

Demand for Higher Education to 2020

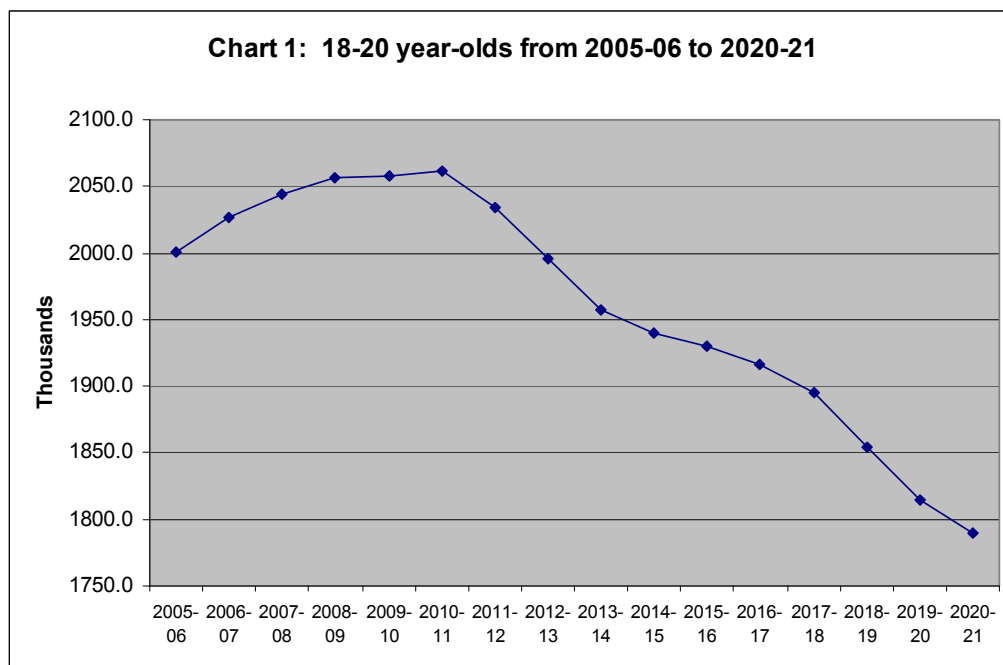
Bahram Bekhradnia

1. In 2005 HEPI published a report "Demand for Higher Education to 2015-16", using the same methodology that had been used in previous years to produce projections of demand to 2010, and extending this with a tentative look to 2015. That report concluded that the downturn in the number of 18-20 year-olds after 2010 would lead to sharp decline in student numbers, and that by 2015 there would be only slightly more students than in 2005-06.
2. This present report refines and extends the projection further, and looks in detail at the various factors that will influence demand for higher education over the next 15 years to 2020. In addition to demographic trends, a range of other factors are considered, and implications are drawn for higher education institutions, and also for government policy.
3. In essence, between now and 2010-11 the population of young school leavers, who have always in the past provided the great majority of full-time higher education entrants, will continue to increase, and although there is no sign of improvement in participation rates, this means a continuing period of growth in numbers. After peaking in 2010-11 the number of young people will decline substantially and rapidly until the end of the next decade. However, the decline in the young population will be concentrated in those social groups who participate least in higher education, so the effect on student demand will be much less severe than would otherwise be the case.
4. The main implication of the conclusions of this report for Universities is that they will have to manage an increase followed by a reduction, though far less serious a reduction than they might have feared. For government policy, one implication is that it confirms the conclusion arrived at last year that there is no prospect whatever of achieving the target of 50 per cent participation in higher education by 2010¹. And even though the change in the balance of the population between social groups will in due course lead to an increase in participation – perhaps to close to 50 per cent - there would have to be other improvements if that target were to be achieved during the next decade.

¹ Though the Government has recently used different language to describe its target, speaking now of 'working towards' 50 per cent participation by 2010.

Population projections

5. Demography – and in particular the number of young people in the population - is the single most important driver of the number of students in higher education, and the full report, on the HEPI web site, gives detailed demographic projections. Based on demography alone, and without allowing for any possible changes in participation, the number of students would peak in 2010-11, and then decline markedly to 2020. The overall change in the 18-20 age group is shown in Chart 1 below. It is this that drives the number of young students: and young school leavers with A levels remain by far the most important group of higher education entrants².



Source: ONS and Government Actuary's Department (2004 based projections, published in October 2005), adjusted by DfES for academic years.

Changes in participation

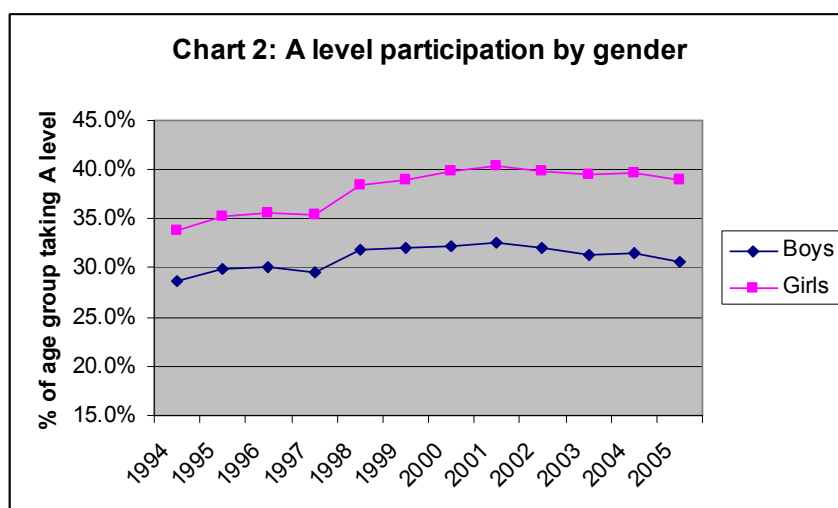
Changes in A level attainment

6. Apart from the population of young people, the proportion of these who take A levels is the major influence on numbers entering higher education. First, it is worth looking at the propensity of those with A levels to enter higher education: if those with A levels - or indeed any other qualification - become more inclined to enter higher education, then even if the overall numbers taking those exams do not increase, numbers entering higher education

² Around 70 per cent of full-time first degree students – calculation based on Tables B3 and B4 in Annex B of HEFCE publication Performance Indicators in Higher Education – HEFCE 2002

may nevertheless do so. This is not a figure that is routinely produced, but estimates produced by DfES³ conclude that at least 90 per cent of students with A levels progress to higher education, and that this proportion has not changed greatly⁴. 90 per cent plus is already a very high proportion, and there seems little scope for a boost to higher education numbers arising from an increase in the propensity to enter higher education among those with A Levels.

