



# Participation Rates in Aimhigher West: Analysis and Comparisons

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## A. Executive summary

1. This report addresses trend in applications to higher education in the Aimhigher West (AHW) area between 2003 and 2009, working from the basis of an apparent underperformance relative to the South west region and England as a whole in a series of Action on Access reports.
2. Detailed analysis finds little evidence to suggest significant underperformance, with a number of factors interacting to make the AHW area appear less successful than other Aimhigher area. These include:
  - a. The chosen base year of 2003 was a particularly strong year for applications in the AHW area, so it serves to relatively undervalue subsequent growth. If a 2004 base year is used instead, AHW performs very similarly to the rest of the South West region.
  - b. The AHW area suffers a disproportionately large drop in applications in 2006, coincidental with the introduction of 'top-up' tuition fees. This single year effect moved the AHW area from relative overperformance to underperformance. There is no evidence that this was a result of action (or inaction) by the AHW partnership.
  - c. Situated within the most rural Aimhigher region, the AHW area is among the most rural Aimhigher areas in England. This rurality appears to act as a suppressing factor in applications; a phenomenon also found in other rural Aimhigher areas.
  - d. Unemployment in the South West region has been historically the lowest in England and this has also acted as a suppressing factor on applications. With near full employment and relatively lucrative work for young people, a distinctive 'push' factor towards higher education has been absent.
  - e. Bristol plays a key role in the applications profile for the AHW area, especially in terms of deprived neighbourhoods. The marked underperformance of Bristol's schools in the early to mid 2000s can hypothetically be linked to a low rate of growth in applications for higher education.
  - f. The population estimates used in the Action on Access reports is flawed in that it exaggerates the underlying youth population in areas which are net 'importers' of students, like the AHW area, thereby underestimating application rates.
3. There is good evidence to suggest that applications in the AHW have grown rapidly in the late 2000s, faster than the England average and particularly in deprived neighbourhoods. This is coincidental with improvements in performance in the schools which the AHW partnership has targeted for interventions, especially in Bristol.

## **B. Detailed summary: answers to research questions**

***Have applications to higher education in the Aimhigher West (AHW) area in general grown less rapidly than the national average between 2003 and 2009?***

1. The percentage growth in applications in the AHW area was above average in 2004 and 2005. However, the AHW area, in common with the rest of the South West region, had a significantly larger drop in applications in 2006 than the national average.
2. This drop is concurrent with the implementation of the 2004 Higher Education Act and specifically the introduction of 'top-up' tuition fees and institutional bursaries, but it is not clear why this would have affected the South West region more strongly than elsewhere in England.
3. From 2007 onwards, the growth in applications in the AHW area has kept pace with growth nationally, suggesting that the effect of the 2006 changes was temporary and not sustained beyond one year.
4. However, it is important to remember that the population of young people has not remained static over the period in question. A number of measures suggest that the population of 18 year olds in the AHW area has grown rapidly (by between 9 and 11%) between 2003 and 2009, compared with 5 to 6% in England as a whole. This means that, other things being equal, the AHW should have outperformed the rest of England in terms of applicant numbers.
5. Conversely, the figures for application rates provided by Action on Access (AoA 2010a) have an in-built inaccuracy due to the population estimate used. This will tend to over-estimate the population of areas that are net student 'importers', with more coming into the area to study than leaving it. It is difficult to quantify this inaccuracy, but it may account for a 1-2% underestimate in application rates in the AHW area in AoA (2010a).

***Why have applications grown less quickly than the English average?***

6. Practitioners in the AHW area have broadly rejected the hypothesis that the portfolio of Aimhigher activities or their targeting have been responsible for below average improvement in applications, preferring explanations that stress localised challenges, including school outcomes, labour market conditions and factors derived from rurality.
7. Supporting this, it should be noted that the AHW area has gone from having GCSE results that were above the national average in 2001 to being below the national average in 2010, although some areas have shown very strong improvement. Furthermore, the area has had

consistently below-average rates of youth unemployment, with the labour market offering attractive alternatives to extended education at both 16 and 18. The low proportion of minority ethnic communities, who tend to have a higher propensity to demand higher education, may also be contributory.

8. The AHW area is markedly rural compared to other Aimhigher partnership areas, although less so than the remainder of the South West region and the Peninsula partnership in particular. The nature of the local labour market, with few graduate jobs, and the geographical remoteness from higher education institutions (and therefore from many Aimhigher activities) are likely additionally to dampen demand from rural areas.
9. In terms of the disproportionate 2006 fall in applications, it is possible that the very low unemployment rate in the AHW area 'pulled' young people away from higher education at the point where the costs were increased. An alternative partial explanation may be that an unusual drop in GCSE pass rates in 2004 translated into there being a smaller pool of possible higher education applicants in 2006.
10. While it is outside the scope of this study, it has been noted that the proportion of applicants from the AHW area (and the wider South West region) accepted onto a higher education course is consistently lower than for the national average. It is possible that this has caused a negative feedback loop with applications, with a lack of success from one cohort reducing the propensity to apply in future cohorts.

***Have applications to higher education from deprived neighbourhoods in the AHW area grown less rapidly than the national average between 2003 and 2009?***

11. The measure of deprivation used in this report and widely by Action on Access and others is the Index of Multiple Deprivation (IMD). While useful, this measure is not without challenge. In particular, it is important to recognise that it is more effective and accurate at identifying urban deprivation than rural forms of deprivation.
12. Deprived neighbourhoods in the AHW area are heavily concentrated in the Bristol local authority area. Depending on the threshold used, between two-fifths and two-thirds of deprived neighbourhoods are within Bristol, which also has the greatest concentration of deprivation and the most severely deprived neighbourhoods. Contrary to widespread belief, these are to be found throughout the city and not solely in south Bristol.
13. Therefore, any analysis of applications from deprived areas must concentrate primarily on Bristol. Gloucester, Cheltenham, Swindon and Weston-super-Mare also make meaningful contributions, though they are individually much less significant than Bristol.

14. Under the IMD ranking, there are very few neighbourhoods which are both rural and deprived – only nine out of 1,555. These are mainly to be found in the Forest of Dean and Mendip local authority areas. Looking in more depth at the Forest of Dean, it is found that while the area is not relatively deprived using the IMD or Free School Meals measures, it has one of the highest concentrations of households in the lower socio-economic groups that Aimhigher is tasked to target.
15. The application pattern for individuals living in the bottom 40% of neighbourhoods by IMD in the AHW area has been broadly similar to the overall pattern for all neighbourhoods, including a marked drop in 2006. Overall, the AHW area (32% growth) has underperformed relative to the national average (38% growth), but outperformed the rest of the South West region (30% growth).
16. Among the bottom 20% of neighbourhoods, the AHW area saw a particularly strong drop in applications in 2006, while England overall saw a rise. However, the AHW area underwent a very rapid growth in applications from 2008 onwards, such that the overall growth between 2003 and 2009 has been very similar to the national average (46% growth in the AHW area, compared with 45% in England), though markedly below the rest of the South West region (58% growth).
17. Among the 20-40% quintile, the AHW area broadly kept pace with the national average until 2008, when it fell behind; however, it remained above the rest of the South West region.

***What factors may have affected applications from deprived neighbourhoods in the AHW area?***

18. Depending on the threshold used, the AHW area has either performed slightly better than (bottom 20% by IMD) or worse than (bottom 40% by IMD) the English average. Progress with applications has grown rapidly in recent years in the most deprived neighbourhoods, but declined compared with the English average among the next most deprived quintile.
19. School results are the factor most likely to explain the growth in the bottom 20% of neighbourhoods by IMD. While GCSE results across the AHW area declined relative to the national average, there was very strong improvement from schools serving deprived neighbourhoods – and particularly those in Bristol – from around 2006 onwards. This translated into an increased demand for post-compulsory education and therefore into a greater pool of possible applicants from deprived neighbourhoods from 2008 onwards.
20. The fastest growth in GCSE pass rates has been seen in the schools in Band A of the AHW Intervention Model, which have rapidly closed the gap in performance with Band B and Band C schools since 2005 – and particularly since 2008. It is impossible to assess the extent to

which Aimhigher activities have been instrumental in this improvement, but given the resources employed, it is reasonable to assume that the link is not entirely coincidental.

21. Furthermore, Bristol's relatively vibrant labour market compared to other major cities is likely to have acted as a brake on demand for higher education until 2009, when unemployment rates started to rise sharply. Combined with school results and entry into post-16 education, this may explain, in part, the slow and fragile growth in applications in the early part of the period from the most deprived urban areas, followed by rapid growth from 2008 onwards.
22. It is important to remember that progress in deprived rural areas will have had very little impact on application numbers from deprived neighbourhoods due to the IMD methodology, with few rural neighbourhoods represented in the bottom 40% and practically none in the bottom 20%.
23. There is some evidence from the Small Area Population Estimates that youth population growth has been significantly slower in deprived areas than in more affluent ones. This would have the effect of making the growth in applications from deprived areas relatively stronger than the average. However, full analysis of this is beyond the scope of this study.

***Has the AHW area significantly underperformed relative to the rest of the South West region and if so, why?***

24. The performance of the AHW area relative to the wider South West region has been a mixed picture. Overall, growth in applications has been slightly lower (19% compared to 23%). However, this difference was largely constructed in 2004, when the South West region saw a particularly large jump in applications, especially among the bottom 20% of neighbourhoods by IMD. Since then, the AHW area and the rest of the South West region have had very similar overall patterns of growth in applications.
25. For the bottom 40% of neighbourhoods by IMD, the South West region has fallen behind the AHW area since 2008, although the former continues to have a stronger rate of growth in the bottom 20% of neighbourhoods.
26. As the AHW area and the South West region have had broadly similar rates of youth population growth across the period in question, this can be disregarded as a meaningful factor explaining differences between the area and the region.
27. There is therefore no compelling evidence to suggest that the AHW area has underperformed relative to the rest of the South West region. In fact, there is good evidence to suggest that recent years have seen stronger growth in the former, while a

change of base year from 2003 to 2004 would see the AHW area have very similar patterns of growth to the rest of the South West region – and stronger growth in deprived neighbourhoods.



## C. Project outline and approaches

### 1. The initial brief for the project was as follows:

*“Some national data on participation rates, produced by Action on Access, suggested that Aimhigher West was performing worse than most other Aimhigher areas in terms of changes in the participation rates of students from under-represented groups. However that analysis was not consistent with other qualitative and quantitative evidence and analysis from other sources. AHW wished to discover the explanation for the Action on Access analysis and its implications. Investigation was also expected to improve knowledge about what works (and/or doesn’t work) in widening participation, and thus enhance the legacy of Aimhigher after its abolition.*

*Unpublished analysis by Action on Access (AoA 2009) suggested that over the period 2002-2003 to 2006-2007 Aimhigher West suffered a 5.2% fall in the number of students going into HE from its area, against a 7.8% average increase nationally. In addition the proportion of participants from the 0-20% most deprived neighbourhoods in West fell by 1.1%, against a national average increase of 1.3%. This analysis was sent to Aimhigher areas but not published more widely because of acknowledged inconsistencies in some of the data. Subsequent Action on Access analysis (AoA 2010a) on a different basis continued to suggest that Aimhigher West had underperformed against most other areas. For 2003 to 2008 overall young full-time HE participation rates in England rose from 31.4% to 35.0%; in the South West from 31.1% to 31.7%, and in Aimhigher West from 32.1% to 32.4%. From this analysis it appeared that Aimhigher West outperformed the region in participation rates overall, and from the least deprived 60% of neighbourhoods, but underperformed for the most deprived 20% and the most deprived 40%. The differences between the area, region and national performances had narrowed because of an apparent marked improvement in 2008.*

*The most recent analysis of data up to and including 2009 suggested that Aimhigher West’s improvement in 2008 had accelerated in 2009. The South West as a whole had begun to outperform instead of underperform the national average changes in participation rates for the most deprived neighbourhoods, and Aimhigher West’s performance had moved close to the regional average.*

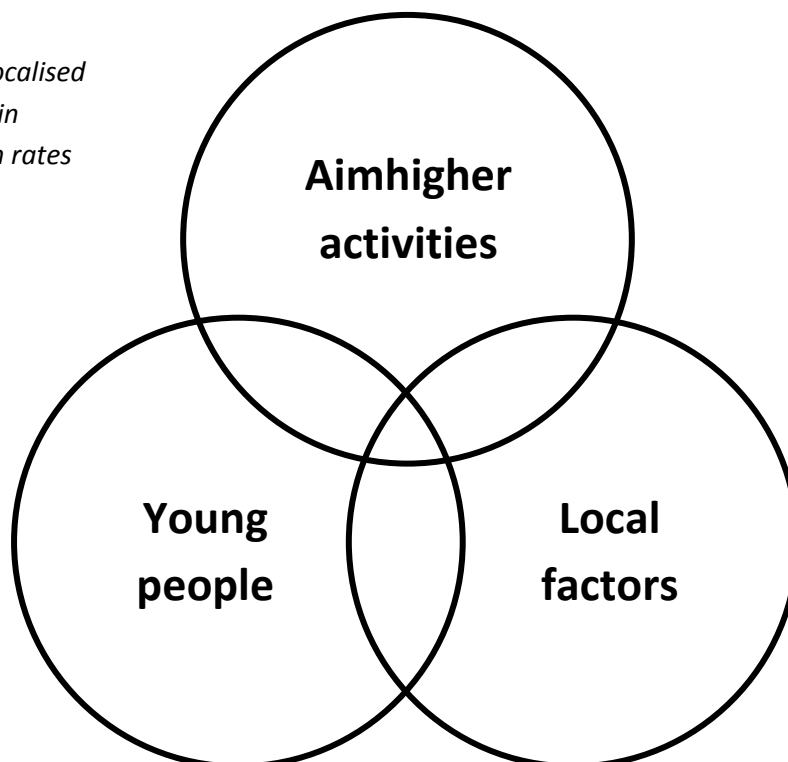
*There were important and significant differences between the 2009 and 2010 Action on Access analyses and a series of analyses and research reports produced by and for Aimhigher West, and by and for Aimhigher South West. Despite the availability of these various analyses and data sets it was not possible to answer the question: why are the data for Aimhigher West less positive than for other Aimhigher areas? In particular, it was not possible to establish whether this was a real difference or a difference arising from the data and methods used. The Aimhigher West Data Group discussion identified a number of data issues and questions for further investigation, leading to the commissioning of this research.*

*The project team was asked to consider and report on the key research question: whether there was an underlying problem with the performance of the area, or whether data problems or other issues might explain the Action on Access analysis. The project team was also asked to report on the associated data issues. The principal motivation of the research was to achieve a better understanding of the area’s performance, and how different data sets and different methods of analysis can lead to different interpretations of performance.*

*The project manager was Professor Rob Cuthbert, and the principal researcher/analyst was Neil Harrison, supported by other UWE colleagues as required. The team worked closely with Aimhigher West colleagues and the Aimhigher West Data Group (Mike Farmer, Catherine Marshall, Liz Bannister, Chris Croudace [later replaced by Brian Miller], Liz Garton, Steve Furness) served as a Project Steering Group.”*

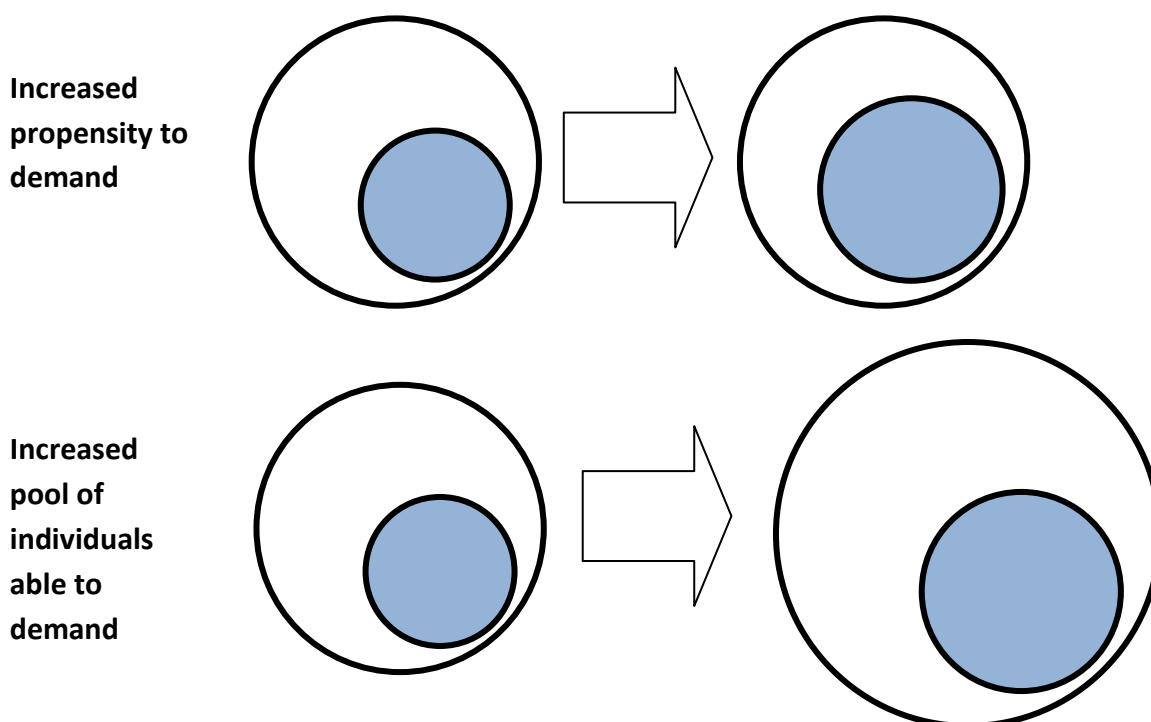
2. Subsequent conversations with the Steering Group honed the basis of analysis and it was agreed that the focus would be on:
  - a. Applications only, rather than acceptances or entrants, as the primary role of Aimhigher was viewed as being to increase applications to higher education, while the admissions process was largely out of Aimhigher’s control.
  - b. 18 and 19 year old applicants only, recognising the very individual nature of entry to higher education for mature students.
3. Unfortunately datasets that had been expected to be available from Action on Access proved not to be available. As a result, the analysis has necessarily been confined at this stage to headline data provided in Action on Access reports. At the time of writing (April 2011), a new dataset is being procured from UCAS and it is expected that a follow-up report will be provided in summer 2011 using these data.
4. The broad approach taken in trying to understand why different Aimhigher partnerships might have different levels of success is shown in Figure 1 below. It shows three basic types of possibly variability in deciding application rates: (a) that the local young people might have different characteristics, (b) that there might be different local environmental factors at work, and (c) that the portfolio of activities provided by Aimhigher might be different.

