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Demand for full-time undergraduate higher education (2013 cycle, March deadline)

UCAS Analysis and Research, July 2013

Key findings

Analysis of over 20 million applications tracks patterns of demand for higher education 2004 to 2013

Applications by the March UCAS deadline give a near complete picture of the level and nature of demand for the full-time undergraduate higher education offered by UCAS' member institutions. Application rates, the proportion of the population who apply, are used to track demand as the population changes.

Demand from 18 year olds in England increases in 2013

Application rates for English 18 year olds have increased by one percentage point to 35 per cent in 2013. This increase is typical of the trend between 2006 and 2011 and takes the application rate back to the 2011 level, after its decrease in 2012. Application rates for 18 year olds in Northern Ireland have increased to 48 per cent, application rates in Scotland (32 per cent) and Wales (30 per cent) are similar to the 2012 cycle.

Cohort application rates - combining demand at ages 18 and 19 - and are unchanged for recent cohorts

Cohort application rates provide a broader measure of demand by recording the proportion of young people who apply at either age 18 or age 19. Nearly half of young people apply for higher education by age 19 in England (44 per cent) and over half in Northern Ireland (52 per cent). The cohort application rate in England increased annually from 36 per cent for the 2006 cohort to 44 per cent for the 2010 cohort. These annual increases stopped for cohorts covering entry in the period where higher and more variables fees were introduced. The demand at age 18 for the 2013 cohort has increased; the full picture of young demand for this cohort will be known next year when the 19 year olds apply.

Demand from some older age groups in England increases in 2013

In 2012 application rates fell by between 15 and 20 per cent for age groups in England aged 19 and over. In 2013, the application rates of those age groups with higher application rates (up to age 22) increased or were unchanged, and 'first-time' demand from 19 year olds increased by 16 per cent. For older age groups (where application rates are much lower) demand has fallen in 2013 by between 3 and 10 per cent proportionally. These older age groups experienced unusually large increases in application rates in 2009 and 2010, and their application rates in 2013 remain higher than those recorded before those increases.

Application rates from disadvantaged groups increase to new highs in England

The March deadline data confirms that 18 year old application rates of people from disadvantaged groups in England increased in 2013 to reach their highest recorded values. This is the case whether disadvantage is defined by area-based measures of higher education entry or by individual-level measures of low income. These increases in 2013 continue a pattern of substantial increases (over 70 per cent proportionally) over the past 10 cycles that is reducing the differences in application rates between advantaged and disadvantaged groups. In 2004 demand from 18 year olds in advantaged areas was 4.3 times greater than in disadvantaged areas. This has fallen to 2.7 times in 2013.

Differences in application rates by ethnic group

There is a wide variation in the application rates of pupils in state schools by their recorded ethnic group. In 2013, these ranged from over 50 per cent of the pupils in the Chinese ethnic group applying, to fewer than 30 per cent of pupils in the White ethnic group. The application rates of all ethnic groups has increased since 2006, and all groups show the same trend of a reduction in demand in 2012 and an increase in 2013. The greatest increase in application rates since 2006 is seen for pupils in the Black ethnic group, their application rate has increased from 20 per cent in 2006 to 34 per cent in 2013 (a 70 per cent proportional increase).

Changing regional patterns of young application rates

Within England there are differences in 18 year old application rates by region. In 2013, these range from 42 per cent (London) to 31 per cent (North East). The trends for each region since 2004 reflect that of England as a whole - all regions saw a reduction in demand in 2012 and an increase in 2013. Within this there is a changing geography of application rates as demand increases faster in some areas (northern England) than others (South East and South West). Some of these changes have reduced or reversed the relative application rate differences between regions over the period. In 2004, 18 year olds in the South West were proportionally 15 per cent more likely to apply to higher education than those living in Yorkshire and the Humber. In 2013 this has been reversed to those from Yorkshire and the Humber being proportionally 3 per cent more likely to apply than those living in the South West.

Different patterns of demand for different institutional groups

Institutions can be grouped into higher, medium and lower tariff groups according to the average attainment of their acceptances. Demand for all three groups of institution from UK 18 year olds has increased since 2004. This is especially marked in terms of demand for lower and medium tariff institutions which increased by over a quarter, concentrated in the period 2008 to 2011. In 2012 demand reduced by more for lower and medium tariff institutions (4 per cent proportionally) than higher tariff institutions (2 per cent). In 2013, demand from 18 year olds has increased for all types of institutions, with increases for higher tariff institutions (3 per cent) being greater than for medium tariff (2 per cent) or lower tariff (1 per cent) institutions. Application rates from 18 year olds to all institution groups are higher in 2013 than in 2010.

Differences in demand by background larger for higher tariff institutions, but reducing for all groups

Demand from 18 year olds in England by background varies for different groups of institutions. Differences by background are much larger for higher tariff institutions than they are for lower tariff institutions. In 2013 application rates of 18 year olds living in disadvantaged areas increased to all institution groups; including by 8 per cent (proportionally) to higher tariff institutions, the largest proportional increase in demand of 18 year olds from any background to those institutions. The differences in demand by background for each group of institutions have been reducing across the period. In 2004, 18 year olds in advantaged areas were 6.0 times more likely to apply to higher tariff institutions than those from disadvantaged areas. By 2013 this ratio has reduced to 4.3 times. For lower tariff institutions the ratio has reduced from 2.7 to 1.5 over the same period.

Share of applications to £9,000 courses increases from 59 to 73 per cent as tuition fees increase

In 2012 applicants from England experienced higher and more variable tuition fees regardless of where they applied to in the UK. In 2012, 59 per cent of the applications from this group were to courses listed at the maximum fee of £9,000. In 2013 this proportion has increased to 73 per cent. A quarter of 2013 applications are to courses where the tuition fee has been increased between 2012 and 2013 (across courses that can be directly compared between the two cycles). The average fee applied to by English applicants in 2013 is \pounds 8,604 - an increase of \pounds 77 compared to 2012. The difference in the average fee applied to by English 18 year olds from advantaged and disadvantaged groups has decreased between 2012 and 2013.

Structure of this report

Key findings (pages 1 - 2) summarise the main results.

Introduction (pages 4 - 5) covers the scope and definitions used in the analysis.

Young demand for higher education (pages 6 - 13) uses measures based on 18 and 19 year olds to look at patterns of demand between countries, between the ages of 18 and 19, broader cohort measures of demands and reapplication rates.

