ranking small areas by the proportion of children where the head of household was assigned to an occupational group in categories 1, 2 or 3 of the National Statistics Socio-Economic Classification (NS-SEC)[23].

62. In this analysis, higher proportions of children where the occupation of the head of household falls in these groups are taken to represent greater parental occupational advantage in the neighbourhood. In the most disadvantaged quintile 21 per cent of children have a head of household in these groups, in the most advantaged quintile this proportion is 67 per cent.

63. Figure 20 shows the young participation rate for disadvantaged areas – where children are least likely to be living in an NS-SEC 1-3 household. Figure 21 shows the participation trends of all quintiles in this classification. There are large differences between the participation rates of areas grouped by parental occupation, but not quite as large as those from ranking by parental education or by the young participation measures.

64. The participation rate of young people living in the least occupationally advantaged areas has increased from 14 per cent of the 94:95 cohort to (an estimated) 21 per cent for the 09:10 cohort. The rate of increase has been higher following the 04:05 cohort, the participation rate of young people from these areas increased by +24 per cent over those final five cohorts. Young people living in occupationally advantaged areas have also seen participation increases across the final five cohorts but – taking the most advantaged quintile – these have been lower in both proportional and percentage point terms than the least advantaged quintile.

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[23] Distribution of dependent children aged 0 to 15 in 2001 by NS-SEC of household reference person, from 2001 Census Area Statistics Theme Table CT001. The NS-SEC classification is outlined at www.ons.gov.uk under About statistics/Classifications/Current standard classifications. The NS-SEC categories are not readily aggregated; the grouping 1-3 contains most higher-salaried managerial and professional occupations and is commonly used in statistics about HE. It is adopted here to aid comparisons.

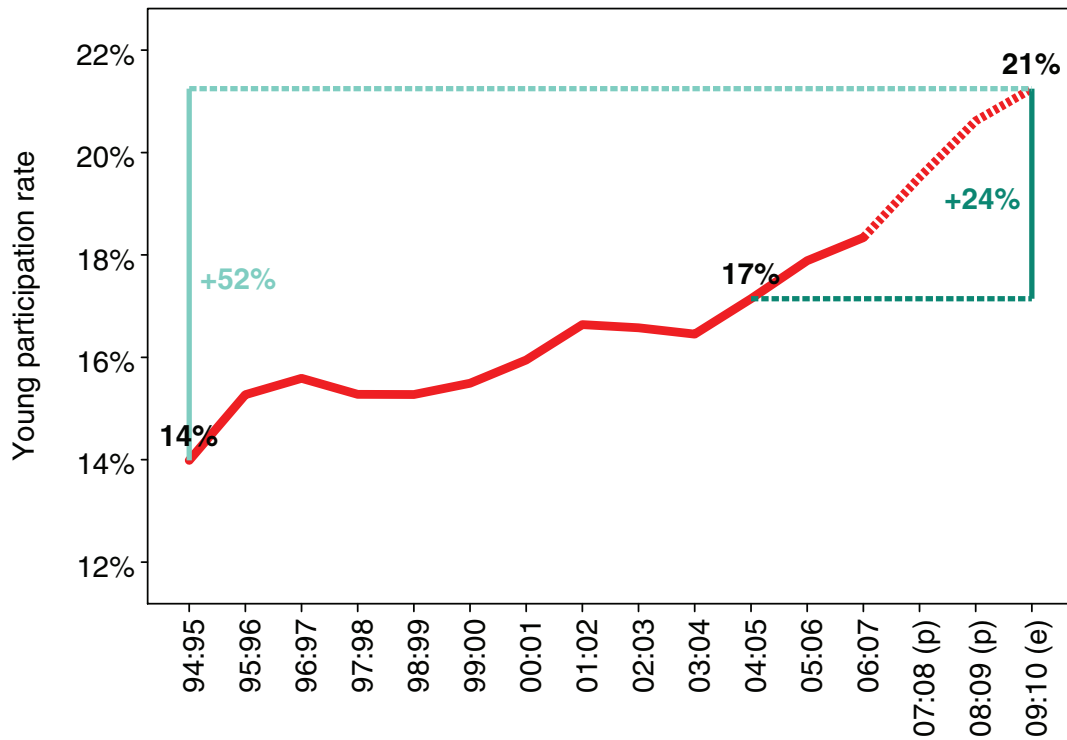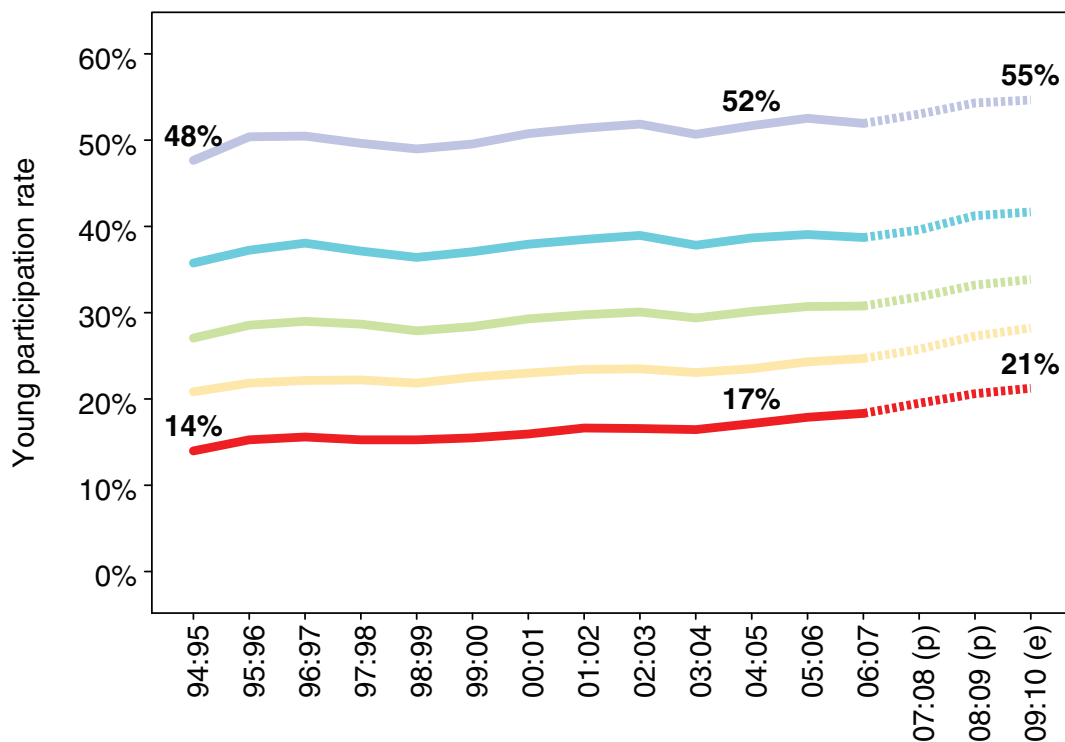**Figure 20 Trends in young participation for areas with low proportions of children in NS-SEC 1-3 households**