*Figure 1: localised variability in application rates*



5. In the context of this study, it has not been possible to evaluate the portfolio of activities offered by the AHW partnership in the abstract or in comparison to other Aimhigher partnerships, although Section K does present some views from practitioners.
6. With the datasets available, it has not been possible to assess all aspects of the young people in the AHW to deduce whether there are meaningful differences between them and their peers in other parts of England. For example, it has not been possible to see whether particular types of student (e.g. by gender or ethnicity) have higher or lower propensities to demand higher education. However, it has been possible to investigate certain aspects, especially around neighbourhood deprivation as a proxy for individual circumstances.
7. This study has therefore focused mainly on the local factors that may make an Aimhigher partnership area distinctive and achieve different levels of measurable success. These have included: levels of deprivation, school results, the impact of rurality and the nature of the local labour market. The report therefore attempts to assess whether the local factors that underlie Aimhigher activities in the AHW area are likely to predispose it for or against success in stimulating applications to higher education.
8. In undertaking this analysis, it has been assumed that there are two basic means of increasing the number of applications from a given Aimhigher partnership area. The first is to increase the propensity of suitably-qualified young people to make an application, while the second is to increase the size of the pool of young people who have the qualifications to apply to higher education, either as a result of improved rates of staying-on into post-compulsory education or through an increase in the underlying population of young people.

*Figure 2: pathways to increased applications*



9. Figure 2 above demonstrates these two types of growth. In both instances, the number of applications (the blue circles) have grown at the same rate. In the first diagram, the proportion of applicants has increased, while in the second diagram, the number of possible applicants (the white circles) has increased while the proportion has remained the same.
  
10. Clearly these two processes are not mutually exclusive in real-life. However, this example helpfully frames the nature of the problem being addressed by this study: to what extent has the AHW partnership managed to create either or both of these processes?

## D. Overview of Action on Access reports

1. The *raison d'être* of this study is drawn primarily from three reports distributed on a semi-confidential basis by Action on Access in 2009 and 2010 to Aimhigher partnerships to provide contextual information relative to regional and national data.
2. These three reports appear, *prima facie*, to show a consistent pattern in which the AHW area is consistently underperforming relative to both the South West region and England as a whole. The scope of these report and their findings are summarised in this section to provide context for this study.
3. The first report ("*Change in Entrant Numbers by Deprivation of Student's Home Neighbourhood*": AoA 2009) uses Higher Education Statistics Agency (HESA) data for people aged under 21 entering onto a full-time first degree programme and persisting until the 1<sup>st</sup> December census date. These data are analysed in respect of the Aimhigher partnership area from which the individual is drawn and the deprivation of their home neighbourhood as measured by the Index of Multiple Deprivation (IMD: see Section E for an explanation). The data provided covers the academic years of entry from 2002 to 2006.
4. This report finds that there has been a 7.8% increase in the entrants to higher education between 2002 and 2006, with a 25.8% increase in those coming from the most deprived 20% of neighbourhoods. The result of this differential rate of growth was that the proportion of entrants from these areas of deprivation rose from 11.5% in 2002 to 13.4% in 2006.
5. In contrast, the AHW area saw a 5.2% fall in entrants overall and a 23.4% fall from the most deprived 20% of neighbourhoods. This led to a fall in the proportion of entrants drawn from these neighbourhoods from 4.3% to 3.5%. The AHW area was thus reported to be one of the least successful Aimhigher partnership areas, showing a fall in entrants (especially from deprived neighbourhoods) in the face of a national growth.
6. Other partnership areas at the bottom of the performance table were Derbyshire (for which a data error had been identified), Sussex, Lancashire, Cumbria, Norfolk and County Durham; the strongly rural nature of most of these areas should be noted.
7. On closer investigation, it is likely that there is a data error in the figures in the 2002 base year for the AHW area. Using breakdown data provided by Action on Access, the number of entrants coming from Bristol and South Gloucestershire show as being inflated beyond normal annual fluctuations. Furthermore, the data provided by the University of West of England to HESA for this year shows a very large proportion of missing data (32% of students). It has not been possible to deduce the exact nature of this data issue in the course of this study, but it is considered very likely that there is one similar to that logged in the report for the Derbyshire partnership area.

8. Using 2003 as a base year to account for this apparent error, the performance of the AHW area rises to being broadly commensurate with the other parts of the South West region, with a positive growth in both overall numbers and those drawn from deprived neighbourhoods.
9. Given this data issue and the focus of the report on entrants rather than applicants, this report has not been used extensively in this study.
10. The second report (*“Estimated Young, Full-Time Higher Education (UCAS) Participation Rate – 2003 to 2008”*: AoA 2010a) uses data from UCAS on those people who have been accepted onto a full-time higher education place. For each year, it calculates the number of 18 year olds accepted in one year and the 19 year olds accepted the following year, broadly echoing the POLAR methodology (HEFCE 2005; 2010). The entry years from 2003 to 2008 are represented.
11. Significantly, it compares the number of accepted individuals with the underlying population of 18 year olds in the neighbourhood, as represented by the Small Area Population Estimate (SAPE : see Section E for an explanation). This creates a participation rate expressed as a percentage. These are then analysed using IMD for the student’s home neighbourhood.
12. There are a number of significant differences between AoA (2009), described above, and AoA (2010a):
  - a. 20 year old entrants are excluded from the latter.
  - b. The UCAS definition of an acceptance (see Section H for an explanation) does not account for individuals who do not take up their place or who take it up but leave before 1<sup>st</sup> December.
  - c. The latter only includes individuals coming through the UCAS application system and excludes some direct entrants to higher education, as well as applicants to nursing/midwifery diplomas prior to 2008<sup>1</sup>. However, it does include non-degree level higher education, which the former does not.
  - d. The latter attempts to account for population changes over the period being examined, while the former deals only with absolute numbers.
  - e. The latter excludes the 2002 entry year (with its likely error) and includes two additional years – 2007 and 2008.
13. The main finding of the report is that the participation rate for England rose by 3.6% (from 31.4% to 35.0%) between 2003 and 2008, with the rate for the bottom 40% of

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<sup>1</sup> This change is not insignificant. In 2008, this added 13,406 applicants within the 540,108 total (UCAS 2008), adding 2.5% to the applicant numbers overall. The additional percentage in England is likely to be somewhat higher than this as the UCAS total applicant figure includes EU and international students. The relative impact at a regional or partnership area level is impossible to assess with the dataset currently available.

neighbourhoods by deprivation rising disproportionately fast, by 5.0% (from 19.7% to 24.7%).

14. Once again, the equivalent figures for the AHW area evidenced less success in boosting participation than the national average. The overall participation rate rose by just 0.3% (from 32.1% to 32.4%), while the rate for the bottom 40% of neighbourhoods rose by 1.0% (from 14.7% to 15.7%).
15. Furthermore, the relative position of AHW relative to the English national average changed. In 2003, the participation rate was 0.7% above average, but in 2008 it was 2.6% below average. This was mainly due to a strong dip in participation in 2006 in the AHW area, most strongly within affluent neighbourhoods.
16. This report focuses solely on participation rates for higher education and so it has not formed the primary basis for analysis in this study. Furthermore, the use of SAPE data (which is discussed in detail in Section E) undermines the reliability of the participation rates quoted and, in particular, may provide participation rate figures for the AHW which are unrealistically low.
17. The third report (*"Change in the Number of UCAS Applicants and Accepted Applicants by Geography of Domicile and Deprivational Category of Home Neighbourhood"* : AoA 2010b) again uses data derived from UCAS, but this time figures for both applicants and acceptances are provided. Data is provided for 'under 19' and '20 and over' categories, but the approach used to mimic POLAR in AoA (2010a) is not used here. Data are provided for absolute numbers of individuals in the period between 2003 and 2009; no account is taken of population changes. As in both previous reports, these are analysed by IMD of their home neighbourhood.
18. The main finding is similar to that for AoA (2010a), despite the differences in method. England saw a 24.9% increase in applications and a 22.2% increase in acceptances between 2003 and 2009, with disproportionately large increases in the bottom 40% of neighbourhoods by IMD (37.2% and 34.6% respectively).
19. In contrast, the AHW area saw a more modest growth in applications of 19.0% and a growth of 14.9% in acceptances. The equivalent figures for the bottom 40% of neighbourhoods by IMD were 31.9% and 30.2% respectively.
20. The growth in the share of applications and acceptances coming from the bottom 40% of neighbourhoods by IMD in England was 2.7% for both. The AHW area saw a 1.1% rise in the share of applications from these areas and a 1.3% growth in acceptances.

21. In other words, the AHW area is shown as having underperformed compared to the English national average both in terms of the growth in overall applicant and acceptance numbers and in the share represented by deprived neighbourhoods. It is also shown to have underperformed relative to the rest of the South West region, although not by as great a margin.
22. As this report directly addresses the issue of applicants to higher education, it is this report and the data it contains which form the main basis of analysis in this study.



## E. Definitions and data

1. To aid interpretation of the data in this study and those in the reports from which it is drawn, it is necessary to define briefly some commonly-used measures and understand their origin and derivation.

### Lower-layer Super Output Area

2. Lower-layer Super Output Areas (LSOAs) are the geographical units used within the Action on Access reports. They are areas broadly representing an average of 1,500 individuals and constructed mathematically to join contiguous smaller areas which share similar statistical features<sup>2</sup>. They can helpfully be conceptualised as ‘neighbourhoods’ of roughly equal size.
3. There are features of LSOAs that cause challenges for analysis and interpretation:
  - a. They are small in terms of population, meaning that estimates can be subject to significant error or to the influence of specific circumstances, like the presence of a large housing complex (e.g. a hall of residence).
  - b. While the population is broadly equal between LSOAs, the geographical area covered can vary a great deal between urban and rural locations. This means that urban LSOAs are generally quite homogeneous, while rural LSOAs can contain wide variety (e.g. several whole villages).
  - c. LSOAs are defined mathematically, so they may not bear much resemblance to real neighbourhoods or communities ‘on the ground’. This can mean that concentrated demographic features can be effectively hidden by being split between two or more LSOAs (e.g. a council housing estate).

### Index of Multiple Deprivation

4. Since its inception in 2000, the Index of Multiple Deprivation<sup>3</sup> (IMD) has quickly become established as a pseudo-objective measure of deprivation as experienced by the inhabitants of an area. It is comprised of scores across seven ‘domains’<sup>4</sup> drawn from a variety of official statistics which are then weighted to provide a scalar score running between 0 (low deprivation) and roughly 100 (high deprivation) for each LSOA. The most recent data were published in March 2011 for 2010, but the data used in this report are from 2007.

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<sup>2</sup> For more information see:

<http://neighbourhood.statistics.gov.uk/dissemination/Info.do?page=aboutneighbourhood/geography/superoutputareas/soafaq/soa-faq.htm>

<sup>3</sup> For more information see: <http://www.communities.gov.uk/publications/communities/indicesdeprivation07>

<sup>4</sup> The seven domains are (a) income, (b) employment, (c) health and disability, (d) education, skills and training, (e) barriers to housing and services, (f) living environment, and (g) crime.

5. As these scores are not inherently meaningful, it has become commonplace to express them through a simple hierarchical ranking of all 32,482 LSOAs in England, running between most deprived to least deprived. To aid interpretation, each neighbourhood is typically assigned to a category of deprivation – most commonly, equally-sized quintiles or deciles.
6. The use of IMD rankings as a tool within discussions of widening participation was solidified with HEFCE's 2007 guidance on targeting Aimhigher activities (HEFCE 2007). Practitioners were instructed to focus their efforts on neighbourhoods which were ranked in the bottom 40% by IMD (and those in the bottom 40% by historic participation rates). Since then, IMD has featured in many reports about widening participation as an area-based proxy for locating individuals from lower socio-economic groups.
7. However, the use of IMD rankings in understanding widening participation has not been without challenge (Harrison & Hatt 2010). While it is a useful proxy, there is no objective reality behind the IMD statistic and essentially arbitrary decisions have been taken as to which statistical measures are used and how they are weighted. Specific effects of this include:
  - a. Rural deprivation is underplayed as these areas tend to have lower crime rates, better housing stock and higher rates of employment, all of which are prioritised in the IMD methodology (Tunstall & Lupton 2003).
  - b. Rural deprivation additionally tends to be 'averaged out' as several centres of population are needed to make up a single LSOA (Huby *et al* 2009). As deprived communities in rural areas tend to be small, they can be analysed with adjoining areas that are more affluent. This can also be true in urban areas due to the phenomenon noted in 3(c) above.
  - c. LSOAs containing certain types of facilities may appear more deprived than might be generally experienced by local people. A useful example is those LSOAs containing football stadia or shopping centres, which by their nature have a crime rate that may not be typical of the neighbourhood as a whole.
  - d. Area-based approaches will always miss a significant proportion of target individuals by over-estimating homogeneity (Rees, Power & Taylor 2007). Harrison & Hatt (2010) found that people from lower socio-economic households are not uncommonly found in affluent areas, but that the reverse is less frequently found.
8. In addition, the levels of deprivation within deciles and quintiles are not necessarily strongly comparable. In particular, there is a very wide range of IMD scores within the bottom groups, such that the 'depth' of deprivation may vary significantly within a quintile. Conversely, the boundaries are not distinct, such that very similar neighbourhoods might find themselves on different sides of an arbitrary boundary.

## POLAR2 statistic

9. The original POLAR<sup>5</sup> statistic was devised by HEFCE in 2005 (HEFCE 2005) as a measure of the higher education participation rate at the local authority ward level and then revised with new data and updated boundaries to become POLAR2 in 2007 (HEFCE 2007).
10. It is expressed as a series of quintiles of equal population size, running from 1 (low participation) to 5 (high participation). The POLAR2 statistic represents entry years from 2000 to 2004.
11. As POLAR2 references participation rates rather than applications, it is only used in this study to provide context in Section F.

## Small Area Population Estimates

12. Higher education application and participation rates are generally expressed as the percentage of a population who make an application or who are accepted onto a course. However, there is no 'gold standard' approach to measuring the size of the underlying population of young people in an area from which applicants might be drawn.
13. There are effectively two determinants of the population: (a) the boundaries of the geographical area, and (b) the specific individuals counted or estimated.
14. The POLAR2 methodology (HEFCE 2010) uses local authority wards and a bespoke calculation based on the child benefit records applying to 15 year olds followed by a three year time lag to provide an estimate of 18 year olds. This has a number of potential features:
  - a. Wards are not of a standard population size and so the unit of measurement can vary significantly both within and between local authority areas.
  - b. By measuring children at their home address (where child benefit is claimed) and extrapolating onwards, it takes account of boarding schools and other situations where young people might live away from home.
  - c. However, it does not take account of any migration occurring within those three years, either within the UK or from overseas. This means that the POLAR2 methodology is likely to inflate participation rates from areas with inbound migration like the South West (and *vice versa*).
15. In contrast, AoA (2010a) uses LSOAs and the Small Area Population Estimates<sup>6</sup> (SAPE) from the Office of National Statistics. The SAPE figures are constructed through an experimental

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<sup>5</sup> For more information see: <http://www.hefce.ac.uk/widen/polar>

methodology and are designed to provide a means of accurately measuring populations between the ten-yearly national censuses. They are derived from a wide variety of official data (e.g. child benefit claims and GP registrations) and mid-year estimates are available for each individual age bracket for each LSOA; it appears these are the data for 18 year olds that have been used in AoA (2010a).

16. SAPE data are difficult to work with for a number of reasons:
  - a. The originators are clear that they should be treated with caution as the methodology is still being refined. It is at its least precise when distant in time from the last census, as at present.
  - b. At the individual age group level, the numbers of individuals are very small, with the number of 18 year olds in each LSOA averaging between 15 and 20 and with some having consistently fewer than 5. This means that year-on-year data can be very volatile, especially when dealing with small collections of LSOAs.
  - c. The SAPE data are concerned with a census-style definition of who is domiciled in a particular area and not the community from which they are drawn. This has three specific ramifications:
    - i. The number of 18 year olds is skewed upwards by boarding schools – this is identified as an issue in AoA (2010a).
    - ii. The number of 18 year olds is also skewed upwards by university halls of residence and, to a lesser extent, in areas with a high density of student accommodation – this is not addressed in AoA (2010a), probably as it was assumed that 18 year olds in a mid-year estimate would not yet have gone away to university. However, this is not reflected in the data, where high concentrations of students can be clearly seen.
    - iii. It is likely that there is some depressing effect on the numbers of 18 year olds in areas that are net ‘exporters’ of university students, though this would take significant work to uncover and is beyond the scope of this study.
17. The net effect of the issues outlined in 14(c) above is that LSOAs containing boarding schools and halls of residence have completely unreliable SAPE data for the purposes of constructing application rates. These LSOAs will appear to have miniscule application/participation rates as the population of 18 year olds is inflated. This applies to 16 LSOAs out of 252 in Bristol, for example.
18. However, this problem has a potentially more important ramification in the context of AoA (2010a) and other Action on Access reports using SAPE figures. These rely on pooling both the number of applications/acceptances and the underlying populations for each quintile. Therefore, the inflated population figures from boarding schools and halls of residence will

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<sup>6</sup> For more information see: [http://www.statistics.gov.uk/about/Methodology\\_by\\_theme/sape/default.asp](http://www.statistics.gov.uk/about/Methodology_by_theme/sape/default.asp)

affect the pooled application rates. This could be a particular issue if halls of residence are disproportionately located in deprived neighbourhoods. Furthermore, those LSOAs with concentrations of students living in the community will also have lowered application/participation rates, which could again affect aggregated rates by IMD quintiles.

