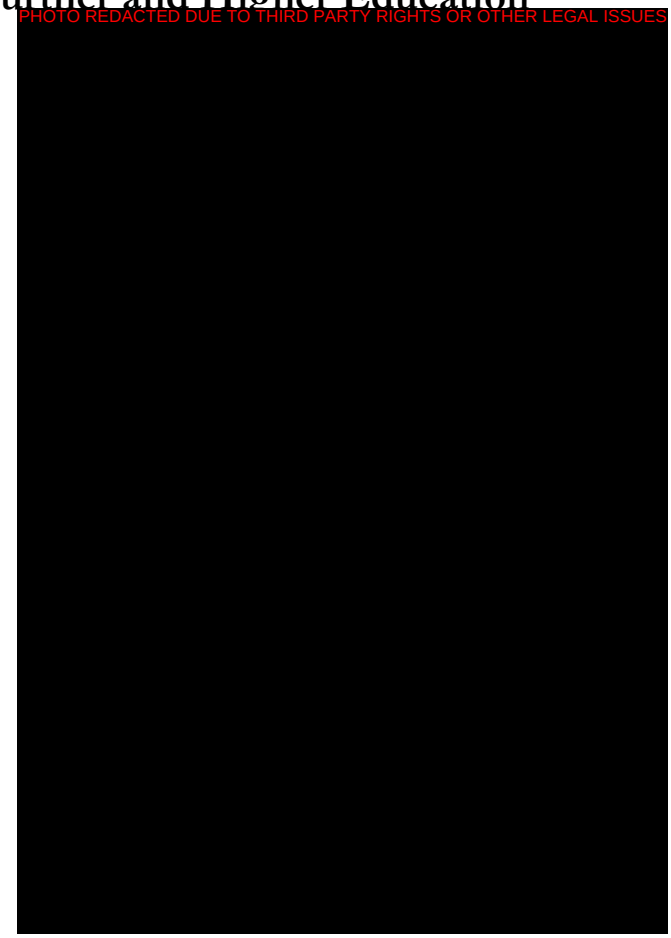
Scottish Funding Council

Promoting further and higher education

Scottish Participation in Further and Higher Education 2005-06 to 2009-10



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Further information:

Helen Storkey and Natalie Nicholls
Tel: 0131 313 6616, email: hstorkey@sfc.ac.uk
Tel: 0131 313 6615, email: nnicholls@sfc.ac.uk
Scottish Funding Council
Donaldson House
97 Haymarket Terrace
Edinburgh
EH12 5HD

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Contents

Key points

This report examines levels of participation by the Scottish population aged 16 plus at school, UK universities and Scotland's colleges. Participation has been measured both in terms of the number of participants and the number of full-time equivalents (FTE) which provides a useful indication of the volume of activity.

In further and higher education as a whole:

- the total number of individuals studying in college or university education has fallen between 2005-06 and 2009-10, however, FTE has increased;
- in 2009-10, those from the most deprived areas of Scotland had a slightly higher likelihood of being in college or university education than those from less deprived areas;
- this ratio of participation amongst the most deprived to participation amongst the less deprived has been on an increasing trend since 2005;
- there is substantial geographical variation in levels of participation. Many areas that have relatively low participation in further education have relatively high participation in higher education, and vice versa; and
- participation is higher among women than men in all age groups. In 2009-10, among those aged 16-19, 69 per cent of women attended school, college or university, compared to 64 per cent of men.

In college further education:

- the total numbers studying decreased by nine per cent between 2008-09 and 2009-10, and FTE by one per cent. This is as a result of the move to more full-time courses at the expense of short part-time courses;
- relatively low participation, compared to Scotland as a whole, is found in parts of Edinburgh, central Scotland and the Highlands;
- headcount participation has decreased for both men and women since 2007-08;
- in 2009-10, 71 per cent were studying for recognised qualifications: this accounted for 89 per cent of the total sector FTE; and

- participation in the most deprived areas is 48 per cent higher than that in the less deprived in 2009-10, and the corresponding FTE is more than one and three quarters times as high in the most deprived class compared to less deprived.

In college and university higher education:

- the total numbers studying increased by one per cent between 2008-09 and 2009-10, and FTE increased by two per cent;
- The total higher education student headcount and FTE decreased from 2005-06 to 2007-08, but have since increased;
- relatively low participation in higher education, compared to Scotland as a whole, is found in parts of Glasgow, Forth Valley, central Scotland, East Lothian and east Fife;
- participation is higher for women than men in all age groups. In 2009-10, among those aged 16-20, 25 per cent of women were in higher education, compared with 20 per cent of men;
- participation has increased slightly for those studying at first degree level in 2009-10, after a decrease over 2005-06 to 2007-08; and
- those from the most deprived areas of Scotland were 66 per cent as likely to study HE as those from less deprived areas in 2009-10. However, the gap has narrowed from 61 per cent in 2005-06.

1. Introduction

This report seeks to provide the information needed to track changes in the pattern of participation by the Scottish post school population, and to support the development of policies aimed at addressing any concerns regarding these patterns. This is achieved by presenting as complete a picture as is possible of post school leaving participation in further and higher education: how it has changed in recent years, how it varies across Scotland and the extent to which different segments of the population are under-represented.

A series of earlier reports have examined participation in higher education (Raab and Storkey, 2001; Raab and Small, 2003), the most recent covering the period up to 2000-01. The report *Scottish participation in further and higher education, 2001-02 to 2006-07* (Scottish Funding Council, 2008) updated this analysis to look at changes between 2001-02 and 2006-07 and extending it to cover further education in the college sector. This report is an update which includes data for 2009-10.

Combining higher and further education with data on post-compulsory school education enables us to give a unique picture of participation in education amongst those aged 16 and over. Indeed, the report starts with this cross-sector overview before moving on to separate and more detailed examinations of further and higher education. This picture is still incomplete, as some forms of further education lie at least partly outside the college and university sectors[1]. For example, limited data is available on community education and on literacy and numeracy classes that take place outside of the college sector. Much publicly-funded training, for Modern Apprenticeships for example, does take place at colleges, but not all. In addition, job-related training is frequently supplied by private providers. Nonetheless, armed with local knowledge to aid interpretation, an examination of combined college and university participation can provide valuable insights, particularly where higher participation in one sector tends to offset relatively low participation in the other.

Our focus is very much on rates of participation in the Scottish population: the proportion of an area's population engaged in education. Thus, the report does not attempt to replicate information presented elsewhere on the supply of education. Supply has been described in detail in various reports such as *Learning for All,* (Scottish Funding Council, 2011)*; Scotland's Colleges: a Baseline Report* (Scottish Funding Council, 2011) *and The Pattern of Subject*

[1] Throughout this report we use the word 'college' to refer to colleges in Scotland that provide mainly further education and higher education in the form of Higher National qualifications. The word 'university' is used to refer to universities and other higher education institutions.

Provision in Scotland's Colleges and Higher Education Institutions (Scottish Funding Council, 2007).

Participation rates are affected by the number of new entrants, the duration or frequency of study and, where relevant, the extent to which students progress to subsequent years of their course. Thus, it should be kept in mind that trends in participation and differences between segments of the population may not be entirely due to variation in the likelihood of students entering further or higher education. For higher education we have been able to add a section looking at entrants separately but for the rest of the report we have not attempted to disaggregate these students.

Participation rates have also been reported elsewhere (eg *Scottish Funding Council, 2011*; *DTZ Pieda Consulting, 2005*) but often using a range of approaches for defining both the student population and the population from which they are drawn. Geographical comparisons of participation rates are also open to misinterpretation given the way in which participation depends on the demographic composition of an area. Participation clearly varies by age and, as has become increasingly apparent in recent years, by gender. Thus, it is helpful to examine the extent to which geographical differences are explained simply by particular areas having, for example, a relatively old population or a gender imbalance.

Therefore, this report also aims to set up a framework for consistent reporting on participation, using the best available measures of student numbers and of the resident population. An account of the methodology can be found in Appendix 1. What follows is a summary of the approach used which serves as a guide to understanding the participation measures presented.

Student data comes from the Higher Education Statistics Agency (HESA) student records which cover all students studying at higher education institutions in the UK; the Further Education Statistics (FES) records held by the Scottish Funding Council (SFC) which cover students at colleges in Scotland; and the pupil census of publicly-funded schools in Scotland.

For the college and university data, activity has been measured in terms of the number of FTE as well the actual number of students (headcount). FTE has been estimated for each student in relation to the normal study requirements of full-time, full-year students. FTE provides a useful indicator of the amount of time devoted to education by the population. Headcount on its own can be misleading, particularly in further education where courses can vary substantially in length and intensity.

Population figures are derived from the National Records of Scotland's (NRS) mid-year estimates. Because these figures record students at their term-time address, they have been adjusted to estimate the actual number of residents for each area. In calculating a participation rate we are interested in the proportion of an area's post-school leaving residents engaging in education. Without adjustment, participation for areas with extensive student accommodation will be underestimated, as the number of domiciled residents is lower than the mid-year population figure suggests.

National levels of participation for student sub-groups have been presented as rates per thousand head of population both for headcount and FTE. However, to facilitate geographical comparisons, participation rates have been standardised for age and gender. This is achieved through the use of a *Standardised Participation Ratio* (SPR) which compares the observed number of participants in an area with what would be expected if national participation rates, by age and gender, applied. The ratio of the observed to expected number provides a benchmark for each area in relation to national rates so that SPRs above or below one indicate that local participation is above or below national levels whilst taking account of the age-gender composition of the area.

The SPR has only been used to aid geographical comparisons and is not intended to hide the fact that there are important differences in participation by age and gender. These differences are also explored in each chapter.

For mapping, participation is presented for the areas defined by the Scottish Neighbourhood Statistics' Intermediate Geography. There are 1,235 of these *intermediate zones* in Scotland and they can be conveniently aggregated to provide results for local authorities. Data for some intermediate zones can be sparse and subject to random fluctuation and so some smoothing has been undertaken to facilitate detection of the underlying geographical patterns.

To examine change in participation within intermediate zones and local authorities, participation rates were standardised across the five years of the study. The resulting measure is termed the Standardised Participation Ratio for Trend, or Trend SPR for short. The Trend SPR will be greater than one for years with a higher participation than the national five-year average. To identify significant trends in headcount participation statistical models have been developed. Trends that are likely to be 'real', rather than due to random fluctuations in participation have been highlighted in maps and tables. This analysis will be extended to FTE in future updates to this report.

Whilst this report examines current levels of participation and recent changes, it does not attempt to predict future changes. However, it is worth keeping in mind that projected population changes for local authority areas may have a significant effect on local demand. For example, the working age populations of Aberdeen City and East Dunbartonshire are projected to fall by 16 and 25 per cent respectively between 2006 and 2031. Conversely, the population of West Lothian is projected to increase by 17 per cent over the same period.

Finally, note that this is primarily a statistical report, presenting participation in a form to aid policy development and monitoring. It does not seek to explain or interpret its findings, except where there are clear influences, such as data recording changes, ignorance of which might result in misleading conclusions being reached.

Important statistical note

All participation rates are expressed as the number of participants (or FTE) per thousand population where the population aged 16 and over is used unless otherwise stated.

Rates for men and women and for different age groups are calculated using only the relevant population sub-group.

Some of the figures for 2005-06 to 2009-10 will be slightly different to those presented in previous participation reports. This is largely due to improved imputation of the information for students with missing home postcodes. Trends are largely unaffected by these changes.

The change to using SIMD 2009 has also affected the numbers in some of the deprivation tables, as datazones changed their SIMD ranking. Therefore, the numbers presented in the report will not be comparable to previous reports.

2. Participation in further and higher education combined

Subsequent chapters in this report focus on further and higher education study separately but here we bring the two together to provide a more complete overview of post-compulsory education. It is still not complete as our analysis is restricted to study within schools, colleges and universities because of availability of data. Almost all higher education (HE) takes place in the colleges and universities, but further education (FE) is extremely varied in nature and supplied by a range of providers. Although the colleges are the biggest provider, other providers play a major role in certain types of education such as leisure courses, work-based learning, and training programmes such as Modern Apprenticeships.

Thus, strictly speaking, the results presented here describe the Scottish 16 years and over population's engagement in education at schools, colleges and universities. In the college sector the type of provision will vary between colleges and also the extent to which they or other providers satisfy local demand. This should be borne in mind when interpreting the results: trends in participation may not reflect trends in the totality of adult education; trends may be affected by an increase or decrease in certain types of provision; and geographical differences can result from variation in the extent of college involvement in different types of further and higher education in a locality.

Nonetheless, there is considerable value to be gained by, for example, comparing the geographical variation in participation in further or higher education combined with that for the two separately, as presented in subsequent chapters. For example, relatively low participation in further education within an area may be counterbalanced by high participation in higher education or a higher percentage of school pupils staying on after 16. Similarly, a decline in further education participation may indicate a switch to higher education and so the combined trend is more stable.

Schools data come from the September schools census of publicly-funded schools and include pupils at special needs schools only as insufficient data are available on Scottish-domiciled pupils at independent schools. Although the total number of such pupils is relatively small in number their omission will have a disproportionate effect on the Edinburgh area where a significant proportion of pupils attend independent schools.

For each academic year, all pupils who will be aged 16 and over by the beginning of March have been included. Those who are still 15 in September are eligible to leave school in December and so we have unavoidably included some pupils who do not undertake post-compulsory

study. However, we have attempted to avoid the overlap with pupils who undertake part of their study at college.

The school census data has only been included in the overview section of this chapter, although school pupils attending college have been included throughout and the omission of non-college school pupils does not have a substantial effect on trends.

There will be a small amount of double counting as some students will study at both colleges and universities in the same year. This may be particularly likely in the highlands and islands where college campuses are often used for both FE courses and for HE study as part of the University of the Highlands and Islands. However, double counting has been avoided at other colleges that provide both FE and HE courses.

Further information on the data used and potential gaps can be found in the chapters on further and higher education and in the account of the methods used in Appendix 1.

As well as number of students (headcount), participation is also presented in terms of FTE. For students at universities, FTE is estimated with reference to a full-time full-year student who would normally receive an FTE of one. FTE for those on part-time courses or who leave part way through a year are estimated pro-rata on either a credit or time basis. For students in colleges in Scotland a broadly comparable FTE was calculated based on the number of hours of study as a proportion of the expected number of hours for a full-time course. For school pupils we assume that they are full-time and, in the absence of individual retention data, that they have an FTE of one. This will be an overestimate for some pupils, for example if they leave at the end of December. See Appendix 1 for more information.

2.1. Overview

Table 2.1.1 summarises the numbers and FTE of Scottish-domiciled students aged 16 and above studying at publicly-funded schools, colleges or universities according to their level of study. The main changes that are evident are that:

- the total number studying courses at Scotland's colleges and universities declined between 2005-06 and 2009-10;
- the overall headcount numbers studying HE at college or university have risen slightly since 2007-08; and
- there has been an overall decline in FE numbers between 2008-09 and 2009-10, although the FTE has increased.

Figure 2.1.1 shows the participation rates for FE and HE activity combined in terms of headcount. As school participation was little changed over the period its inclusion would not have affected the trends. The figure indicates that the rate for FE is declining, while that for HE remains around the same level.

Table 2.1.1 Numbers and FTE for school, college and university participants aged 16 and over

a) Headcount

Location of Study	Level of study	2005-06	2006-07	2007-08	2008-09	2009-10
		Count	Count	Count	Count	Count
School	College Link (FE or HE) (a)	17,735	20,143	21,097	21,886	20,632
	All school (b)	**75,853**	**77,671**	**79,702**	**79,304**	**81,936**
College	Studying FE only (c)	259,401	265,703	267,429	259,426	235,873
	Studying both FE and HE (d)	6,578	7,208	7,388	7,028	6,582
	Total FE	**265,979**	**272,911**	**274,817**	**266,454**	**242,455**
	Undergraduate	48,359	46,655	45,545	45,568	47,472
	Postgraduate	137	146	109	108	103
	Total HE	**48,496**	**46,799**	**45,736**	**45,675**	**47,575**
Scottish university	Undergraduate	146,752	144,354	140,809	143,233	144,806
	Postgraduate	29,253	30,370	28,997	28,569	28,635
	Total	**175,642**	**174,419**	**169,563**	**171,541**	**173,187**
Other UK university	Undergraduate	8,771	8,435	8,129	8,455	8,079
	Postgraduate	4,214	4,096	4,127	4,378	4,632
	All	**12,957**	**12,493**	**12,229**	**12,809**	**12,686**
College and university	**All HE (e)**	237,087	233,704	227,514	230,018	233,445
	All FE and HE (c+e)	**496,488**	**499,407**	**494,947**	**489,444**	**469,318**
School, college and university	**All (b - a +c+e)**	**554,606**	**556,935**	**553,552**	**546,862**	**530,622**

Note

- The school figures come from the annual schools census of publicly-funded schools. Special needs pupils have been included. In 2009-10 school ages were defined as 16-19 years of age.
- The college figures include school-college link students.
- A small overlap exists between those studying at both a college and university in the same academic year. Thus the combined totals are slight over-estimates.
- There is an overlap between some levels of study as, for example, a student may enrol on an undergraduate and postgraduate course in the same year. In addition, a small number enrol at both a Scottish and an 'Other UK' university in the same year.
- Letters after the level of study indicate where figures have been derived from other figures in the table.