Demand from 18 year olds by background and region (pages 14 to 24) takes a closer look at the key 18 year old application rates and recent patterns in demand by area based (POLAR2), income based (free school meals) and ethnic group classification of background. The 18 year old geography of demand by region is mapped and trends in demand by study inside or outside of the applicant country is reported.

Demand from older age groups (pages 25 to 27) tracks patterns in the level of demand for age groups in each country of the UK.

Trends in the nature of demand for higher education (pages 28 to 35) extends the analysis to look at demand by both young and older groups for subject and higher, medium and lower tariff groups of institutions. For English 18 year olds demand by background by type of institution is analysed.

Changes in tuition fees between 2012 and 2013 (pages 36 to 40) uses both cycles under higher and more variable tuition fees to investigate changes in the pattern of applications to courses with different tuition fees. This covers the distribution of courses by tuition fee applied to in the two years, how the fees have changed for courses and changes in the average fee applied to by different types of applicants.

Image files of all the figures used in this report and the **data** used in their construction in a form suitable for further analysis are available on the data and analysis section of the UCAS website (www.ucas.com).

Introduction

Almost all applications to full-time undergraduate higher education in the UK are made through UCAS and their analysis can provide a comprehensive picture of both the level and the nature of demand for this type of higher education.

The UCAS report *UK Application rates by country, sex, age and background (2013 Cycle, January deadline)* (see www.ucas.com/data-analysis/key-analysis) published in January 2013 addressed the key questions about the level of demand based on applications submitted by the January deadline.

This report takes a more detailed look at trends in demand for higher education using applications submitted by the March UCAS deadline. This later deadline affords a near complete picture of demand for all age groups, subjects and type of institution over the past ten admissions cycles. In particular it eliminates problems in the time series caused by changes in the deadline for certain subject areas, and better captures the pattern of demand from the older age groups (who are more likely to apply after the January deadline than 18 year olds).

This is used to give a detailed analysis of overall demand by age, region and different measures of background and to look at the nature of that demand in terms of type of higher education applied for, including type of institution and intended subject of study.

The 2013 application cycle is the second cycle of applications since the introduction of higher and more variable tuition fees, and the greater differentiation between countries that brought. A detailed analysis of the effect of these changes on the level and nature of demand in the 2012 cycle was included in the UCAS report *How have applications for full-time undergraduate higher education in the UK changed in 2012?* (see http://www.ucas.com/data-analysis/key-analysis). This report continues the analysis of changes in demand by country and takes advantage of having two years of higher and more variable tuition fees to investigate how demand for, and provision of, courses at different fee levels has changed in the second year of the arrangements.

Measures used in this report

One way to measure demand for higher education is through application rates. These report the proportion of a group in the population that make an application. As such they directly measure demand in terms of the propensity to apply to higher education. The advantage of using application rates is that they show trends in this measure of demand without being affected by year-to-year changes in the population size. This is important as changes in the population size can have a substantial effect on applicant numbers, often as large as any change in application rate, and the demographic trends for different age groups can be in different directions.

Using March deadline data gives a near complete picture of demand for the courses of higher education offered by UCAS members. Demand for higher education courses at Scottish further education colleges (around a third of overall young demand in Scotland) is not recorded in these data. Demand for part-time higher education courses, or those at postgraduate level, is not covered in this analysis.

The population estimates are based on Office for National Statistics Mid-Year Estimates and National Population Projections controlled to UK countries. For 16 to 20 year olds, the estimates are obtained by aging 15 year olds from the appropriate number of years earlier. This approach avoids the estimates being susceptible to changes in net migration (including overseas students) during these ages. Older ages are obtained from the Mid-Year Estimates and National Population Projections without aging. In both cases the estimates are adjusted from age at mid-year to age on the country-specific reference dates using the monthly distribution of births.

The analysis of application rates by area-based background is supported through small area population estimates provided by HEFCE. Application rates by some characteristics (such as ethnic group) are supported by population estimates derived from the National Pupil Database (National Pupil Database, Department for Education).

The age of the applicants is defined using country-specific age definitions that align with the typical composition of school cohorts across the UK. For example, in the 2013 cycle, ages in England and Wales are defined on the 31 August 2013, for Northern Ireland on the 1 July 2013 and for Scotland on the 28 February 2014 (the following year). Defining ages in this way best matches the assignment of children to school cohorts. The group of applicants treated as 18 year olds in each country under these definitions will generally be applying to UCAS for the first time.

Young demand for higher education

Most applications to full-time higher education through UCAS are made by 18 and 19 year olds domiciled in the UK. This group represents around 60 per cent of all applicants at the March deadline. These applicants are usually either in their final year of school or college or are applying in the year immediately following finishing school or college and are treated as 'young' applicants.

Usually, 18 year olds are applying for higher education for the first time, whereas 19 year olds typically fit into one of two categories: applying for the first time, or reapplying after having already made an application aged 18. The 18 year old application rate is especially valuable as it is a measure of demand for a cohort where the potential demand has not been altered by application patterns at younger ages. For this reason it is the basis of most of the analysis in this report. The application rate at age 19 is the second highest age-specific application rate and a key part of overall young demand. But it is more difficult to interpret since it is influenced by the application and acceptance rate of 18 year olds in the previous cycle.

This section analyses demand at age 18, 'first time' demand at age 19, and constructs measures of cohort demand that can give a fuller picture of young demand for higher education. These cohort measures are not influenced by the changing pattern of applying at 18 or 19, or by changing proportions of 18 year old applicants being accepted.

Application rates of 18 year olds by country

The application rate of 18 year olds is much higher than for any other age group. Most 18 year olds will be applying for higher education for the first time and therefore are an important indicator of annual changes in demand for higher education. In recent cycles typically 98 per cent of total applicants in a cycle from this age group will have applied by the March deadline (compared to 97 per cent by the January deadline). The application rates of 18 year olds by country of the UK (Figure 1) are almost unchanged from the UCAS report *UK Application rates by country, sex, age and background (2013 cycle, January deadline)*.

In England, the 18 year old application rate in 2013 increases by 0.9 percentage points to 35.1 per cent. This increase is similar to the typical increases seen between 2006 and 2011, but the application rate remains 2 percentage points below where it would be if there had been a similarly typical increase of 1 percentage point in 2012 as well. The 2013 application rate is near the highest value recorded in recent cycles.