19. The overall effect at the macro level is that regions or partnership areas that are net importers of students are likely to have their application/participation rates depressed by the AoA (2010a) approach to estimating populations of 18 year olds. Quantifying this is beyond the scope of this report, but the AHW area provided 9,068 young higher education entrants in 2006 (AoA 2009), compared with 11,355 individuals attending higher education institutions in the area<sup>7</sup>; it is therefore a net importer.

### Population growth

20. The discussion of the limitations of the SAPE data above still leaves open the question of how to account for the relative population growth within calculations of application or participation rates for specific geographical areas. This is important as different parts of England are subject to very different population trends, so comparing absolute numbers of applicants can be misleading as the pools of possible applicants can be growing or shrinking at different rates.
21. Aside from the SAPE data for 18 year olds, there are a number of options. The SAPE data for 17 year olds still includes anomalies due to boarding schools, but it is not affected by student migration.
22. The ONS Mid-Year Population Estimate (MYPE)<sup>8</sup> also provides a data source for larger geographical areas, but this is only readily-available for a 15 to 19 age banding. As described in 10 above, the POLAR2 methodology uses a bespoke estimate, but this is not publicly available.
23. Table 1 below shows how these estimates vary for England, the South West region and the AHW area. Firstly, across all three measures the SAPE data for 18 year olds are significantly higher than the other estimates, supporting the analysis above which questions its reliability. Furthermore, the difference in the AHW area is the greatest. Secondly, the South West region has a faster rate of growth than for England on all three estimates, with the AHW growth being equal or slightly higher than the region. Thirdly, the SAPE data for 17 year olds and the MYPE data show broadly similar growth rates, although the latter is slightly higher for all three geographical areas.

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<sup>7</sup> Drawn from the HESA website for the 2006/07 academic year :

[http://www.hesa.ac.uk/index.php?option=com\\_content&task=view&id=2072&Itemid=141](http://www.hesa.ac.uk/index.php?option=com_content&task=view&id=2072&Itemid=141)

<sup>8</sup> For more information see : <http://www.statistics.gov.uk/statbase/Product.asp?vlnk=15106>

Table 1: Percentage population growth between 2002 and 2009 by different estimates

	England	South West	AHW Area
<b>SAPE 17 year olds</b>	5.1%	8.7%	8.7%
<b>SAPE 18 year olds</b>	11.7%	15.1%	17.1%
<b>MYPE 15 to 19 year olds</b>	6.2%	10.8%	11.1%

24. The implication of the data above is that, *ceteris paribus*, the South West region and the AHW area should have seen larger percentage increases in applications to higher education than England as their populations of young people have grown faster between 2002 and 2009. However, as we shall see in Section G below, this was not the case.

### Rural and Urban Area Classification

25. The final measure used in this study which requires explanation is the Rural and Urban Area Classification<sup>9</sup>. This was published by the Office for National Statistics in 2004 and is available at the LSOA level (among other levels of resolution) and uses a three-part scale:

- 1 = urban
- 2 = town and fringe
- 3 = village, hamlet and isolated dwellings

26. For the purposes of this report, urban will refer to LSOAs classified as '1' and rural to those classified as '2' or '3'.

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<sup>9</sup> For more information see:

<http://www.ons.gov.uk/about-statistics/geography/products/area-classifications/rural-urban-definition-and-la-classification/index.html>

## F. Contextualising the South West region and the AHW area

1. The regions of England are far from homogeneous and have specific differences in their demography that are likely to affect higher education application rates.

Table 2: Proportion of LSOAs in each IMD ranking quintile by English region

	Bottom 20%	20-40%	40-60%	60-80%	Top 20%
East Midlands	17%	20%	19%	22%	23%
East of England	6%	17%	23%	25%	29%
London	28%	29%	20%	14%	9%
North East	34%	24%	17%	15%	10%
North West	32%	20%	18%	17%	13%
South East	6%	14%	19%	23%	38%
South West	9%	20%	26%	25%	20%
West Midlands	27%	20%	20%	19%	14%
Yorkshire & The Humber	28%	20%	18%	20%	14%
All England	20%	20%	20%	20%	20%

Table 3: Proportion of LSOAs in each POLAR2 quintile by English region<sup>10</sup>

	1	2	3	4	5
East Midlands	12%	20%	17%	25%	25%
East of England	12%	18%	18%	27%	25%
London	5%	17%	20%	20%	39%
North East	24%	23%	17%	19%	16%
North West	17%	20%	17%	20%	26%
South East	8%	12%	19%	25%	36%
South West	9%	14%	21%	28%	29%
West Midlands	14%	24%	20%	18%	25%
Yorkshire & The Humber	22%	22%	19%	20%	17%
All England	12%	18%	19%	22%	28%

Table 4: Proportion of LSOAs in each rural and urban area classification by English region

	1 (urban)	2	3 (rural)
East Midlands	72%	16%	12%
East of England	70%	15%	15%
London	100%	0%	0%
North East	81%	13%	5%
North West	89%	6%	5%
South East	78%	10%	11%
South West	67%	14%	18%
West Midlands	85%	6%	9%
Yorkshire & The Humber	81%	11%	8%
All England	81%	9%	9%

<sup>10</sup> As electoral wards and LSOAs do not articulate exactly, this table uses an estimation process which may tend to slightly exaggerate the proportion of LSOAs in with POLAR2 statistics.

Table 5: Youth ethnicity and unemployment, qualification to Level 4 and self-employment by English region

	BME individuals in 2010 Q2 (16 to 19 year olds)	Unemployment rate in 2005 Q2 (16 to 19 year olds)	Unemployment rate in 2010 Q2 (16 to 19 year olds)	Proportion of individuals qualified to Level 4 in 2009	Proportion of self-employed individuals in 2010 Q2
East Midlands	12%	15%	26%	26%	12%
East of England	10%	15%	25%	27%	15%
London	48%	32%	37%	40%	16%
North East	5%	22%	31%	24%	9%
North West	12%	19%	28%	27%	12%
South East	8%	14%	24%	33%	14%
South West	3%	12%	22%	29%	15%
West Midlands	18%	19%	28%	25%	13%
Yorkshire & The Humber	12%	17%	26%	27%	12%
All England	15%	17%	27%	30%	14%

Source: Annual Population Survey

Table 6: Youth population growth by English region

	Population growth of 15 to 19 year olds – 2002 to 2009
East Midlands	10%
East of England	10%
London	-1%
North East	1%
North West	3%
South East	11%
South West	11%
West Midlands	5%
Yorkshire & The Humber	7%
All England	6%

Source: Mid-Year Population Estimates

2. The South West is among the least deprived regions, with just 9% of its LSOAs in the bottom 20% nationally; only the South East and the East of England are less deprived overall. Low participation neighbourhoods are also relatively under-represented, having the third strongest participation profile after London and the South East. The South West has the third highest proportion of people educated to Level 4, once again trailing London and the South East and the second highest proportion of self-employed people after London.
3. In terms of unique features, the South West is the most rural region (with the East of England in second place), has the lowest proportion of young people from black and



minority ethnic backgrounds and has consistently had the lowest youth (and overall) unemployment rate over the last six years for which measurements are available. It has also has the joint highest growth in the population of 15 to 19 year olds between 2002 and 2009, along with the South East.

#### Contextualising the Aimhigher West area

4. Within the South West region, the AHW area is broadly average in terms of the statistics used in the section above. It is slightly less deprived and has more neighbourhoods with above average HE participation, with the Peninsula area being the most deprived and having the lowest HE participation. The AHW area is the most urban of the partnership areas, but it is still markedly rural compared to other regions.

*Table 7: Proportion of LSOAs in each IMD ranking quintile by South West partnership area*

	<b>Bottom 20%</b>	<b>20-40%</b>	<b>40-60%</b>	<b>60-80%</b>	<b>Top 20%</b>
<b>LIFE</b>	6%	13%	31%	30%	20%
<b>Peninsula</b>	11%	32%	32%	19%	7%
<b>West</b>	9%	13%	20%	27%	31%
<b>All South West</b>	9%	20%	26%	25%	20%

*Table 8: Proportion of LSOAs in each POLAR2 quintile by South West partnership area*

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>LIFE</b>	7%	13%	24%	30%	26%
<b>Peninsula</b>	7%	13%	25%	36%	19%
<b>West</b>	10%	14%	16%	21%	37%
<b>All South West</b>	9%	14%	21%	28%	29%

*Table 9: Proportion of LSOAs in each rural and urban area classification by South West partnership areas*

	<b>1 (urban)</b>	<b>2</b>	<b>3 (rural)</b>
<b>LIFE</b>	69%	15%	16%
<b>Peninsula</b>	58%	18%	23%
<b>West</b>	74%	11%	15%
<b>All South West</b>	67%	14%	18%

5. Reliable data for youth ethnicity, unemployment and population growth are not available below the regional level. Table 10 below provides equivalent data for the whole population aged 16 and over and so is not directly comparable with the regional data presented above. Within the South West region, black and minority ethnic communities are concentrated in Bristol and Swindon, as well as in the city of Gloucester (7%) within Gloucestershire. Unemployment rates vary across the South West region, with urban areas tending to have

higher rates than rural areas. Urban areas also tended to have a higher proportion of individuals qualified to Level 4 and fewer self-employed people.

Table 10: South West local authorities by ethnicity, unemployment and qualification to Level 4

	BME individuals in 2010 Q2	Unemployment rate in 2005 Q2	Unemployment rate in 2010 Q2	Proportion of individuals qualified to Level 4 in 2009	Proportion of self-employed individuals in 2010 Q2
Bath & NE Somerset	3%	3%	6%	35%	16%
Bournemouth	4%	4%	7%	25%	14%
Bristol	9%	5%	8%	35%	10%
Cornwall	1%	4%	7%	24%	23%
Devon	1%	3%	6%	30%	19%
Dorset	1%	3%	5%	29%	19%
Gloucestershire	3%	3%	5%	33%	15%
North Somerset	2%	3%	6%	30%	14%
Plymouth	3%	4%	7%	24%	9%
Poole	3%	3%	6%	27%	11%
Somerset	1%	3%	8%	26%	14%
South Gloucestershire	3%	3%	4%	27%	10%
Swindon	8%	4%	7%	23%	9%
Torbay	2%	4%	10%	24%	17%
Wiltshire	3%	3%	4%	33%	14%

Source: Annual Population Survey

- The rate of youth population growth in the AHW area is in keeping with the South West region average at 11% between 2002 and 2009, but it is significantly higher than for the Peninsula partnership and somewhat lower than the LIFE partnership.

Table 11: Youth population growth by South West partnership areas

	Population growth of 15 to 19 year olds – 2002 to 2009
LIFE	14%
Peninsula	5%
West	11%

Source: Mid-Year Population Estimates

### Understanding the Aimhigher West area

- It is possible to drill down further into the AHW area by individual local authority areas by deprivation, historic HE participation rates and urbanity/rurality.

Table 12: Proportion of LSOAs in each IMD ranking quintile by local authorities in AHW area

	Bottom 20%	20-40%	40-60%	60-80%	Top 20%
Bath & North East Somerset	3%	8%	18%	26%	44%
Bristol	28%	29%	21%	16%	6%
Cheltenham	12%	16%	13%	21%	37%
Cotswold	0%	2%	14%	45%	39%
Forest of Dean	0%	12%	54%	30%	4%
Gloucester	24%	20%	16%	18%	22%
Kennet	0%	5%	18%	36%	41%
Mendip	3%	12%	36%	34%	15%
North Somerset	10%	8%	15%	33%	33%
North Wiltshire	0%	6%	12%	24%	59%
Salisbury	1%	5%	23%	27%	42%
Sedgemoor	7%	21%	25%	37%	10%
South Gloucestershire	1%	5%	20%	27%	48%
Stroud	0%	7%	13%	46%	33%
Swindon	15%	13%	17%	26%	29%
Tewkesbury	2%	8%	23%	23%	44%
West Wiltshire	3%	6%	19%	30%	42%

- Bristol and Gloucester emerge as the most deprived local authorities in the AHW area, with the former having 58% of LSOAs in the bottom 40% by IMD and the latter 44%. Conversely, the most affluent local authority is North Wiltshire, with 59% of its LSOAs in the top 20% by IMD.
- By reversing the columns and rows, Table 13 below investigates where the LSOAs in each quintile are to be found, taking account of the relative sizes of the local authorities.

Table 13: Proportion of LSOAs in each local authority in the AHW area by IMD ranking quintile

	BANES	Bristol	Cheltenham	Cotswold	Forest of Dean	Gloucester	Kennet	Mendip	North Somerset	North Wiltshire	Salisbury	Sedgemoor	South Gloucs	Stroud	Swindon	Tewkesbury	West Wiltshire
Bottom 20%	3%	49%	6%	0%	0%	12%	0%	1%	9%	0%	1%	3%	1%	0%	12%	1%	1%
20-40%	5%	37%	6%	1%	3%	8%	1%	4%	5%	3%	2%	7%	4%	3%	8%	2%	3%
40-60%	7%	17%	3%	2%	9%	4%	3%	8%	6%	3%	5%	5%	10%	3%	6%	4%	5%
60-80%	7%	10%	4%	5%	4%	3%	4%	5%	10%	5%	5%	6%	10%	8%	7%	3%	6%
Top 20%	11%	3%	6%	4%	0%	3%	4%	2%	9%	10%	6%	1%	16%	5%	7%	4%	7%

- As can be seen, Bristol accounts for 49% of the LSOAs in the bottom 20% by IMD in the AHW area; 71 out of 145 LSOAs in the quintile. Gloucester and Swindon are important

contributors (12% each), followed by North Somerset (concentrated in Weston-super-Mare) with 9% and Cheltenham with 6%. Looking at the bottom 10%, Bristol's proportion rises to 39 out of 62 LSOAs – i.e. 63% of the total. Bristol also accounts for the largest share of the 20-40% quintile by IMD with 37%, once again followed by Swindon (8%), Gloucester (8%) and Cheltenham (6%), although every local authority has at least one LSOA falling into this banding.

11. At the opposite end of the scale, South Gloucestershire contributes the highest proportion of LSOAs in the top 20% with 16%, followed by BANES (11%), North Wiltshire (10%) and North Somerset (9%).

*Table 14: Proportion of LSOAs in each rural and urban area classification by local authorities in the AHW area*

	<b>1 (urban)</b>	<b>2</b>	<b>3 (rural)</b>
<b>Bath &amp; North East Somerset</b>	77%	11%	12%
<b>Bristol</b>	100%	0%	0%
<b>Cheltenham</b>	100%	0%	0%
<b>Cotswold</b>	24%	31%	45%
<b>Forest of Dean</b>	32%	22%	46%
<b>Gloucester</b>	100%	0%	0%
<b>Kennet</b>	20%	41%	39%
<b>Mendip</b>	48%	21%	31%
<b>North Somerset</b>	78%	9%	13%
<b>North Wiltshire</b>	55%	15%	29%
<b>Salisbury</b>	40%	23%	37%
<b>Sedgemoor</b>	56%	19%	25%
<b>South Gloucestershire</b>	87%	5%	8%
<b>Stroud</b>	61%	17%	22%
<b>Swindon</b>	87%	9%	4%
<b>Tewkesbury</b>	67%	15%	19%
<b>West Wiltshire</b>	71%	11%	18%
<b>AHW area</b>	74%	11%	15%
<b>SW region</b>	67%	14%	18%

12. Table 14 reveals Bristol, Cheltenham and Gloucester to be entirely urban while, at the other end of spectrum, Kennet (20%), Cotswold (24%) and the Forest of Dean (32%) are defined as being the least urban.
13. The Forest of Dean is also seen as having the greatest proportion of the most rural areas, with 46% of its LSOAs in this quartile. Cotswold (45%), Kennet (39%), Salisbury (37%) and Mendip (31%) all have over 30% of their LSOAs in the most rural category.

Table 15: Proportion of LSOAs in each rural and urban area classification by IMD ranking quintiles

	1 (urban)	2	3 (rural)
Bottom 20%	99%	1%	0%
20-40%	97%	3%	0%
40-60%	73%	12%	15%
60-80%	60%	11%	29%
Top 20%	68%	17%	15%

14. By cross-tabulating the IMD ranking of the LSOAs in the AHW area against the urbanity/rurality measure, it can be seen that there is a strong disparity. Just 1% of LSOAs in the bottom 20% by IMD (2 out of 145) are rural, with a similar pattern (3%, or 5 out of 198) in the 20-40% IMD quintile. In other words, there are very few LSOAs in the AHW area that are defined as being both rural and deprived. The overwhelming majority of deprivation (as measured by IMD) is therefore to be found in urban areas.

15. The seven LSOAs that are rural and fall into the bottom 40% category by IMD are to be found in Mendip (3), the Forest of Dean (2), BANES (1) and Salisbury (1):

- Glastonbury St Edmund's Ward
- Glastonbury St Benedict's Ward
- Shepton East Ward
- Lydney East Ward x 2
- Peasedown Ward
- Amesbury East Ward

Table 16: Youth population growth by local authorities in the AHW area

	Population growth of 15 to 19 year olds – 2002 to 2009		Population growth of 15 to 19 year olds – 2002 to 2009
BANES	11%	North Somerset	10%
Bristol	0%	Sedgemoor	13%
Cheltenham	16%	South Gloucestershire	14%
Cotswold	14%	Stroud	10%
Forest of Dean	10%	Swindon	8%
Gloucester	10%	Tewkesbury	7%
Mendip	21%	Wiltshire	18%

Source: Mid-Year Population Estimates

16. Youth population growth has not been evenly distributed across the AHW area. The local authority areas with the fastest growing population of 15 to 19 year olds have been

Mendip (21% increase), Wiltshire (18% increase) and Cheltenham (16% increase), while Bristol has had no net increase and Tewkesbury (7% increase) and Swindon (8% increase) have been markedly below the AHW area average.