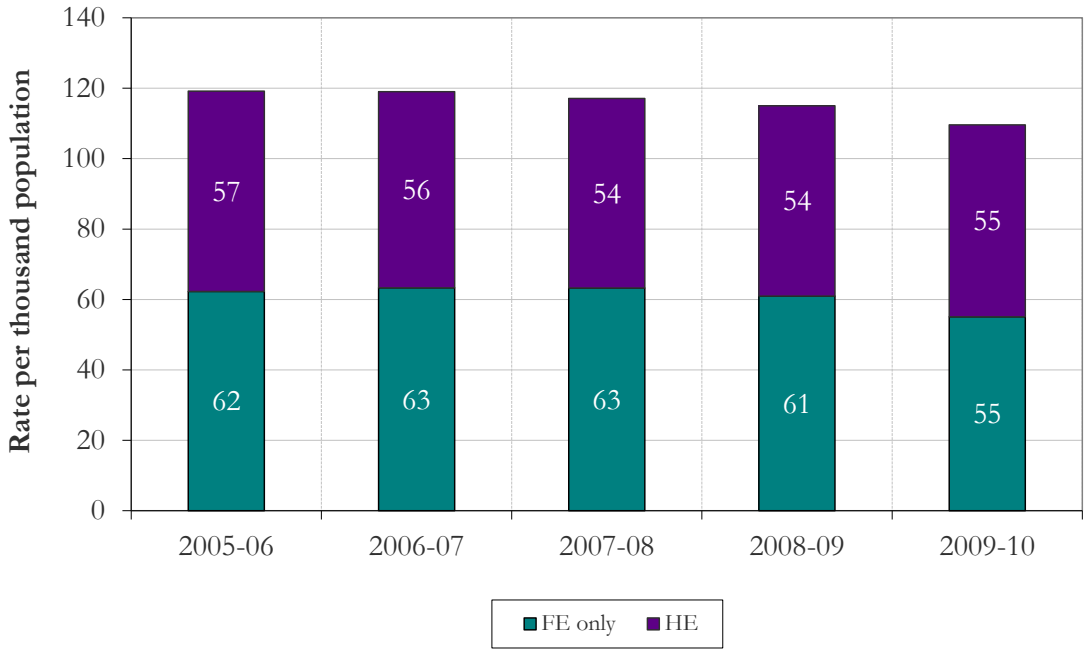
b) FTE

Location of study	Level of study	2005-06	2006-07	2007-08	2008-09	2009-10
		FTE	FTE	FTE	FTE	FTE
School	College Link (FE or HE) (a)	4,439	4,872	4,986	5,495	5,226
	All school (b)					
College	Studying FE only (c)	71,257	73,675	74,912	76,934	76,211
	Studying both FE and HE (d)	1,261	1,397	1,541	1,515	1,387
	Total FE	**72,510**	**75,065**	**76,444**	**78,443**	**77,592**
	Undergraduate	30,863	30,697	29,816	30,941	33,081
	Postgraduate	44	48	41	46	50
	Total HE	**30,910**	**30,746**	**29,870**	**30,987**	**33,131**
Scottish university	Undergraduate	103,834	102,564	103,469	104,469	106,354
	Postgraduate	15,806	15,973	15,846	15,406	15,252
	Total	**119,640**	**118,537**	**119,315**	**119,875**	**121,607**
Other UK university	Undergraduate	6,444	6,195	6,229	6,196	6,070
	Postgraduate	2,355	2,254	2,219	2,242	2,411
	All	**8,799**	**8,449**	**8,449**	**8,438**	**8,481**
College and university	**All HE (e)**	159,350	157,732	157,632	159,299	163,219
	All FE and HE (c+e)	**231,441**	**232,184**	**233,317**	**236,953**	**240,030**
School, college and university	**All (b - a +c+e)**	**227,002**	**227,312**	**228,331**	**231,458**	**234,804**

Note

- The FTE for school-college link students is for their college study only.
- College FTE does not always sum to the totals because of the way a cap has been applied to an individual's FTE. See Appendix 1 for more information. Other FTEs may not sum due to rounding.
- The total FTE for school, college and university activity assumes school pupils have an FTE of one. This will not always be the case, for example, if a student leaves school at the end of December.

Figure 2.1.1 Trends in headcount participation rates for FE or HE activity



Geographical variation in headcount participation in FE, HE or school education in 2009-10 is illustrated in Figure 2.1.2. Shetland is notable as an area of high participation because of the nature of local provision. Other areas with high participation include Orkney, north Fife, and parts of Argyll and Bute; Glasgow and Edinburgh cities. Particularly low participation is found in parts of Aberdeen City, Edinburgh, Glasgow, east Fife and central Scotland.

Variation in FTE participation is shown in Figure 2.1.3. FTE will be slightly overestimated as we assume school pupils have an FTE of one. Comparing with Figure 2.1.2, the impression is of less variation in terms of FTE than headcount. Many areas with relatively high headcount participation are nearer the national average in terms of FTE because a relatively large proportion of students are part-time. This is clearly the case for much of the Highland local authority area and for Orkney and Shetland. Nonetheless parts of Edinburgh, Aberdeen, Glasgow and central Scotland tend to have low participation for both headcount and FTE. A few areas, such as parts of Glasgow and Dundee, are relatively higher in terms of FTE because they tend to have a higher proportion of full-time students.

Figure 2.1.2 Geographical variation in headcount participation for school, FE or HE activity in 2009-10

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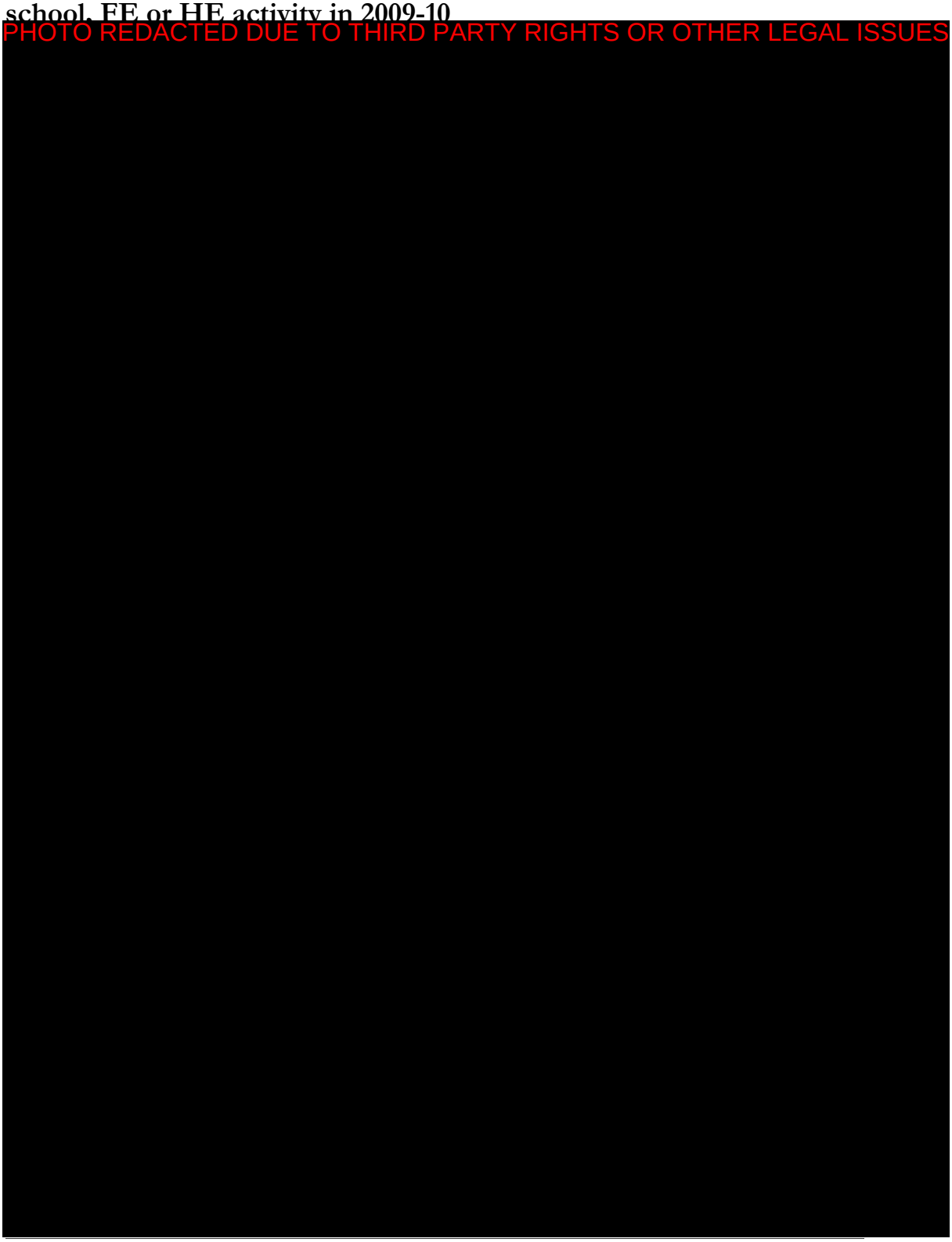
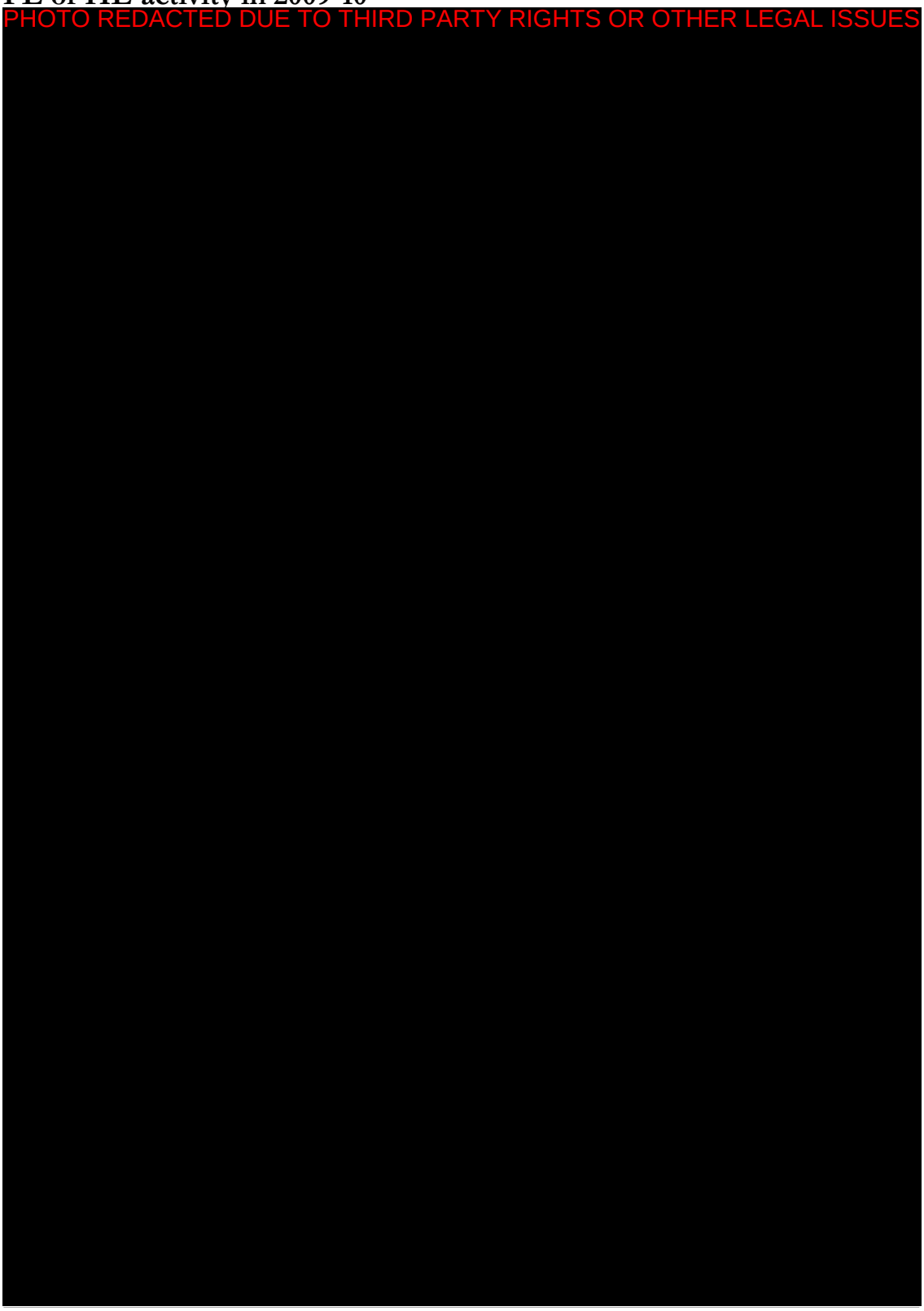


Notes

The Standardised Participation Ratio (SPR) compares the number of participants in an area with what would be expected if national age-gender specific participation rates were applied to the area's population. The SPR ensures areas with differing age-gender distributions are comparable. The national SPR is one. Thus participation in areas in green is close to the national rates.

Figure 2.1.3 Geographical variation in FTE participation for school, FE or HE activity in 2009-10



Notes
An FTE of one has been assumed for school pupils. This will be an over-estimate for pupils who leave in December.

2.2. Trends by age and gender

Trends by age and gender for further or higher education are summarised in Figure 2.2.1 and Figure 2.2.2. School pupils not studying at college have been excluded, but this does not appear to affect the trends, as illustrated by Figure 2.2.3. The figures show that

- headcount and FTE participation rates are higher for women than men in all age groups;
- headcount numbers are clearly in decline for all ages apart from age groups 16-19; however
- FTE has increased among the age group 16-19, but fairly stable otherwise.

If all school pupils are included, an estimated 69 per cent of women aged 16-19 attended school, college or university in 2009-10, compared to 64 per cent of men.

It should be noted that the difference in the overall participation rates ('All ages') is affected by the fact that there are rather more elderly women than men in the post school leaving population. As participation is low in the elderly they do have the effect of reducing overall rates and more so in women than men. Thus, the difference between men and women in the 'Working age' rates is rather larger than in the 'All ages' rate.

Figure 2.2.1 Headcount participation rates in FE or HE by age and gender

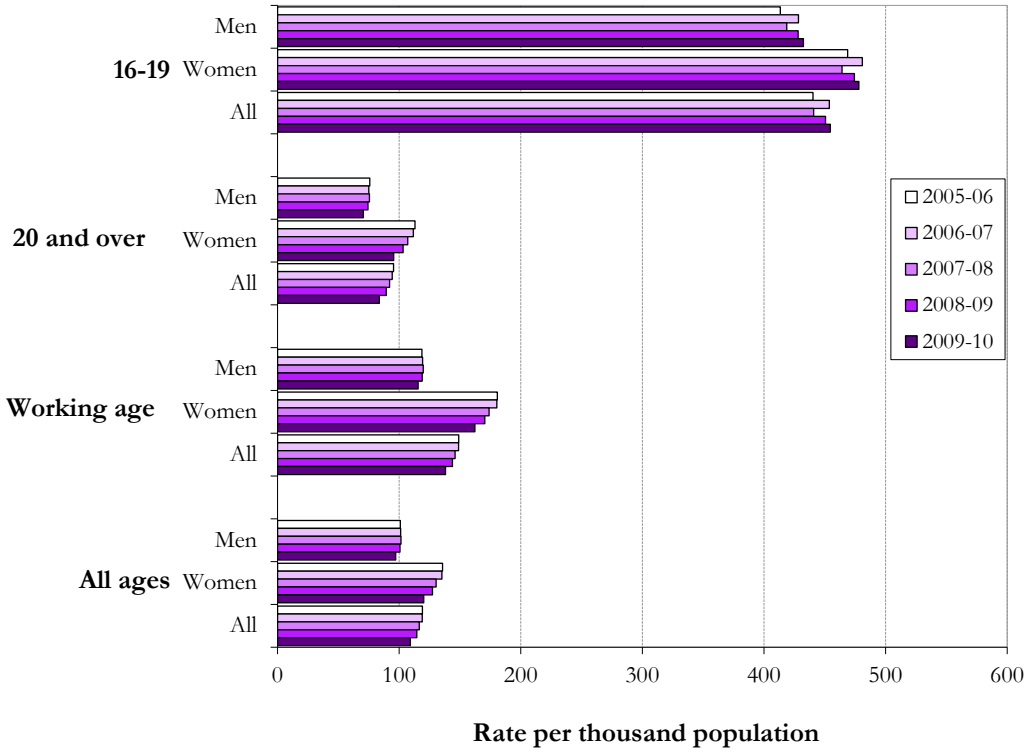
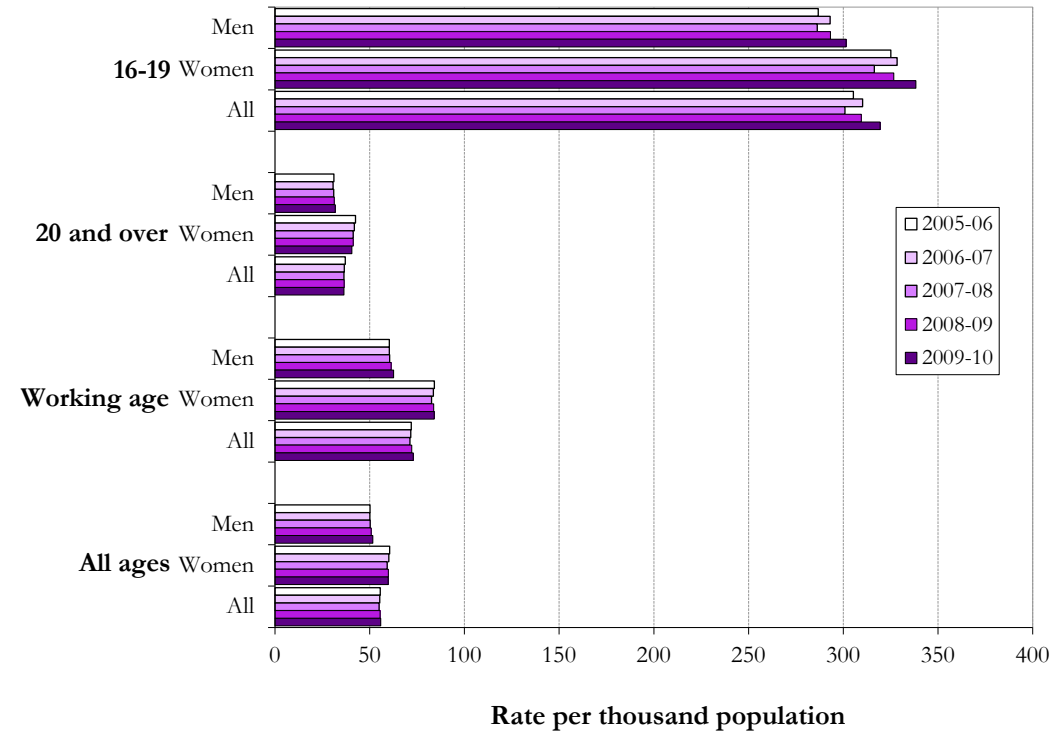
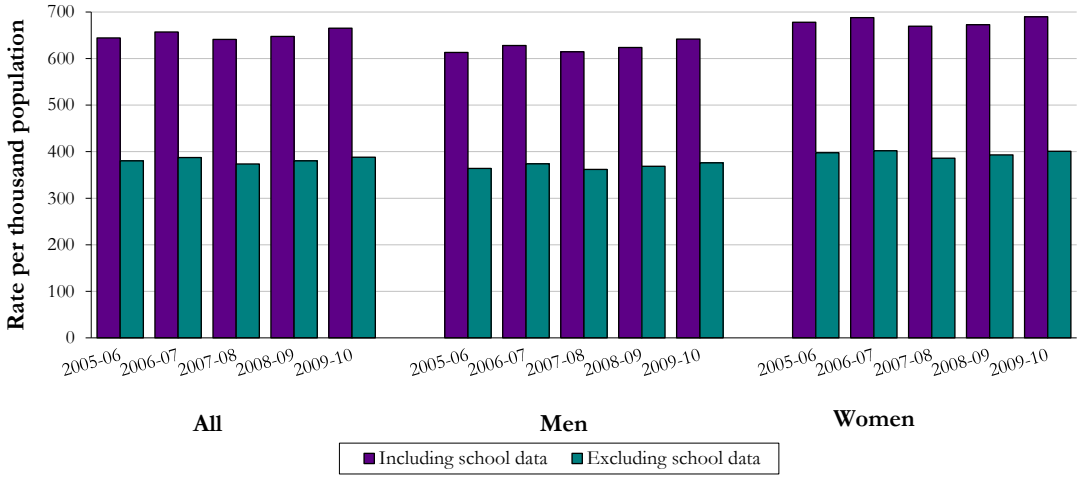