The application rate from Northern Ireland increases by 1.6 percentage points in 2013 to 48.3 per cent, the highest recorded in the period. In Scotland, application rates continue the recent trend of increasing slightly (0.3 percentage points per year) to 31.6 per cent, also the highest recorded in the period. Application rates in Wales decreased slightly (by 0.2 percentage points) to 29.9 per cent, but this is within the range of expected year to year variability given the relatively small population and is still near to the highest value recorded (30.1 per cent in 2012).



Figure 1 Application rates of 18 year olds by country

19 year old 'first-time' application rates by country

Some applicants aged 19 will have already applied - and been counted in the demand measures - at age 18. Their numbers will depend on not just demand for higher education, but also the extent to which that demand has already been accommodated through application and acceptances aged 18. 'First-time' application rates at age 19 only include those applicants who did not apply the previous cycle. Unlike the application rate for 19 year olds as a whole, they are not directly influenced by the acceptance rate of 18 year olds in the previous cycle. However, they may be sensitive to changes in the application rate at age 18, since if the application rate at age 18 increases substantially it may result in a smaller pool of potential applicants to apply for the first time at age 19. Figure 2 shows the 'first-time' 19 year old application rates. Generally, this application rate increased between 2007 and 2010 in all four countries, and then fell in 2011.

First-time 19 year old application rates are higher in England than elsewhere in the UK. The first-time application rate increased between 2007 and 2010 to almost 10 per cent. It then reduced by 0.6 percentage points in 2011 and a further 1.2 percentage points in 2012 to 8.0 per cent. In the 2013 cycle the rate has increased by 1.3 percentage points (16 per cent proportionally) to 9.3 per cent, around the same level as observed in 2011.

Northern Ireland and Wales show decreases in both 2011 and 2012 followed by increases in 2013 to reach levels at or near the highest recorded. In Scotland - where the measure will not include most demand for HE provided at further education colleges - the first-time 19 year old application rate has been increasing gradually over the period; apart from an elevated level of demand in 2010 which was reversed the following cycle.



Figure 2 First-time application rates of 19 year olds by country

Cohort demand for higher education covering 18 and 19 year olds

Applicant decisions about whether to apply at age 18 or age 19 can vary from year to year. Material changes in the balance of applying at age 18 versus age 19 can make it more difficult to interpret trends for single age groups as an indicator of demand from young people as a whole. One measure that is not influenced by the decision to apply at age 18 or age 19 is the cohort application rate. Each cohort includes all young people aged 18 within a particular academic year. The cohort application rate is the proportion of that cohort that applies for higher education either at age 18 or, a year later, at age 19. To calculate cohort rates an additional year is needed so that the cohort has had the opportunity to apply at age 19 as well as age 18. In this report we can look at cohort demand up to and including the cohort that were 18 in 2012 ('the 2012 cohort') and applied for the first time at age 18 in 2012 or aged 19 in 2013.

The proportion of the English young people that applied for higher education by the age of 19 has increased steadily from 36 per cent for those aged 18 in 2006 to 44 per cent for those aged 18 in 2010. There was no increase in the cohort rate for either the 2011 cohort (where 19 year applicants experienced higher and more variable fees) or the 2012 cohort (where both 18 and 19 year applicants experienced higher and more variable fees).

In Northern Ireland over half of the young cohort apply to higher education and this rate has been steady for the past three cohorts. In Wales and Scotland, cohort application rates are lower than elsewhere (the Scottish rate will not include applications to higher education in further education colleges in Scotland), have increased over the period, and increased by a small amount in 2013.



Figure 3 Cohort application rates by age 19 by country

In England, the cohort application rate has been steady since 2010, despite an on-trend increase in the 18 year old application rate in 2011, and a fall in the 18 year old application rate in 2012 (Figure 4). This is accounted for by the pattern of the 19 year old first-time application rate for these cohorts. One model that is consistent with this pattern is that the reduction in demand against trend seen for the 2012 cycle is being reflected in the cohort trend through, first, 19 year olds from the 2011 cohort, and then, second, both 18 and 19 year olds from the 2012 cohort.

The 18 year old application rate for the 2013 cohort increased by 1 percentage point in 2013. If the first-time application rate at 19 (in the 2014 cycle) for this cohort remains at the same level for the 2012 cohort, then the trend of increasing growth in this cohort rate would resume.



Figure 4 England 18 year old application rates and cohort application rates by age 19

English cohort application rates by sex

Around 44 per cent of the young English cohort applies to higher education by age 19. Figure 5 shows how this national rate is a mixture of different rates for men and women. For the cohort aged 18 in 2012, more (49 per cent) women than men (38 per cent) applied to higher education by age 19. For this cohort young women are 29 per cent more likely to apply than young men. This difference is slightly larger than in recent cycles, but within the range seen over the period.



Figure 5 Cohort application rates by age 19 by sex (England)

Nature of 18 year old applicant demand indicated by their reapplication rates

The first-time 19 year old application rates, and the cohort demand rates, necessarily exclude those 19 year old applicants who are reapplying. However, this group can be analysed to provide useful information about the nature of 18 year old demand.

Around 80 to 85 per cent of all 18 year old English applicants will be accepted for entry to higher education by the end of the application cycle (the acceptance rate). Therefore a minority, around 15 to 20 per cent will be unplaced at the end of the cycle when they apply at age 18. Some of these will reapply at age 19 - these are the applicants not included in the 'first-time' 19 year old application rate. A useful way to measure the demand from this particular group is to calculate the proportion of the 18 year old unplaced applicants who go on to apply again (aged 19) in the following cycle - this is the reapplication rate.

Figure 6 shows the acceptance rate for 18 year old applicants in each cycle (left axis) and the reapplication rate of those who are not accepted (right axis, shown against the cycle that they were unplaced). Both the acceptance rate and reapplication rate have varied considerably across this period. However, a combination of these measures (the proportion of 18 year old applicants who are either accepted or immediately reapply the next cycle) gives a statistic that is more constant. This measure describes the proportion of applicants who either translate their application into entry or, if not, have the persistence of demand to immediately seek to do so the next cycle.