## G. Trends in applications

1. The data in this section are drawn from AoA (2010b) for England, the South West region and the AHW partnership area between 2003 and 2009 for applicants aged 19 and under.
2. Figures 3, 4 and 5 below show the percentage change in applications relative to the 2003 base year (i.e. 2003 = 100) by IMD quintiles for (a) England excluding the South West region, (b) the South West region excluding the AHW area, and (c) the AHW area. The changes have not been adjusted for population growth over this period.
3. The vertical scales have been kept identical so that the slope of individual lines can be appropriately compared between figures.

Figure 3 : Percentage change in applications by IMD quintiles (England excluding South West region)

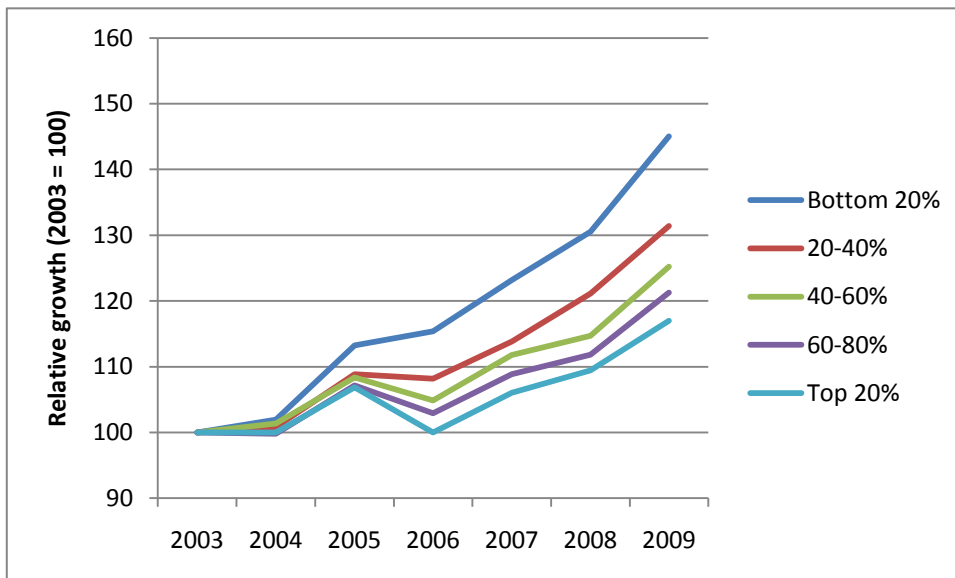


Figure 4 : Percentage change in applications by IMD quintiles (South West region excluding AHW area)

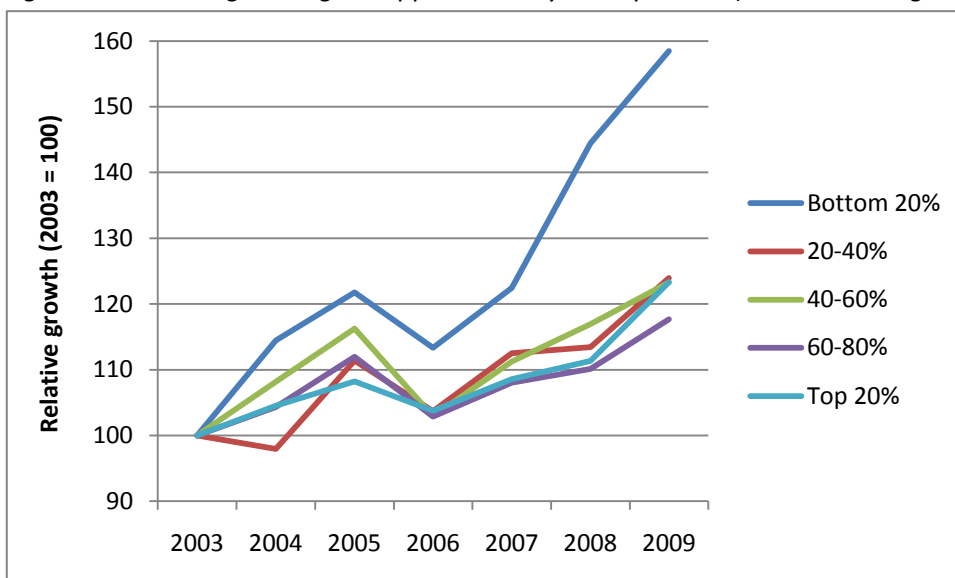
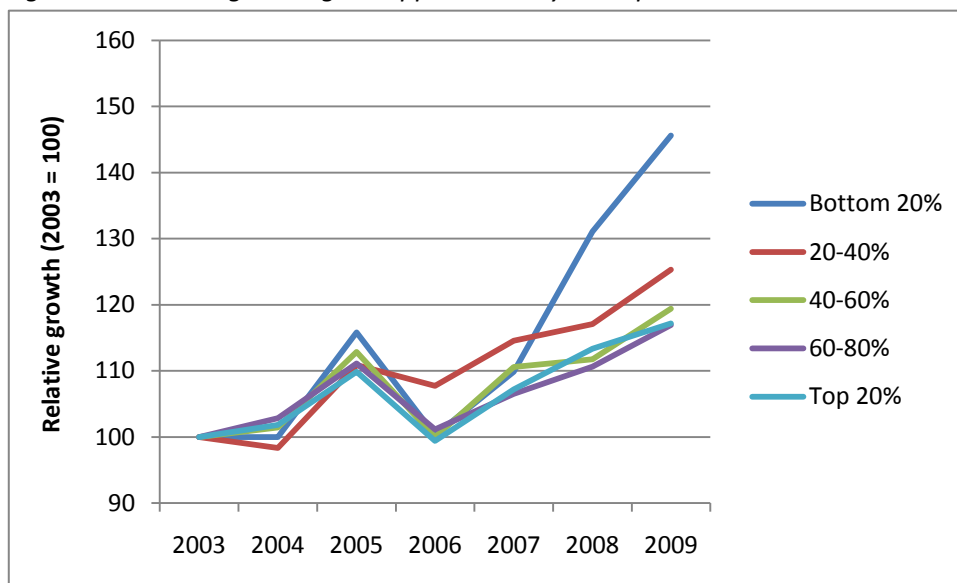


Figure 5 : Percentage change in applications by IMD quintiles in AHW area



3. Figure 3 shows a clear demarcation between the quintiles, with a coherent pattern of a more rapid growth in applications by IMD quintiles, with deprived areas showing greater growth than less deprived areas.
4. All the groups except one show a relative drop in applications in 2006, concurrent with the implementation of the changes under the 2004 Higher Education Act – e.g. the introduction of ‘top up’ tuition fees and institutional bursaries. Uniquely, and counter-intuitively, the bottom 20% by IMD group shows a small relative growth. All five quintiles show rapid, and generally accelerating, rates of growth since 2006.
5. The picture for the South West region is less clear. All five quintiles saw a significant drop in applications in 2006 despite above average growth relative to England in the previous two years for all except the 20-40% quintile. Since 2006, there has once again been a faster than average growth for the bottom 20% quintile, with 58% growth over the period from 2003 to 2009, compared to 46% for the rest of England. The other four quintiles have had similar rates of growth to each since 2006, with no clear pattern, but at rates generally lower than the national average.
6. The AHW area shows a broadly similar pattern to the South West region, although without so much early growth in the 2003 to 2005 period. As with the rest of the region, applications in the AHW area dipped strongly in 2006, returning to approximately their 2003 level in all cases except the 20-40% quintile.
7. The bottom 20% quintile showed very rapid growth in 2008 and 2009, finally showing a 45% growth in applications across the whole period; this is commensurate with the England average, but lower than the rest of the South West region. The other four quintiles showed below average rates of growth relative to England.



8. To summarise, the South West region and AHW area had stronger than the national average rates of growth up to 2005, but the drop in applications in 2006 effectively reversed this initial strength. Since 2006, the bottom 20% quintile has seen a very rapid rate of growth in both the South West region and the AHW area, catching up with the national average (AHW area) or exceeding it (South West region); the other four quintiles have not.
  
9. It is possible to illustrate the same data in another way to provide additional insight. Figures 6 to 9 below show the percentage change in applications relative to the 2003 base year (i.e. 2003 = 100) by area for: (a) all deprivation groups, (b) the bottom 20% quintile by IMD, (c) the 20-40% quintile, and (d) the top 60%.

Figure 6: Percentage change in applications by area – all LSOAs

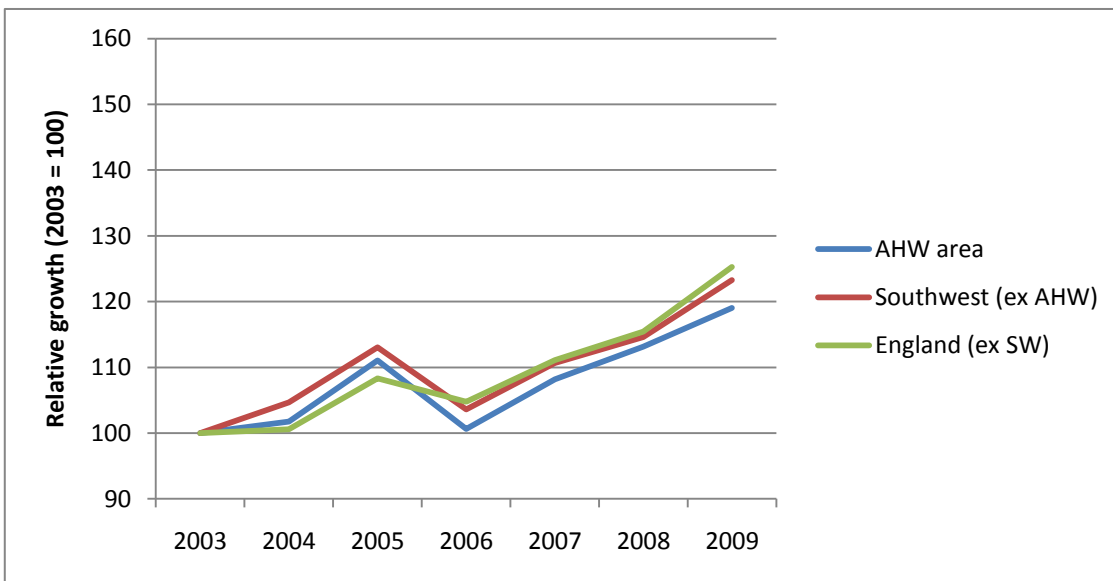


Figure 7: Percentage change in applications by area – bottom 20% of LSOAs by IMD

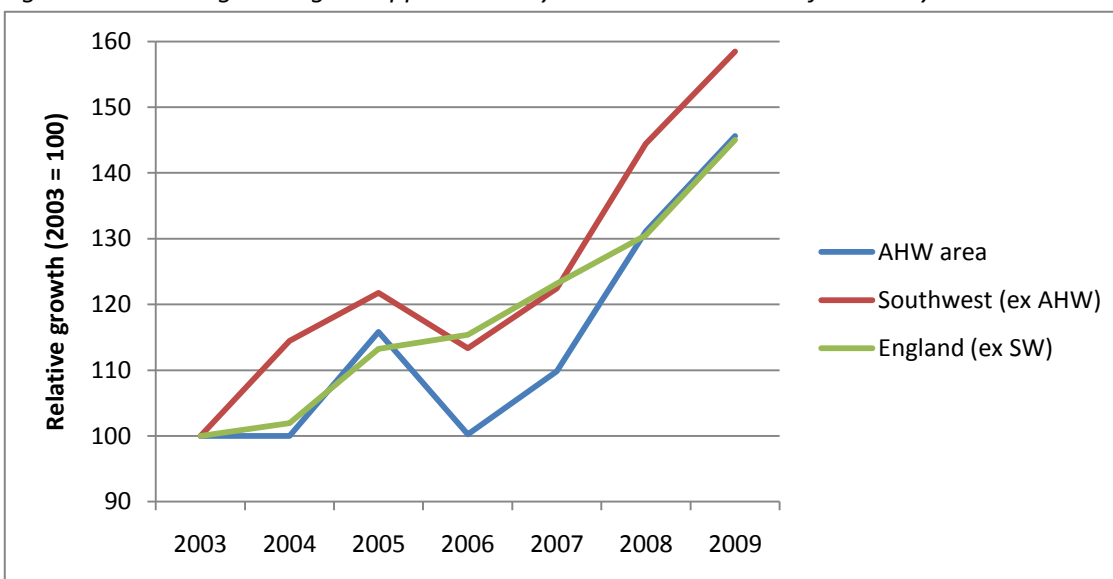


Figure 8: Percentage change in applications by area – 20-40% quintile of LSOAs by IMD

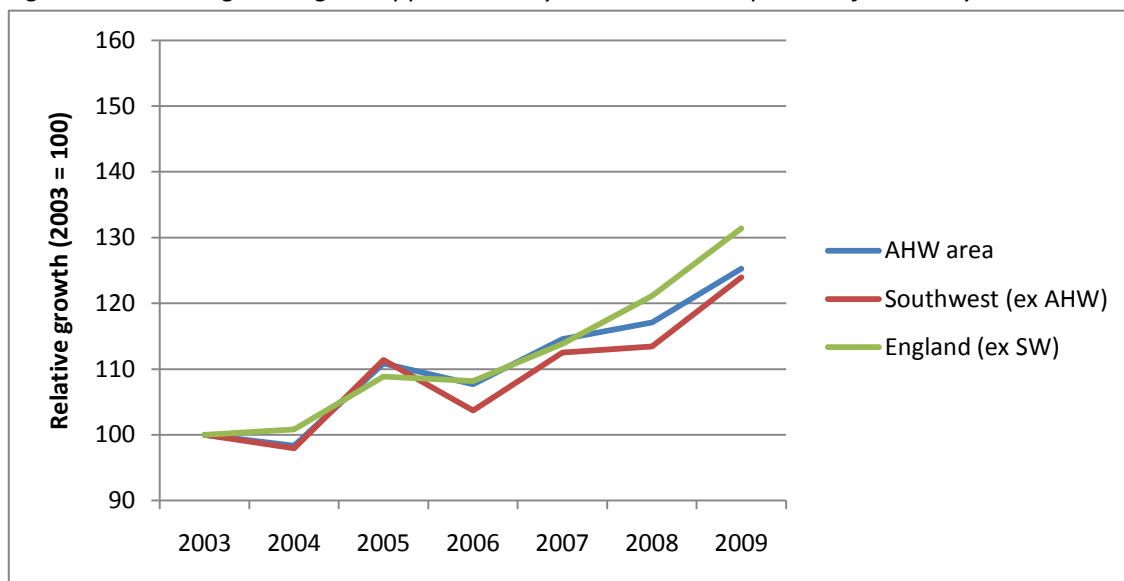
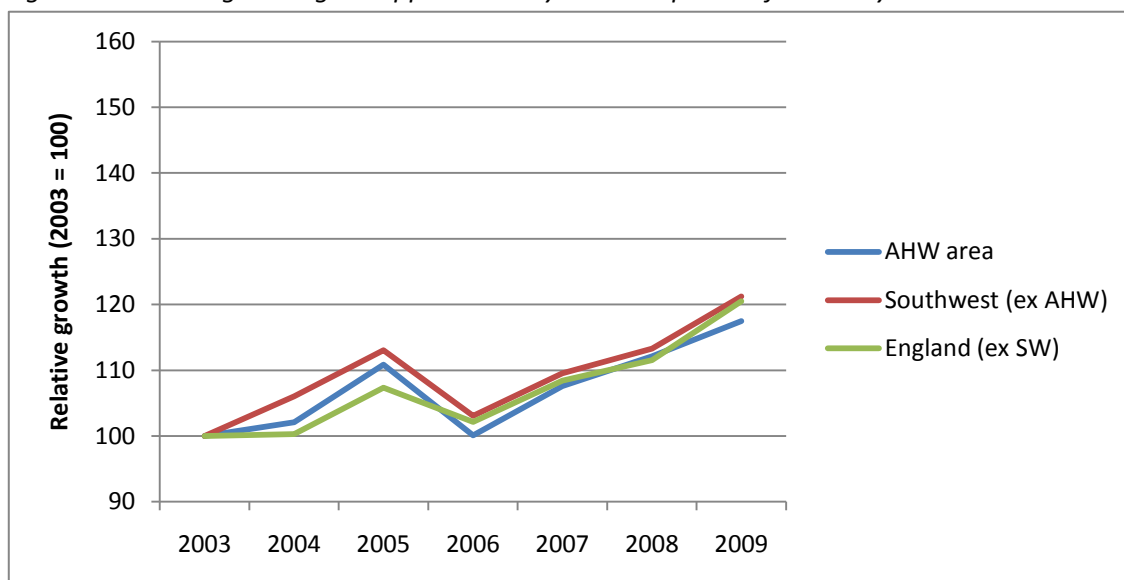


Figure 9: Percentage change in applications by area – top 60% of LSOAs by IMD



10. Figure 6 shows that the growth in applications has been stronger in the rest of the South West region than in the AHW area throughout the period between 2003 and 2009. Both were stronger than the England average prior to 2006, but after a disproportionate drop in applications in that year, both have since been consistently weaker, although only marginally so in the case of the South West region.
11. While the England average for the bottom 20% quintile has experienced a period of sustained growth, including in 2006, this has not been the case for the South West region or the AHW area. Both saw strong falls in applications in 2006. In the case of the AHW area, this returned the numbers to their 2003 levels, while the South West region reversed the above average growth in 2004 and 2005. Since 2006, both the South West region and the

AHW area have had faster rates of growth than the national average (as seen in the steeper line), both exceeding the England average in 2008.