Figure 2.2.2 FTE participation rates in FE or HE by age and gender



Note: Working age is defined as 16 to 59 years for women and 16 to 64 years for men

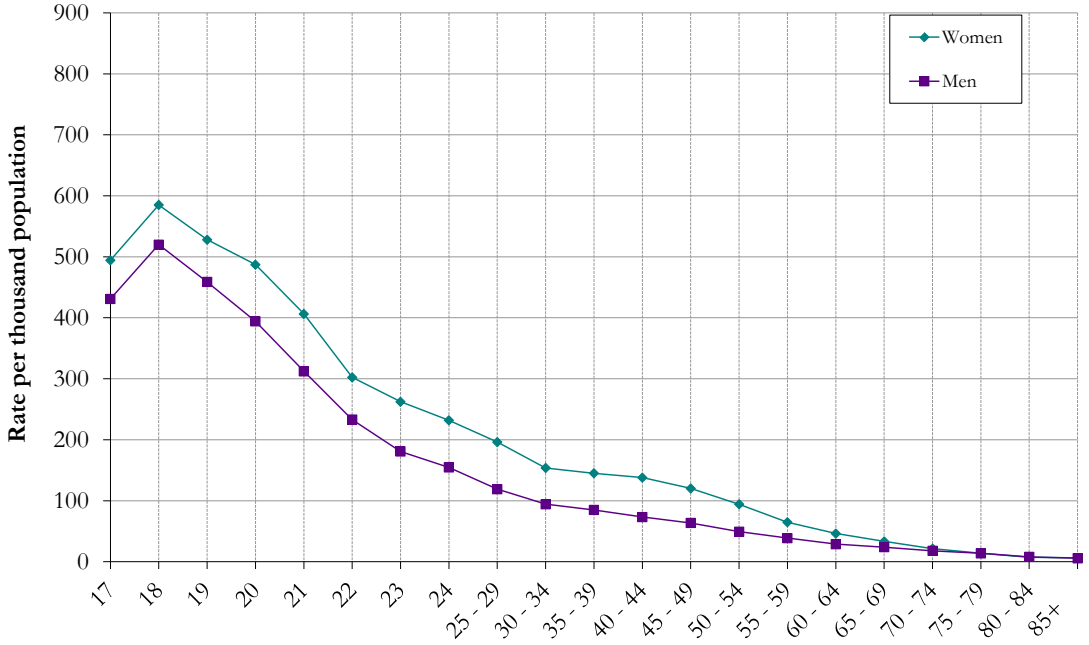
Figure 2.2.3 Headcount participation in FE or HE amongst students aged 16-19, with school pupils included and excluded



The age distribution of participation in men and women in further or higher education activity is shown for 2005-06 and 2009-10 in Figure 2.2.4. Participation is higher in women at all ages up to the age 74 in both years.

Figure 2.2.4 Participation rates in FE or HE by age and gender, 2005-06 and 2009-10

a) 2005-06



b) 2009-10

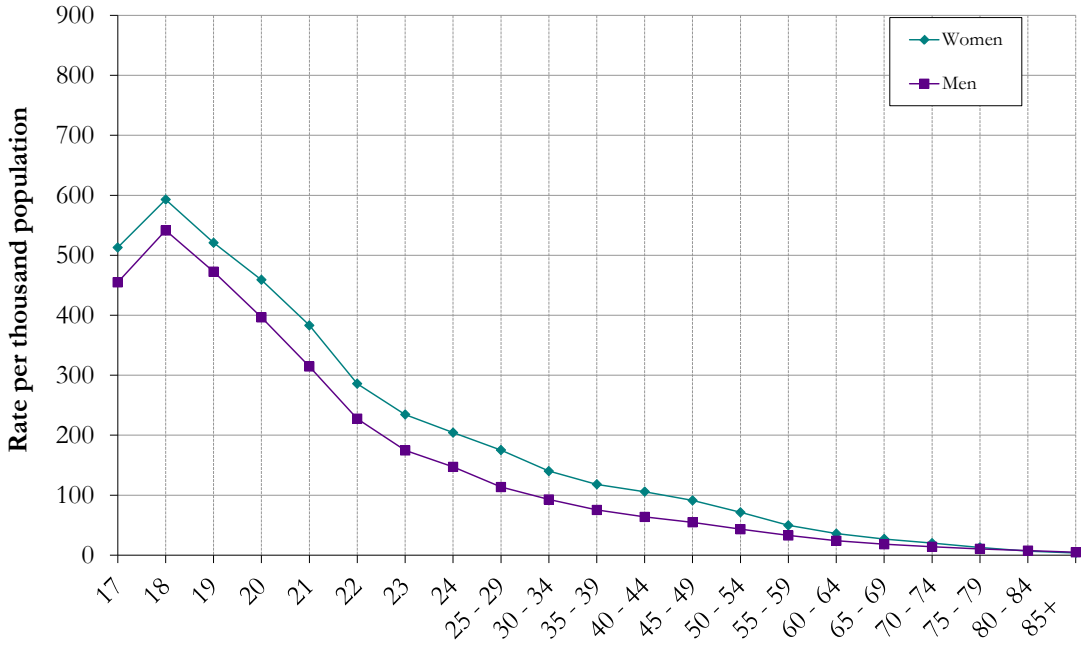


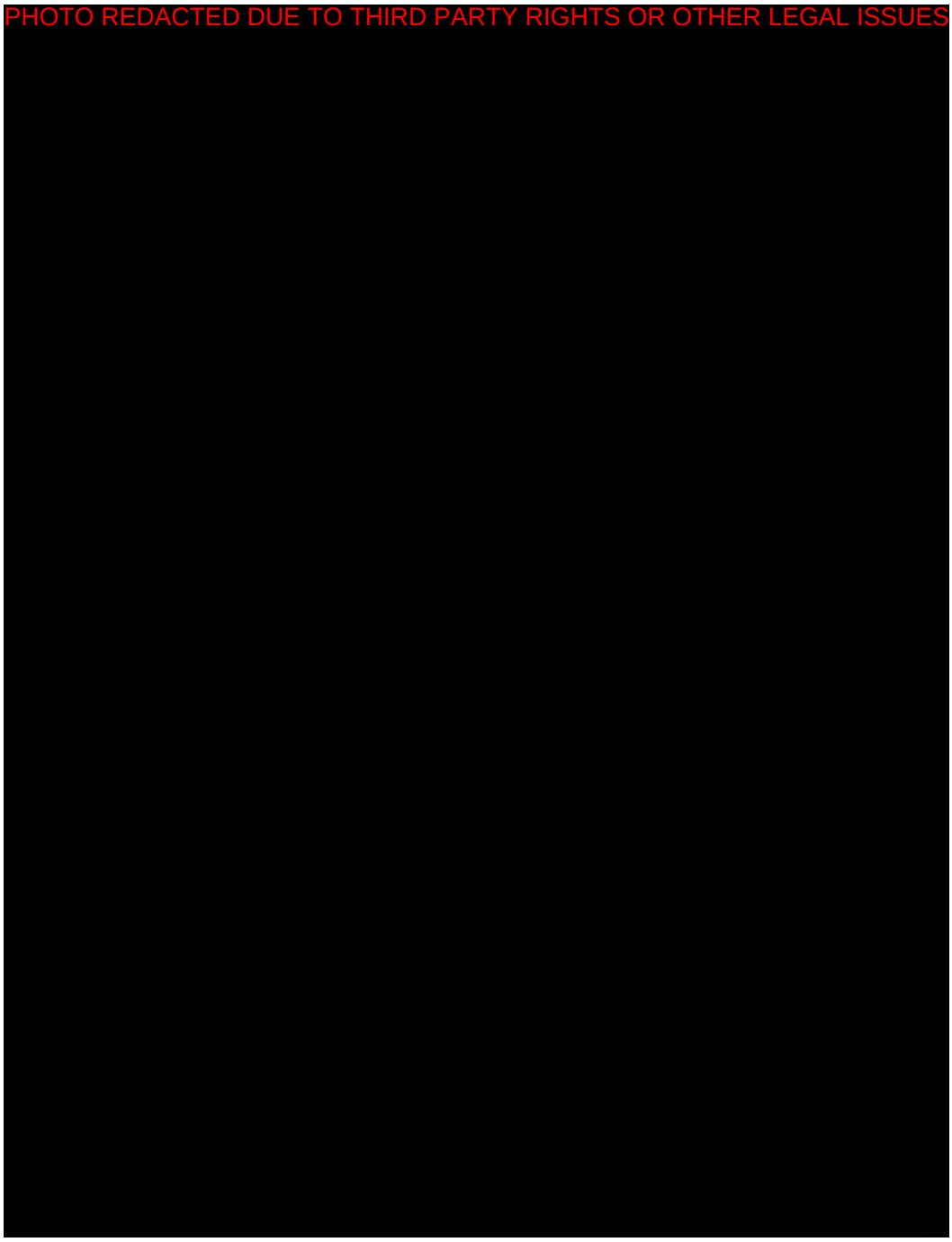
Figure 2.2.5 illustrates variation between local authorities in gender balance in 2009-10, measured as the ratio of the participation rate for young (16-19 year old) men to that for young women. Areas with a value below one are those where young men are less likely to be studying at a college or university than women and the converse is true for values greater than one. This shows that:

- young men from Orkney, Renfrewshire, Inverclyde and East and North Ayrshire are least likely to study in college or university compared to women;
- young men are less likely to study at a college or university than women in most local authorities; and
- young men are slightly more likely to study than women in Mid and East Lothian.

For Scotland as a whole, the participation rate for men (all ages) was about 81 per cent that for women in 2009-10. However, in the young age group (16-19) the rate for men was 90 per cent of that for women (Figure 2.2.1).

It should be noted, however, that the degree of gender balance will vary between years and relatively small changes may result in a change of class on the map.

Figure 2.2.5 Gender balance among young participants in FE or HE by local authority, 2009-10 (< 1 means young men less likely to be participating than young women)



Note
The scale shows the ratio of young male to female participation rates. Thus, values are less than one where young men are less likely to participate than young women. The converse is true for values greater than one.

2.3. Local authority trends

Table 2.3.1 summarises current levels of participation in further or higher education by local authority and trends since 2005-06.

In 2009-10:

- Angus, Orkney Islands and Shetland Islands have particularly high standardised participation in terms of headcount;
- East Dunbartonshire, East Renfrewshire and Angus have the highest standardised level of participation in terms of FTE;
- Falkirk, East, West and Mid-Lothian have the lowest standardised participation at below 80 per cent of the national rate for headcount; and
- in terms of FTE, Falkirk and Midlothian have the lowest standardised participation rates at around 85 per cent or less of the national rate.

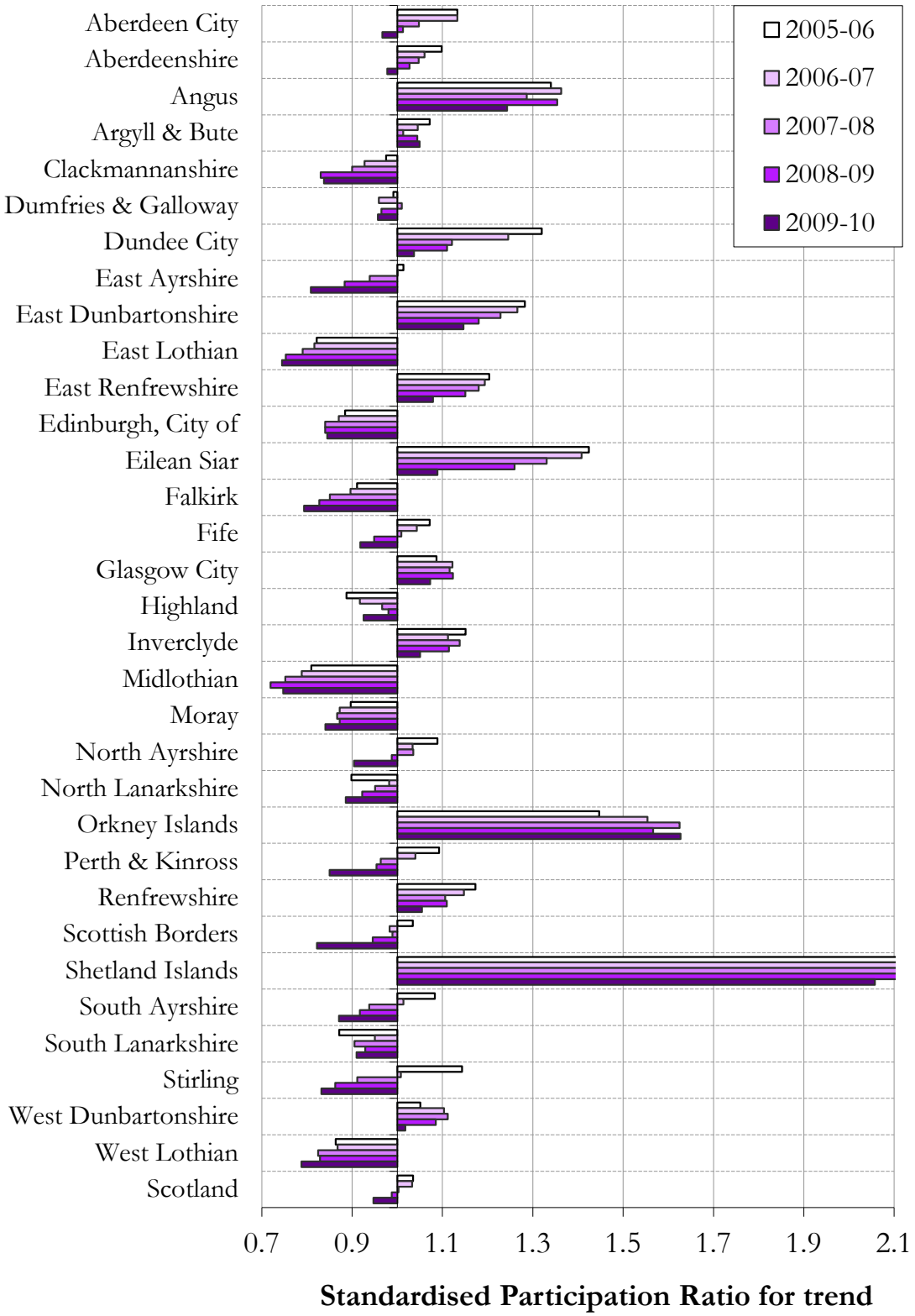
Figure 2.3.1 shows trends in standardised participation ratio for headcount for further or higher education. A statistical model was used on the headcount data to determine which trends were not due to random fluctuations between 2005-09 and 2009-10 and it was noted that headcount participation declined in 19 local authorities.

Figure 2.3.2 shows FTE participation from 2005-06 to 2009-10. This gives a more realistic picture of changes in the volume of activity in recent years.