7. Chart 2 below shows the proportion of 18-year-olds with two or more A level qualifications since 1993-94, separately for girls and boys.



Source: Calculations based on data supplied by DfES (refers to proportions taking at least one A level)

8. It will be seen that although there was a sharp increase in the proportion taking A levels between 1997-98 and 2001-02, following the Qualifications for Success (QfS) reforms, this increase stalled in 2002-03, and there has been no increase since 2001-02. Earlier reports by HEPI suggested that if the increases seen immediately following the QfS reforms proved to be the beginning of a trend then this could lead to substantial increases in demand for higher education. However, it appears that there is no such trend. For four years the proportion of the population taking A levels has not increased.

9. In last year's report we drew attention to the disparity between girls and boys, both in their participation at A level and subsequently in entry to university. That disparity – which repeats disparities at earlier phases of education - has shown no sign of moderating in the most recent A level results, as is shown in Chart 2 above.

³ Source: DfES calculations based on the Youth Cohort Study cohort 8, sweeps 2 and 3.

⁴ The introduction of the QfS reforms from 1998 – which broadened the definition of A level, and increased the number of pupils taking that exam – might have been expected to depress the proportion going to higher education, but this does not appear to have occurred.

10. Nevertheless, the observation that was made last year has to be repeated: the fact that boys under-perform girls to the extent that they do provides some grounds for thinking that there is scope for an increase in higher education participation. If boys do begin to match girls at A level - and there seems no intrinsic reason why they should not do so in due course - then that will provide an increase that, if nothing else changes in the meantime, will add up to 73,000⁵ additional students by 2020.

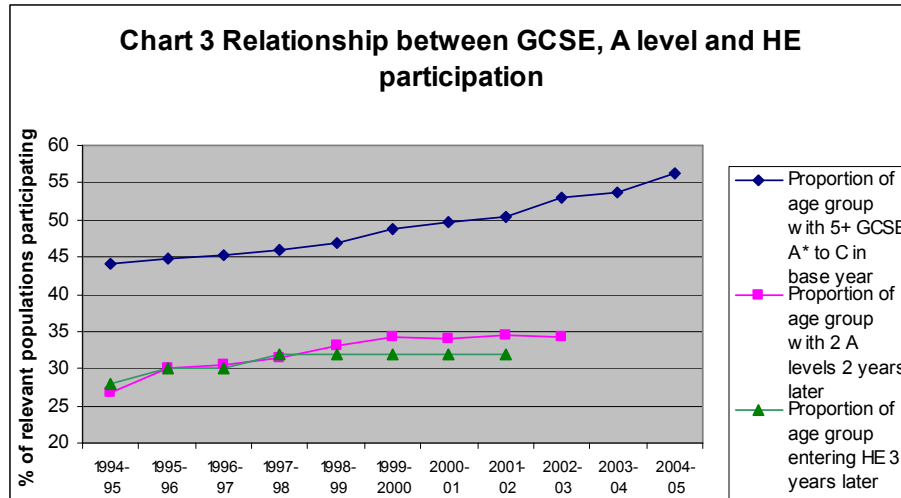
Lead indicators of increasing participation

Changes in GCSE attainment

11. In the same way as A levels are a lead indicator of participation in higher education, so GCSEs are a lead indicator of the number of students who might go on to take A level. Here, the story is a little more encouraging. The proportion of 15-year-olds achieving five or more GCSE grades A*-C has increased significantly over the past year from 53.7 per cent in 2003-04 to 56.3 per cent last year. This means that the proportion with GCSE grades A*-C has increased by over 10 percentage points in less than 10 years.

12. Encouraging though this is in itself, it is less so when considering the implications for participation at A level and then in higher education. As Chart 3 below shows, it is apparent that although there has been a significant increase in the proportion achieving five or more GCSE grades A*-C, this has not translated in the past into an equivalent increase at A level or in higher education participation two or three years later. Although improvements in GCSE attainment are a necessary condition for improvements at higher levels, they are not a sufficient condition, and recent increases in GCSE participation do not provide grounds for assuming that there will be such improvements.

⁵ The difference between 30 per cent and 38 per cent of the 17 year old cohort of boys in 2021 taking A levels, and assuming that 90 per cent of A level holders continue to go to higher education, with the average length of course assumed to be about 3.3 years.



Source: DfES Statistical First Releases 2 01/2006 and 02/2006⁶

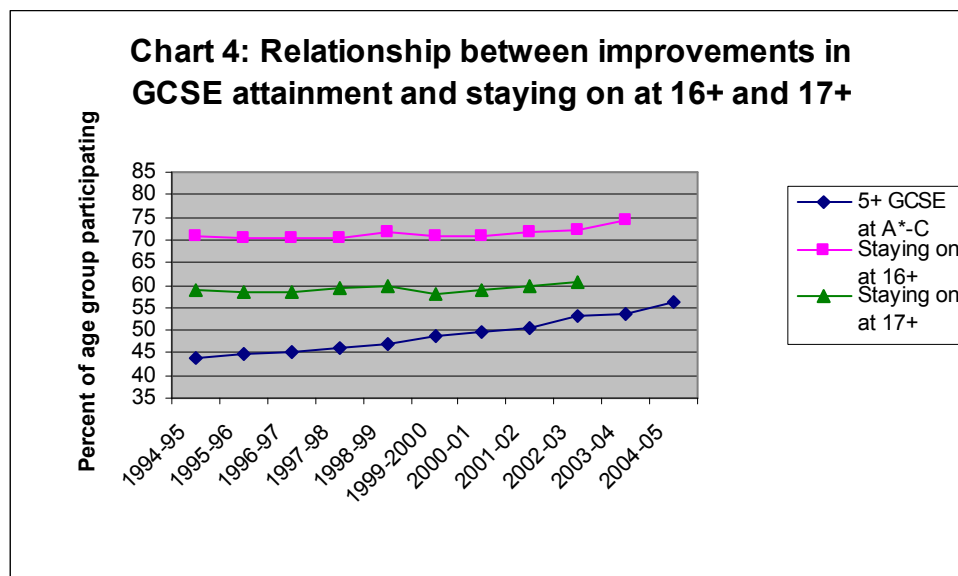
16 plus staying on

13. Another lead indicator of success at later stages of education is the proportion of pupils staying on at school post-16. It might be expected that, as the proportion of GCSE successes has increased, so will the proportion of those staying on. This has proved not to be the case. Although the proportion staying on in full-time education at 16 plus has increased slightly over the decade (from 71.7 per cent in 1994 to 74.2 per cent in 2004), the proportion undertaking other sorts of education and training (including part-time education and training as well as employer-provided training) has declined, and consequently the proportion of those not in any kind of education and training has actually increased from 9.4 per cent in 1994 to 12.6 per cent in 2004.