This statistic can be interpreted as a measure of degree of persistence in demand for higher education amongst those who have already applied. The stability of this statistic, at around 90 per cent of applicants, over the measured period (despite large fluctuations in application, acceptance and reapplication rates) is suggestive that a steady proportion of those 18 year olds who apply will tend to persist in their applications to higher education. In particular, any increase in the 18 year old acceptance rate towards 90 per cent may lead to fewer 19 year old reapplicants the following year.



Figure 6 Acceptance rates, reapplication rates and implied persistent demand

Demand from 18 year olds by background and region

The application rate for 18 year olds is much larger than other age groups and - as it will typically be the first opportunity for most to apply - is clear to interpret. This section takes advantage of this to look at the pattern in demand from this group in more detail, particularly in England where the larger population size and availability of population data allows closer investigation of trends by background.

Trends by background in England: area-based measures of educational advantage

The POLAR classification developed by the Higher Education Funding Council for England (HEFCE) classifies small areas across the UK into five groups according to their level of young participation (entry into higher education at age 18 or 19) in higher education. Each of these groups represents around 20 per cent of young people and are ranked from quintile 1 (areas with the lowest young participation rates, considered as the most disadvantaged) to quintile 5 (highest young participation rates, considered most advantaged). As such it is a direct measure of advantage and disadvantage in terms of access to higher education.

Application rates are very closely related to young participation rates. This means that application rate trends by the POLAR groupings can be subject to distortions across the POLAR definition window boundaries (see paragraph 51 in HEFCE 2010/03, www.hefce.ac.uk), which complicates the interpretation of historical trends. To minimise the impact of this on the time period covered by this analysis we use the POLAR2 grouping (definition window for 18 year olds 2000-2004) rather than the POLAR3 grouping (definition window for 18 year olds 2000-2004).

Figure 7 shows the application rates for English 18 year olds by POLAR2, where quintile 5 (Q5) represents the most advantaged areas and quintile 1 (Q1) the most disadvantaged areas. Application rates for 18 year olds in England from all backgrounds have increased since 2004, with the largest increases for young people from the most disadvantaged backgrounds. The application rate of young people living in the most disadvantaged areas has increased by over 70 per cent (proportionally) between 2004 and 2013. This compares to an increase of 10 per cent proportionally in the most advantaged areas. These increases are slightly lower than those at the January deadline because more young people apply by the January deadline now than in 2004.

A progression from lower to higher application rates across the most disadvantaged to most advantaged areas is maintained throughout the period although the large increases in application rates from disadvantaged areas is reducing this. In 2013, 18 year olds living in the most advantaged areas are 2.7 times more likely to apply for higher education than those living in the most disadvantaged areas. This is substantially less of a differential than in 2004, when 18 year olds living in the most disadvantaged areas. This reduction is a result of the relatively larger growth in demand from disadvantaged areas over this period.

Figure 8 shows the same application rates against a logarithmic scale, so that the proportional changes are clearer, together with a linear extrapolation based on the application rate trend between the 2006 and 2011 cycles. This shows a return in 2013 to the trend of increasing application rates across the groups (greatest proportional increases in most disadvantaged areas, small increase in the most advantaged areas). But this is at a lower level of demand than would have been the case if the trend growth between 2006 and 2011 had not been interrupted in 2012.



Figure 7 Application rates for 18 year olds in England by POLAR2

Figure 8 Application rates for 18 year olds in England by POLAR2 (logarithmic scale) with extrapolation of 2006 to 2010 trend



Trends by background in England: by whether received free school meals in state schools

Administrative data records whether individuals attending school in England are receiving free school meals. As a means-tested benefit this can be used as an indicator of a low income background. Linking these data records (source: National Pupil Database, Department for Education) to the UCAS applications data allows the calculation of application rates by whether young people were in receipt of free school meals when they were aged 15.

Calculating these rates requires individual-level record linking between the two data sets - for this analysis a conservative linking method that requires a full match across a range of identifying details is used. This ensures that only true links are reported but necessarily makes the reported application rate lower than its actual value, since those applicants who cannot be unambiguously matched are not included. This introduces an amount of uncertainty into the trends compared with other methods used in this report.

Figure 9 shows the application rate of English 18 year olds split by whether they were in receipt of free school meals or not when aged 15. Pupils in independent schools are treated as not in receipt of free school meals for this measure. On these definitions around 13 per cent of the 18 year old population were in receipt of free school meals when aged 15.

The application rate for 18 year olds in 2013 who were previously in receipt of free school meals is 15 per cent compared with 33 per cent for those not in receipt of free school meals. Pupils who had not been receipt of free school meals were more than twice as likely to apply to higher education in 2013 than those who had been in receipt of free school meals.

In 2012, when the higher and more variable fees were introduced, the application rate of those not in receipt of free school meals fell by 1.5 percentage points (4.7 per cent proportionally). In comparison, the application rate of those in receipt of free school meals fell by 0.1 percentage points (0.8 per cent proportionally).

In 2013, the application rates increase for both groups by around 3.5 per cent proportionally (and the application rate for those in receipt of free school meals reached a new recorded high). This is an increase typical of the period for those not in receipt of free school meals but lower than the annual increases typical before 2012 for those in receipt of free school meals.



Figure 9 Application rates for 18 year olds in England by free school meal (FSM) status at age 15

Application rates by ethnic group (state school pupils in England)

Administrative records (source National Pupil Database, Department for Education) record an ethnic group for pupils in English state schools. This allows, through the same record linking method as used for the free school meal application rates, the application rate of pupils in each ethnic group to be estimated (this will be slightly lower than the actual value because only unambiguous links between the data sources are used).

There is a large range in the population size of the different groups. For instance, there are around 500,000 pupils recorded in the White ethnic group compared to around 2,000 pupils recorded in the Chinese ethnic group. The expected range of year to year variation in the application rate will be greater where there are fewer pupils in population. This analysis uses the major group level classification of ethnic groups; it is possible that more detailed ethnic groups would show different application rate levels and trends.

Figure 10 shows the application rates by ethnic group estimated using this method. In each year there are a number of pupils recorded as unclassified; these are excluded from the chart. The application rate of pupils from all ethnic groups increases over the period. All ethnic groups also show the national pattern of a decrease against trend in application rates in 2012 followed by a return to increases in 2013 at approximately the trend rate. There are differences in both the level and trend rate of growth between groups.