Table 2.3.1 Participation in FE or HE by local authority

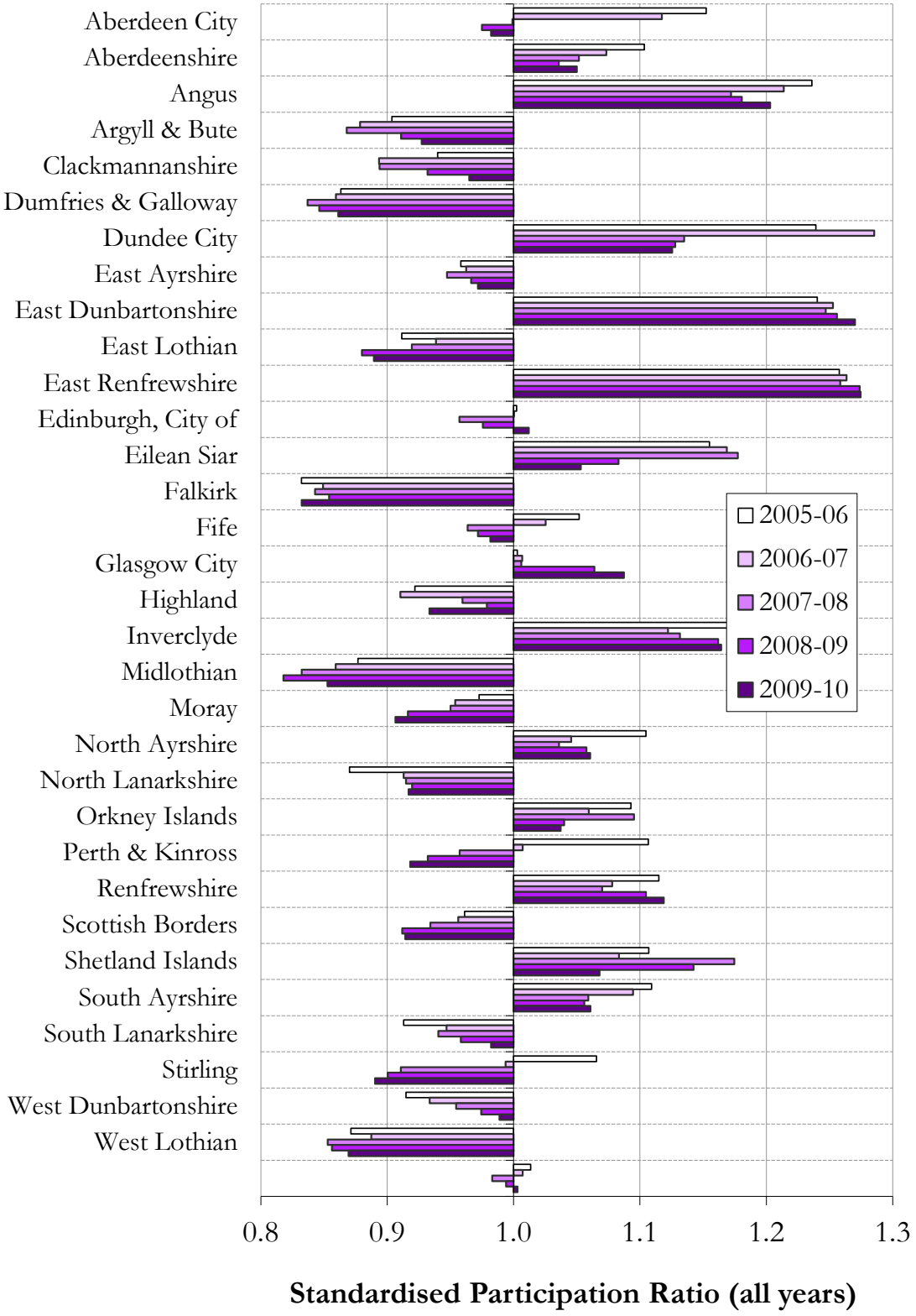
Local Authority	Headcount			FTE	
	2009-10 Rate /1000	2009-10 SPR	Trend (2005-06 to 2009-10)	2009-10 Rate /1000	2009-10 SPR
Aberdeen City	113.9	0.97	↓	55.8	0.98
Aberdeenshire	109.3	0.98	↓	55.8	1.05
Angus	133.3	1.24		60.7	1.20
Argyll & Bute	113.1	1.05		48.1	0.92
Clackmannanshire	97.3	0.84	↓	54.2	0.96
Dumfries & Galloway	101.0	0.96		42.9	0.86
Dundee City	124.3	1.04	↓	66.8	1.12
East Ayrshire	93.3	0.81	↓	54.3	0.97
East Dunbartonshire	128.7	1.15	↓	68.8	1.27
East Lothian	85.1	0.74	↓	49.2	0.89
East Renfrewshire	123.1	1.08	↓	70.3	1.27
Edinburgh, City of	100.9	0.84		57.3	1.01
Eilean Siar	116.1	1.09	↓	53.3	1.05
Falkirk	91.9	0.79	↓	46.3	0.83
Fife	107.2	0.92	↓	56.3	0.98
Glasgow City	132.7	1.07		65.3	1.08
Highland	101.0	0.93		48.3	0.93
Inverclyde	119.5	1.05		63.7	1.16
Midlothian	86.6	0.75	↓	47.9	0.85
Moray	95.2	0.84		49.9	0.90
North Ayrshire	102.3	0.90	↓	57.8	1.06
North Lanarkshire	104.4	0.89		52.1	0.91
Orkney Islands	179.2	1.63		54.8	1.03
Perth & Kinross	95.0	0.85	↓	49.3	0.92
Renfrewshire	120.9	1.05	↓	61.3	1.12
Scottish Borders	88.6	0.82	↓	46.8	0.91
Shetland Islands	238.3	2.06		60.4	1.06
South Ayrshire	94.1	0.87	↓	54.7	1.06
South Lanarkshire	104.0	0.91		53.5	0.98
Stirling	101.5	0.83	↓	55.1	0.89
West Dunbartonshire	119.2	1.02		56.0	0.99
West Lothian	93.8	0.79	↓	49.8	0.87
Scotland	**109.1**	**1.00**		**55.8**	**1.00**

Figure 2.3.1 Trends in standardised headcount participation in FE or HE by local authority



Notes
The five-year national average Standardised Participation Ratio (SPR) for trend is one. Thus SPRs above or below 1 are above or below this national average.

Figure 2.3.2.Trends in standardised FTE participation in FE or HE by local authority



Notes
The three-year national average Standardised Participation Ratio (SPR) for trend is 1.0. Thus SPRs above or below one are above or below this national average.

2.4. Participation within deprivation classes

The Scottish Index of Multiple Deprivation 2009 (SIMD) (Scottish Government, 2009) ranks each of the 6,505 Scottish Neighbourhood Statistics data zones using a score derived from seven domains of deprivation: income; employment; health; education, skills and training; geographic access to services; crime; and housing. This ranking was used to group the data zones into two classes: the most deprived data zones, which contain approximately 20 per cent of the 2009 mid-year population, and the rest. The two classes are termed the 'most deprived' and the 'less deprived'.

Table 2.4.1 and Table 2.4.2 show participation rates, in terms of headcount and FTE, in further or higher education by deprivation class and year together with the ratio of participation from the most deprived data zones to that from the less deprived. This is an indicator of how strongly participation is related to deprivation in an area. In particular:

- the gap between the less and most deprived has decreased since 2005-06;
- for the latest three years, headcount rate has been higher in the most deprived class; and
- in terms of FTE the participation rate of the most deprived class is 97 per cent that of the less deprived in 2009-10.

Table 2.4.1 Headcount participation in FE or HE by deprivation class

Year	Deprivation class: Less deprived (Rate/1000)	Deprivation class: Most deprived (Rate/1000)	Ratio of most to less deprived
2005-06	120.8	112.8	0.93
2006-07	119.9	115.7	0.97
2007-08	116.4	117.3	1.01
2008-09	113.9	117.2	1.03
2009-10	108.4	112.6	1.04

Table 2.4.2 FTE participation in FE or HE by deprivation class

Year	Deprivation class: Less deprived (Rate/1000)	Deprivation class: Most deprived (Rate/1000)	Ratio of most to less deprived
2005-06	57.0	49.8	0.87
2006-07	56.6	50.2	0.89
2007-08	55.9	51.2	0.92
2008-09	56.0	53.5	0.96
2009-10	56.1	54.7	0.97

Figure 2.4.1 and Figure 2.4.2 show trends in participation by deprivation class and by gender and age group respectively. These indicate that:

- participation has declined for men and women (in particular) in the less deprived classes but has increased slightly for men among the most deprived; and
- young participation increased in the most deprived classes since 2005-06.

Figure 2.4.1 Trends in headcount participation in FE or HE education by gender and deprivation class

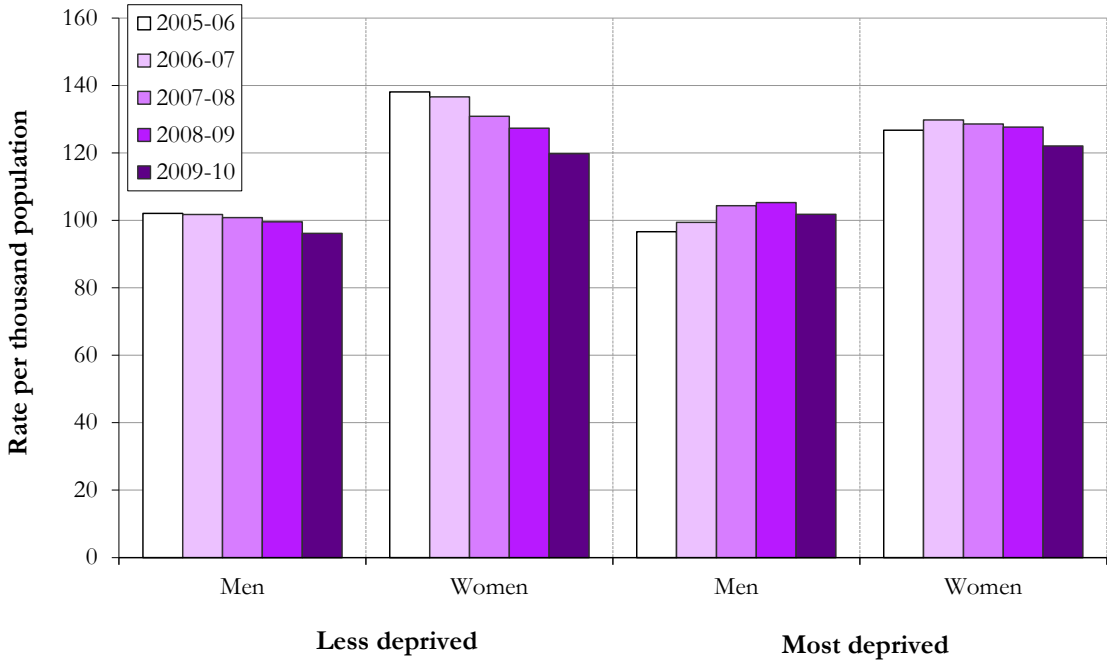
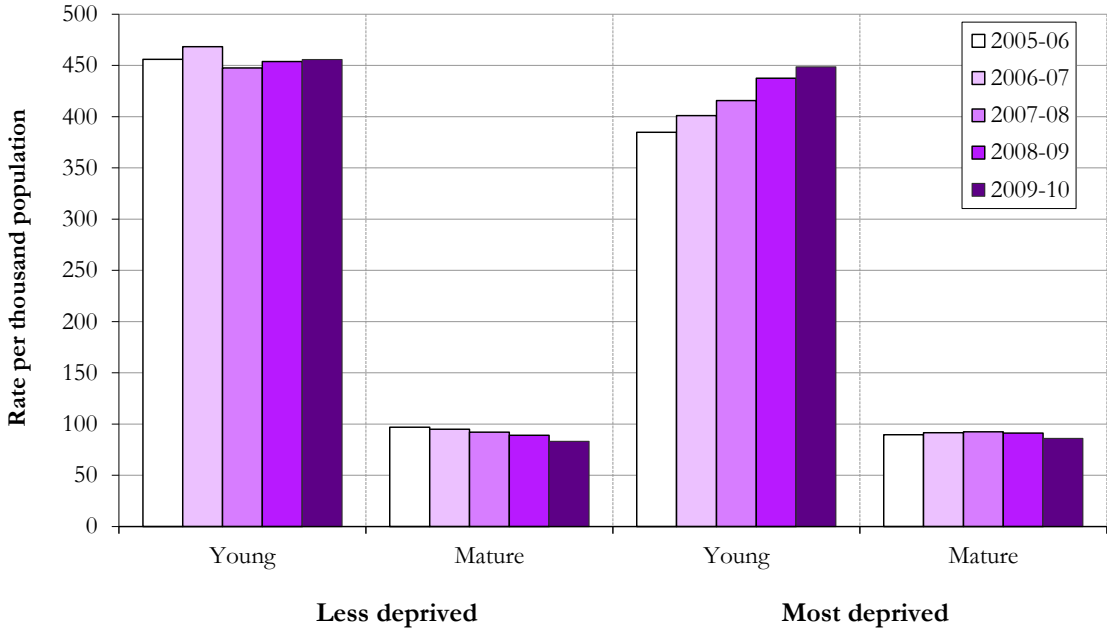


Figure 2.4.2 Trends in headcount participation in FE or HE by age group and deprivation class



Notes
Young = 16-19, Mature = 20 and over

Table 2.4.3 shows headcount participation rates in further or higher education by deprivation class and local authority for 2009-10 together with the ratio of participation from the most deprived data zones to that from the less deprived. A number of local authorities have relatively small populations in the most deprived class and are therefore likely to have fluctuating participation rates. These have been indicated in the table.

Excluding those with small populations, the following local authorities have relatively high participation in their most deprived data zones compared to the less deprived: Aberdeenshire, Angus, Borders and Perth and Kinross.

Conversely, the following have relatively low participation in their most deprived data zones: Stirling.

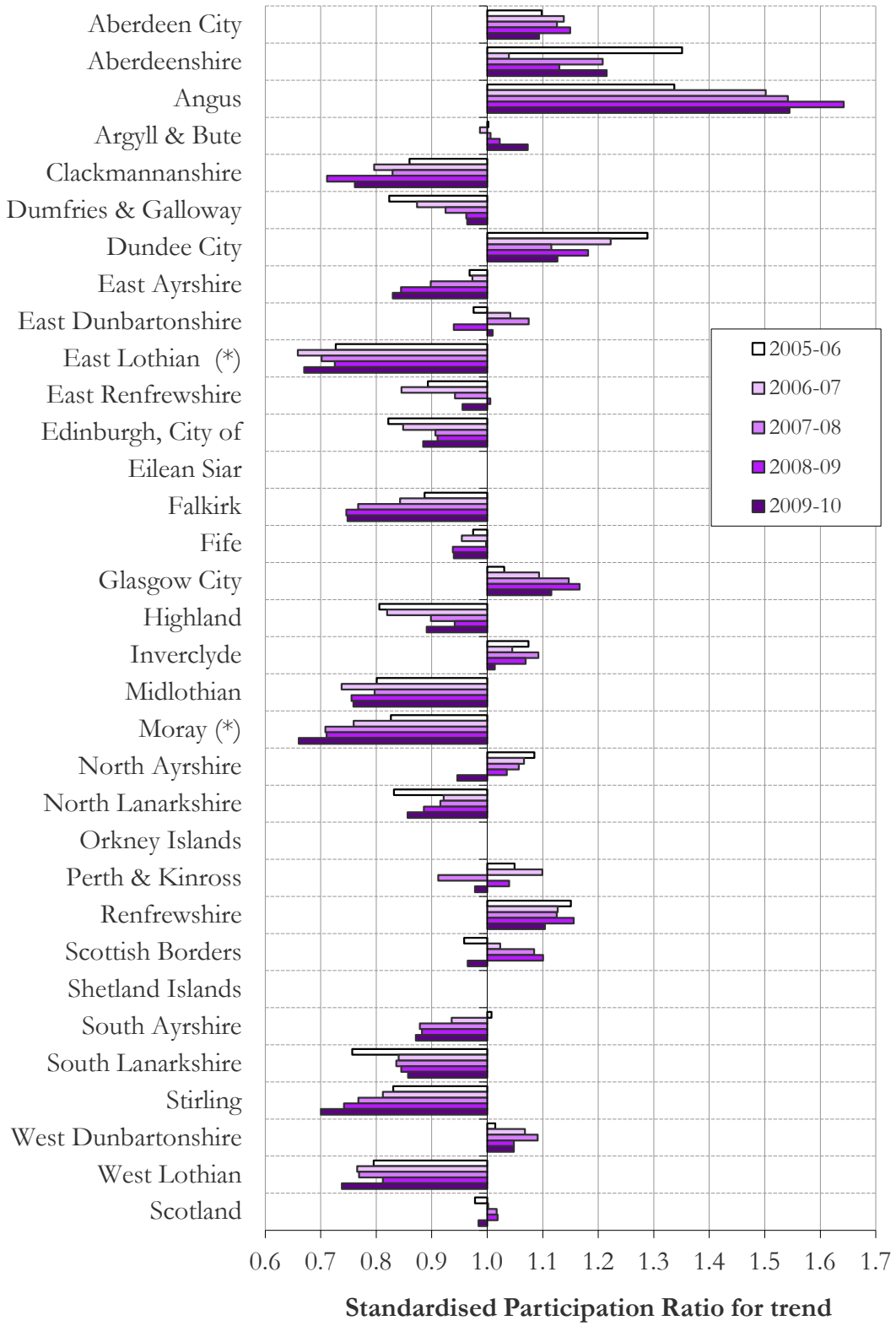
Figure 2.4.3 shows trends in headcount participation by local authority in the most deprived data zones. Trends that are less likely to be due to random fluctuations were identified using a statistical model. In the most deprived data zones an upward trend was evident in Edinburgh and Glasgow cities, while a downward trend was identified in Falkirk, Dundee, East and North Ayrshire.