14. Moreover, the proportion staying on from 16 plus to 17 plus has declined in the last 10 years, and the proportion of the population at 17 plus in full-time education (the majority of whom are taking A levels, and who in turn account for the great majority of those taking A levels) has increased by just one percentage point in a decade (from 59.5 per cent to 60.5 per cent). Chart 4 below shows the relationship (or rather the lack of it) between increased GCSE success and staying on rates at 16+ a year later, and at 17+ two years later. It indicates that the majority of the increased numbers with GCSEs have simply left school with

⁶ Note, GCSE figures relate to proportion of population aged 15, A levels to population aged 17 and HE participation to population aged 18. The figures for A level and HE participation relate to one and two years later than the year in which they are plotted here, in order to show more clearly the relationship with GCSE attainment.

slightly better qualifications than in the past, and have not continued with any sort of further study, let alone study that would prepare them for higher education⁷.



Source: DfES Statistical First Releases 1/2006 and 27/2005⁸

15. For completeness, other forms of level 3 qualifications have been examined, though it will be apparent from the discussion of 16 plus staying on that the proportion of the age group taking such qualifications has not increased. Nevertheless, it is sometimes said that because such small numbers of those taking other level 3 qualifications go on to higher education (50 per cent with other level 3s⁹, compared to 90 per cent with A levels), this may represent a possible source of additional students in the future, if either they can be persuaded to consider higher education or universities can be persuaded to admit them.

16. Other forms of level 3 qualification are of two main types – Advanced GNVQ (now called VCE A levels) and NVQ level 3 (and equivalent). At age 17 and 18 roughly equal numbers take the two kinds of examination, but the trends are in opposite directions. The VCE A level - which, being more general, is regarded as a possible preparation for higher education - has been declining in numbers, while NVQ level 3 (and equivalent) numbers have been increasing, although slowly and from a low base. There is no reason to think that increasing numbers of NVQ level 3 (and equivalent) students will step in to take up any slack in higher education demand: these qualifications provide very specific competency-based

⁷ Even this conclusion may be slightly optimistic, since the proportions shown for GCSE success have since 1997 included GNVQ level 2s, and in the last two years have included 'GCSE equivalent' qualifications. This has added about 40 per cent of the apparent improvement over the past decade. This may also provide a clue as to why increases in GCSE numbers have not led to increases in 17 plus and A level participation.

⁸ As with Chart 3, the year in which GCSE is taken is treated as the base year. The figures for 16+and 17+ participation relate to one and two years later than the year in which they are plotted here, in order to show more clearly the relationship with GCSE attainment.

⁹ Source: DfES calculations based on the Youth Cohort Study cohort 8, sweeps 2 and 3.

training for particular craft and technician employment, and they are not intended as a preparation for higher education. It is no accident that small numbers of such students have progressed to higher education in the past, and the fact that numbers taking these qualifications are increasing at the expense of those taking VCE A level actually reduces potential demand for higher education.

17. Included among other level 3s are those taking advanced 'Modern Apprenticeships'. Modern Apprenticeships (now called Apprenticeships and Advanced Apprenticeships) are an important plank in the Government's education reforms, and in their efforts to ensure a more highly skilled workforce. It is therefore encouraging that there has been an increase in the number of apprentices: at age 17, for example, the number has increased from 44,500 in 2003-04 to 47,400 in 2004-05¹⁰. However, only a small and declining minority of these (11,200) are taking 'Advanced Apprenticeships', at level 3, which might conceivably contribute to demand for higher education, and numbers are declining¹¹. Apprenticeships are undoubtedly important in their own right, but are not at present material when considering demand for higher education.

18. Entrants to higher education come from a variety of other different routes, including Access Courses and university specific matriculation. It is hard to determine what the potential demand for this provision is, and to what extent it could be stimulated. For the purposes of these projections it has been assumed that the numbers will change with the size of the population. In any case numbers are small – a forthcoming HEFCE report estimates that about 8000 entrants to HE come from Access Courses, so even if there were a large increase in Access Courses it would not impact greatly on HE numbers. A 25 per cent increase in Access Course provision would only lead to about 2000 more HE entrants.

EU Students

19. Projections have to take account of the substantial number of EU students in UK universities, of whom there were something like 72,000 in 2004-05, a number that has not changed greatly since 1995 (though with a changing balance away from undergraduates and towards postgraduates). In 2004 HEPI suggested¹² that that year's EU enlargement would add up to 16,000 undergraduate and 9,000 postgraduate students by 2010-11, a projection

¹⁰ Source: DfES Statistical First Release 27/2005.

¹¹ Total numbers of apprentices increased from 212,300 in 2000-01 to 255,800 in 2004-05, while within these totals Advanced Apprentices declined from 125,700 to 101,800. (ILR/SFR08 <http://readingroom.lsc.gov.uk/lsc/2005/learningdata/statistics/further-education-and-work-based-learning-for-young-people-ilr-sfr08.pdf>)

¹² "Projecting Demand for UK Higher Education from the Accession Countries"

validated by UCAS indications of recruitment in the last two years (applications up by 136 per cent for entry in September 2004 and by 58 per cent for September 2005). Moreover, expansion of the EU in 2007 may well provide a similar further boost to recruitment - and if Turkey is admitted in the future, then that may give rise to a very substantial additional boost.

20. On the other hand, there are strong reasons for thinking that universities in this country will struggle to maintain their number of EU students. Over the whole EU, demography is moving in the same direction, and the number of young people in the age cohort from which university entrants are drawn will reduce by over 20 per cent between now and 2020: although there will be variations, no EU state is exempt from the overall trend. They will all, therefore, need to achieve significant increases in participation if they are to offset demographic decline.