Across the period the Chinese ethnic group have consistently higher application rates, more than 50 per cent on this measure, compared with the other groups. The Asian ethnic group have an application rate of around 40 per cent on this measure in 2013. The Black, Mixed, White and Other ethnic groups have application rates in a relatively narrow range in 2013 between 29 per cent (White) and 34 per cent (Black). The largest increase in application rates across the period, and the largest increase in 2013, is observed for the Black ethnic group, for these pupils the application rate has increased from 20 per cent in 2006 to 34 per cent in 2013 (a 70 per cent proportional increase).



Figure 10 Application rates for English 18 year olds by ethnic group (state schools)

Application rates within and outside of country of domicile for 18 year olds

The introduction of higher and more variable fees in 2012 created a link between the domicile of applicants, the country of the institution that they applied to and the tuition fee for the course. For applicants domiciled in England there was an increase in tuition fee wherever they applied. In 2012 there was a decrease in English 18 year old application rates to both institutions within England and outside of England. In 2013, the trend of an increasing application rate to institutions within England that was observed prior to 2012 has resumed. The application rate of 18 year olds in England to institutions outside England is relatively low, typically around 6-7 per cent. In 2013 it increases by 0.7 percentage points (11 per cent proportionally) to 7.0 per cent. This is one of the larger increases over the period although the application rate remains below the levels seen in 2005 and 2006.

In Northern Ireland there was no above inflation increase in tuition fees for applicants that chose to study in Northern Ireland in 2012. The application rate to study within Northern Ireland for 18 year olds has continued to increase at a steady rate in 2011, 2012 and 2013. Northern Ireland applicants that chose to study outside Northern Ireland were liable for fees of up to £9,000 from 2012, and this application rate fell by around 4 percentage points (over 10 per cent proportionally) in 2012. In 2013, the application rate to institutions outside of Northern Ireland increased, as was typical for cycles before 2012.

Throughout the period applicants domiciled in Scotland were able to study at a Scottish institution and not be liable for a tuition fee. There was no change to this arrangement in 2012. Since 2010 there have been small increases of around 0.5 percentage points in the application rate to institutions within Scotland from applicants domiciled in Scotland. The application rate of 18 year olds in Scotland to institutions outside of Scotland has historically been very low at around 3.5 per cent. In 2012, the tuition fee for Scottish applicants planning to study outside Scotland increased from £3,375 to up to £9,000. This increase in maximum tuition fee coincided with a decrease in the application rate to 2.8 per cent. In 2013 this application rate has increased to 3.0 per cent.

Applicants domiciled in Wales effectively experience the same tuition fee wherever they are accepted for higher education, and there was no above inflation increase in the fee for these applicants in 2012. Since 2009, the application rate of Welsh 18 year olds to institutions within Wales has decreased almost every year. In 2013 this rate is similar to 2012 at 23.2 per cent. The application rate of Welsh 18 year olds to institutions outside Wales is relatively high and has been increasing each year since 2008. In 2013 this application rate is unchanged compared with 2012 at 24.4 per cent. Wales is the only country of the UK where 18 year olds are more likely to apply outside of their country than within it.



Figure 11 Application rates for 18 year olds to institutions in their country of domicile

Figure 12 Application rates for 18 year olds to institutions outside of their country of domicile



Application rates by English region

The 18 year old population of England (around 600k) far exceeds the populations of Scotland (around 60k), Northern Ireland (around 25k) and Wales (around 35k). This larger population size allows the subdivision of application rates for England by region.

Figure 13 shows the 18 year old application rate for applicants from the regions of England. In all regions the application rate has increased since 2004 and, in general, each region reflects the national trend of increases or decreases. For instance the application rate in all regions falls in 2012 and increases in 2013. The highest application rate in each year in the period is from London (42 per cent in 2013), and the lowest application rate each year is from the North East (31 per cent in 2013).

The greatest proportional increase in the application rate over the period is from the North West region (38 per cent proportional increase: from 26 per cent in 2004 to 35 per cent 2013) and the smallest proportional increase is from the South West region (14 per cent proportional increase: from 28 per cent in 2004 to 31 per cent in 2013).



Figure 13 Application rates for English 18 year olds by region

A large part of the year-to-year changes in each region's application rate are a reflection of the national trend and are the same for each region. Therefore, a clearer picture of how application rates by region are changing relative to each other is given by taking away the effect of the national trend. This is done in Figure 14 which uses the same application rates by region but shows them indexed to the national average so that an index of 100 represents the 18 year old application rate for the whole of England that year.

Since 2004, the application rate in the North West has increased from being over 5 per cent (proportionally) below the national average, to being higher than the national average in 2013. In contrast, over the same period the application rate from the South West has decreased from being about the same as the national average to being more than 10 per cent below it. The application rate from the South East region has seen a steady decrease relative to the national average, declining from a peak of 14 per cent above the national average in 2005 to 5 per cent above in 2013.

Some of these changes have reduced or reversed the relative application rate differences between regions over the period. In 2004 18 year olds in the South East were nearly 20 per cent more likely to apply to higher education than those living in the North West; in 2013 this difference has reduced to 4 per cent. In 2004, 18 year olds in the South West were 15 per cent proportionally more likely to apply to higher education than those living in Yorkshire and the Humber. In 2013 this has been reversed to 18 year olds from Yorkshire and the Humber. In 2013 this has been reversed to 18 year olds from Yorkshire and the Humber being 3 per cent (proportionally) more likely to apply than those in the South West.



Figure 14 Application rates for English 18 year olds by region (indexed to 100 = England)

The geographical patterns of English regional application rates, together with application rates for countries elsewhere in the UK (demand for HE in further education colleges in Scotland is not recorded), can be shown on maps. Figure 15 maps the 2013 application rates for 18 year olds. The maps used (see Thomas, B. and Dorling, D., 2007, *Identity in Britain: A cradle-to-grave atlas*, Bristol : Policy Press) are designed so that the size of each area approximates the size of its population and their arrangement approximates the geographical locations of the areas. Amongst these units of English regions and other UK countries, Northern Ireland (48%) and London (42%) have the highest application rates amongst their 18 year old populations in 2013. Wales, the North East, and South West regions have the lowest application rates (31%) in 2013.



Figure 15 Application rates in 2013 for UK 18 year olds by region and country

The geographical patterns of proportional changes in application rates between 2004 and 2013 are shown in Figure 16. There are two areas of high proportional increases, the northern half of England (North West, North East, and Yorkshire and the Humber) and London, where proportional increases range between 32 to 38 per cent. Scotland, Wales and the South West of England have seen the lowest proportional increases over this period (13-14 per cent).