12. The changes in applications in the 20-40% quintile by IMD have been less dramatic, with the South West region and the AHW area broadly echoing the England average across the period in question. While there were drops in applications in 2006, they were less significant than among the bottom 20% quintile. However, and again contrary to the bottom 20% quintile, relative performance of the South West region and the AHW area has declined compared to the England average since 2008.
13. The 20-40% quintile is the only one where the growth in applications has been consistently higher in the AHW area than in the rest of the South West region, although the gap closed significantly in 2009. In all other deprivation groups, applications have grown faster in the South West region.
14. The top 60% group by IMD has a pattern which is very similar to that shown in Figure 6 for all groups, which is largely due to the numerical weight of this group as a proportion of the whole population. One again, prior to 2006, the South West region and the AHW area were significantly outperforming the England average, while all three divisions have had similar rates of growth since; the South West region has remained slightly above the national average throughout.
15. It is important to stress that the analysis in this section does not take account of population changes across the period in question. As shown in Section E, the AHW area has had a faster rate of youth population growth than the English average. With the data currently available, it is not possible to model this reliably. However, the general point is that the relative underperformance of the AHW area in terms of application rates is actually greater than presented within this analysis.

#### Changing base years

16. All of the above analysis is constructed around a 2003 base year. There is no particularly strong reason to select this year, except perhaps that it was the year immediately before the creation of Aimhigher. Two predecessor initiatives (Partnerships for Progression and the Excellence Challenge) were in existence prior to this, while, arguably Aimhigher activities were not effectively launched until 2005 or later.
17. However, the choice of base year is important to any time series analysis that is looking at cumulative percentage change, such as applications to higher education. As can be seen from the graphs above, 2004 was a particularly strong year for applications in the South West region outside the AHW area relative to 2003, giving it an early boost in applications.

18. Conversely, 2003 was a strong year for applications in the AHW area. One possible reason for this, suggested by members of the Steering Group, is that there was a problem with the marking of A Level examinations in 2002 in Bristol and South Gloucestershire, delaying applications to higher education for some young people until 2003.
19. If 2004 is chosen as the base year (i.e. 2004 = 100), a different relative pattern between the AHW area and the rest of the South West region emerges for the total applications. Rather than the AHW area trailing the South West region, the two growth patterns become remarkably similar, although both are still significantly lower than the England average from 2006 onwards.

Figure 10: Percentage change in applications by area from 2004 base year – all LSOAs

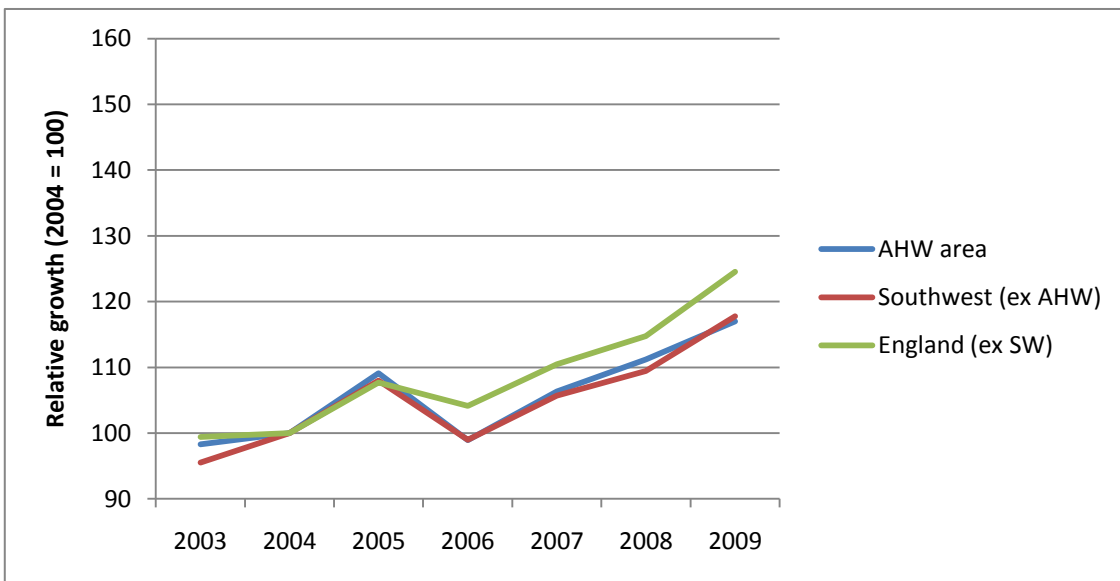
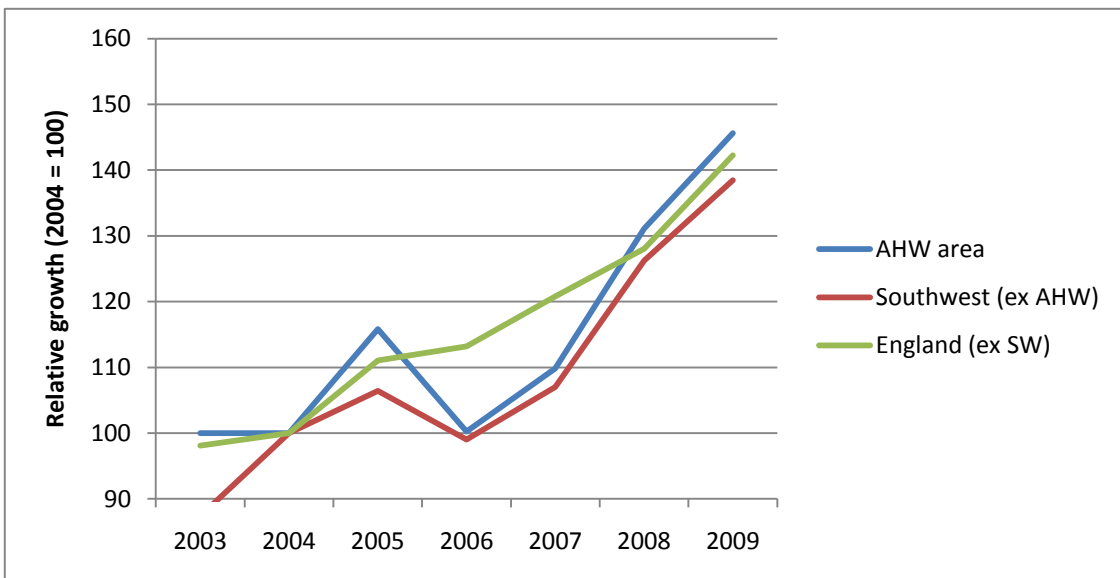


Figure 11: Percentage change in applications by area from 2004 base year – bottom 20% of LSOAs



20. This type of change is even more marked for the bottom 20% quintile by IMD when a 2004 base year is chosen. As can be seen in Figure 11 above, the AHW area (46% growth) is seen to outperform not only the rest of the South West region (38% growth), but also the rest of England (42% growth).

### Summary

21. A number of broad conclusions can be drawn from this analysis:
  - a. 2006 had a disproportionately strong effect on applications in the South West region, including the AHW area, compared to elsewhere in England. The drop was most strongly marked in the bottom 20% quintile, which showed an increase elsewhere.
  - b. As a result, the South West region and AHW area went from over-performing (2003 to 2005) to under-performing (2006 to 2009).
  - c. In 2008 and 2009, the rate of growth in the bottom 20% quintile has been very strong in the South West region and the AHW area; the latter is now in line with the national average, while the former is above average.
  - d. Since 2007, growth in the 20-40% quintile has been slower in the South West region and the AHW area than elsewhere in England.
  - e. Differential population growth rates mean that the performance of the AHW area and South West region is actually slightly poorer than presented relative to the English average.
  - f. However, the selection of base year is very important to the pattern that emerges and the use of 2004 rather than 2003 portrays the AHW area in a much improved light.

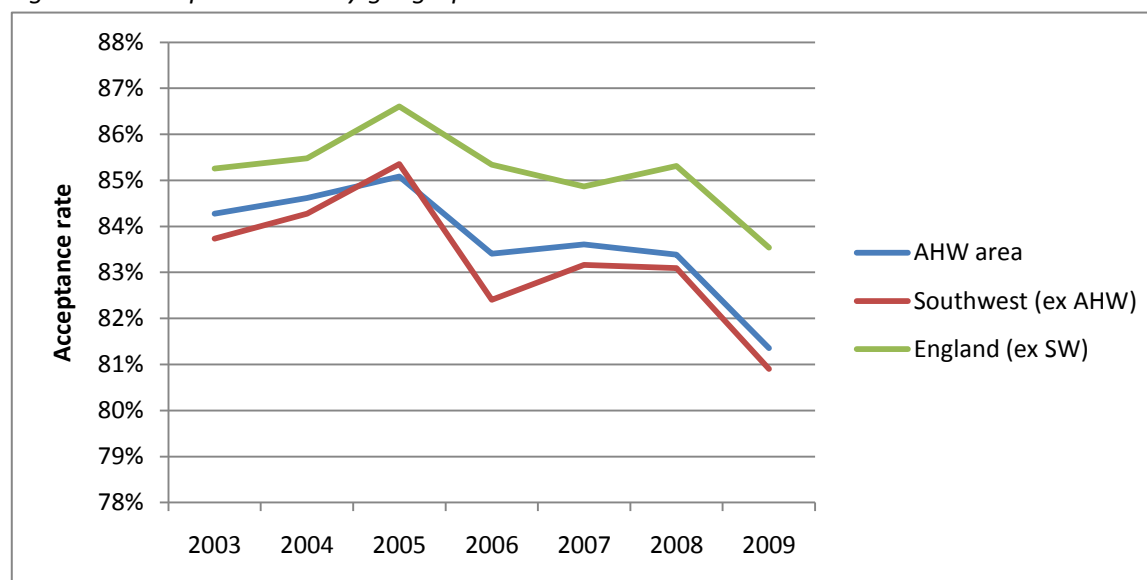
## H. Acceptance rate

1. Using data from UCAS, Action on Access (AoA 2010b) have made available data on acceptances alongside that discussed in Section G for applications. Whilst acceptances for higher education places are formally outside of the remit of this study, a brief exploration is revealing.
2. An 'acceptance' in the terms used by UCAS is effectively a two-part negotiation following an 'application'. Firstly, a higher education institution must accept the applicant and then the applicant must accept the offer. Acceptances are therefore a subset of applicants and it is possible to define an 'acceptance rate' representing the percentage of applicants who are accepted.
3. The table and graph below shows the acceptance rates for England (excluding the South West region), the South West region (excluding the AHW area) and the AHW area.

Table 17: Acceptance rate by geographical area

	2003	2004	2005	2006	2007	2008	2009
<b>AHW area</b>	84.3%	84.6%	85.1%	83.4%	83.6%	83.4%	81.4%
<b>South West (ex AHW)</b>	83.7%	84.3%	85.4%	82.4%	83.2%	83.1%	80.9%
<b>England (ex SW)</b>	85.3%	85.5%	86.6%	85.3%	84.9%	85.3%	83.5%

Figure 12: Acceptance rate by geographical area



4. As can be seen, the AHW area and the rest of the South West region have broadly similar acceptance rates across the period from 2003 to 2009. The acceptance rates have dropped from around 84% in 2003 to 81% in 2009, concurrent with rising applications.

5. Furthermore, the rates in the South West region and the AHW area are significantly lower than the England average and the gap with this figure has widened over this period from around 1.2% in 2003 to 2.3% in 2009.
6. In other words, young people living in the South West and applying for a higher education place are less likely to secure one than young people living elsewhere in England and they are becoming even less likely to do so through time. The same basic pattern exists across all IMD quintiles.
7. A full investigation is beyond the scope of this study, but there are broadly four possible hypotheses for this phenomenon:
  - a. South West applicants are less strong, either academically or in terms of the wider application process (e.g. personal statement or interview).
  - b. South West applicants have unrealistically high expectations of which higher education institutions are available to them.
  - c. South West applicants are more selective or limited about the higher education institutions to which they apply (e.g. only those in the region).
  - d. South West applicants are less committed to attending higher education and disproportionately decline offers made to them.
8. There is a potential negative feedback loop with applications, especially if the lower rate of acceptances is driven by the higher education institutions rather than the individuals, whereby the relative inability of one cohort of young people to secure places could adversely influence demand from following cohorts. This might operate through peer groups, teachers or wider information, advice and guidance provision.

## I. School results

1. This section addresses patterns in school results and post-compulsory admissions over the period between 2001 and 2010 as a likely determinant of higher education demand.
2. It will primarily use the statistic for the number of young people achieving five GCSE passes at grades A\* to C (or equivalent) – this will henceforth be referred to as the ‘pass rate’ to avoid repetition<sup>11</sup>. This is widely available at a number of geographical levels and the definition has remained broadly consistent throughout the period in question. It has largely now been partly superseded by a statistic which only includes young people numbering English and Maths among the five, but data for this are only available since 2003. In any case, the former is arguably a more appropriate measure of the proportion of students who have experienced success at 16 which may translate into persistence into post-compulsory education or training.
3. The reference list for schools in this section is the AHW Intervention Model (Aimhigher West 2008), which excludes independent schools. Averages have been constructed using the size of the school as per the 2010 roll. Where data for a school have been unavailable for a year (e.g. during transfer to an academy), the previous year has been substituted. No data have been included for schools closed prior to 2008, but new schools have been included after opening. The figures should inevitably, therefore, be treated with a degree of caution, although the estimates are likely to be robust at the level of precision quoted.
4. The 2000s have seen a steady improvement in GCSE results across England. The number of young people achieving 5 passes at grades A\* to C (or equivalent) has risen from 50.0% in 2001 to 75.4% in 2010, with the most rapid improvement occurring since 2007. The schools in the AHW area have had a similar, though slightly less marked, improvement, moving from 52.8% to 74.3%.

Table 18: Five GCSE pass rate for England and the AHW area

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
<b>All England</b>	50.0%	51.6%	52.9%	53.7%	56.3%	58.5%	60.9%	64.8%	70.0%	75.4%
<b>AHW area</b>	52.8%	54.7%	56.6%	55.7%	57.5%	59.1%	60.1%	64.2%	69.1%	74.3%

5. The AHW area has therefore moved from a slightly above average position, relative to England as a whole, to a slightly below average one. Also of note is a small dip in outcomes on this measure in 2004. The Steering Group felt that this might be explained by a known problem with GCSE marking in that year, with many young people being undermarked; several schools went through a large-scale appeals process to see this rectified.

<sup>11</sup> The data in this section are drawn from: <http://www.education.gov.uk/performanceables>

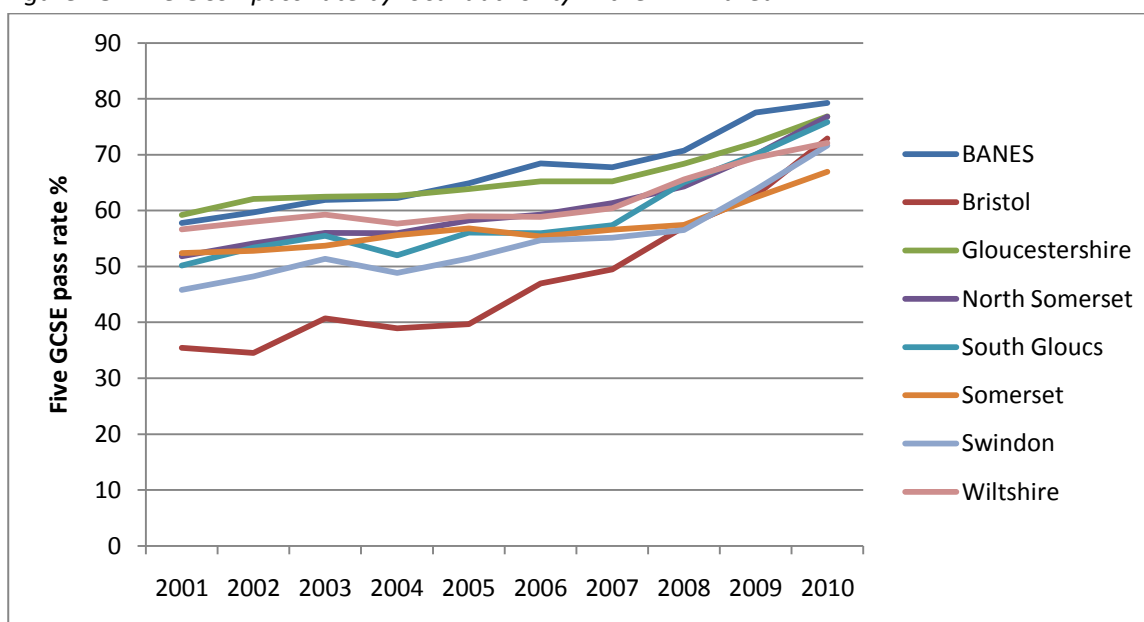


6. Drilling down into individual local authority areas, we find strong contrasts in the pass rate. Wiltshire saw the slowest improvement (57% in 2001 to 72% in 2010) and Bristol the fastest (35% in 2001 to 73% in 2010).