21. European universities will endeavour to retain their domestic students in the light of the demographic decline, and this, together with reduced demand overall, means that it is highly unlikely that increased demand from EU students will help offset any reduced demand from home students after 2010-11. It needs to be noted that apart from one-off increases arising from EU enlargement, the number of students from other EU countries has barely increased in 10 years. Indeed, if English universities succeed in holding on to their present numbers, this would represent a relative increase of 20 per cent, and is probably the most optimistic outcome that can be anticipated. For the purpose of these projections, it has simply been assumed that 12,000 of the expected 16,000 increase in demand from the Accession Countries remain to be recruited between 2005-06 and 2010-11.

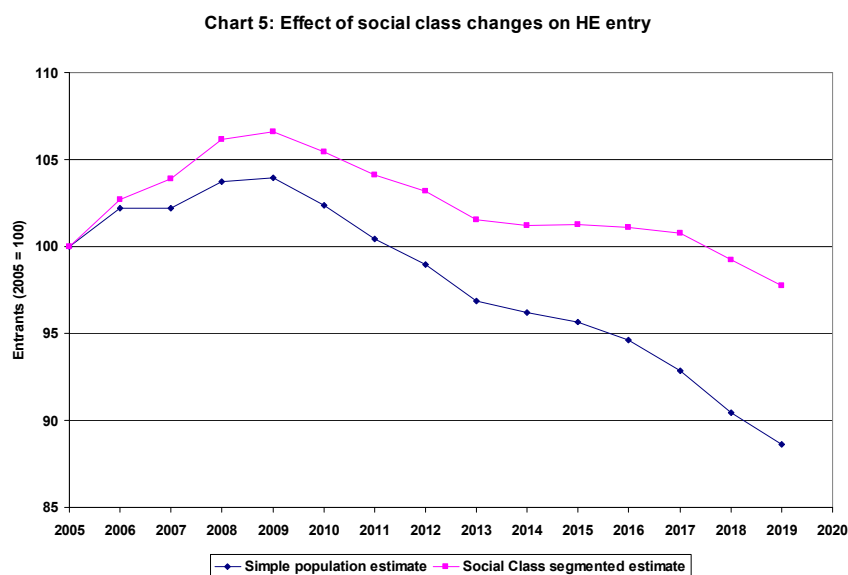
Projections to 2010 and 2020

22. It is apparent that the main drivers point to an increase in student numbers between now and 2010-11, followed by a sharp reduction to the end of the next decade. The previous paragraphs have suggested that there are no indications in the short term that participation will increase. However, in the medium to long term, changes in the socio-demographic balance mean that there is likely to be some improvement in participation that will go some way towards countering the decline in student numbers. Information from the Office for National Statistics shows that the decline in births over the past decade or more has been steepest among those social groups least likely to participate in HE.

23. This is very significant. The last reduction in the young population was in the late 1980s and 1990s. In their planning the Government assumed that HE numbers would reduce pro rata to the overall population. In fact there was a doubling of the participation rate and numbers grew rapidly, because – as in the downturn that will follow 2010 – the reduction in births affected different social groups differently.

24. Annex A sets out calculations that lead to the conclusion that this differentiation of births by social class will result in increased young participation by 3 percentage points or so, and that the decline in young home students between 2010-11 and 2020-21 will be only a small fraction of that which would otherwise have occurred. As a result it appears that there may be a significant improvement in the overall participation of young people – increasing the HE Initial Participation Rate to close to 50 per cent - without any improvement in the participation of young people from poor backgrounds. Indeed, their share of HE participation would actually decline.

25. Chart 5 below illustrates the impact of the ‘social class effect’ on young participation. It shows that if the demographic decline of 18-20 year olds were equally spread, there would be a reduction in young entrants in 2019-20 of 11 per cent, compared with 2005-06, and of 15 per cent compared with 2009-10¹³. Allowing for the differential decline between social classes, the reductions are just 2 per cent and 9 per cent respectively. The impact of these calculations has been incorporated in the projections discussed below.



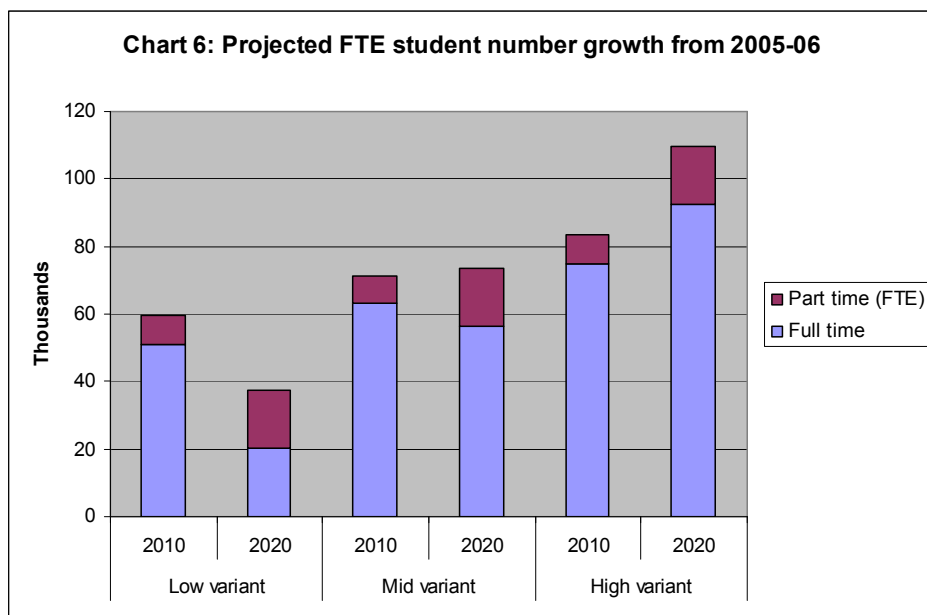
Source: Office for National Statistics

¹³ Note this calculation has been done for entrants, so the peak year is one year earlier than when all-year figures are considered.