Demand from older age groups

Application rates by age

Application rates for older age groups are more difficult to interpret because a substantial and varying proportion of the population will have already applied and been accepted to higher education at a younger age. It is also possible for the rate in any one particular year to be affected by changes in the decision to apply, and the proportion of applicants who are unplaced, from the previous year. These factors make it more difficult to interpret trends for these age groups than for 18 year olds.

Using applications data from the March deadline gives a fuller picture of application rates for older age groups than January deadline data since, unlike 18 year olds, a significant proportion of applicants apply between the January and March deadlines (typically an additional 5 to 20 per cent of total applicants, depending on the age group and country). The later deadline date also avoids some of the changes to the UCAS processes through time that particularly affect trends for older applicants. The integration of the applications to nursing courses during the time series can affect application rates for older age groups so applications to these courses has been improved this year, leading to some small changes to these rates compared with those published in 2012.

Figures 17 to 20 show the application rates of age groups from each country in turn. Application rates vary substantially across the age groups: for example in England 18 year olds have an application rate around 10 times greater than 20 year olds, a hundred times greater than 24-29 year olds and a thousand times greater than 40-60 year olds. To accommodate this range, and to allow the assessment of proportional changes, the rates are shown on a logarithmic, rather than linear, scale.

The application rates of those age groups in England with higher application rates (over 1 per cent, up to and including 22 years of age) increase or remain steady compared to the application rates in 2012, following a decrease from the unusually high levels recorded in 2010 and 2011. In the older age groups the application rates have continued to fall in 2013 by between 3 and 10 per cent proportionally. These decreases are smaller than those observed for these groups in 2012 (between 15 and 19 per cent proportionally). These older age groups experienced the largest increases in application rates in 2009 and 2010 and their application rates in 2013 remain above those recorded in 2008 and earlier.

In Northern Ireland, Scotland and Wales the pattern of application rates is more variable across age groups, and generally the application rates in 2013 are consistent with recent trends.



Figure 17 Application rates from England by age

Figure 18 Application rates from Northern Ireland by age



Application rate



Figure 19 Application rates from Scotland by age

Figure 20 Application rates from Wales by age



Trends in the nature of demand for higher education

This section takes a closer look at two aspects of the nature of higher education applied to; the group of institution determined by the average level of attainment of their accepted applicants, and the subject area of the course choices.

Institution tariff groups

Institutions can be described by the average levels of attainment (summarised through UCAS tariff points) of their accepted applicants. The institution tariff groups are three groups of UCAS member institutions, each of which represents approximately one third of UK 18 year old accepted applicants in recent cycles (for consistency we use the same classification as in the 2012 End of Cycle report).

Figure 21 shows the application rates of UK domiciled 18 year olds to each of the three institution tariff groups. Since 2004, the application rate to the higher tariff institutions has been relatively steady, increasing by 1.3 percentage points (7 per cent proportionally). In the same period the application rates to the medium and lower tariff institutions have increased by 5.1 percentage points (26 per cent proportionally) and 5.0 percentage points (32 per cent proportionally) respectively. This increase in medium and lower tariff institutions occurred steadily between 2008 and 2011. In each year since 2011 a greater proportion of UK 18 year olds have made at least one choice to a lower tariff institution than to a higher tariff institution.

In 2012, the application rates decreased to all types of institution with larger reductions for lower and medium tariff institutions (4 per cent proportionally) than higher tariff institutions (2 per cent proportionally). Compared to 2012, application rates to the higher tariff institutions have increased in 2013 by 0.6 percentage points (3 per cent proportionally) to 20 per cent; by 0.6 percentage points (2 per cent proportionally) to 25 per cent at medium tariff institutions; and 0.2 percentage points (1 per cent proportionally) to 20 per cent at lower tariff institutions. Application rates to higher tariff institutions are higher in 2013 than 2011. Application rates to all institutional groups are higher than in 2010.

Figure 22 shows the application rates for an older group of applicants (20-29 year olds) to each of the three institution tariff groups. Across this period, 20-29 year olds are more likely to apply to lower and medium tariff institutions than to higher tariff institutions. There was an above trend increase in application rates to all three tariff groups in 2010 that persisted in 2011. The decrease in application rates in 2012 reduced application rates to the (approximate) level that may have been expected if the trend seen between 2006 and 2009 had been maintained. In 2013, application rates to lower tariff institutions are materially unchanged from 2012 (a 0.4 per cent proportional increase). However, application rates to medium and higher tariff institution groups have increased by around 3.5 per cent proportionally between 2012 and 2013. Application rates to all institutional groups are higher than in 2009, but lower than 2010 and 2011.



Figure 21 Application rates for UK 18 year olds by institution tariff group

Figure 22 Application rates for UK 20-29 year olds by institution tariff group



Institution tariff groups by POLAR2 for 18 year olds

Figures 23 to 25 show the English 18 year old application rates to each of three institution tariff groups by area-based background (POLAR2). In all three institution tariff groups there is a progression from lower to higher application rates across the disadvantaged (quintile 1) to the advantaged (quintile 5) groups. The difference in application rates between backgrounds is greatest for the higher tariff institutions and lowest for the lower tariff institutions.

Higher tariff institutions

The difference in application rates between the most advantaged groups and the most disadvantaged groups is greatest for the higher tariff institutions (Figure 23). In 2004, the application rate to higher tariff institutions from the most advantaged areas was 36.5 per cent, 6.0 times greater than the application rate to higher tariff institutions from the most disadvantaged areas (6.1 per cent). Over the period, the application rate from the most advantaged areas has remained consistently at or around 36 per cent, whereas the application rate from the most disadvantaged areas has increased by 2.4 percentage points (39 per cent proportionally) to 8.4 per cent. In 2013, the application rate to higher tariff institutions from the most disadvantaged areas is 4.3 times the rate to higher tariff institutions from the most disadvantaged areas.

In 2012, the application rate to higher tariff institutions decreased in all areas apart from the most disadvantaged areas (where the rate remained unchanged). The greatest proportional decrease in 2012 was from the most advantaged areas (-2.8 per cent proportionally) and there was a progression in the size of change from the most advantaged areas to the most disadvantaged areas (no change). In 2013, application rates to higher tariff institutions increased in all areas with the greatest proportional increase in the most disadvantaged areas (8.1 per cent proportionally) and the smallest proportional increase in the most advantaged areas (1.0 per cent proportionally).