Table 2.4.3 Headcount participation in FE or HE by local authority and deprivation class, 2009-10

Local Authority	Deprivation quintile Less deprived Rate/1000	Most deprived	Ratio of most to less deprived
Aberdeen City	111.9	128.8	1.15
Aberdeenshire	108.8	137.2	1.26
Angus	130.8	178.9	1.37
Argyll & Bute	112.7	118.6	1.05
Clackmannanshire	99.9	89.2	0.89
Dumfries & Galloway	100.2	109.1	1.09
Dundee City	122.6	127.1	1.04
East Ayrshire	93.3	93.3	1.00
East Dunbartonshire	129.2	118.1	0.91
East Lothian (*)	85.2	83.5	0.98
East Renfrewshire	123.9	110.7	0.89
Edinburgh, City of	100.4	105.0	1.05
Eilean Siar	116.2	-	-
Falkirk	93.2	84.8	0.91
Fife	107.2	107.7	1.00
Glasgow City	136.3	128.9	0.95
Highland	100.9	102.9	1.02
Inverclyde	127.1	109.3	0.86
Midlothian	86.3	90.4	1.05
Moray (*)	95.8	77.6	0.81
North Ayrshire	100.3	106.7	1.06
North Lanarkshire	107.9	96.4	0.89
Orkney Islands	179.2	-	-
Perth & Kinross	93.8	118.0	1.26
Renfrewshire	120.0	124.0	1.03
Scottish Borders	87.6	112.7	1.29
Shetland Islands	238.5	-	-
South Ayrshire	93.8	96.2	1.03
South Lanarkshire	106.1	95.2	0.90
Stirling	103.2	82.3	0.80
West Dunbartonshire	117.5	122.7	1.04
West Lothian	95.7	85.4	0.89
Scotland	**109.2**	**112.6**	**1.03**

Notes
* = local authorities that have a relatively small population in the most deprived deprivation class (below 3,000 in 2009)
- = no population in that class

Figure 2.4.3 Trends in standardised headcount participation in FE or HE from data zones in the most deprived class, by local authority



Notes
* = based on a relatively small population (below 3,000 in 2009)
Eilean Siar, Moray, Orkney Islands and Shetland Islands have no data zones in the most deprived class.

3. Participation in further education

This chapter covers participation in further education (FE) by Scottish students at colleges in Scotland. The 43 colleges funded by SFC deliver learning at over 4,000 locations and offer a wide range of courses at almost every level. Their higher education students are included in chapter 4, but courses at further education level include:

- vocational and general education up to SVQ level 3;
- Modern Apprenticeships, Skill seekers and 'Get Ready for Work' programmes;
- courses for school pupils through school link arrangements;
- access courses for those returning to education;
- courses for students with learning difficulties;
- training for employees, at college and in the workplace;
- courses required for the registration of public service staff, such as social and health care;
- literacy and numeracy courses;
- English for Speakers of Other Languages (ESOL); and
- vocational and non-vocational evening classes.

This list is not exhaustive, and for more information on the nature of college activity see *Unlocking Opportunity: the Difference Scotland's Colleges Make to Learners, the Economy and Wider Society* (Scottish Government, 2006a).

For most of the types of education offered, the colleges may be the main provider, but they are not the only provider. In addition, the type of provision will vary between colleges and also the extent to which they or other providers satisfy local demand. This should be borne in mind when interpreting the results: trends in college participation may not entirely reflect overall trends in further education; trends may be affected by an increase or decrease in certain types of provision; and geographical differences can result from variation in the extent of college involvement in different types of further education in a locality.

In addition, participation reflects, to a large extent, levels of funding and how colleges allocate funds so as to ensure they meet targets set by SFC. For example, some courses, such as those in agriculture and construction, or those for students with learning difficulties, have a relatively high cost per

student which can affect the number of enrolments that are achievable. Numbers are also affected by the extent to which colleges meet part of their target by claiming for the additional study time required for students needing Extended Learning Support (ELS). The amount claimed for ELS has increased year on year since 2005-06.

As we are focusing on the proportion of the population studying at college, this section concentrates on the number of students (headcount) rather than on the number of enrolments at colleges. Students frequently enrol on more than one course in a year. For example, a student returning to education may enrol on a short course before committing to further study.

The numbers presented here will differ slightly from those presented elsewhere, for example in *Scotland's Colleges: a Baseline Report* (SFC, 2011) and the INFACT database (https://stats.sfc.ac.uk/infact/). This is because in this report:

- only students resident in Scotland are included;
- students under school leaving age have been excluded; and
- we have attempted to avoid double counting of students who enrol at more than one college in a year.

In addition, some students on college courses not funded by SFC have not been included because we hold very limited information on them. For 2009-10 we have data on around 21,000 enrolments on these 'full cost recovery' courses, although, because of multiple enrolments, the number of additional students involved will be less than this.

Students who are Scottish-domiciled but studying in colleges outside Scotland have also been excluded. Leaving these students out is unlikely to result in a significant under-representation of participation for any particular areas.

As well as number of students (headcount), participation is also presented in terms of FTE. FTE was based on the number of hours of study as a proportion of the expected number of hours for a full-time course. Full-time students who completed their course were given an FTE of one. See Appendix 1 for more information.

3.1. Overview

Table 3.1.1 summarises the number of students, FTE and participation rates in further education in colleges and shows the extent to which these have changed since 2005-06. In percentage terms, the FTEs have increased more than the number of participants between 2005-06 and 2009-10 and so the average student FTE has increased slightly.

The number of students fell overall between 2005-06 and 2009-10 but as college funding increased over this period it is likely that FTE would have exhibited a different trend. FTE has increased by 8 per cent between 2005-06 and 2008-09 but has shown a one per cent drop between 2008-09 and 2009-10.

Table 3.1.1 Participation in FE, 2005-06 to 2009-10

Year	Headcount		FTE	
	Count	Rate/1000	Count	Rate/1000
2005-06	265,979	63.8	72,510	17.4
2006-07	272,911	65.0	75,065	17.9
2007-08	274,817	64.7	76,444	18.0
2008-09	266,454	62.4	78,443	18.4
2009-10	242,455	56.4	77,592	18.0
Change 2008-09 to 2009-10	-9.0%	-9.6%	-1.1%	-1.7%

Note
Rates/1,000 are the number of students per thousand head of the population aged 16 and over.

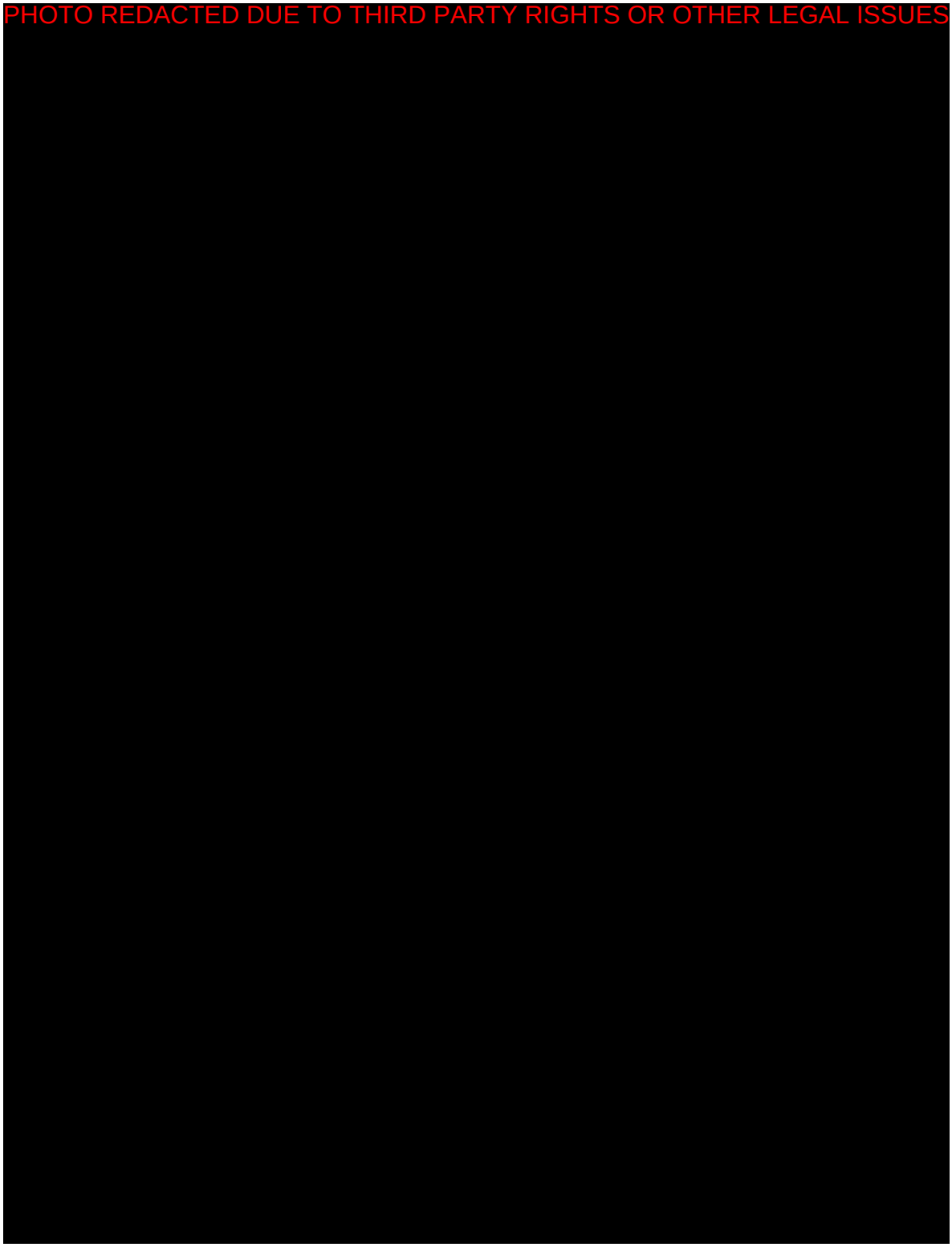
Geographical variation in participation in 2009-10 is illustrated in Figure 3.1.1. Areas with particularly high participation include south-west Highland, Orkney, Shetland, parts of Angus, and north Argyll and Bute, as well as Glasgow. Particularly low participation is found mainly within Edinburgh, central Scotland and the highlands. In some areas participation is high because of the nature of local provision. For example, Shetland College provides training for local council staff.

Figure 3.1.2 shows changes in headcount participation between 2005-06 and 2009-10. There was strong evidence of an increase in participation in areas of Glasgow and Edinburgh and south-west Highland. There was strong evidence of a decrease in many areas including parts of the cities, central Scotland, south Ayrshire, north Highland, Perth and Kinross and Eilean

Siar. Note that areas in green may also have changed but there was insufficient statistical evidence to determine this.

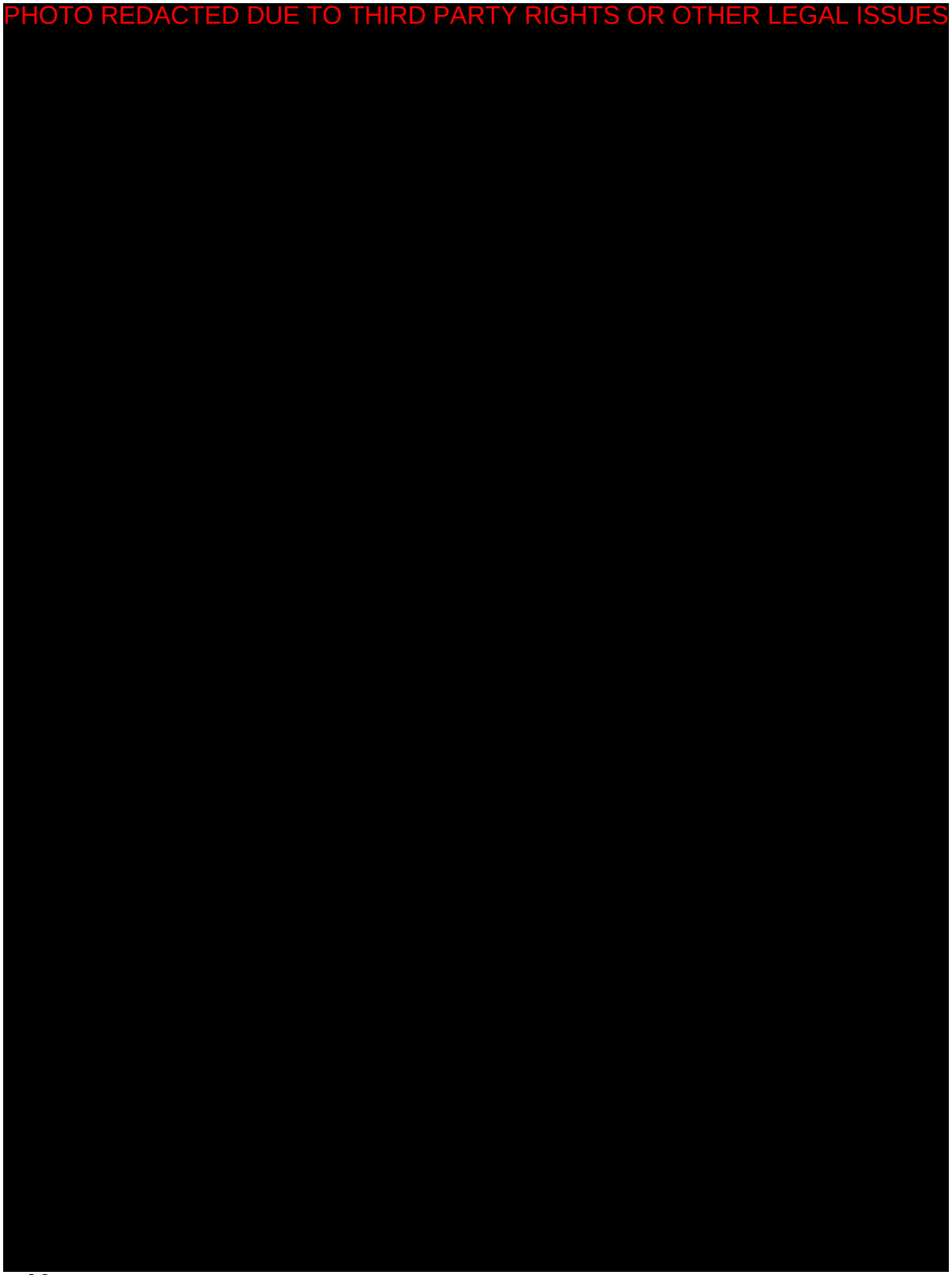
Variation in FTE participation is shown in Figure 3.1.3. Comparing with Figure 3.1.1, this shows a low participation in terms of FTE throughout much of the highlands and the south of Scotland. Most areas of high FTE participation are concentrated in and around the cities of Glasgow and Dundee with pockets in Fife, Edinburgh and parts of central Scotland.

Figure 3.1.1 Geographical variation in headcount participation in FE, 2009-10



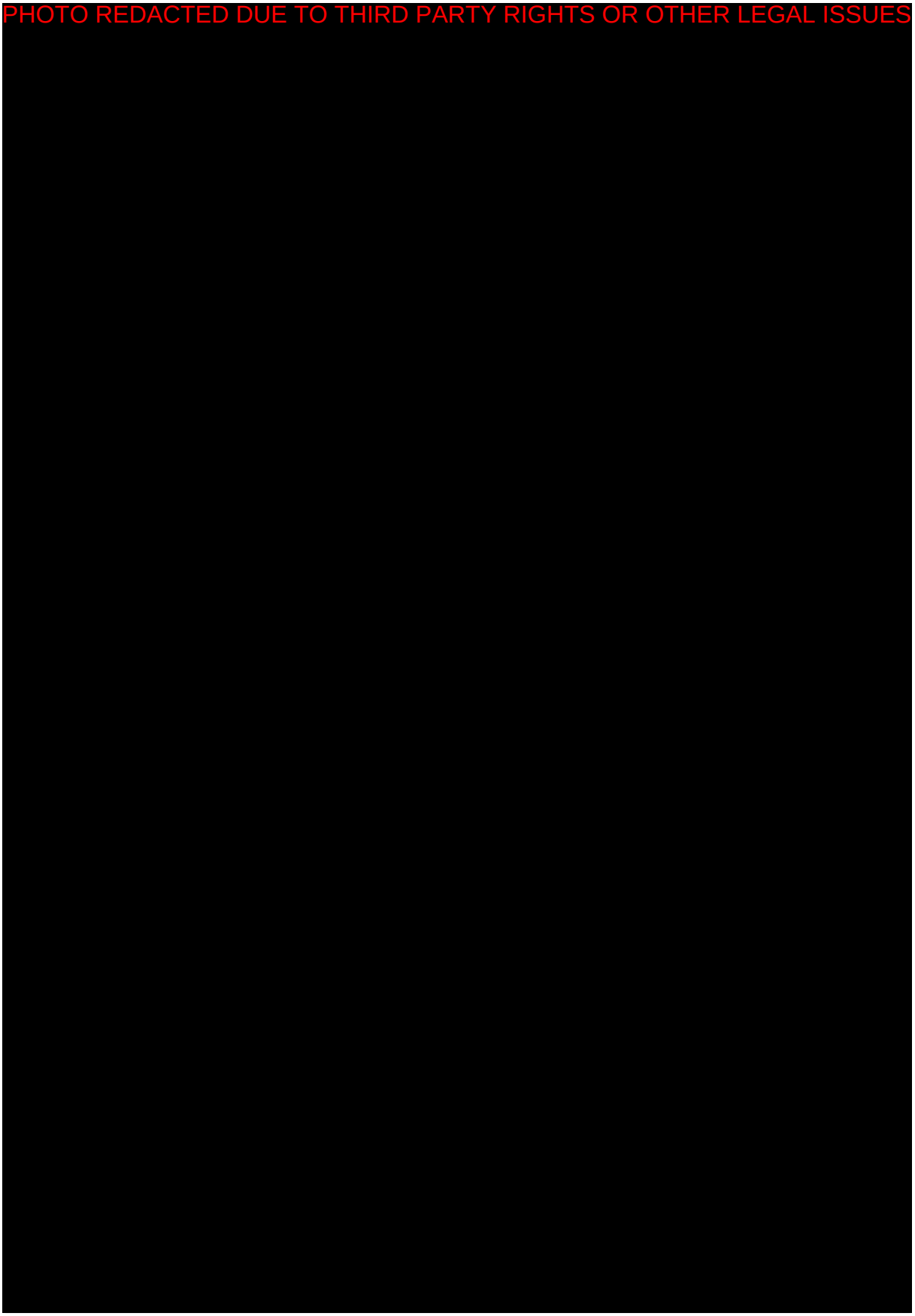
Notes
The Standardised Participation Ratio (SPR) compares the number of participants in an area with what would be expected if national age-gender specific participation rates were applied to the area's population. The SPR ensures areas with differing age-gender distributions are comparable. The national SPR is one. Thus participation in areas in green is close to the national rates.