26. Three projections are shown in Chart 6 below, to 2010-11 and to 2020-21. The first assumes that – other than the changes arising from the demographic ‘social class effect’¹⁴ described above - there will be no changes in participation, or in any of the other influences on demand: it effectively simply shows the effect of demography. For the purpose of these projections it has been assumed that there will be increased demand from the 2004 Accession Countries, but that otherwise EU demand will move with demographic change¹⁵. This might be regarded as a "low" variant, but in fact it represents the status quo.

27. The second, "central", projection is based on the "low" variant, but makes the assumption that by the end of the period the participation of males in higher education (at all ages) will rise halfway from its present level towards that of females.

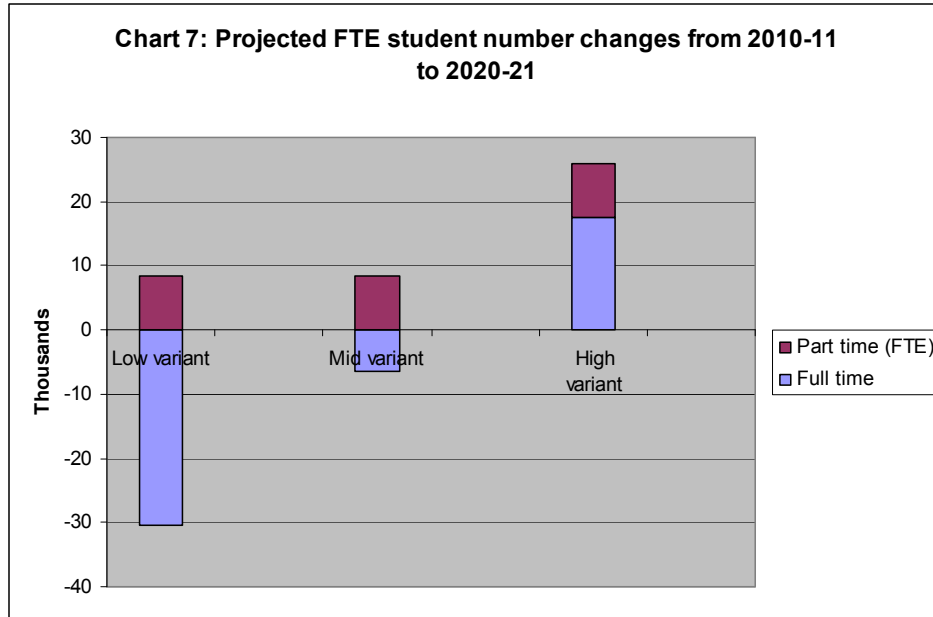
28. The final, "high" variant, is similar to the "central" variant but assumes that by the end of the period males will fully match females in their participation in higher education.



29. Although this chart shows some growth even on the low variant, this is because of the strong growth in the young population between now and 2010-11. In fact, for full-time students, the change from 2010-11 to 2020-21 is negative or barely positive on two of the three projections as Chart 7 below shows.

¹⁴ This is a common assumption, made in all three variants.

¹⁵ Because of the time delay before obtaining HESA data it is not known how much of the projected increase from Accession Country students has already been met by 2005-06. However, it is apparent from information from UCAS that there has been substantial additional enrolment. For the purpose of this discussion it has been assumed that 12,000 of the projected additional demand of up to 16,000 remains to be met by 2010-11.



30. The high variant looks very ambitious in the light of recent experience – and the mid variant only a little less so – both assuming an upturn in the performance of males, for which there is no evidence. However, that would be consistent with the Government's ambitions and the substantial activity that is in play at present to try and increase participation. If, as is assumed in the high variant, the participation of males were to match that of females across all ages, then that would imply that the male Higher Education Initial Participation Rate (HEIPR) would rise to 47.3 per cent, from 37.5 per cent at present, with the overall HEIPR rising to 47.3 per cent from the present 42.5 per cent. If in addition the 'social class effect' is taken into account, then the HEIPR would rise to close to the 50 per cent target.

31. When last year's report was published it was criticised for taking no account of the various programmes the Government had initiated, such as Aimhigher, Education Maintenance Allowances and Lifelong Learning Partnerships, which, if successful, would all have the effect of contributing to the achievement of the target of 50 per cent participation in higher education by 2010. It is true that these projections make no assumptions about the effect of these programmes. However, if they succeed, they will affect the lead indicators - GCSE attainment, staying on at 17 plus and A level achievement – and these in turn will impact the projections. As has been discussed above, so far there has been disappointingly little evidence of any positive movement in these.

32. Extended and widened participation in higher education will have social as well as economic benefits, so the prospective failure to increase participation is bad news for the

country. Nevertheless, looking to the medium term, a great deal can change in 15 years - 15 years ago, for example, the participation rate was on its way towards doubling from the 15 per cent or so where it had stagnated for the previous two decades – but Government projections failed to anticipate this. So, things may not turn out as suggested by these projections.

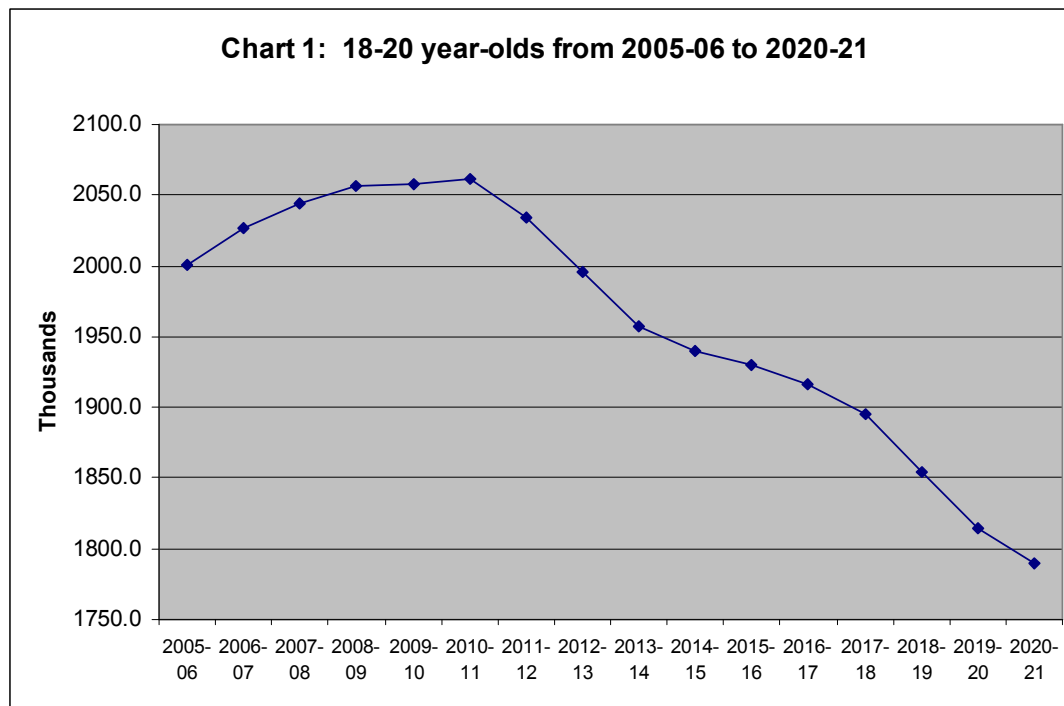
33. In particular, there are a number of important policy initiatives in progress that are intended – either directly or indirectly – to impact HE demand. The Schools Bill for example is intended to improve performance; and the Aimhigher and EMA programmes have already been mentioned. And if the Government addresses one of the greatest failings of the English education system – that of the number of young people who leave compulsory education at 16 and never return – then this too may give rise to additional demand. On the other hand, we do not yet know whether the increased cost of HE will affect the willingness of young people to attend HE, or on the other hand if the student support that is available will increase demand.