Figure 20 Trends in young participation for areas with low proportions of children in NS-SEC 1-3 households

Figure 21 Trends in young participation for areas grouped by the proportion of children in NS-SEC 1-3 households

Figure 21 Trends in young participation for areas grouped by the proportion of children in NS-SEC 1-3 households

Trends in young participation for areas grouped by household income

65. Some changes to HE since the mid-1990s, such as means-tested student support arrangements, will have been specific to young people from particular income backgrounds. It is therefore of interest to examine the trends in young participation of young people from families with differing levels of income. One way of investigating this through area analysis is to form a classification based on the proportion of children living in households in receipt of certain income-related benefits or tax credits (for simplicity referred to here as 'lower-income households')[24]. In this classification, the most disadvantaged quintile represents young people living in those areas with the largest proportion of children in lower-income households in the early 2000s. Around 45 per cent of children in the most disadvantaged quintile were living in households supported by the defined income-related benefits or tax credits at that time, compared to around 5 per cent of children in the most advantaged quintile.

66. The proportion of children in lower-income households has a weaker area-level association with young participation than is seen for other measures in this analysis. In particular, areas with similar proportions of children in lower-income households show a relatively wide range of young participation rates by, for example, region or distribution of children across ethnic group categories. Because of this heterogeneity, the trends for this income-based classification do not necessarily identify the situation for most and least disadvantaged in terms of entry to HE. Groupings formed on measures more closely associated with area young participation rates – such as young participation itself, or the proportion of graduate parents – serve that purpose better.

67. Figure 22 shows the trend in young participation for young people living in the most income-disadvantaged neighbourhoods. The proportion of young people from these areas entering HE was 15 per cent for the 94:95 cohort, increasing to reach (an estimated) 25 per cent for the 09:10 cohort. Compared to the other area classifications this trend differs by having a larger increase in young participation overall (10 percentage points, +71 per cent), and by showing substantial increases (from 15 per cent to 20 per cent) between the 94:95 and 04:05 cohorts. The trend in participation across the final five cohorts (20 per cent to 25 per cent, a +27 per cent increase) differs in being from a higher base, but is otherwise similar to those recorded for the other area classifications.