Figure 3.1.2.Change in headcount participation in FE 2005-06 to 2009-10



Notes
The map highlights those areas which have shown an increasing or decreasing trend in SPR as derived from a statistical model, see Appendix 1 for more information.
Areas with an established trend are not necessarily those that have changed the most.

Figure 3.1.3 Geographical variation in FTE participation in FE, 2009-10



3.2. Trends by age and gender

Age and gender specific trends are summarised in Figure 3.2.1 and Figure 3.2.2. These show that:

- headcount participation for men has increased between 2005-06 and 2007-8, but has dropped in 2008-9 and further in 2009-10;
- headcount participation generally declined for women between 2006-07 and 2009-10;
- headcount participation has dropped for both men and women in the 16-19 year old age group in 2009-10 following previous rises; and
- FTE participation is higher in 16-19 year old men than for 16-19 year old women as they are more likely to undertake either full-time or short full-time study.

Participation in students aged '20 and over' is consistently higher in women than men, and it should be noted that the difference in the overall participation rates ('All ages') is affected by the fact that there are rather more elderly women than men in the post school leaving population. As participation is low in the elderly they have the effect of reducing overall rates and more so in women than men. Thus, the difference between men and women in the 'Working age' rates is rather larger than in the 'All ages' rate.

Figure 3.2.1 Headcount participation rates in FE by age and gender

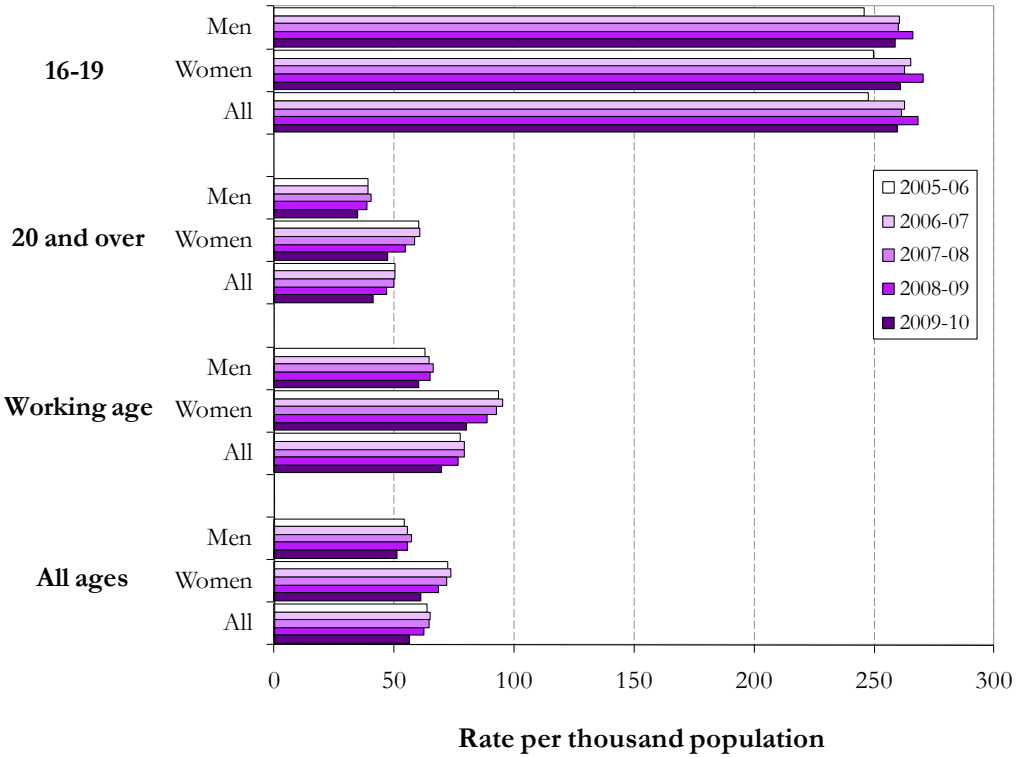
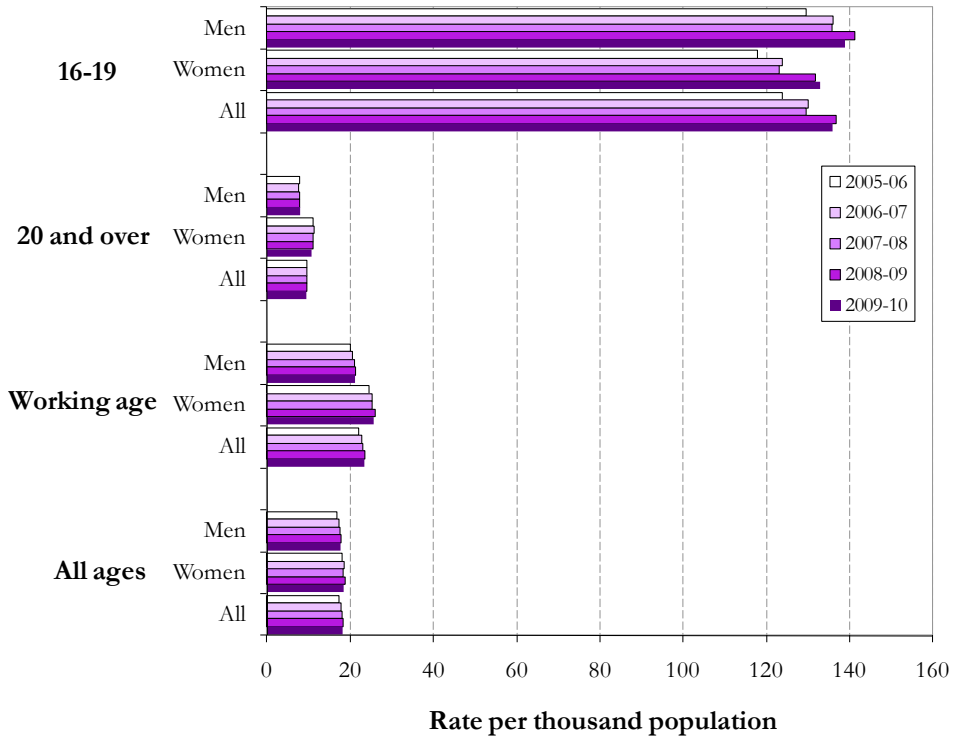


Figure 3.2.2.FTE participation rates in FE by age groups and gender

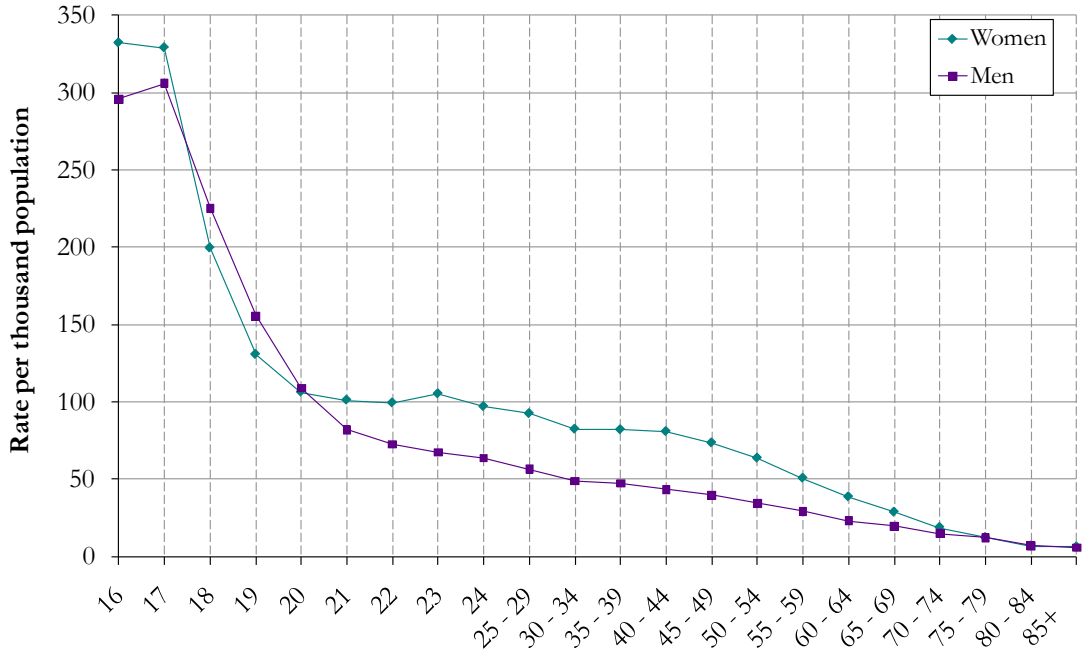


Note: Rates are calculated using the relevant population group, eg women aged between 16 and 19.

The age distribution of participation in men and women is shown for 2005-06 and 2009-10 in Figure 3.2.3. Participation is higher in women at ages under 18, but male participation is greater between the ages of 18 and 20. Female participation is greater over the age of 20 but falls to a level similar to men by age 75.

Figure 3.2.3 Headcount participation rates in FE by age and gender, 2005-06 and 2009-10

a) 2005-06



b) 2009-10

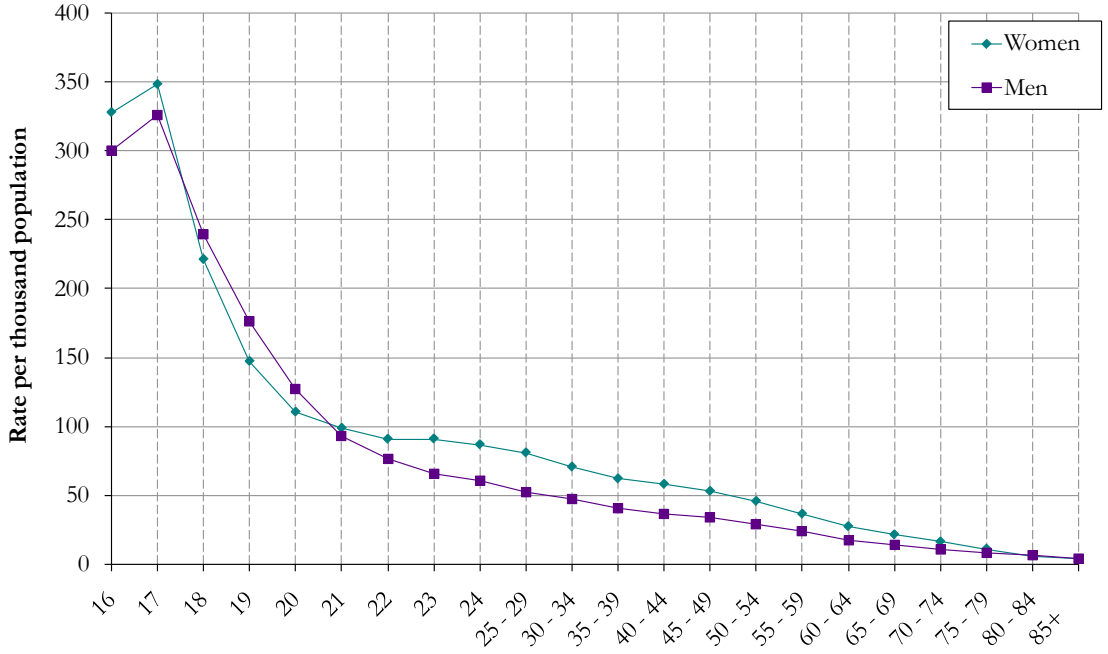


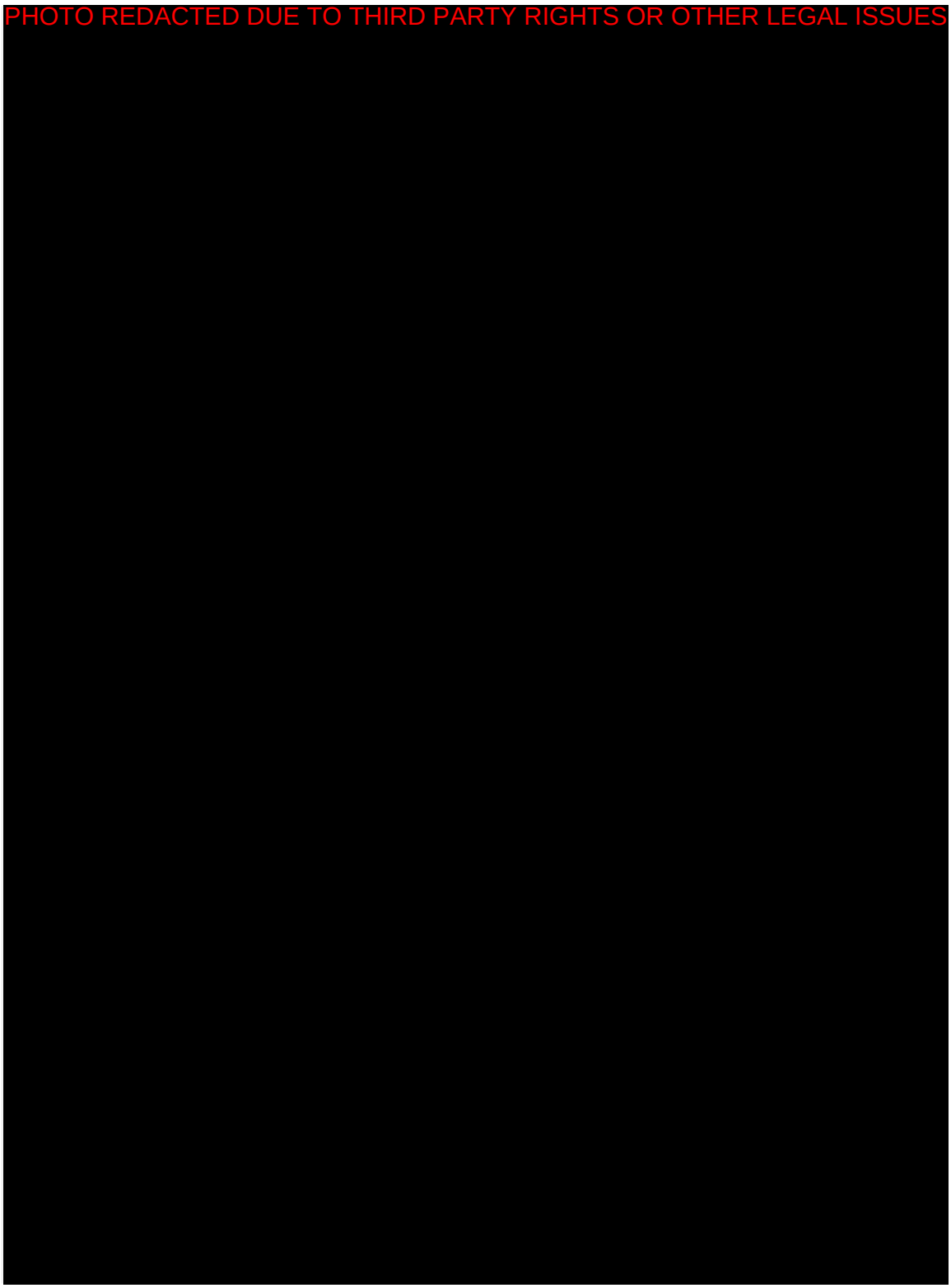
Figure 3.2.4 illustrates variation between local authorities in gender balance in 2009-10, measured as the ratio of the participation rate for young (16-19 year old) men to that for young women. Areas with a value below one are those where young men are less likely to be in FE than women and the converse is true for values greater than one. The map shows that:

- participation in young men is lowest relative to women in West Dunbartonshire, Inverclyde, Renfrewshire, Orkney and North Ayrshire; and
- it is highest in Clackmannanshire, Eilean Siar, Perth and Kinross, Stirling, East Lothian and Midlothian where young men are up to 26 per cent more likely than women to participate.

For Scotland as a whole, young men were slightly less likely to participate than women in 2009-10 (Figure 3.2.1).

It should be noted however, that the degree of gender balance will vary between years and relatively small changes may result in a change of class on the map. This is particularly evident in Orkney, where in 2006-07, a similar ratio of males and females were enrolled in further education as opposed to the high ratio of males in the following two years, and the low ratio for this current year.

Figure 3.2.4 Gender balance among young participants in FE by local authority, 2009-10 (< 1 means young men less likely to participate than young women)



Note
The scale shows the ratio of young male to female participation rates. Thus, values are less than one where young men are less likely to participate than young women. The converse is true for values greater than one.

3.3. Trends by mode and length of study

Participation in FE by mode of study is presented in Figure 3.3.1 and Figure 3.3.2.

Short full-time and part-time day modes of study are normally associated with students who are already in employment and are attending college on a part-time basis. An increasing amount of activity is accounted for by work-based assessments.