34. These are all policy developments whose effects on demand are unknown. But on the basis of what we know at present and the evidence of recent trends, the low variant, perhaps shading to the central variant, seems the best that we can hope for. After two decades of strong growth this represents a rather new environment for HEIs, and may cause difficulty for some as they come to terms with the new reality.

Annex A: Calculation of population projections¹⁶

1. 18-21 year olds are the most relevant cohort of the population for the purpose of projecting demand for higher education, representing 70 per cent of entrants. Figure A1 shows that this population will increase to 2010-11 and decrease rapidly in the following decade. The increase from 2005-06 to 2010-11 is 3.1 per cent, but between now and 2015-16 there is a reduction of 3.5 per cent and between now and 2020-21 (when the demographic decline halts) the reduction is 10.6 per cent. Between 2010-11 (the peak year) and 2020-21 the reduction is even greater, at 13.2 per cent.

Figure A1: Projected changes in the 18-20 year old (under 21) population, 2005-06 to 2020-21



Source: ONS and Government Actuary's Department (2004 based projections for England, published in October 2005), adjusted by DfES for academic years.

2. Although less significant in terms of participation in higher education, other cohorts of the population also need to be considered. The 21-24 year old population is projected to increase by 9.3 per cent to 2010-11 but to reduce

¹⁶ No allowance has been made for migration – either inward or outward. The population projections are based only on births.

between 2010-11 and 2020-21, so that between 2005-06 and 2020-21 the increase in the population of 21-24 year olds is only 2.9 per cent. The 25-29 year old population will increase by 9.9 per cent to 2010-11 and by 15.9 between now and 2020-21. And those aged 30 and over will increase by 3.3 per cent to 2010-11 and by 11.5 per cent between now and 2020-21. Table A2 summarises these changes.

Table A2: Changes in different age cohorts from 2005-06

Age group	Percentage change to 2010-11	Percentage change to 2020-21
<21	3.1	-10.6
21-24	9.3	2.9
25-29	9.9	15.9
30+	3.3	11.5

Source: ONS and Government Actuary's Department (2004 based projections for England, published in October 2005), adjusted by DfES for academic years.

Implications of population changes for student numbers: raw calculation

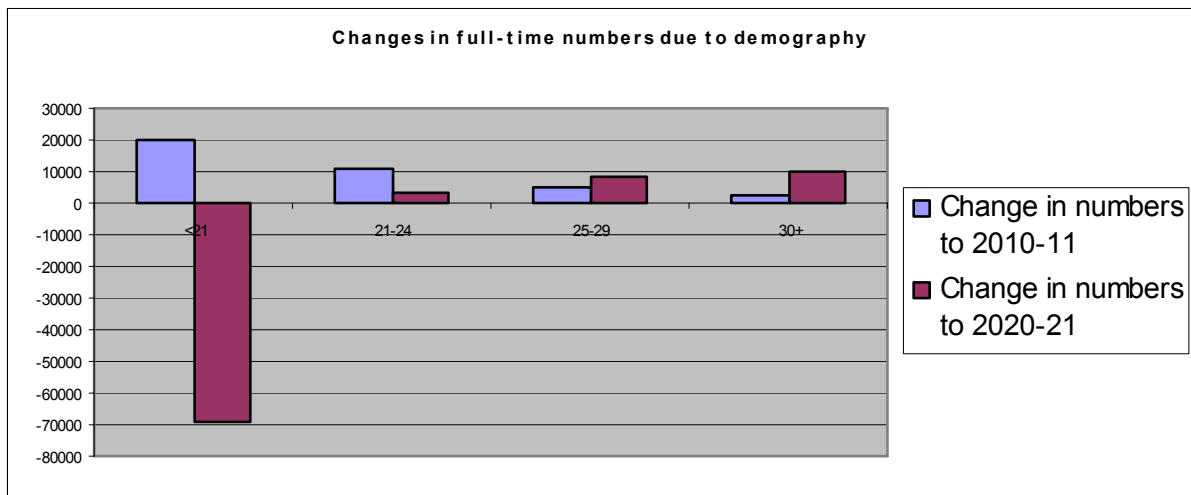
3. There were approximately 1.4 million undergraduates (headcount)¹⁷ in 2005-06, of whom 907,000 were full-time and 494,000 were part-time. Table A3 shows the different age cohorts of full-time undergraduates and the projected increase in their numbers to 2010-11 and to 2020-21, resulting from demographic increases alone, if the demographic changes occurred equally among all groups (which they will not, see below).

¹⁷ HESES and HEIFES 2005 – figures from the Higher Education Funding Council for England (HEFCE)

Table A3: Changes in full time numbers due to demography

Age cohort	Estimated student numbers in 2005-06 ¹⁸	% population change by 2010-11	Resulting change in numbers by 2010-11	% population change by 2020-21	Resulting change in numbers by 2020-21
<21	651000	3.1	20000	-10.6	-69000
21-24	120000	9.3	11000	2.9	3500
25-29	50000	9.9	5000	15.9	8000
30+	87000	3.3	3000	11.5	10000
Total			39000		-47500

Figure A3a: Changes in full time numbers due to demography



4. All else being equal, the projected increase in the number of full-time undergraduates between now and 2010-11 would be 39,000, but between now and 2020-21 there would be a decrease of over 47,000, as a result of the sharp fall in the under-21 population after 2010-11. The decrease between 2010-11 and 2020-21 would be around 86,000.