68.   The participation trends for all quintiles (Figure 23) show that although the income-based classification does show large differences in young participation rates across its categories, it is substantially less discriminating in this regard than the other measures. That the low income measure is not designed to effectively differentiate between advantaged areas is a factor, but this reduced discrimination is mostly a consequence of the higher participation rate for the most disadvantaged group. Young people from both income-advantaged and income-disadvantaged areas have shown increases in participation, but the increases for the disadvantaged groups have been larger in proportional and percentage point terms both over the entire period and the last five cohorts.

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24 Income Deprivation Affecting Children Index: see 'The English Indices of Deprivation 2004', available at www.communities.gov.uk under Publications. This measure is based on benefit data from 2001, near to the middle of the analysis period.

Figure 22 Trends in young participation for areas with high proportions of children in lower-income households
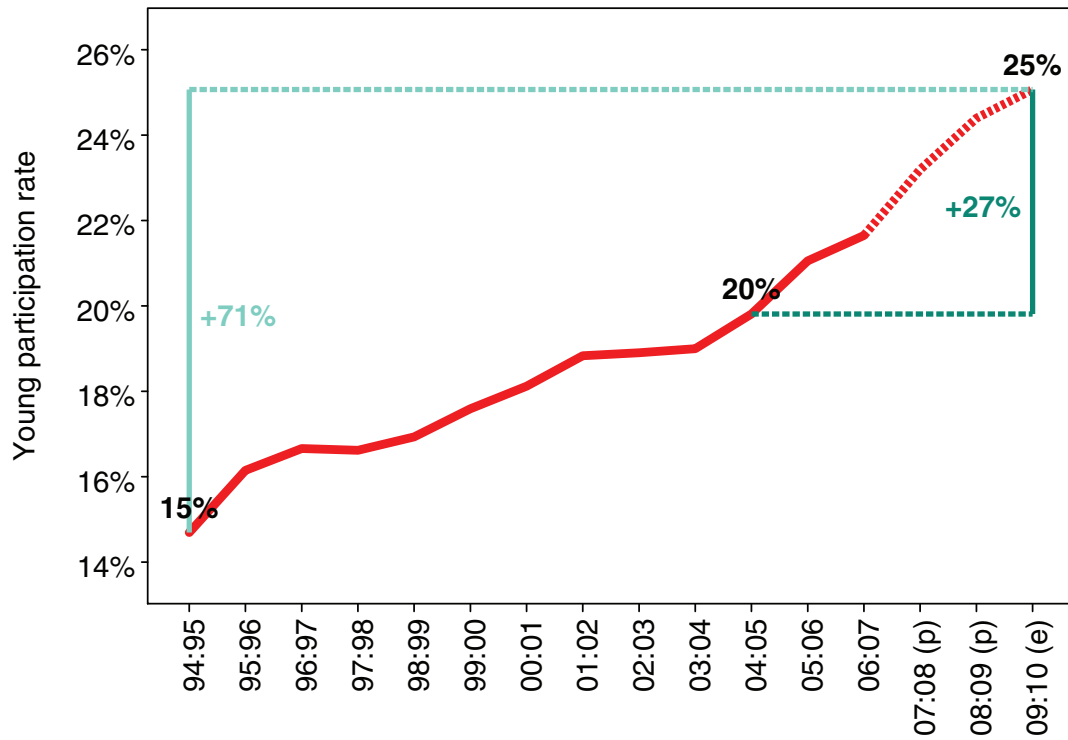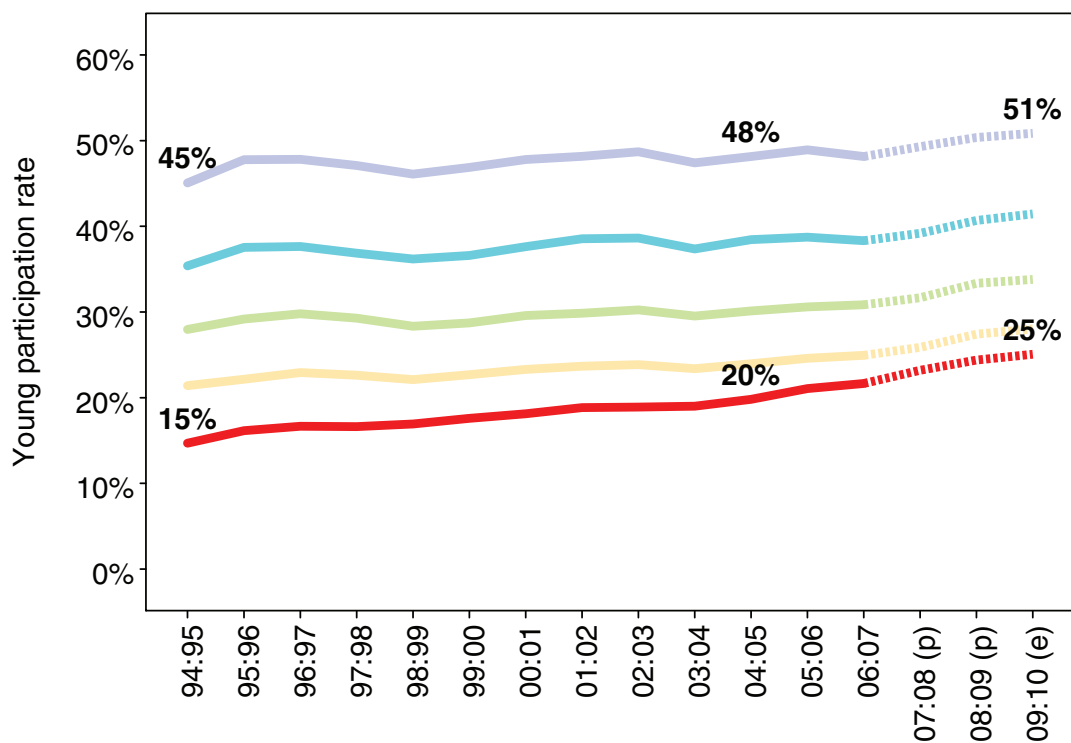