Table 19: Five GCSE pass rate by local authority in the AHW area

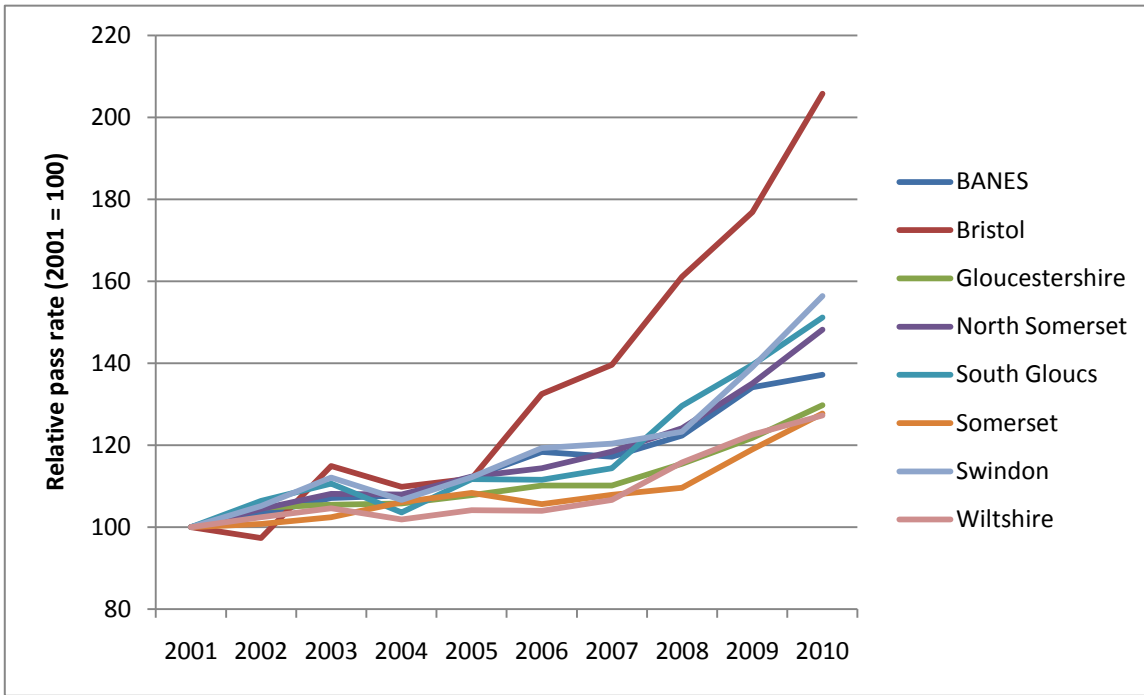
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
<b>BANES</b>	58%	60%	62%	62%	65%	68%	68%	71%	78%	79%
<b>Bristol</b>	35%	35%	41%	39%	40%	47%	49%	57%	63%	73%
<b>Gloucs</b>	59%	62%	62%	63%	64%	65%	65%	68%	72%	77%
<b>N Somerset</b>	52%	54%	56%	56%	58%	59%	61%	64%	70%	77%
<b>South Gloucs</b>	50%	53%	56%	52%	56%	56%	57%	65%	70%	76%
<b>Somerset</b>	52%	53%	54%	56%	57%	55%	57%	57%	62%	67%
<b>Swindon</b>	46%	48%	51%	49%	51%	55%	55%	57%	64%	72%
<b>Wiltshire</b>	57%	58%	59%	58%	59%	59%	60%	66%	69%	72%

Figure 13: Five GCSE pass rate by local authority in the AHW area



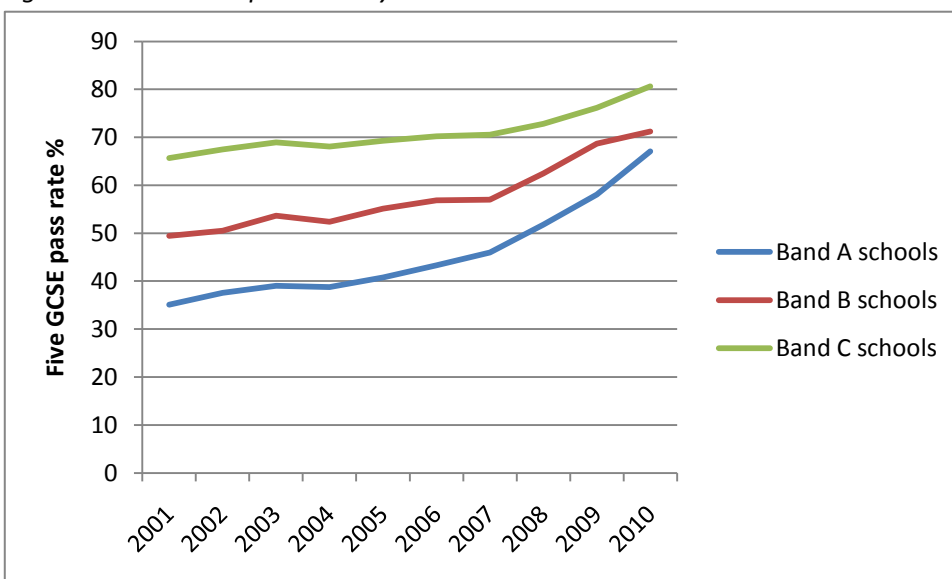
7. The most notable feature in Figure 13 is the very rapid improvement in the pass rate for Bristol, which has moved from being isolated as the poorest performing local authority to being well within the mainstream and approaching the AHW area and national average. The 2004 dip in pass rates is seen to be restricted to four local authorities – Bristol, South Gloucestershire, Wiltshire and Swindon – with South Gloucestershire having proportionately the largest dip.
8. Figure 14 shows improvements relative to a 2001 base year (i.e. 2001 = 100): Bristol once again stands out from the other local authorities. Specifically, there is a notable improvement in 2003, a fall in 2004 (as noted above) and then very rapid improvement from 2006 onwards.

Figure 14: Percentage change in five GCSE pass rate by local authority in AHW area



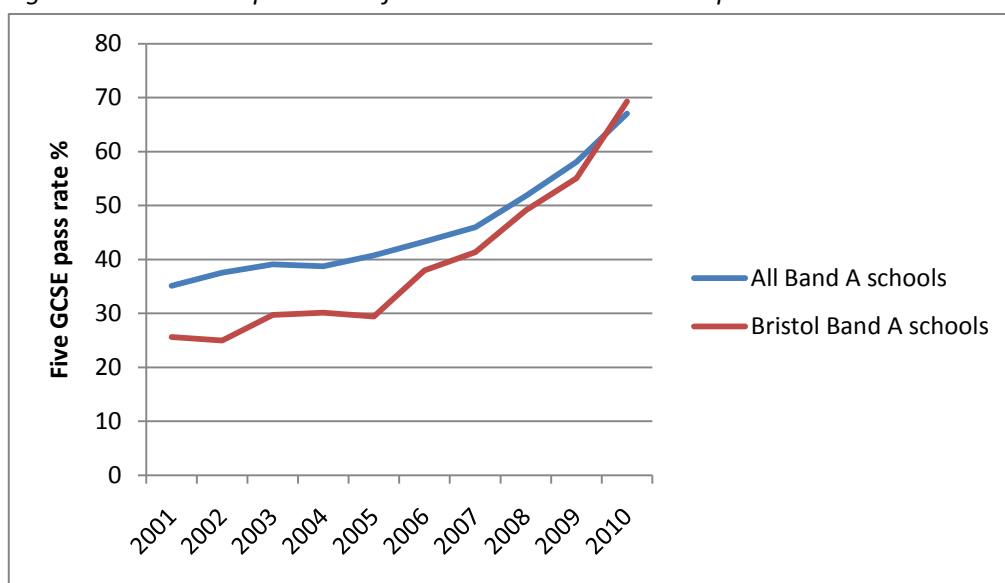
9. Also observable in Figure 14 above is a difference in trend: the mainly urban (and unitary) local authorities other than Bristol (i.e. BANES, North Somerset, South Gloucestershire and Swindon) have a markedly stronger rate of improvement than the mainly rural (and county) local authorities (i.e. Gloucestershire, Somerset and Wiltshire). No particular explanation is offered for this observation.
  
10. Figure 15 below shows average pass rates for the three bandings of schools used in the Intervention Model, ranging from Band A (poorly achieving schools prioritised for Aimhigher initiatives) to Band C (higher achieving schools with no Aimhigher initiatives).

Figure 15: Five GCSE pass rate by AHW Intervention Model bands



11. All three bandings have seen improvements in GCSE pass rates over the period between 2001 and 2010. This has been strongest in Band A and least strong in Band C, such that the outcomes for the three bands have begun to converge. The difference in pass rates between Band A and Band C was 31% in 2001 and 14% in 2010. This convergence began in 2005 and accelerated from 2008 onwards.
12. While it is impossible to prove a causal link, it is reasonable to assume that the resources invested in Band A (and, to a lesser extent, Band B) schools by Aimhigher had a role to play in the improvements seen.
13. Furthermore, the improvements within the Band A schools was most marked for those in Bristol. These had an average pass rate of 25% in 2001, rising to 69% in 2010 and overtaking the Band A average as a whole. The majority of the improvement was seen from 2006 onwards.

Figure 16: Five GCSE pass rate of Bristol Band A schools compared to all Band A schools



### Post-compulsory education

14. There is no sufficiently robust measure of A Level success comparable to that used above for GCSE results. While the Department for Education does publish an average points score for schools and local authorities, it is felt that this does not offer a good representation of outcomes or of the likely propensity for a young person to demand higher education. For example, it does not distinguish between the number of A Levels being taken, such that young people taking two are averaged against those taking three or more.

15. Instead, the other readily-available relevant dataset for this period is that for the number of young people in post-compulsory education by local authority<sup>12</sup>. This measure necessarily includes FE and sixth form colleges alongside 11-18 schools; for completeness, independent schools have also been included, but their influence is very limited as the number of pupils on their roll tends to remain similar over time. A starting year of 2002 has been used to correspond to with the 2001 starting year for GCSE results used above.

Table 20: Number of 16 to 18 year olds in education by local authority in AHW area

	2002	2003	2004	2005	2006	2007	2008	2009	2010
<b>BANES</b>	4,554	4,606	4,817	4,666	4,659	4,533	5,061	5,029	5,332
<b>Bristol</b>	7,545	8,230	8,773	8,663	9,458	9,944	10,623	10,163	10,464
<b>Gloucs</b>	12,453	12,723	13,057	13,177	13,803	14,025	15,009	15,232	15,755
<b>N Somerset</b>	3,129	3,145	3,200	3,306	3,513	3,827	3,725	4,116	4,348
<b>South Gloucs</b>	4,083	4,132	4,589	4,772	4,919	5,014	5,006	5,135	5,629
<b>Somerset<sup>13</sup></b>	11,943	11,618	11,649	12,950	12,807	12,847	13,216	13,434	13,939
<b>Swindon</b>	4,136	3,985	4,185	4,440	4,517	4,686	5,204	5,117	5,434
<b>Wiltshire</b>	8,617	8,113	8,209	8,216	8,249	8,433	7,760	8,900	9,384
<b>ALL</b>	<b>56,460</b>	<b>56,552</b>	<b>58,479</b>	<b>60,190</b>	<b>61,925</b>	<b>63,309</b>	<b>65,604</b>	<b>67,126</b>	<b>70,285</b>

16. The period has seen a growth in the numbers of 16 to 18 year olds in post-compulsory education, from 56,460 in 2002 to 70,285 in 2010, representing a 24% growth. This growth has accelerated towards the end of the period.
17. The local authorities with the fastest rates of growth have been Bristol (39%), South Gloucestershire (39%) and North Somerset (38%). The lowest has been Wiltshire with just 9%.
18. It is important to note that these figures take no account of changing population profiles within the local authority areas. In other words, growth (or decline) may reflect an increase in the propensity to pass into post-compulsory education or simply a growth (or decline) in the underlying population of 16 to 18 year olds.
19. Furthermore, it is not possible to model accurately the school roll aggregates against the population in local authority areas, owing to the phenomenon of young people being educated outside their own area. This is especially true for the geographically small local

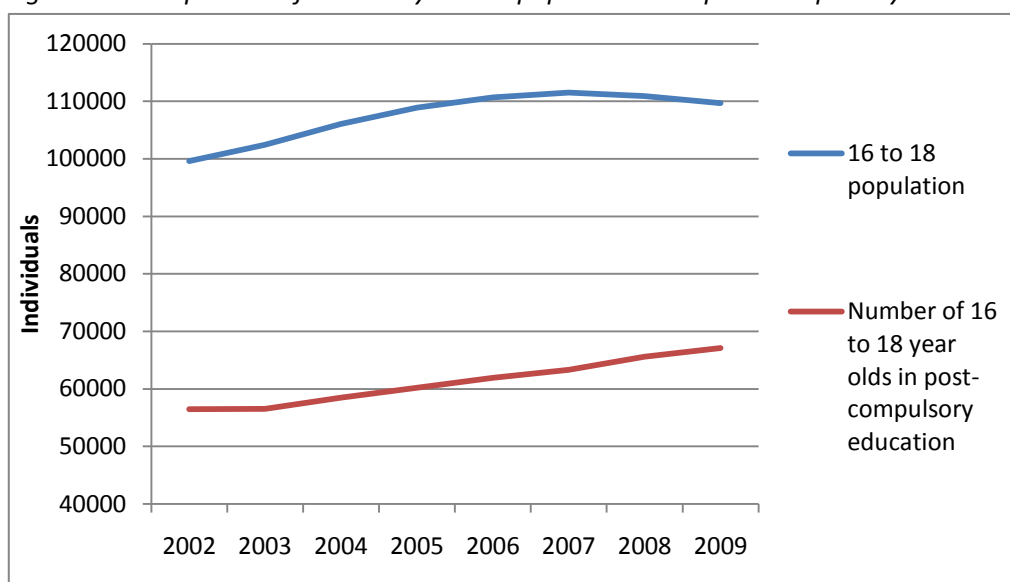
<sup>12</sup> The dataset for young people taking A Levels or an equivalent underwent a major change in definition in 2006 and so is therefore not useful in this context. The proportion of young people in post-compulsory education taking A Levels or equivalent has remained broadly constant and so one measure is a reasonable proxy for the other.

<sup>13</sup> The Somerset figures relate to the whole county and not just the portion in the AHW area.

authorities, where journeys may be short. Changes in this pattern may also affect the relative distribution of young people in post-compulsory education between local authorities<sup>14</sup>.

20. However, it is instructive to understand changes in the population of 16 to 18 year olds across the AHW area during this period. Data drawn from the SAPE figures (see Section E for details) show a 10% increase in population for this age group between 2002 and 2009; data are not yet available for 2010<sup>15</sup>. The corresponding increase in numbers in post-compulsory education for this shortened timeframe is 19%. Crudely, the number of young people staying on into post-compulsory education has therefore increased at just under twice the rate of growth of population.
21. However, the overall picture is more complex than this. The population of 16 to 18 year olds in the AHW area grew until 2007, when it began to decline. However, as can be seen in Figure 17 below, the numbers attending post-compulsory education have not declined.

Figure 17: Comparison of 16 to 18 year old population and post-compulsory attendees in AHW area



22. This suggests that there has been a significant increase in the demand for post-compulsory education in the AHW area since 2007, with the numbers attending increasing even while the underlying population declined.

<sup>14</sup> It is, of course, possible that there is also cross-border exchange between the AHW area and the surrounding areas. However, this is likely to be relatively insignificant relative to the population for the AHW as a whole. In any instance, this is beyond the scope of this study.

<sup>15</sup> These data include the problems explored in Section D and should therefore be treated with a degree of caution. If error exists, it will be in the direction of over-estimating population growth.

## J. Targeting deprivation

1. The terms of reference for this study are to explain not only why progressing in increasing application in the AHW area has been lower than average, but also why, in particular, this progress has seemingly been even more muted in deprived areas. This will be achieved by looking in more detail at two areas which are defined as being relatively deprived by IMD – one urban (Bristol) and one rural (the Forest of Dean).

### Urban deprivation: Bristol

2. Bristol is the largest settlement in the AHW area and, indeed, in the South West region. It has a population of 430,000 people within the city boundary, but there are significant additional contiguous urban areas to the north and east of the city. Depending on the measurement used, it is between the sixth and ninth largest city in England and it comprises around 16% of the AHW area by population. The city boundary is tightly drawn and the local authority area is therefore exclusively urban in nature, covering 110 km<sup>2</sup>. Ethnic minority communities make up around 9% of the population. Historically, Bristol's economy has been based on engineering, tobacco and chocolate processing, coal mining and the port. The port remains important, with aerospace and environmental technology evolving from the engineering roots, now supplemented by a large services sector.
3. As noted in the Section F above, Bristol accounts for a significant proportion of the deprivation in the AHW area. More than half (58%) of the city's LSOAs are in the bottom 40% and these in Bristol account for 42% of those in the AHW area as a whole. Within this grouping, deprivation in Bristol is 'deeper' than in other areas, accounting for 49% of the bottom 20% and 63% of the bottom 10%. 16 out of the 20 most deprived LSOAs in the AHW area are in Bristol – three are in Weston-super-Mare and one in Gloucester.
4. As a result, any discussion of deprivation in the AHW area must necessarily focus on Bristol. It is not the first time that Bristol has been identified in this way. The original HEFCE report into area-based participation rates using the POLAR methodology (HEFCE 2005) identified the Bristol South parliamentary constituency as having the among the lowest propensities for young people to attend higher education in England. As a result, it was one of four areas selected for a HEFCE-funded research project to explore low participation (Raphael Reed *et al* 2007). Among other findings, this report revealed and discussed the multifaceted and multigenerational nature of deprivation and attitudes to education and employment.
5. However parliamentary constituencies, like LSOAs, are largely arbitrary lines on a map which may or may not represent real-life communities. A wider look<sup>16</sup> at the Bristol landscape

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<sup>16</sup> For a map of POLAR1 see: [http://www.hefce.ac.uk/widen/polar/reg/map/ward/1998/w98\\_West\\_of\\_England.pdf](http://www.hefce.ac.uk/widen/polar/reg/map/ward/1998/w98_West_of_England.pdf)

shows that areas of low participation in higher education are to be found throughout the city. The unique feature of Bristol South is that the areas are contiguous and comprise a significant proportion of the constituency, while similar areas in other constituencies in Bristol are smaller, and more 'averaged out' by adjacent areas.