Colleges have always offered programmes of study at evenings or weekends, and many of these programmes are non-vocational in nature. Open and distance learning modes were introduced so that colleges could offer students a more flexible approach to their learning needs in, for example, rural areas.

Evening and weekends and work-based learning have decreased over the last five years. Although distance/open learning had increased overall until 2007-08; it is again in decline.

Figure 3.3.1 Headcount participation in FE by mode of study

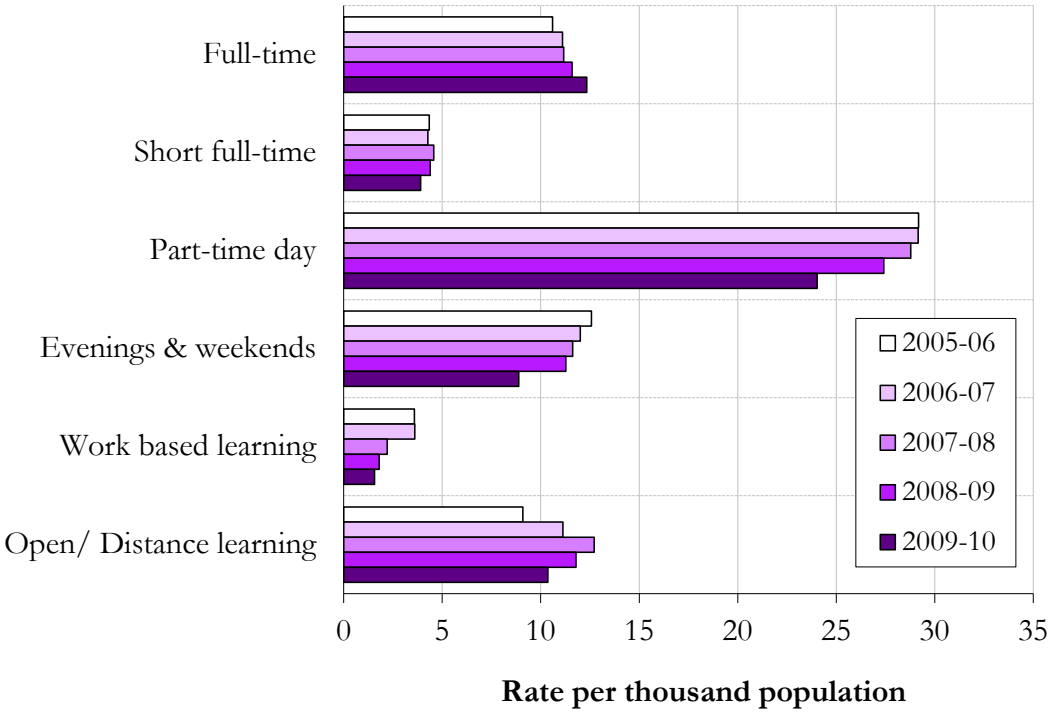
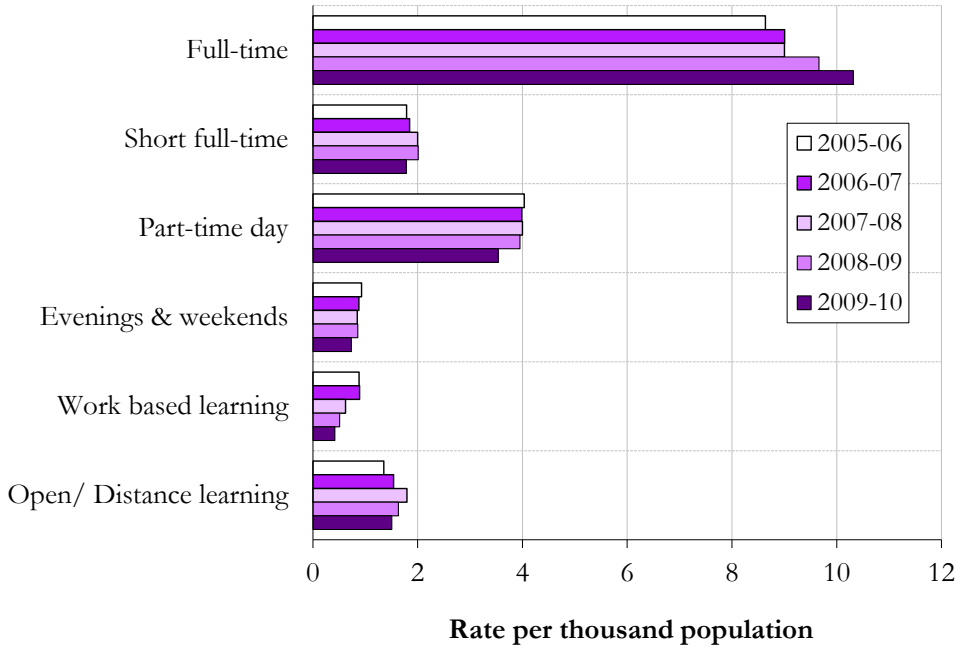


Figure 3.3.2 FTE participation in FE by mode of study



Note
We have assumed that courses recorded as 'part-time, but previously met full-time criteria' are short full-time courses. Some may have been part-time day courses which would mean that the figures for this mode of study are slightly underestimated and those for short full-time overestimated.

Figure 3.3.3 and Figure 3.3.4 show participation for men and women separately.

These indicate that:

- short full-time study is much more common among men, being commonly associated with training for trades such as joinery and plumbing;
- work-based learning is more common among women but has decreased since 2006-07;
- 'evening and weekend' and 'distance/open learning' are more popular with women; and
- more women participate in part-time day courses, although the number doing so has declined over the five year period.

Figure 3.3.3 Headcount participation in FE by mode of study and gender

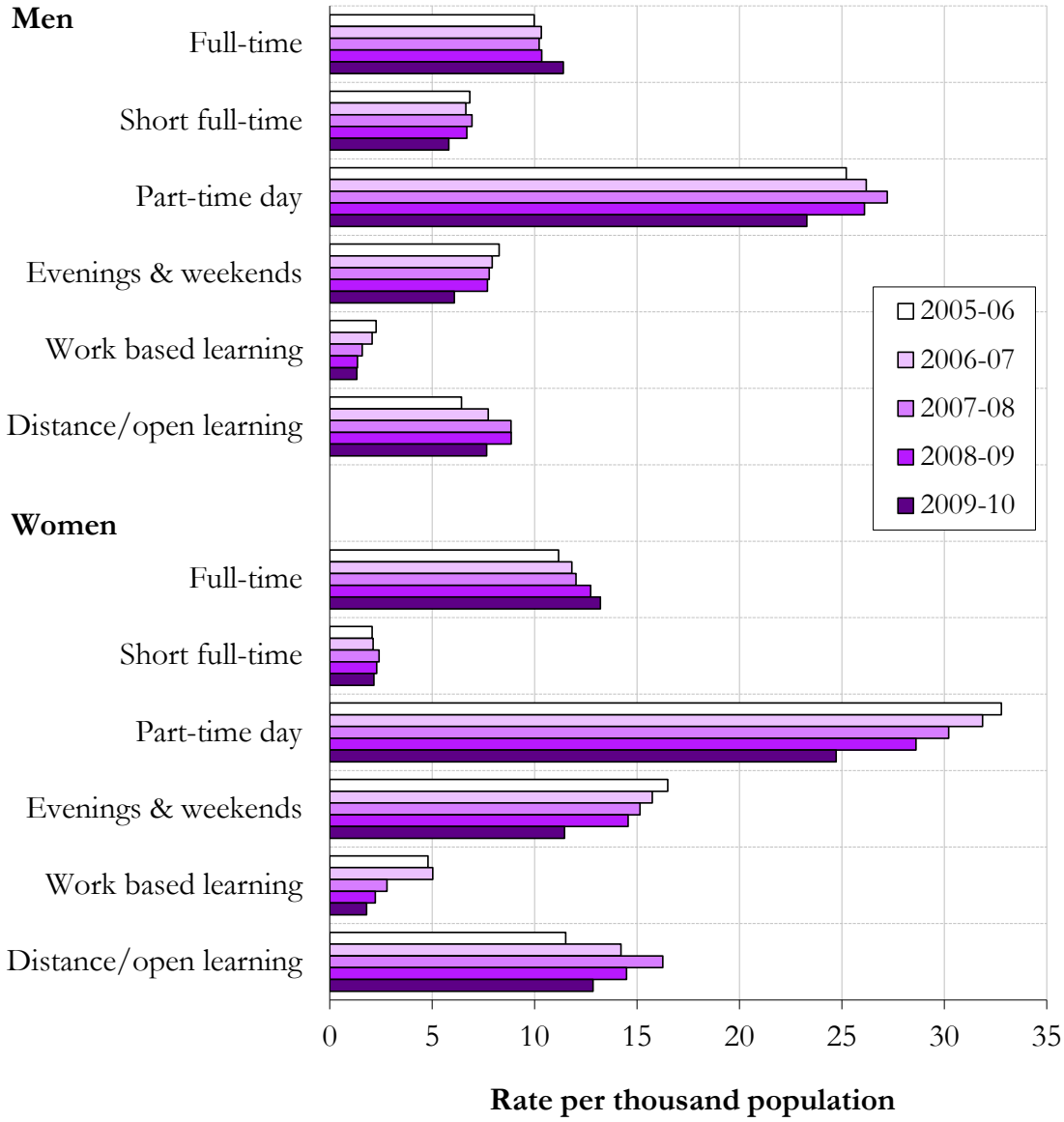


Figure 3.3.4 FTE participation in FE by mode of study and gender

It is also of interest to examine changes in the number of hours of study by students during the year. For this analysis we added up the total number of hours each student studied during the year and grouped them into bands to show rates for those studying very small amounts through to those studying more than 400 hours. The hours of study were imputed for students for whom the information was missing, based on the hours of study for other students on the same course or on similar courses.

Figure 3.3.5 shows headcount participation by length of study. This chart should be interpreted alongside Table 3.1.1 and Figure 3.2.1 which show an overall fall in FE headcount participation:

- there has been decrease in 2009-10 in the proportion of the population studying for less than 10 hours. This is as a result of the move to more full-time courses at the expense of short part-time courses;
- for those studying between 10 hours and 39 hours the level of participation has decreased;
- there is a decrease over the last four years in those studying between 40 and 119 hours; and
- participation among those studying for 400 or more hours has dropped slightly in 2009-10 after an increase since 2005-06.

Figure 3.3.5 Headcount participation in FE by hours of study

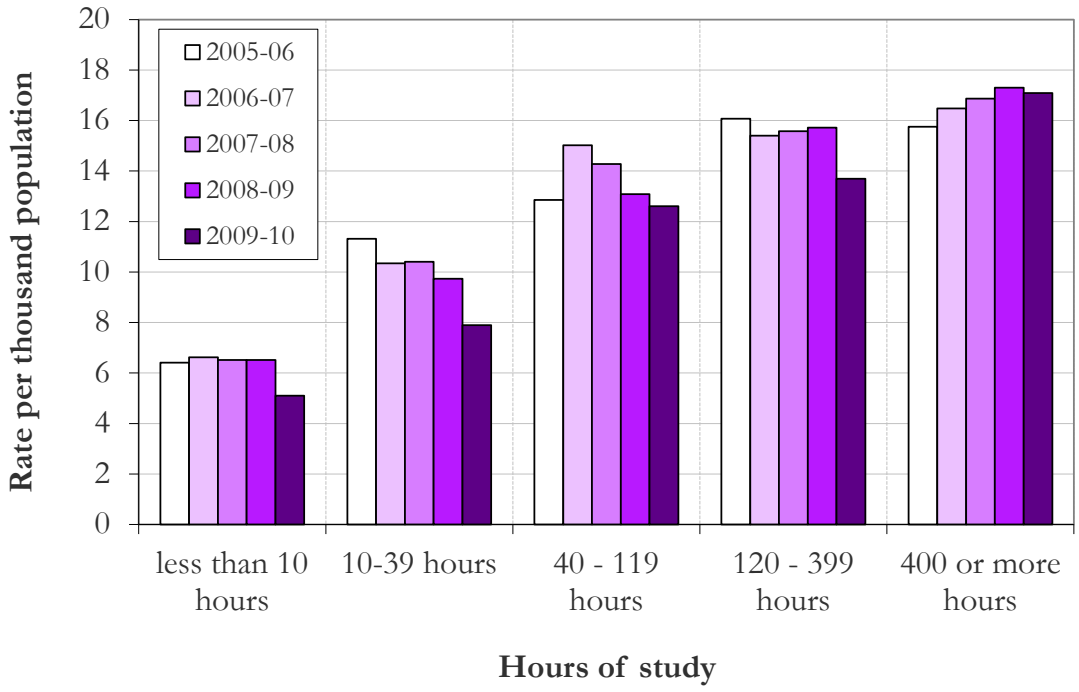


Figure 3.3.6 illustrates trends for women and men separately. In particular:

- women have higher rates of participation than men except for those studying for 400 or more hours; and
- the decrease in numbers of women studying less than 10 hours has been over the last four years since 2006-7 whereas there is only a decrease in numbers of men studying less than 10 hours in 2009-10.

Figure 3.3.6 Headcount participation in FE by hours of study and gender

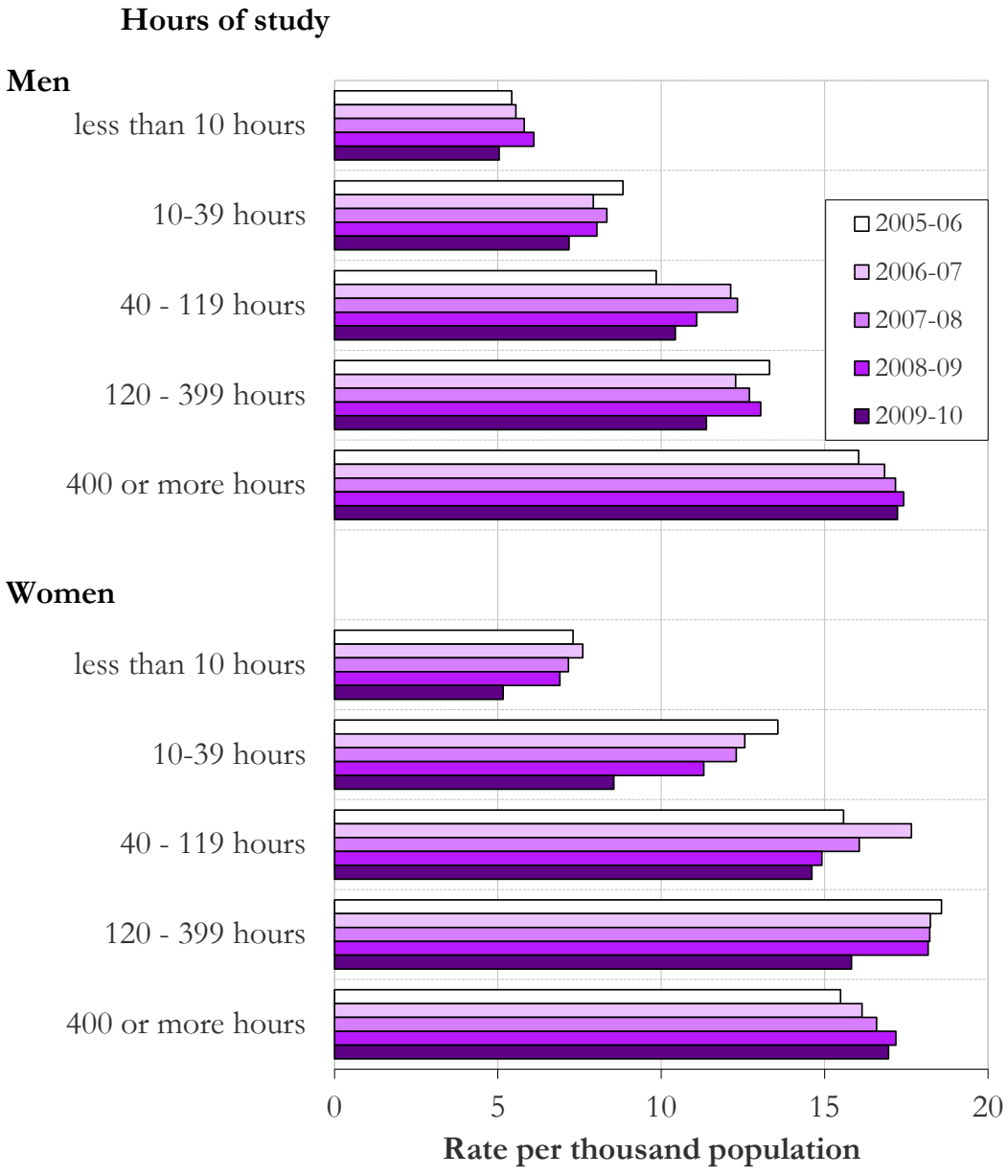
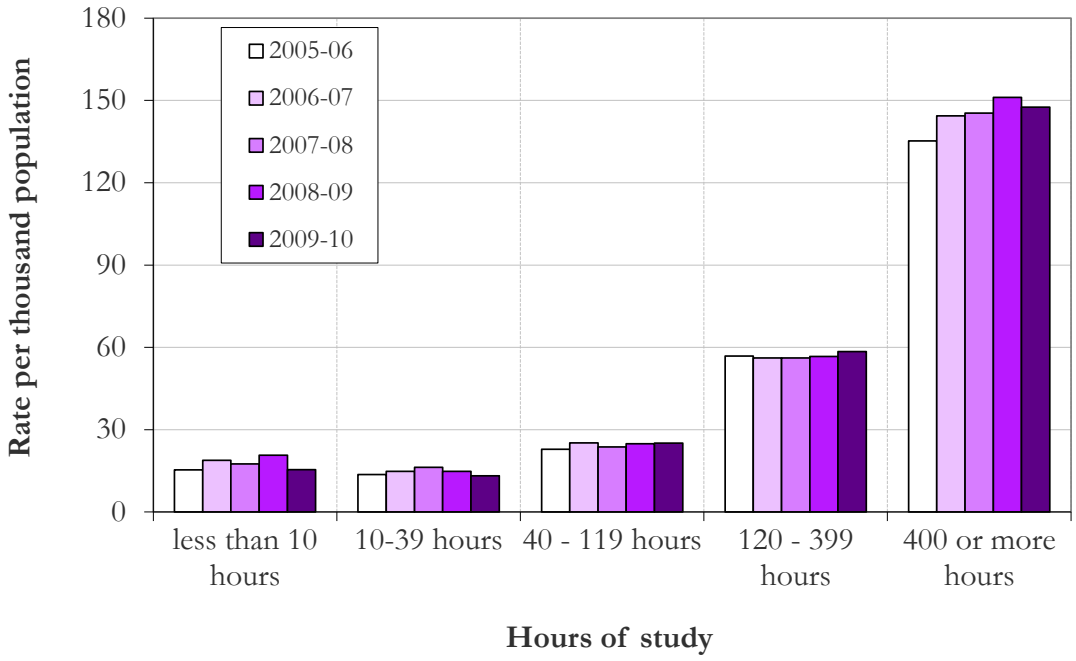


Figure 3.3.7 shows trends among the young. Compared with all students (Figure 3.3.5) participation has increased fairly consistently in those studying 400 hours or more and the decline in participation between 2006-07 and 2009-10 in those studying between 10 and 400 hours is less evident.