Figure 23 Trends in young participation for areas grouped by the proportion of children in lower-income households

Trends in young participation for disadvantaged areas: credibility comparisons against GCSE attainment and pupil funding levels

69.   The large differences in young participation between advantaged and disadvantaged areas are strongly associated with a set of wide differences in educational, social and economic advantage. These associated factors represent deeply rooted differences in advantage and, as such, might be expected to change slowly. Set in this context, the rapid and substantial increases in the participation rates of the most disadvantaged areas shown by this analysis are striking. The results described in this report have been considered against a series of robustness and credibility tests which give confidence that they are faithfully describing trends in young participation. This section describes two examples of the credibility tests that focus on whether the increase in the participation rate of the most disadvantaged areas across recent cohorts is plausible viewed against measures (GCSE attainment and school funding levels) that might reasonably be expected to be associated with increases in young participation.

70.   Figure 24 shows the participation rate of young people living in disadvantaged areas (low HE participation) together with trends in GCSE attainment for maintained school pupils from the same cohorts living in the same disadvantaged areas (from the National Pupil Database[25]). Rather than being shown directly, GCSE attainment is transformed to an expected[26] HE participation rate given the profile of GCSE attainment recorded for young people living in that type of area. GCSE attainment for young people living in disadvantaged areas has been increasing. This in turn leads the GCSE-based expected HE participation rate for young people living in these disadvantaged areas to increase from 14.5 per cent for the 04:05 cohort to 19.5 per cent for the 09:10 cohort, an increase of five percentage points (+35 per cent proportionately). Figure 24 shows that this GCSE-signalled change in expected young participation rates is a close match, both in terms of the participation rate level and trend, to the reported young participation results for these disadvantaged areas (14.5 per cent to 19.2 per cent, 4.7 percentage points, +32 per cent proportionally). The increase in the GCSE-based expected HE participation rates are smaller for more advantaged areas, both proportionally and in percentage point terms. This is consistent with the young participation results for more advantaged areas. However, using the GCSE-based model is a progressively less useful check for more advantaged areas since children at independent schools (who are concentrated in those advantaged areas) are not included in this model.

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[25] The National Pupil Database (NPD) records the characteristics and attainment of pupils in maintained-sector schools in England. The first year of GCSE attainment recorded in this way is for the school year 2001-02 (when the 04:05 cohort in this analysis would typically have sat their GCSE examinations).

[26] We estimate whether maintained-sector pupils on the NPD from the 08:09 cohort enter HE by linking these records with HE admissions data. A logistic regression is used to establish a relationship between HE entry and polynomials of GCSE point scores interacted with area types for this cohort. The parameter estimates from the fitted model are then applied to all the available cohorts in the NPD (with adjustments for the changes in the way of recording GCSE point scores in the earlier years) to get a predicted HE participation rate of maintained school pupils by area type and cohort.