6. Moving away from low participation neighbourhoods, which are not the focus of this study, and refocusing on deprivation as described by IMD, we find a similar pattern. Deprivation is spread throughout the city. Of the 71 LSOAs in the bottom 20% quintile, 26 are to be found in Bristol South parliamentary constituency, 23 in Bristol North West, 13 in Bristol West and 9 in Bristol East.
7. From the survey exercise with practitioners (see Section K for detail), it emerged that there was a common belief that deprivation was markedly concentrated in south Bristol. It is likely that this perception was drawn in part from the local and national coverage of Raphael Reed *et al* (2007). There is some danger that this may have skewed targeting of AHW activities in Bristol, leaving other deprived parts of the city with less coverage.
8. Comparing Bristol to the six cities of a comparable size in England (excluding London and Birmingham), we find that it has the equal fewest LSOAs in the bottom 20%, level with Leeds. However, we find that it contains considerably more deprived areas when the bottom 40% category is used, coming in fourth out of seven behind Manchester, Liverpool and Nottingham.

Table 21: Proportion of LSOAs in IMD ranking quintiles by major English cities

	Bottom 20%	20-40%	40-60%	60-80%	Top 20%
<b>Bristol</b>	28%	29%	21%	16%	6%
<b>Leeds</b>	28%	18%	18%	21%	16%
<b>Liverpool</b>	68%	17%	12%	3%	0%
<b>Manchester</b>	67%	22%	9%	2%	0%
<b>Newcastle upon Tyne</b>	40%	19%	17%	13%	10%
<b>Nottingham</b>	60%	20%	15%	5%	0%
<b>Sheffield</b>	36%	15%	19%	14%	16%

9. It is clear, therefore, that Bristol is not the most deprived large city in England and that, depending on the measure, it can be reasonably typified as being among the least deprived. Given the well-established link between deprivation and demand for higher education, it might be expected that Bristol would have a stronger participation rate, suggesting that there are other effects at work here.
10. Turning to school results, we have seen in Section I that Bristol has undergone a rapid improvement in GCSE pass rate relative to the other local authority areas in the AHW area. A slightly different pattern is seen in comparison to the other major English cities.

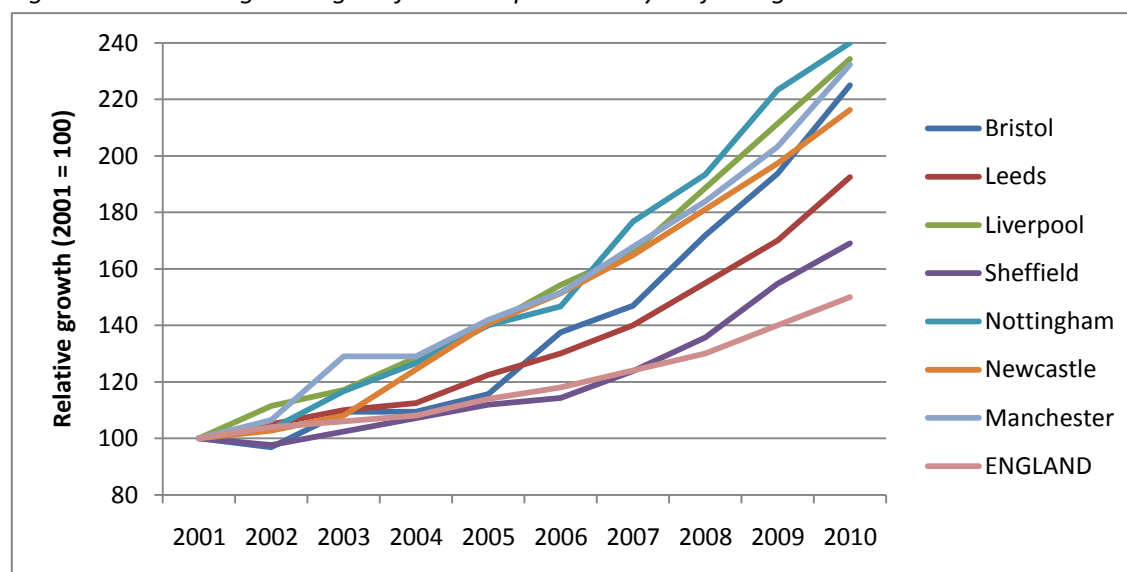
Table 22: Five GCSE pass rates by major English cities

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
<b>Bristol</b>	32%	31%	35%	35%	37%	44%	47%	55%	62%	72%
<b>Leeds</b>	40%	42%	44%	45%	49%	52%	56%	62%	68%	77%
<b>Liverpool</b>	35%	39%	41%	45%	49%	54%	58%	66%	74%	82%
<b>Manchester</b>	31%	33%	40%	40%	44%	47%	52%	57%	63%	72%
<b>Newcastle upon Tyne</b>	37%	38%	40%	46%	52%	56%	61%	67%	73%	80%
<b>Nottingham</b>	30%	31%	35%	38%	42%	44%	53%	58%	67%	72%
<b>Sheffield</b>	42%	41%	43%	45%	47%	48%	52%	57%	65%	71%
<b>ENGLAND</b>	50%	52%	53%	54%	57%	59%	62%	65%	70%	75%

Source: Department for Education (includes all school types)

11. Bristol began the period in question with among the lowest GCSE pass rates at 32%, comparable with Manchester and Nottingham – two cities with considerable more deprivation, as evidenced above. It also ends the period with a comparable rate to these two cities plus Sheffield at 72%.
12. All of the cities listed above show a similar improvement between 2001 and 2010, with the exception of Sheffield and Leeds which were somewhat slower. However, Bristol is marked out from the others as improvements were slow prior to 2006, such that it was 5% below the next lowest city (Nottingham) in 2005. However, from 2006 onwards, the GCSE pass rate began to climb rapidly.
13. This can be seen visually below, with the graph showing the GCSE pass rate relative to the 2001 base year (i.e. 2001 = 100). Also notable is that all the cities showed a markedly better rate of improvement than the England average, although this only occurred in Sheffield from 2008 onwards.

Figure 18: Percentage change in five GCSE pass rate by major English cities





14. Once again, we find that school results in Bristol were slow to improve, relative to other areas, but that once improvement began (in 2006) it was disproportionately rapid. One feature of the creation of Aimhigher was that Bristol saw a net reduction in the additional resources that it had under the predecessor schemes. The Steering Group feel that this led to some early disengagement from Aimhigher within Bristol's local authority and schools.
15. There has long been an association made between demand for extended education and the 'health' of the local labour market, especially in regard to youth unemployment and access to jobs at 16 and 18 (e.g. Clark in press; McVicar & Rice 2001). It has been observed that periods of high unemployment tend to lead to young people staying in education longer to avoid having to try to find work and to equip themselves for a competitive job market.
16. It has already been shown in Section F above that the South West region has had a consistently lower level of general and youth unemployment than other regions in England across the period in question. A similar picture emerges when comparing Bristol to other major English cities for the general unemployment rate; data are available for youth unemployment, but are not robust at the local authority level.

Table 23: Rate of unemployment for 16 to 64 year olds by major English cities

	2004	2005	2006	2007	2008	2009
<b>Bristol</b>	5.0%	4.4%	4.3%	4.3%	4.1%	7.9%
<b>Leeds</b>	4.5%	6.6%	5.2%	5.6%	6.5%	9.0%
<b>Liverpool</b>	7.8%	9.2%	9.2%	8.6%	6.8%	12.6%
<b>Manchester</b>	8.5%	8.3%	6.9%	8.5%	10.5%	13.3%
<b>Newcastle upon Tyne</b>	7.6%	6.4%	8.1%	7.0%	9.1%	13.2%
<b>Nottingham</b>	9.0%	9.2%	10.4%	7.9%	8.8%	12.9%
<b>Sheffield</b>	6.5%	5.4%	8.1%	6.0%	6.5%	9.2%
<b>ENGLAND</b>	<b>4.8%</b>	<b>5.0%</b>	<b>5.4%</b>	<b>5.2%</b>	<b>5.8%</b>	<b>7.8%</b>

17. With the exception of 2004, the Bristol unemployment rate is lower than all the other major cities and with the exception of this year and 2009, lower than the English average. This was to be expected to some degree given the deprivation profile discussed above, but the unemployment is lower than close comparators like Leeds and Sheffield.
18. This triangulates well with the Bristol South study (Raphael Reed *et al* 2007), which found that high levels of deprivation were associated with a surprisingly vibrant and lucrative youth labour market which acted as a real draw away from education for young people. The jobs available tended to be manual work that paid well in the initial stages, but where there was little or no progression, typically construction trades, retail and beauty. Family links were seen to be more important than schooling or qualifications, while parental attitudes were often either indifferent or hostile to the connection between education and employment.

19. It was established in the research and analysis underpinning the Dearing Report (NCIHE 1997) that there had been significant improvements in the representation of minority ethnic communities during the 1990s, such that they were no longer under-represented, with some exceptions (e.g. Black Caribbean men and Bangladeshi women). This was supported and extended in work by the National Audit Office (NAO 2008) which found that nearly all minority ethnic groups were over-represented in higher education and that white students had become relatively under-represented. The basis of this change is still not well understood (Connor *et al* 2004), but it appears that black and minority ethnic groups now tend to have a higher propensity to demand higher education than their white peers.
  
20. One explanation for this phenomenon could relate back to the prevailing unemployment rates, which are higher within ethnic minority communities (Bell & Blanchflower 2010), and particularly to the perception of young people about their job prospects and ability to compete in the labour market, potentially tinged with fears about discrimination. Among major cities only Liverpool has a lower proportion of residents from minority ethnic communities than Bristol, with both being slightly below the national average.

*Table 24: Size of minority ethnic communities as proportion of total for major English cities*

<b>Bristol</b>	9%	<b>Newcastle upon Tyne</b>	10%
<b>Leeds</b>	11%	<b>Nottingham</b>	24%
<b>Liverpool</b>	8%	<b>Sheffield</b>	11%
<b>Manchester</b>	29%	<b>ENGLAND</b>	<b>11%</b>

*Source : Annual Population Survey*

21. In summary, among major cities in England, Bristol can be typified as being of mid-range deprivation, with fewer areas of 'deep' deprivation and a high employment rate. School results were largely static until 2006, but have risen rapidly since, fuelled mainly by lower performing schools serving deprived communities. Bristol's minority ethnic communities are relatively small and unlikely to have a strong positive impact in terms of applications.
  
22. Bristol, therefore, has been unsuited in many ways to seeding an increase in applications for higher education. While it plays home to the majority of deprived neighbourhoods in the AHW area, its GCSE results only improved in 2006, thereby increasing the pool of possible applicants from 2008 onwards – precisely the time when rapid improvement is seen. However, the buoyant labour market is likely to have acted as a 'pull' away from education; one which may have declined with the onset of recession in 2008.
  
23. It is difficult to attribute direct cause-and-effect to complex models like higher education applications. However, it would appear that Bristol has had features over the period between 2003 and 2010 which have not supported applications in comparison to other major cities, especially in the early period.

## Rural deprivation: the Forest of Dean

24. The Forest of Dean is the westernmost part of the county of Gloucestershire, bordering Wales. The district council area includes around 82,000 people across an area of 526 km<sup>2</sup>. As the name suggests, it is overwhelmingly rural and forested, with just 32% of LSOAs being urban and 46% being in the most rural group. The largest settlements are Coleford and Cinderford, with populations of around 8,000 each. The population is over 99% white. The traditional economy was based on forestry, iron working and coal mining, with tourism and manufacturing playing increasing roles as the latter two industries have declined. At 11%, the proportion of self-employed individuals is below the national average.
25. The Forest of Dean contains 50 LSOAs. The majority of these (54%) fall into the 40-60% quintile by IMD, with just two LSOAs in the top 20% quintile – the lowest proportion of any local authority area within the AHW area. In common with most rural areas, it has no LSOAs in the bottom 20% quintile, but six (comprising 12%) in the 20-40% quintile. These are split between four in urban areas (two in Cinderford and one each in Coleford and in Littledean and Ruspidge) and two in rural areas (both in Lydney).
26. Partly due to its relative size, the Forest of Dean contributes just 2% of the LSOAs in the bottom 40% by IMD in the AHW area. This compares to 42% for Bristol. As discussed in Section E above, there are strong questions about the ability of the IMD metric to adequately represent deprivation in rural areas, with the Forest of Dean being widely assumed by local practitioners to be a strong example of rural deprivation.

*Table 25: Number and proportion of children receiving Free School Meals by local authority in the AHW area*

	<b>Number of 15 year olds in 2006</b>	<b>Number receiving Free School Meals</b>	<b>Percentage receiving Free School Meals</b>
<b>Bristol</b>	3,662	537	14.7%
<b>Sedgemoor</b>	1,364	105	7.7%
<b>Swindon</b>	2,486	190	7.6%
<b>Gloucester</b>	1,518	112	7.4%
<b>North Somerset</b>	2,169	156	7.2%
<b>South Gloucestershire</b>	2,017	145	7.2%
<b>Bath &amp; NE Somerset</b>	1,756	116	6.6%
<b>Cheltenham</b>	1,170	75	6.4%
<b>Forest of Dean</b>	977	59	6.0%
<b>Mendip</b>	1,299	73	5.6%
<b>Wiltshire</b>	5,048	241	4.8%
<b>Stroud</b>	1,354	56	4.1%
<b>Tewkesbury</b>	951	39	4.1%
<b>Cotswold</b>	805	26	3.2%
<b>All AHW area</b>	<b>26,576</b>	<b>1930</b>	<b>7.3%</b>

27. Using receipt of Free School Meals (FSM) as an alternative metric for deprivation, we find a similar picture. 6.0% of 15 year olds in the Forest of Dean received FSM in 2006, compared with an average across the AHW area of 7.3% and 14.7% in Bristol. As FSM are focused specifically on low income families (and particularly on those that are benefit-dependent), this suggests that the Forest of Dean is not particularly deprived using this measure of economic disadvantage, although the FSM proportion is much higher than in some other rural areas, like Cotswold.
28. However, returning to the main target group for Aimhigher activity (HEFCE 2007), we find a quite different picture. When looking at the proportion of economically-active households from the lower socio-economic groups (NS-SEC 4 to 7) in the 2001 Census, the Forest of Dean comes out just behind Sedgemoor with 56.4%. Mendip, another area of rural deprivation, is in third place – all three having a significantly higher proportion of lower socio-economic groups than other local authority areas in the AHW area. The equivalent figure for Bristol is 45.7%, while the AHW area average is 47.6%.

Table 26: Proportion of economically-active households by NS-SEC grouping

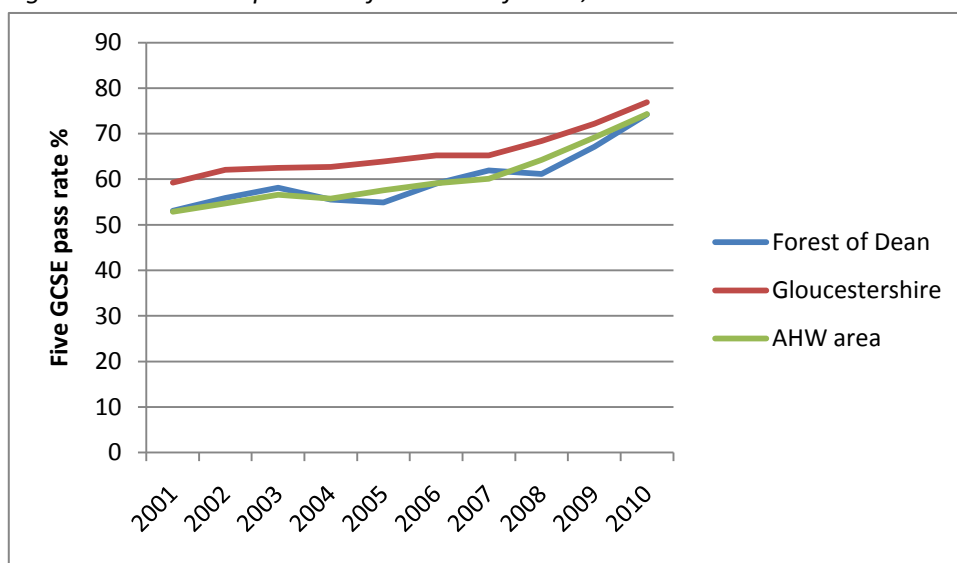
	NS-SEC 1 to 3	NS-SEC 4 to 7
Sedgemoor	42.7%	57.3%
Forest of Dean	43.6%	56.4%
Mendip	45.0%	55.0%
Gloucester	49.1%	50.9%
Cotswold	50.2%	49.8%
Stroud	50.6%	49.4%
Swindon	51.6%	48.4%
Wiltshire	52.9%	47.1%
North Somerset	54.0%	46.0%
Bristol	54.3%	45.7%
Tewkesbury	55.1%	44.9%
Bath & NE Somerset	55.3%	44.7%
South Gloucestershire	55.6%	44.4%
Cheltenham	57.5%	42.5%
All AHW area	52.4%	47.6%

Source: 2001 Census

29. The Forest of Dean therefore provides a useful exemplar. It has one of the highest proportions of households from the lower socio-economic groups that Aimhigher is tasked to target, but relatively few children receiving Free School Meals and very few LSOAs in the bottom 40% by IMD. A likely explanation for this is that employment levels are relatively high with relatively lucrative wages, but that the nature of the employment available is such that it is graded in the lower half of the NS-SEC scale. This is consistent with the importance of the area's tourist and forestry industries.

30. The important ramification of this in the context of the Action on Access reports is that the AHW partnership could be very successful at increasing applications from the relatively abundant NS-SEC groups 4 to 7 in the Forest of Dean (and similar rural areas), but that this would not be reflected well, if at all, in figures for applications from neighbourhoods with a low IMD ranking.
31. Looking in more detail at the Forest of Dean's schools, two of which are allocated to Band A in the Intervention Model and two to Band C, we find that GCSE results have grown at a similar rate to the AHW area average and slightly faster than the rest of Gloucestershire, although they remain below average compared to the rest of the county.