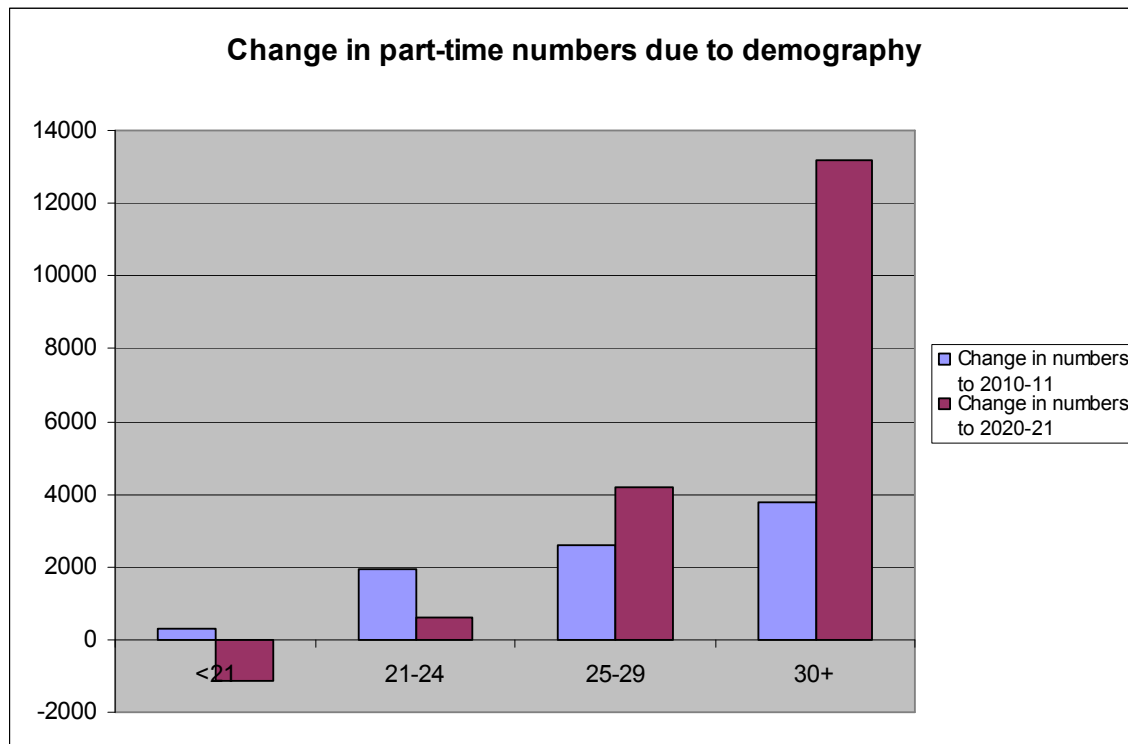
¹⁸ HESES does not break down student numbers by age group. This table has taken the age distribution from the previous year's HESA record and applied it to the 2005-06 aggregate numbers.

5. Table A4 shows the different age cohorts for part-time undergraduates and the projected changes in their numbers, resulting from demographic changes alone.

Table A4: Changes in part time numbers due to demography

Age group	Estimated numbers in 2005-06	Percentage population growth to 2010-11	Resulting increase in numbers to 2010-11	FTE equivalent increase in 2010-11	Percentage population growth to 2020-21	Resulting change in numbers to 2020-21	FTE equivalent change to 2020-21
<21	30000	3.1	1000	500	-10.6	-3000	-1000
21-24	60000	9.3	5500	2000	2.9	2000	500
25-29	75000	9.9	7500	2500	15.9	12000	4000
30+	328000	3.3	11000	4000	11.5	38000	13000
Total			25000	9000		49000	16500

Figure A4a: Changes in part time numbers due to demography



6. So, based on changes in demography alone and all else being equal – assuming no changes in propensity to attend higher education - full-time and the full-time equivalent of part-time student demand between 2004-05 and 2010-11 would increase by about 48,000 but between 2005-06 and 2020-21 there would

be a net decrease of about 31,000. Between the year of peak demand, in 2010-11 and 2020-21 aggregate FTE demand would reduce by nearly 79,000.

Implications of population changes for student numbers: factoring in the effect of the changing social class profile

7. Although overall numbers of 18-19 year-olds show a sharp fall over the next 20 years, this would not necessarily lead to the reductions in student numbers projected here if the demographic reduction were concentrated among groups in the population least likely to enter higher education. We know that there are large differences in the participation rates for different social classes, so if the numbers of young people from higher social classes reduced proportionately less than the number from lower social classes, we would expect a smaller reduction in the overall number of entrants. The projections of the effect of demography shown above take no account of this: they show what would happen if population changes affected all social groups equally; or else what would happen if all social groups participated equally in higher education. However, neither of these is the case.

8. Although data on births by social class are limited, the Office of National Statistics (ONS) have provided some information on the number of births by the social class of the father, where that is known. It is apparent that this social class profile at birth has changed over the last twenty years.

9. In the calculations that follow, the demographic projections have been modified, based on an assumption that the participation rates specific to each social class will remain constant. The following further assumptions have been made:

- i. The relative participation rates of cohorts defined by social class at birth is the same as the Age Participation Index (API) by social class in 2000. Note that this is based on information collected by UCAS concerning the occupation of the highest earning parent or guardian when applying to higher education.

ii. The relative proportions of births by social class based on father's occupation for the whole cohort are the same as for those for whom it is known. The proportion of births where social class is unknown has not greatly changed: it was 4.6 per cent in 1986 and had risen to 5.6 per cent in 2001¹⁹.

iii. Two students enter at 18 for every one at 19, as at present.

10. These assumptions imply that the participation rate overall for young entrants would increase by about 10% - or by about three percentage points - between 2005 and 2019. Chart 5 below shows how such an increase would change the expected numbers of young entrants compared to an assumption of constant participation.