Figure 24 **Young participation rates and predicted HE acceptance rates based on GCSE points, for young people living in low HE participation areas (POLAR2 classification, adjusted)**
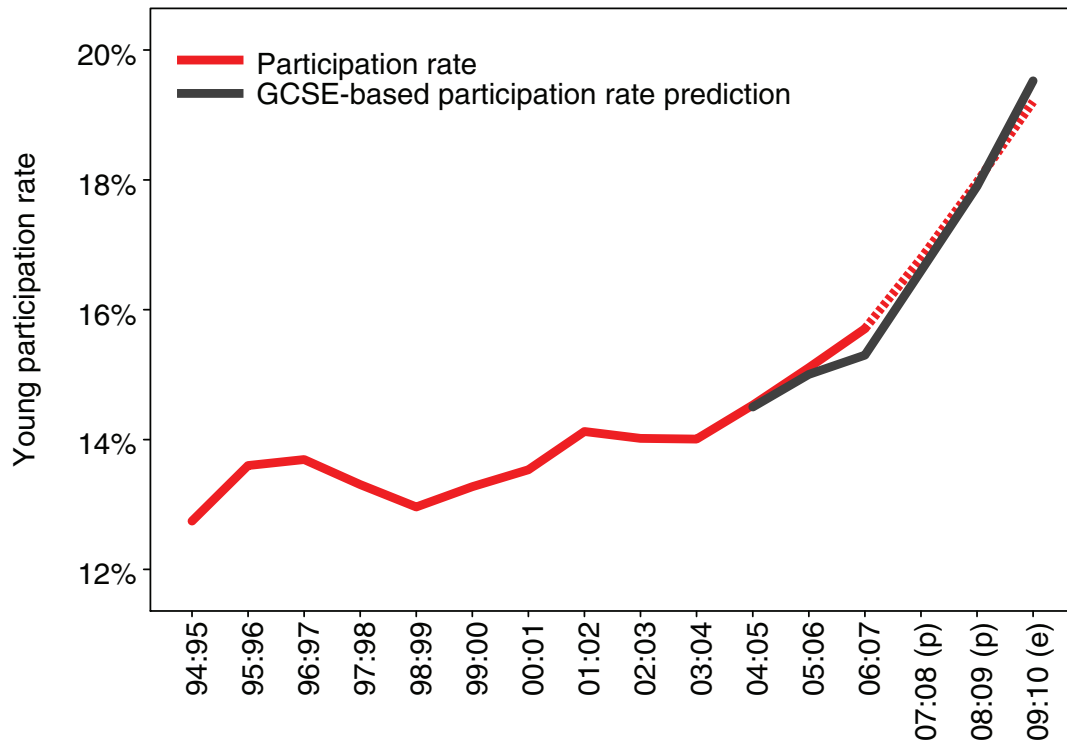
71. One potential difficulty with the GCSE-based analysis is that the way in which GCSE attainment is recorded has changed over time. Another measure that might reasonably be expected to be associated with increased attainment at schools (and subsequently HE participation rates), but is not susceptible to how GCSE attainment is measured, is per pupil level of spending on maintained secondary schools. One simple measure of this is the 'spending per pupil at maintained secondary schools' series[27]. Figure 25 is based on these statistics, reporting them as the average level of funding over the five years that each cohort was aged 11 to 15 years old, alongside the young participation rate of the most disadvantaged areas in terms of HE participation rates (POLAR2 classification, adjusted).

72. Figure 25 demonstrates that the change in the per pupil secondary school funding environment of each cohort approximates both the profile and relative size of the increase in the young participation rate of disadvantaged areas. This should not be over-interpreted: for example, there is no reason to suppose that HE participation rates would respond linearly to this particular funding statistic, nor for the national funding profile to closely match the trends of the most disadvantaged areas alone. However, this finding does support the GCSE-based comparison in demonstrating that the consistent pattern found in this analysis of substantial and sustained increases in young participation for young people living in disadvantaged areas across the 04:05 to 09:10 cohorts is credible in the light of trends in factors that might reasonably be expected to be associated with increased young participation for young people living in those areas.

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27 DCSF (2008) 'Spending per pupil in real terms (updated March 2008)' [TS/EXP(R)05].
Available at www.dcsf.gov.uk/rsgateway/DB/TIM/m002001/index.shtml