Figure 19: Five GCSE pass rate for Forest of Dean, Gloucestershire and the AHW area



32. As in other areas, the improvement has been stronger in the Band A schools than in the Band C schools, although this trend has not been as marked as in Bristol (see Section I for more details).
33. As seen in Table 26 above, the Forest of Dean is typified by a high proportion of households from lower socio-economic households. It is also an area which has a markedly below average proportion of the population which is educated to Level 4 (26% compared with 29% in the South West region as a whole) and a very low job density<sup>17</sup> (58% compared with 82% in the South West).
34. During the 2000s, it has consistently had a higher rate of unemployment than the rest of the region, which is the lowest in England, but lower than the national average. In September

<sup>17</sup> This is a measure used by the Office of National Statistics to represent the number of jobs in an area compared to the size of the population, such that a low percentage means that there are relative few jobs located locally. Where employment rates are high, this implies that many people commute outside of the area.

2010, the latest date for which figures were available, unemployment was estimated at 6.8%.

35. These labour market statistics suggest a complex picture of an area where high-skilled graduate jobs are relatively rare, with many people working outside the local authority area (presumably in cities like Gloucester), thereby maintaining above average rates of employment. Unusually for the South West region, the majority of people work in lower status occupations. There are therefore relatively few high-skilled graduate jobs for young people growing up locally to aspire to, and those that do exist are mainly located at a distance. This pattern is unlikely to provide a compelling 'pull' factor for extended education (Shucksmith 2000). Perhaps surprisingly, self-employment is not an important feature of the local economy.
  
36. It is likely that this reflects a mixed population, with skilled and/or qualified individuals using the rural beauty of the Forest of Dean as a 'commuter belt' for Gloucester, Cheltenham or Bristol, while lower skilled/qualified individuals work within the area in manual and other lower status jobs. Deprivation within the long-term community would be concealed by a more recent and possibly transitory population of affluent commuters with whom they share physical space, cheek by jowl. Evidencing this hypothesis is beyond the scope of this study, but it does provide a plausible framework for understanding why areas like the Forest of Dean do not feature highly on deprivation scales, contrary to the expectations and experiences of practitioners.

## K. Practitioner views

1. The brief for this study did not include the formal collection of the views of practitioners working in the AHW area. However, it was felt useful to engage with this group as a means of triangulating and validating the other analyses, and to potentially open up new lines of enquiry.
2. The method chosen was a revised and shortened form of the Delphi method. This is not designed to harvest opinions in simple proportion terms, but rather to move towards a group consensus and/or to identify different subsets of opinion through repeated questioning of an identified body of experts, with each set of questions being constructed in part from the answers of the previous set. Ordinarily three to five iterations might be used, but the timeframe of this study meant that only two opportunities were available.
3. The first questionnaire was employed in the two weeks to 28<sup>th</sup> February 2011, with a second in the two weeks to 25<sup>th</sup> March 2011. The questionnaires were available online and a link was e-mailed to all practitioners in the AHW area. 32 replied to the first questionnaire and 25 to the second. This was a larger 'panel' than might ordinarily be used in a Delphi exercise, but it was felt appropriate given the exploratory nature of the work.
4. The first questionnaire focused on issues around perceptions of success of Aimhigher in the AHW area, while the second sought mainly to legitimise these perceptions and investigate potential barriers to success.
5. A consensus formed that Aimhigher activities *"had been moderately successful in terms of increasing applications to higher education in recent years, especially from lower income households"*, with no respondents disagreeing with this statement.
6. There was also a broad consensus, with only a few dissenting voices, that success had accelerated through time. A number of possible reasons were offered for this:
  - a. That it took considerable time and effort to establish trust and partnership working patterns in the early stages of Aimhigher that limited immediate success
  - b. That there were particular difficulties in building relationships in one local authority area that was key for engaging with deprived communities
  - c. That, following from (a) above, it took time for Aimhigher activities to permeate successfully into the mainstream ethos of schools and colleges
  - d. That a focus on younger people meant that Aimhigher activities took several years to bear fruit in terms of applications to higher education
  - e. That the Intervention Model meant that the work of AHW was focused on the hardest targets to shift and so progress was delayed

- f. Funding for the AHW partnership (in common with the rest of the South West region) was proportionally lower than for other areas in the early stages of Aimhigher due to the formula used, but this evened out over time
7. Practitioners were asked to comment on the possibility that success in the AHW area had been less marked than in other partnership areas and to assess possible reasons why this might be the case. They almost unanimously rejected the idea that the portfolio of Aimhigher activities was inherently inferior to those offered in other partnership areas, but there were more mixed views about other possible reasons.
8. Poor targeting of activities was not considered to be a likely explanation by the majority of respondents. However, there were a number of dissenting voices which felt that more priority should have been given either to rural deprived areas or to urban areas with less 'deep' (and therefore more easy to influence) deprivation.
9. Other potential reasons for the muted success in the AHW area gained some support, but no consensus emerged. These included:
  - a. Relatively slow improvements in school results in the AHW area
  - b. Better work opportunities for 16 to 18 year olds in the AHW area than elsewhere
  - c. Relative underfunding of rural schools and further education colleges, both of which are over-represented in the AHW area
  - d. The perceived decentralised nature of AHW, with local decision-making potentially hampering outcomes
  - e. The remoteness of some rural areas disadvantaging them in terms of access to Aimhigher activities or to links with higher education institutions
  - f. Problems with data collection or data processing – although the reasons suggested are unlikely to have impacted on the outcomes discussed in this report
10. The responses to the first questionnaire suggested the possibility that the role of disability within widening participation may have been overlooked within the AHW area. There was no consensus either way on this in the second questionnaire and the responses suggested that this may be due to a localised issue in particular schools or colleges.
11. There was a strong consensus about the need to direct resources to support young people from traveller communities and those in local authority care. The suggestion that too much resource had been committed was rejected, though there was an acceptance that the deployment of funds had not always been successful and that the numbers of individuals involved were too small to be meaningful within the wider picture of success. Nevertheless, there was general agreement about the social justice driver to engage with these groups, whatever the challenges.

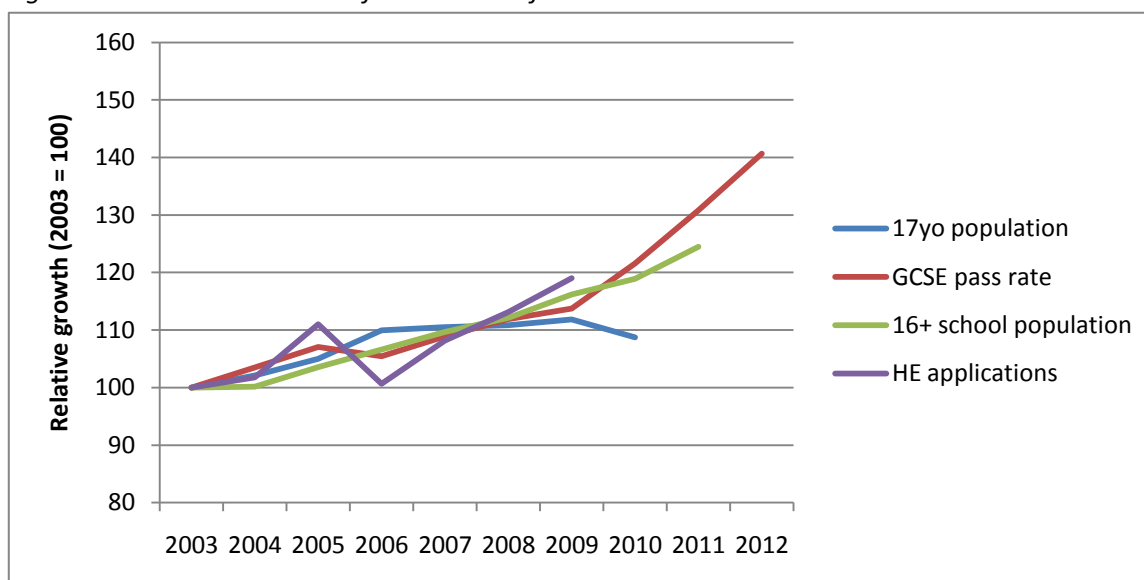


12. The respondents, on the whole, did not feel that the AHW area had unique features that predisposed it to have particularly strong parental and peer attitudes working against entry to higher education. Those suggestions that were made could largely be generalised to all areas of deprivation or low participation (Raphael Reed, Gates & Last 2007) and related to attitudes to achievement, the nature of the labour market and parental experience of education. The one suggestion that might have a disproportional effect in the AHW area was the absence of diverse job roles in rural areas. The implication was that concentration of graduate jobs in urban areas is likely to act depress the demand for higher education in rural areas, with the AHW area being one of the most rural in England.
  
13. In summary, the Delphi exercise, albeit shortened, was a useful adjunct to the main study. It established that there was no sense amongst practitioners of a partnership area which was underperforming and no specific reason for underperformance that commanded majority support. The consensus view about success matched well with the statistical analysis elsewhere in this report, with a slow start followed by rapid progress being made in the last few years of Aimhigher. It also highlighted the particular challenges of rural areas, though it is important to note that these do not strongly affect applicant rates from deprived neighbourhoods due to the IMD methodology.

## L. Conclusion: value added

1. In Section C above, the concept was introduced that a growth in higher education applications can be driven either by a growth in the population of qualified individuals or by a growth in the propensity of such individuals to apply – or, more realistically, a dynamic combination of the two.
2. A full assessment of the extent to which either of these effects has been active in the AHW area is beyond the scope of this study and the datasets currently available. However, an outline analysis is possible, drawing together the data presented elsewhere in this report.
3. Figure 20 below shows the change in applications in the AHW area relative to the 2003 base year (i.e. 2003 = 100). To this has been added three measures of ‘the pool’ of young people in the position to apply:
  - a. The percentage change of the underlying population of 17 year olds from the SAPE dataset, offset by one year to represent the 18 year old population of the following year.
  - b. The percentage change in the population of 16 to 18 year olds in post-compulsory education, also offset by one year.
  - c. The percentage change in GCSE pass rates for schools in the AHW Intervention Model, offset by two years to represent 18 year olds with five GCSE passes at A\* to C.

Figure 20: Various measures of value added for AHW area

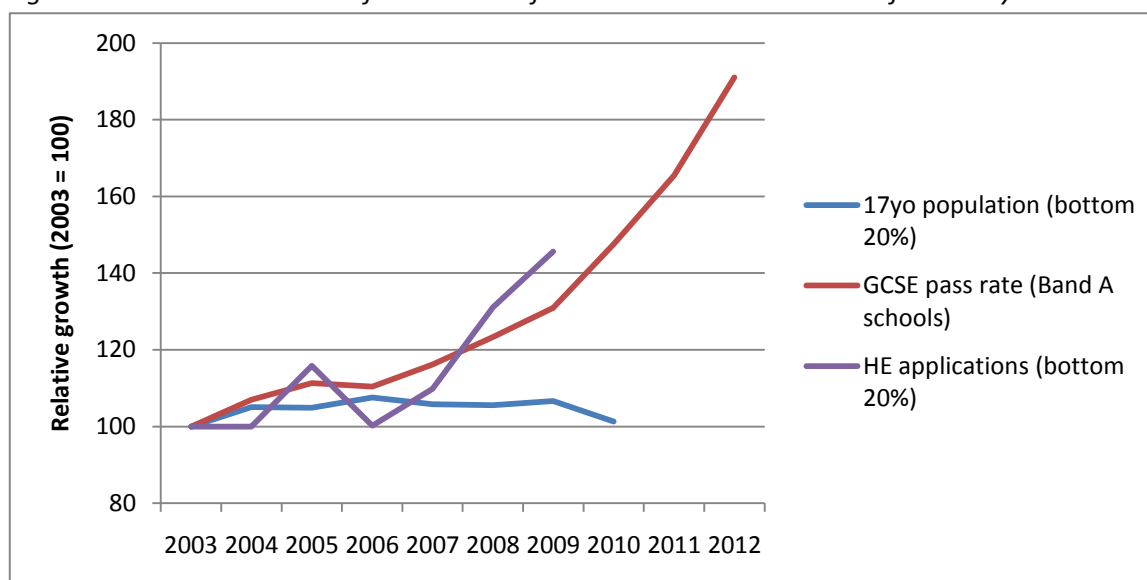


4. Interpretation of this graph is hampered by the anomalous application profile for 2005 and 2006 related to the introduction of ‘top up’ tuition fees. However, allowing for these two volatile years, the growth in applications has broadly kept pace with growth in the other

measures until 2007. More positively, from 2008 onwards, the rate of growth in applications has outstripped the measures of the applicant pool.

5. This suggests that not only has the applicant pool grown (in which Aimhigher is likely to have had a role), but that the propensity of qualified young people in the AHW area to demand higher education has also increased during 2008 and 2009. This could be interpreted as evidence of value added by the AHW partnership beyond the outputs of the 11 to 18 education system. Conversely, it is also the period in which youth unemployment has begun to rise rapidly<sup>18</sup>.
6. Because of the offsetting approach, future data are available. These show a drop in the underlying population, but a rapid increase in GCSE pass rates and, to a lesser extent, the demand for post-compulsory education. These augur well for future applications in the AHW area.
7. A similar analysis is possible focusing on deprived neighbourhoods and the schools that serve them. Figure 21 below presents the change in applications from the bottom 20% of neighbourhoods by IMD in the AHW area relative to a 2003 base year (i.e. 2003 = 100), alongside the relative population change in these areas and the relative change in the GCSE pass rate for Band A schools under the AHW Intervention Model. The latter two measures have been offset as described in 3 above. No data are presented for the population in post-compulsory education as this cannot be disaggregated for deprived neighbourhoods.

Figure 21: Various measures of value added for AHW area – bottom 20% of LSOAs by IMD



<sup>18</sup> Unemployment has not been included in the graph as the data available do not extend for the full period in question, but a reduced dataset can be found in Section E.

8. The same overall pattern is observed for deprived neighbourhoods as seen for the whole of the AHW area, with the growth in applications outstripping the growth in the applicant pool from 2008 onwards; note that this graph uses a different vertical scale to the one above, but that the amount by which applications have outstripped GCSE pass rate is still considerably more for deprived neighbourhoods.
9. The growth in applications is particularly marked in comparison to a largely static underlying population in areas of deprivation.
10. Once again, the future data for GCSE pass rates suggest a likelihood that a further growth in higher education applications will be seen in the coming years, despite a falling population of young people living in deprived neighbourhoods in the AHW area.
11. The tentative conclusion suggested by the data is that application patterns in the AHW area (both as a whole and specifically in deprived neighbourhoods) have been largely driven by the outcomes recorded by local schools, but that there is evidence for a faster improvement since 2008, although this is concurrent with a rise in youth unemployment that may also have affected demand for higher education.

## M. References

- Action on Access [AoA]. 2009. *Change in Entrant Numbers by Deprivation of Student's Home Neighbourhood*. Unpublished report. AoA: Ormskirk.
- Action on Access [AoA]. 2010a. *Estimated Young, Full-Time Higher Education (UCAS) Participation Rate – 2003 to 2008*. Unpublished report. AoA: Ormskirk.
- Action on Access [AoA]. 2010b. *Change in the Number of UCAS Applicants and Accepted Applicants by Geography of Domicile and Deprivational Category of Home Neighbourhood*. AoA: Ormskirk.
- Aimhigher West. 2008. *Aimhigher West area partnership intervention model: 2008/09 edition*. UWE: Bristol.
- Bell, D. & D. Blanchflower. 2010. UK unemployment in the Great Recession. *National Institute Economic Review* 214: R23-R33.
- Clark, D. In press. Do recessions keep students in school? The impact of youth unemployment on enrolment in post-compulsory education in England. Awaiting publication in *Economica* and available online at <http://onlinelibrary.wiley.com/doi/10.1111/j.1468-0335.2009.00824.x/full>.
- Connor, H., C. Tyers, T. Modood & J. Hillage. 2004. *Why the difference? A closer look at higher education minority ethnic students and graduates*. DfES Research Report 552. Institute of Employment Studies: Brighton.
- Harrison, N. & S. Hatt. 2010. 'Disadvantaged learners': who are we targeting? Understanding the targeting of widening participation activity in the United Kingdom using geo-demographic data from Southwest England. *Higher Education Quarterly* 64: 65-88.
- Higher Education Funding Council for England [HEFCE]. 2005. *Young participation in higher education*. Report 2005/03. HEFCE: Bristol.
- Higher Education Funding Council for England [HEFCE]. 2007. *Higher education outreach: targeting disadvantaged learners*. Report 2007/12. HEFCE: Bristol.
- Higher Education Funding Council for England [HEFCE]. 2010. *Trends in young participation in higher education: core results for England*. Report 10/03. HEFCE: Bristol.
- Huby, M., S. Cinderby, P. White & A. de Bruin. 2009. Measuring inequality in rural England: the effects of changing spatial resolution. *Environment and Planning A* 41: 3023-3037.
- McVicar, D & P. Rice. 2001. Participation in further education in England and Wales: an analysis of post-war trends. *Oxford Economic Papers* 53: 47-66.
- National Audit Office [NAO]. 2008. *Widening Participation in Higher Education*. The Stationary Office: London.
- National Committee of Inquiry into Higher Education [NCIHE]. 1997. *Higher Education in the Learning Society* (known as the Dearing Report). HMSO: Norwich.
- Raphael Reed, L., C. Croudace, N. Harrison, A. Baxter & K. Last 2007. *A sociocultural study of educational engagement in Bristol South parliamentary constituency*. UWE: Bristol.
- Raphael Reed, L., P. Gates & K. Last. 2007. *Young Participation in Higher Education in the Parliamentary Constituencies of Birmingham Hodge Hill, Bristol South, Nottingham North and Sheffield Brightside*. HEFCE: Bristol.

- Rees, G., S. Power & C. Taylor. 2007. The governance of educational inequalities: The limits of area-based initiatives, *Journal of Comparative Policy Analysis: Research and Practice* 9: 261-274.
- Shucksmith, M. 2000. *Exclusive Countryside? Social inclusion and regeneration in rural areas*. Joseph Rowntree Foundation: York.
- Tunstall, R. & R. Lupton. 2003. *Is targeting deprived areas an effective means to reach poor people? An assessment of one rationale for area-based funding programmes*. CASE paper 70. London School of Economics: London.