Figure 23 Application rates for English 18 year olds to higher tariff institutions by POLAR2

Medium tariff institutions

Application rates to medium tariff institutions (Figure 24) have generally increased across the period in all areas, but, as with the higher tariff institutions, there are greater increases in application rates from the most disadvantaged areas. In the most advantaged areas the application rate to medium tariff institutions has increased from 33.0 per cent in 2004 to 36.0 per cent in 2013 (3.0 percentage point increase, 9 per cent proportionally). For the most disadvantaged areas the application rate has increased from 7.9 per cent in 2004 to 13.8 per cent in 2013 (5.9 percentage point increase, 76 per cent proportionally).

Across all areas the application rate to medium tariff institutions decreased in 2012. There were smaller decreases from the most disadvantaged areas (decrease of 2 per cent proportionally) than the most advantaged areas (decrease of 6 per cent proportionally). In 2013, application rates increased again in all areas apart from the most advantaged areas where it fell by another 1 per cent proportionally. The application rate in the most disadvantaged areas increased by 7.3 per cent proportionally in 2013 compared with 2012.



Figure 24 Application rates for English 18 year olds to medium tariff institutions by POLAR2

Lower tariff institutions

For applications to lower tariff institutions (Figure 25) there is much less differentiation in application rates by background and the difference in application rates between backgrounds has reduced considerably over the period. In 2004, the application rate to lower tariff institutions from the most advantaged areas was 2.7 times the application rate from the most disadvantaged areas. By the end of the period in 2013 the application rate from the most advantaged areas.

A similar pattern in the change in application rates seen for medium tariff institutions between 2012 and 2013 is observed for application rates to lower tariff institutions. The largest proportional decrease in application rates in 2012 was from the most advantaged areas (-8.0 per cent proportionally) and the smallest in the most disadvantaged areas (-0.8 per cent proportionally). In 2013, the application rate to lower tariff institutions fell by another 1.6 per cent proportionally in the most advantaged areas, whereas in the most disadvantaged areas the application rate increased by 4.7 per cent proportionally.



Figure 25 Application rates for English 18 year olds to lower tariff institutions by POLAR2

Demand for subjects of study

The subject area of the courses chosen by applicants is another way of describing the type of higher education in terms of demand from applicants. One method of classifying subject is by using JACS subject groups. Over recent years the JACS classification has been refined a number of times, and this can make comparisons between years difficult. In this report we have chosen to use the JACS2 classification, which was used between 2007 and 2011, because this is the classification that we can map to choices in other years in the most secure way.

Figures 26 and 27 show (for 18 year olds and 20-29 year olds respectively) the 2013 application rates by intended subject of study. Only subject groups with more than 1,000 applicants are shown in these charts. Applicants with choices to more than one subject are represented in each of subject groups that they have chosen. "Biological Sciences" has the highest application rate in 2013 at 5.4 per cent, meaning that more than 1 in 20 18 year olds in the UK made at least one choice to study "Biological Sciences". The difference between the rates for each subject group is partly due to the varying demand from applicants for each subject and partly due to the varying availability of courses in each subject group. Some subject groups encompass many courses and other subject groups are more specialised and represent fewer courses.

For the older age group "Subjects allied to medicine" has a greater application rate than any other subject group. This is the group that includes 'Nursing', the most popular type of course within this subject group for 20-29 year olds. "Subjects allied to medicine" is also an important subject group for 18 year olds, but a greater proportion of them choose 'Biological Sciences", "Business & Admin studies" and "Creative Arts & Design".

Figures 28 and Figure 29, show (for 18 year olds and 20-29 year olds respectively) the proportional change in application rates between 2010 and 2013.

For 18 year olds there is a range of application rate increases and decreases over this period. For instance application rates to "Physical Sciences" and "Engineering" have increased by 9 per cent or more. In particular, the application rate to "Physical Sciences" has increased by 15 per cent proportionally to 2.8 per cent of 18 year olds. Other subjects have seen reduced application rates in this period, including certain language courses and architecture and building subjects.

For 20-29 year olds, 2010 was a year with an unusually large increase in the application rate that has since been reversed. Following this national pattern the application rates for this older age group have decreased for most subjects, but by different amounts. Some subject areas, including courses in technology and architecture and building subjects have application rates from this age group in 2013 that are around a third lower than in 2010.

Figure 26 UK 18 year olds 2013 application rates by intended subject of study



Figure 27 UK 20-29 year olds 2013 application rates by intended subject of study



Figure 28 Proportional changes in UK 18 year olds application rates by subject group (2010 to 2013)



Figure 29 Proportional changes in UK 20-29 year olds application rates by subject group (2010 to 2013)



Changes in tuition fees between 2012 and 2013

From 2012 the tuition fee and student support arrangements for UK domiciled applicants changed compared with previous years. In particular, the maximum tuition fee increased to £9,000 (from £3,375) and large differences in tuition fees were set up across combinations of country of domicile and country of institution varied. For applicants domiciled in England the maximum tuition fee became £9,000 wherever they studied in the UK. This is different from applicants domiciled elsewhere in the UK where the effective maximum tuition fee varies by country of study.

A detailed analysis of the effect of these changes on pattern of demand and course choice in 2012 cycle against the context of choices in previous cycles was included in the UCAS report *How have applications for full-time undergraduate higher education in the UK changed in 2012?* (see http://www.ucas.com/data-analysis/key-analysis).

The 2013 cycle is the second year of these arrangements. This makes it possible for the first time to compare the pattern of choices made between cycles against the actual tuition fee in effect in each of those years. This section looks at the distribution of demand across courses at different fee levels in both 2012 and 2013, changes to the fee charged for particular courses, and reports average tuition fee applied to in both cycles by selected applicant groups.

Information provided by institutions about tuition fees for UCAS course databases is combined with the choices of English domiciled applicants for the analysis in this section. Choosing to focus the analysis on this particular group of applicants is preferable for two reasons: English institutions, where most English applicants apply, do not have a fee structure differentiated by domicile, and for institutions outside England the fee for English students is listed in an unambiguous fashion. The tuition fees used in the analysis are the listed fees and do not take into account any fee waivers or other forms of financial support that may be offered to applicants, or adjust the figures for inflation.