Figure 25 **Young participation rate trends for low HE participation areas (POLAR2 classification, adjusted) and average per pupil annual funding of maintained secondary schools, by cohort**
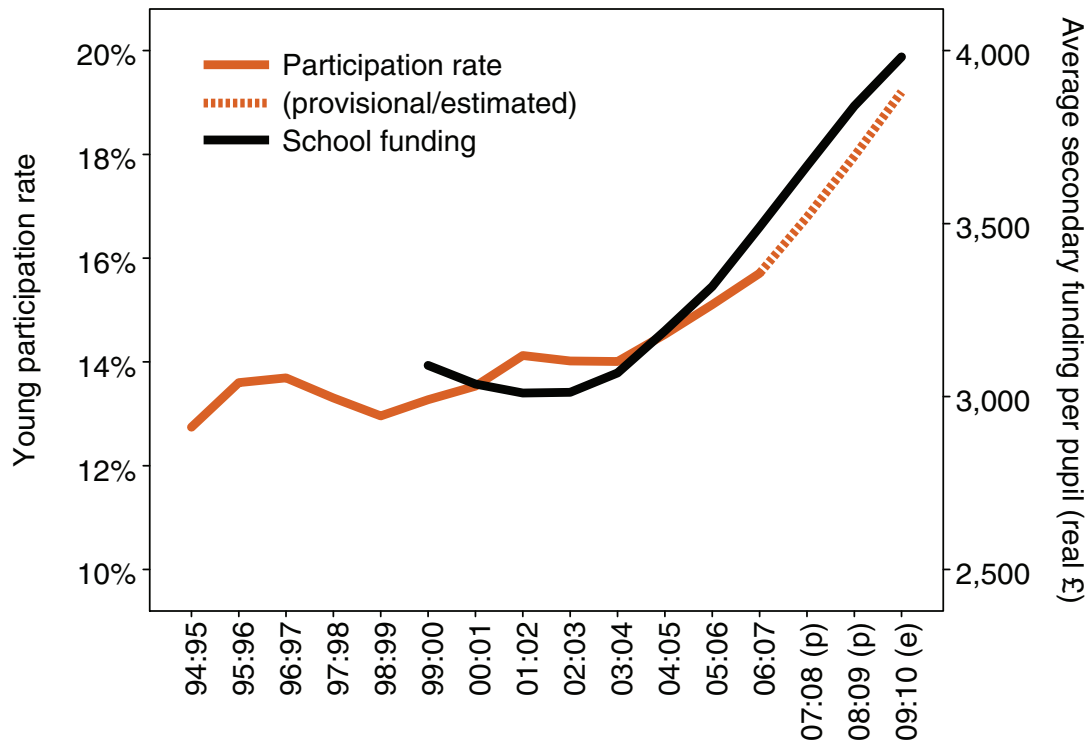
Trends in young participation for men and women

73. At the start of the 1990s, young men and women were equally likely to enter higher education[28]. At the time of the first cohort in this analysis – 94:95 – young men and women still had comparable participation rates (29 per cent and 30 per cent respectively, Figure 26). Over the next decade men and women show very different young participation trajectories. The participation rate of young women increases from 30 per cent to 35 per cent between the 94:95 and 04:05 cohorts, whereas young men end this period with the same participation rate – 29 per cent – that they had at the start. Compared to the participation rates of the 94:95 cohort, there were 15,000 additional female entrants (that is, after allowing for population changes) from the 04:05 cohort compared to fewer than 1,000 additional male entrants.

74. Across the more recent cohorts, young men have had a sustained material increase in their participation rate – matching that of young women – for the first time in the analysis period. Between the 04:05 and 09:10 cohorts the young participation rate of both men and women increased by +12 per cent proportionally, giving (estimated) participation rates for the 09:10 cohort of 32 per cent (men) and 40 per cent (women). The more comparable increases in participation by sex over these five cohorts means that the distribution of additional entrants from the 09:10 cohort (that is, resulting from participation changes since 04:05, after accounting for population changes) is more evenly distributed than before: 12,000 additional male and 14,000 additional female HE entrants.

75. The difference between the participation rate of young men and women remains high – the participation rate gap is over seven percentage points for the 09:10 cohort, and young men from this cohort have a participation rate that young women passed a decade earlier. There would need to be 25,000 additional male entrants for young men from the 09:10 cohort to have the same participation rate as young women. In total, across the 94:95 to 09:10 cohorts around 270,000 fewer young men entered higher education than would have been the case if they had the same young participation rate as women for each cohort.

76. Figure 27 shows the young participation rates of men and women living in the most disadvantaged areas (in terms of HE participation). As for England, young men and women start with comparable participation rates but then go on to show very different participation trends over the first decade: increases for young women, no change for young men. By the 04:05 cohort the participation rates in these areas are 12 per cent (men) and 17 per cent (women). Over the next five cohorts – to 09:10 – the participation rate of young men increases markedly for the first time in the analysis period. Although the absolute percentage point increase over these cohorts is greater for women (five percentage points to 22 per cent for the 09:10 cohort, compared to four percentage points to 16 per cent for men) the proportional increases are similar (+31 per cent for women, +34 per cent for men). The relatively rapid increases in young participation for both men and women in these disadvantaged areas leads to the participation rate of young men lagging behind that of young women by only five years, compared to twice that for England as a whole.