Chart A5: Projected numbers of young entrants



Source: Based on calculations from unpublished data provided by the Office for National Statistics

11. It will be seen that allowing for the change in social class profile significantly reduces the extent of the reduction in HE numbers. With the increase in

¹⁹ Proportion of all births for which social class not classified, including armed forces, students and inadequately described.

participation rates driven by the changes in social class profile, in 2019-20²⁰ there will be just 2 per cent fewer entrants than in 2005-06, and 9 per cent fewer than in the peak year of 2009-10. This compares with reductions of 11 and 15 per cent respectively, if we assume no change in the overall participation rate. In which case, the overall FTE reduction of 79,000 between 2010-11 and 2020-21, discussed above, may in reality be nearer 30,500, and numbers in 2020-21 may even be a little higher than those in 2005-06. Table A6 shows the effect of this modification to the projection of full-time student numbers. At Appendix 1 of this Annex are the workings that have underpinned this table.

Table A6 Changes in full-time numbers from 2005-06 to 2020-21 due to demography, with and without the social class effect

Age cohort	% population change by 2020-21 assumed in Table A3	Change in numbers by 2020-21 calculated in Table A3	Effective % population change by 2020-21, taking account of the 'social class effect'	Change in numbers by 2020-21, taking account of the 'social class effect'
<21	-10.6	-69000	-2	-13000
21-24	2.9	3500	2.9	3500
25-29	15.9	8000	15.9	8000
30+	11.5	10000	11.5	10000
Total		-47500		8500

12. The numbers modified by the 'social class effect' are the figures assumed in this report. These calculations have only been applied to the full-time under 21 population, since this is by far the most significant in terms of HE participation. However, it should be noted that any possible effect on other age groups has not been shown, and the net effect may be somewhat over- or under-stated.

²⁰ The data necessary to continue the projections to 2020-21 are not yet available.

Appendix 1 to Annex A

Livebirths by father's social class³ 1986-2001⁴ England and Wales (Data from ONS)

All live births

Social class as coded in the 10% sample

Only 10% of births are coded for father's occupation. Social class is not known for sole registered births.

	Not coded	I	II	IIIN	IIIM	IV	V	Armed forces	Inadequately described	Students	All
1986	599,603	4,290	13,091	6,115	21,802	9,119	4,176	1,399	501	922	661,018
1987	618,478	4,360	13,630	6,068	22,498	9,306	4,206	1,463	530	972	681,511
1988	629,601	4,447	14,154	6,287	22,657	9,291	4,123	1,409	752	856	693,577
1989	624,420	4,623	14,731	5,740	22,585	9,038	3,799	1,248	645	896	687,725
1990	641,036	4,720	15,287	6,259	23,155	9,187	3,800	1,220	580	896	706,140
1991	634,800	4,518	15,459	6,132	22,856	8,618	3,855	1,177	768	1,034	699,217
1992 (estimated)	622,963	4,552	15,194	6,198	21,685	8,819	3,750	1,143	804	1,236	686,342
1993	611,126	4,585	14,929	6,264	20,514	9,020	3,645	1,108	839	1,437	673,467
1994	603,130	4,645	14,979	6,305	20,117	8,793	3,604	1,047	568	1,538	664,726
1995	588,167	4,546	14,770	6,113	19,236	8,744	3,423	1,014	406	1,719	648,138
1996	589,505	4,464	15,109	6,159	18,900	9,187	3,105	918	216	1,922	649,485
1997	584,034	4,358	15,594	5,803	18,138	9,000	3,162	822	254	1,930	643,095
1998	577,275	4,493	15,823	5,715	17,567	9,044	3,053	797	319	1,815	635,901
1999	564,456	4,595	16,147	5,511	16,763	8,464	2,858	795	347	1,936	621,872
2000	548,535	4,602	15,977	5,282	16,016	8,373	2,690	768	216	1,982	604,441
2001	539,488	4,421	16,157	5,241	15,670	7,952	2,636	724	235	2,110	594,634

Entrants to HE at 18 and 19 (relative numbers)

2005	612186	4337	13450	6084	22266	9244	4196	1442	520	955	674680
2006	625893	4418	13979	6214	22604	9296	4151	1427	678	895	689555
2007	626147	4564	14539	5922	22609	9122	3907	1302	681	883	689676
2008	635497	4688	15102	6086	22965	9137	3800	1229	602	896	700002
2009	636879	4585	15402	6174	22956	8808	3837	1191	705	988	701525
2010	626909	4540	15282	6176	22075	8752	3785	1154	792	1168	690634
2011	615072	4574	15017	6242	20904	8953	3680	1120	827	1370	677759
2012	605795	4625	14962	6291	20249	8869	3618	1067	658	1504	667640
2013	593155	4579	14840	6177	19530	8760	3483	1025	460	1659	653667
2014	589059	4491	14996	6144	19012	9039	3211	950	279	1854	649036
2015	585858	4393	15432	5922	18392	9062	3143	854	241	1927	645225
2016	579528	4448	15747	5744	17757	9029	3089	805	297	1853	638299
2017	568729	4561	16039	5579	17031	8657	2923	796	338	1896	626548
2018	553842	4600	16034	5358	16265	8403	2746	777	260	1967	610251
2019	542504	4481	16097	5255	15785	8092	2654	739	229	2067	597903

Participation rates

76% 48% 33% 19% 19% 14%

API by Social Class 2000. Source: Parliamentary Review No. 33 Session 2001-02 8-12 July 200, Based on Social Class of parent at time of application to HE.

Projected participation rates and relative entrant numbers

	<u>Participation rates</u>		<u>Relative entrant Numbers</u>	
		<u>Separate SCs</u>	<u>Ignore SCs</u>	<u>Separate SCs</u>
2005		30.8%	100	100
2006		30.9%	102	103
2007		31.3%	102	104
2008		31.5%	104	106
2009		31.6%	104	107
2010		31.7%	102	105
2011		31.9%	100	104
2012		32.1%	99	103
2013		32.3%	97	102
2014		32.4%	96	101
2015		32.6%	96	101
2016		32.9%	95	101
2017		33.4%	93	101
2018		33.8%	90	99
2019		33.9%	89	98

Assumptions

Relative populations at 18 and 19 entirely driven by birth rates deaths and migration netting to zero.

Ages have not been aligned to school years and are therefore approximate.

Participation rates by social class at birth fixed and set to participation rates by social class at entry to HE in 2000.