Share of applications by tuition fee

Figures 30 and 31 show the share of applications made by English domiciled applicants in 2012 and in 2013 by the listed tuition fee of the course applied to. These show that most choices (59 per cent) were to courses at or around £9,000 in 2012, and that this share of applications has increased considerably in 2013 (73 per cent). This increase in the share of applications to courses advertised at or around £9,000 could be caused by either some courses that were listed at less than £9,000 in 2012 increased their fee to £9,000 in 2013, or from the nature of demand from applicants shifting towards the courses that were listed at £9,000 in both years.

The extent of the increase in the listed fee for courses can be investigated by looking at the same course in both 2012 and 2013. In 2013, for English domiciled applicants to English institutions (and only considering those cases where there is an unambiguous match to a course in 2012), 74 per cent of applicant choices are to courses advertised at the same tuition fee as 2012, 25 per cent are to courses where the tuition fee has increased from 2012 and 1 per cent to courses where the tuition fee has been reduced.

Figure 30 Distribution of 2012 English applications by tuition fee of course



Figure 31 Distribution of 2013 English applications by tuition fee of course



This is looked at in more detail in Figure 32 which shows the distribution of applicant choices made in 2013 by the listed tuition fee of the same course in both years. There is one circle for each group of courses ar a particular combination of the tuition fee in 2012 and the tuition fee in 2013, for example all courses that were advertised at £8,500 in 2012 and £9,000 in 2013 are shown by one circle. The size of the circle represents the number of applicant choices. The large circle represents the majority of choices, to courses advertised at £9,000 in both years. The diagonal line represents where the circle would be plotted if the courses it represents had the same tuition fee in 2013 as 2012. All the circles plotted above this line represent choices to courses that increased their fee between 2012 and 2013. Most courses not already at the maximum fee are in this category.

These results suggest that it is likely that the overall increased share of applications to courses at or around \pounds 9,000 is being driven to a large extent by the increase in the listed tuition fee for courses that were below the maximum in 2012, rather a large shift in demand towards high fee courses by applicants. This would be consistent with the conclusions of the analysis in the UCAS report *How have applications for full-time undergraduate higher education in the UK changed in 2012?* (see http://www.ucas.com/data-analysis/key-analysis) which found that the introduction of variable tuition fees was not associated with substantial changes in applicant course choices.

Figure 32 Applications in 2013 by 2012 and 2013 course tuition fee (from English applicants to English institutions, for matched courses)



Average tuition fee applied to by English applicants

Table 33 reports the average (mean) fee of the courses that English domiciled applicants in 2012 and 2013 applied to. These figures are reported for selected groups of applicants using measures of background appropriate to the age group.

The average tuition fee of courses applied to by English applicants varies across groups of applicants. For example, younger applicants and those from areas with higher entry rates to higher education apply to courses with higher average fees (around £250 to £350 higher) and make more choices to £9,000 courses than older applicants or those from disadvantaged backgrounds. The UCAS report *How have applications for full-time undergraduate higher education in the UK changed in 2012?* (see http://www.ucas.com/data-analysis/key-analysis) investigated the trends in these differences through time and found that they reflected an established pattern of choice making rather than being a response to the introduction of the variable fees in 2012.

In 2013, the average tuition fee applied to by 18 year old applicants is £8,705, for 19 year olds £8,587 and around £8,350 to £8,500 for older age groups. The average proportion of choices to £9,000 courses in 2013 is 70 per cent for 18 year olds, 62 per cent for 19 year olds and around 50 to 60 per cent for older age groups. These statistics are the averages across applicants, rather than for applications. These figures differ from those shown in the distribution of applications because applicants make different numbers of applications.

Young English applicants from areas with low participation rates in higher education typically apply to courses with an average tuition fee of around £8,600 (around 60 per cent of choices to £9,000 courses). Young English applicants from areas with high entry rates to higher education apply to courses with an average tuition fee of around £8,750 (around 75 per cent of choices to £9,000 courses).

English applicants from older age groups living in areas with low proportions of higher education qualified adults (used as an area-based measure of educational advantage and disadvantage for older populations) apply to courses with an average tuition fee of around £8,375 (around 50 per cent of choices to £9,000 courses). In areas with high proportions of higher education qualified adults the average fee for courses applied to by older applicants is around £8,500 (around 60 per cent to £9,000 courses).

Compared to 2012 the average tuition fee of courses applied to by English applicants has increased by £77, an increase of less than 1 per cent proportionally (less than the inflation measure between the two cycles). For 18 year old applicants the change in the average tuition fee is greatest for those living in areas with the lowest entry rates to higher education (POLAR2 Q1) and smallest for those living in the most advantaged areas (POLAR2 Q5), and there is a progression from Q1 to Q5. This has reduced the difference in the mean fee applied to between 18 year old English applicants from the most advantaged areas and most disadvantaged areas from £280 in 2012 to £230 in 2013.

Table 33 Average tuition fee applied to by English applicants in 2012 and 2013 split by selected applicant characteristics

		Applicant average (mean) tuition fee			Average applicant
		2013	2012	Change 2013 -2012	proportion at £9,000 (%) in 2013
All applicants (England domiciled)		8,604	8,527	77	64
Women		8,605	8,523	82	62
Men		8,603	8,534	69	65
Age group	17 and under	8,686	8,764	-78	80
	18	8,705	8,632	73	70
	19	8,587	8,484	103	62
	20	8,391	8,330	61	53
	21	8,407	8,357	50	55
	22	8,467	8,406	61	58
	23	8,481	8,414	67	59
	24	8,476	8,414	62	57
	25-29	8,467	8,397	70	56
	30-39	8,431	8,364	67	51
	40 and over	8,334	8,265	69	48
All (English 18 year olds)		8,705	8,632	73	70
POLAR2 quintiles (18 year olds)	Q1	8,573	8,467	106	59
	Q2	8,628	8,538	90	63
	Q3	8,672	8,592	80	67
	Q4	8,731	8,663	68	72
	Q5	8,803	8,747	56	78
All (English, aged 21 and over)		8,436	8,372	65	54
Areas grouped from low (Q1) to high (Q5) proportions of HE qualified adults (English, aged 21 and over)	Q1	8,355	8,282	73	47
	Q2	8,398	8,327	71	51
	Q3	8,419	8,370	49	54
	Q4	8,468	8,403	65	57
	Q5	8,527	8,460	67	62