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28 Indicated by the Age Participation Index – see Figure 1 in Broecke, S and Hamed, J (2008) 'Gender Gaps in Higher Education Participation' (DIUS Research Report 08 14). London: Department for Innovation, Universities and Skills. Available at www.dius.gov.uk/research_and_analysis/~/media/publications/D/DIUS_RR_08_14

Figure 26 Young participation rate trends by sex
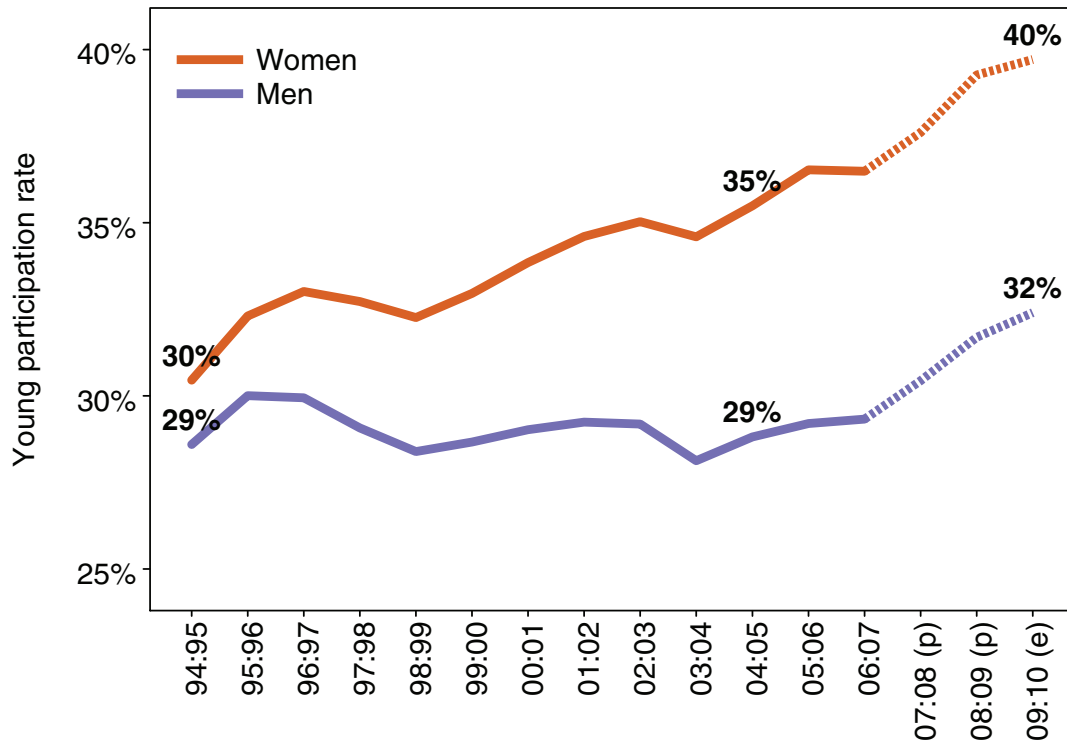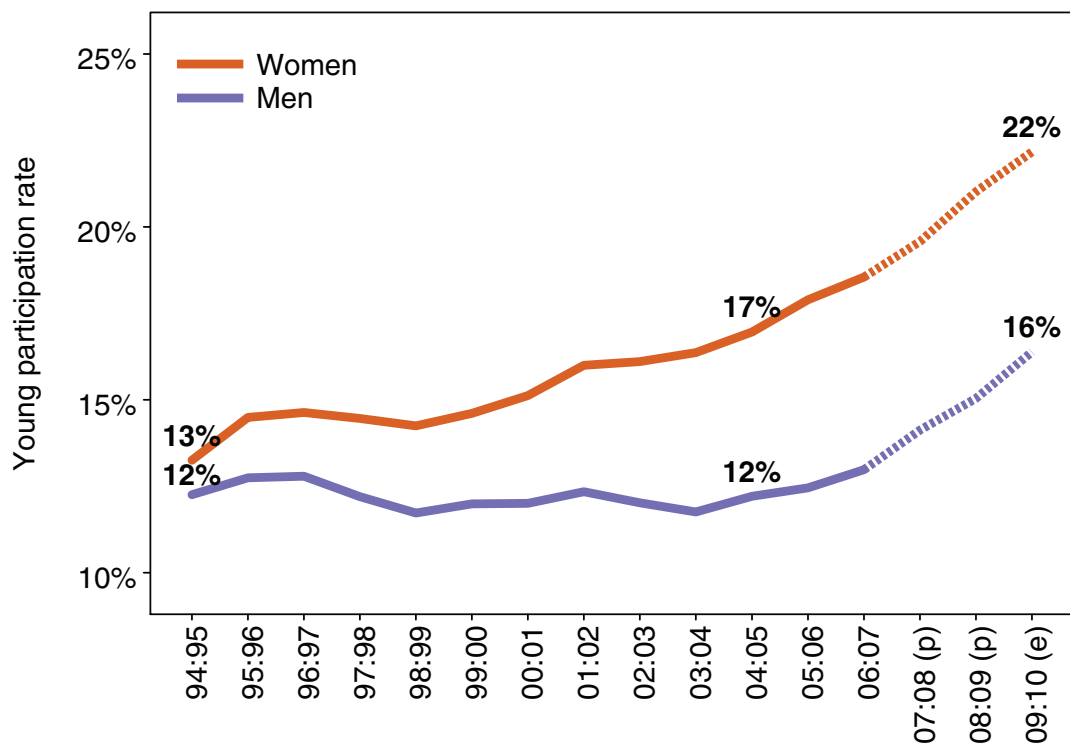

Figure 27 Young participation rate trends by sex for young people living in low HE participation areas (POLAR2 classification, adjusted)

77. One summary of the participation differences between young men and young women is a measure of how much higher the participation rate of women is when expressed relative to that of the participation rate of men[29]. Figure 28 shows that this measure of the relative participation advantage of young women increased steadily from +7 per cent for the 94:95 cohort to peak for the 05:06 cohort, where young women were +25 per cent more likely to enter higher education than young men. In disadvantaged areas the relative participation advantage of young women starts off as similar to that for England as a whole in 94:95 but then increases more rapidly to peak, again for the 05:06 cohort, at young women from these areas being +44 per cent more likely to enter HE than young men.

78. The increase in the participation rates of men in the most recent cohorts is sufficiently large to arrest this trend of increasing relative differences, with the measure staying below +25 per cent for England and falling slightly, to +35 per cent, for the most disadvantaged areas. This is a significant change of direction: prior to this the trend of the participation rate of young women increasing relative to that of young men has been intact since the early 1980s (when the participation of women was lower than that of men).

Figure 28 **Difference between the young participation rate for women and men (expressed relative to that for men) for England as a whole and for low-participation areas**

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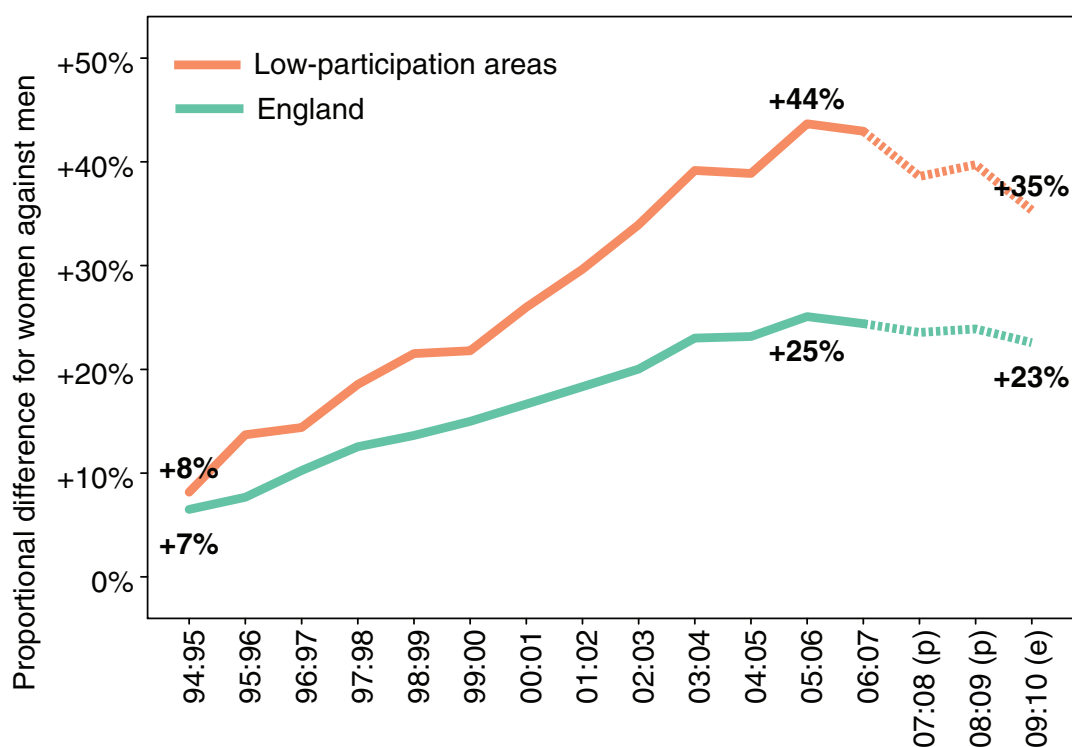
29 That is, the participation rate of young women minus the participation rate of young men expressed as a proportion of the participation rate for men. Equivalently, the proportional change in the participation rate of young men required for them to have the same participation rate as young women.