Figure 3.3.7 Headcount participation in FE by hours of study for young students aged 16–19



3.4. Trends by level of study

Where possible, the level of study has been grouped according to the Scottish Credit and Qualifications Framework (SCQF) levels (SCQF Partnership, 2007). The framework is designed to help people understand and compare different qualifications in Scotland and the levels indicate the degree of complexity in the learning required for a qualification. Unfortunately, some qualification types cannot be allocated to a single level and these have been grouped separately. This means that the amount of activity recorded under each SCQF level will be slightly underestimated.

Some students who are studying on courses not leading to a qualification are on special educational needs courses and these are shown separately in the main table.

Table 3.4.1, Figure 3.4.1 and Figure 3.4.2 show the numbers, FTE and rates per thousand population for participation according to level of study. These indicate that:

- headcount participation rate for study at SCQF Level 3 and 4 have increased slightly over the five years;
- participation on courses not leading to a recognised qualification fell in terms of headcount and FTE since 2006-07; and
- although in 2009-10, 71 per cent of students were studying for recognised qualifications, such courses comprised 89 per cent of all FTE.

Table 3.4.1 FE headcount and FTE by level of study, 2009-10

Mode of study SCQF Level	Description	Headcount	% of all students	FTE	% of all FTE
	Recognised qualifications				
6 & 7	Advanced Higher/Higher/SVQ: Level 3 or equivalent	28,661	12	14,132	18
5	Intermediate 2/SVQ: Level 2 or equivalent	21,271	9	11,661	15
4	Intermediate 1/SVQ: Level 1 or equivalent	7,268	3	3,316	4
3	Access	2,977	1	1,546	2
	Other non-advanced certificate / diploma or equivalent	37,509	15	11,617	15
	National Units	45,285	19	20,286	26
	Any Other recognised qualification	40,480	17	7,314	9
	Any recognised qualification	**172,925**	**71**	**69,303**	**89**
	Non - recognised qualifications				
	Special educational needs programme	12,324	5	2,960	4
	Course not leading to recognised qualification	73,455	30	5,828	8

Notes
There is an overlap between the levels of study as some students studied courses at more than one level in the same year. Therefore, the total number "Studying for any recognised qualification" will be less than the sum of the numbers for each level of study.

Figure 3.4.1 FE headcount participation rates by level of study

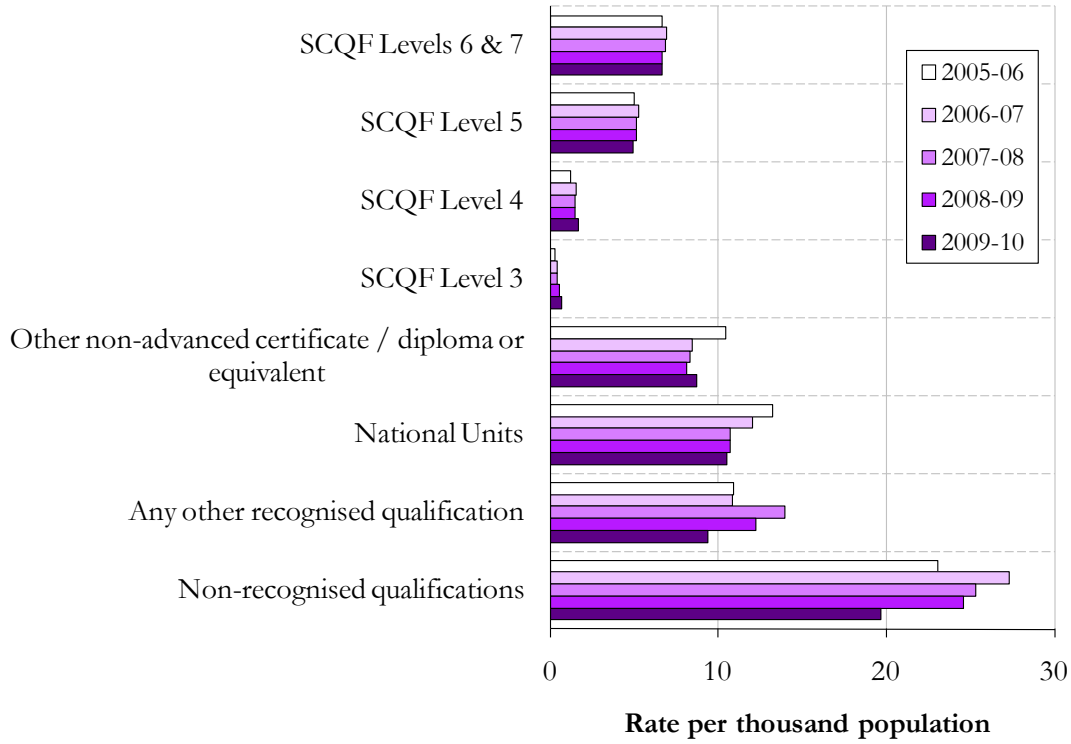


Figure 3.4.2 FE FTE participation rates by level of study

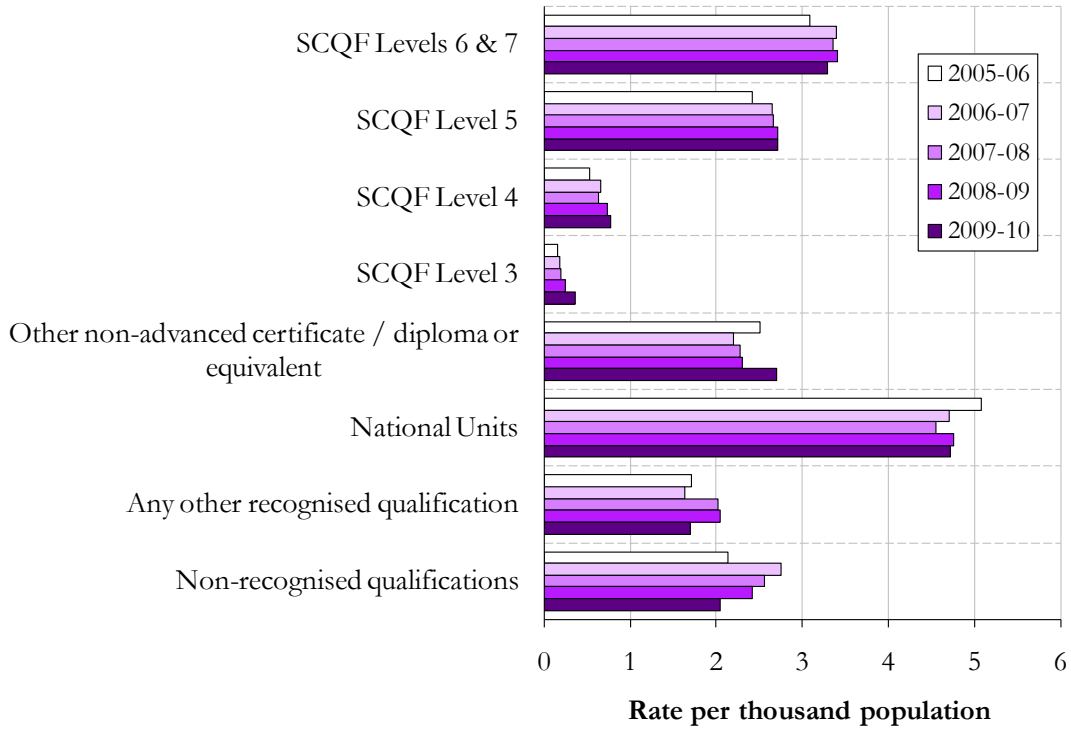
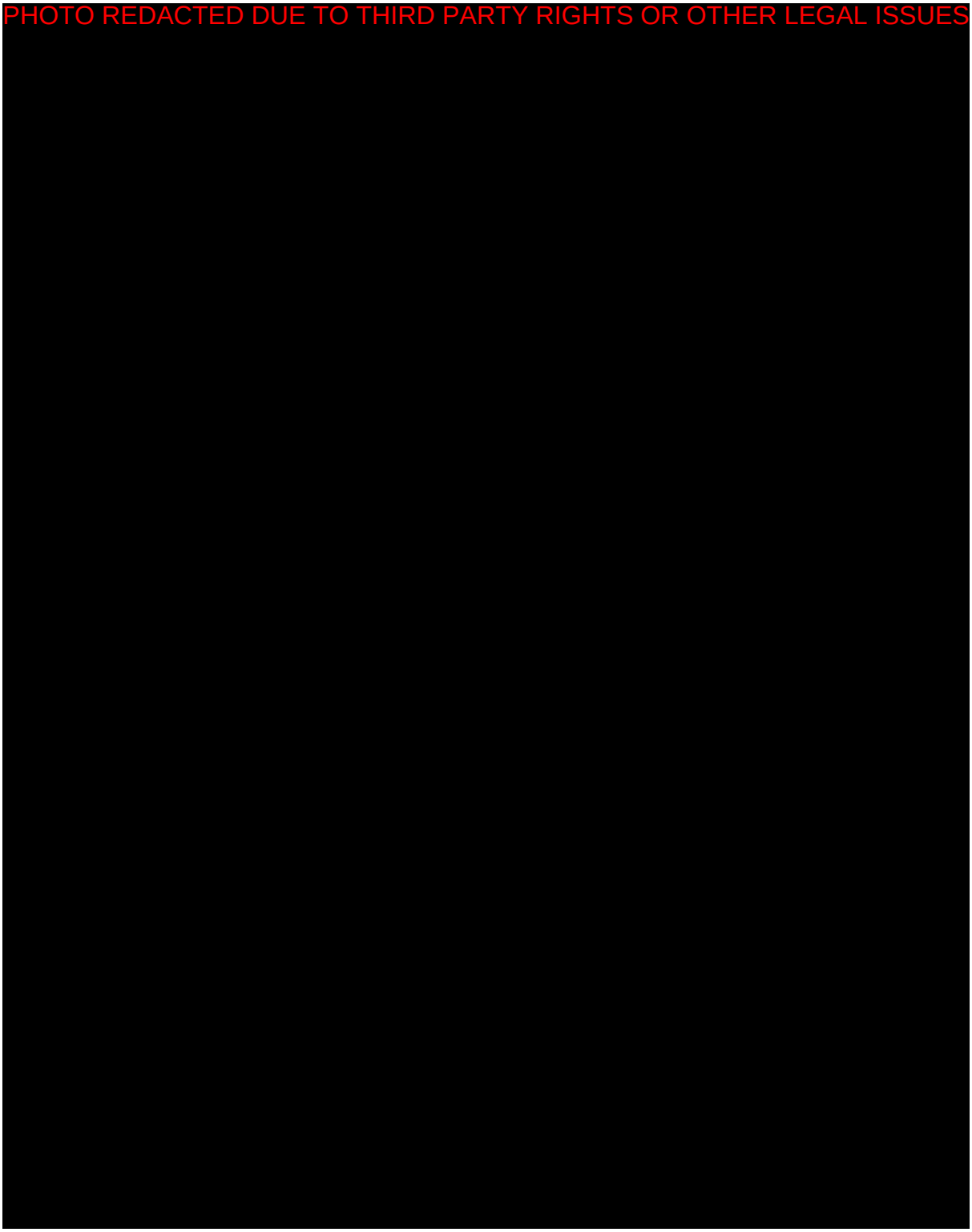


Figure 3.4.3 shows the geographical pattern of headcount participation for recognised FE qualifications. Participation is relatively high in Orkney, west Highland, parts of Dumfries and Galloway, northeast Aberdeenshire, and parts of Aberdeen, Dundee, Glasgow and Edinburgh City. Participation is relatively low in parts of Edinburgh, Glasgow, Aberdeen and Dundee cities, as well as Forth Valley, East Lothian and parts of Perth and Kinross.

Figure 3.4.3 Geographical variation in headcount participation for FE



Notes
The Standardised Participation Ratio (SPR) compares the number of participants in an area with what would be expected if national age-gender specific participation rates were applied to the area's population. The SPR ensures areas with differing age-gender distributions are comparable. The national SPR is one. Thus participation in areas in green is close to the national rates.

Figure 3.4.4 and Figure 3.4.5 show trends in headcount and FTE participation rates for men and women separately. Men and women have similar levels of participation for SCQF Level 6 and 7. For the other categories participation rates for women tend to be higher than the rates for men.

Figure 3.4.4 Headcount participation in FE by level of study and gender

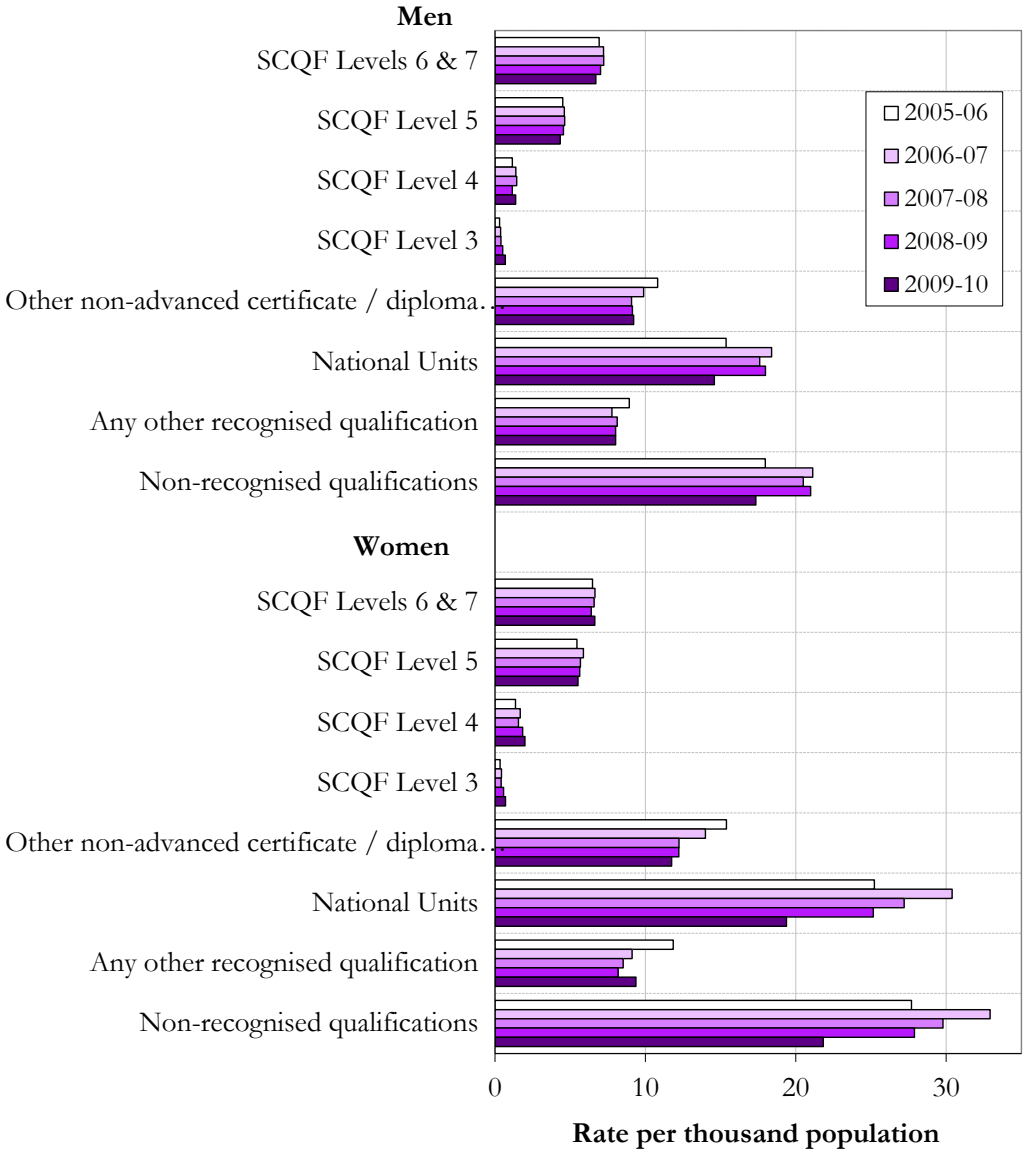


Figure 3.4.5 FTE participation in FE by level of study and gender

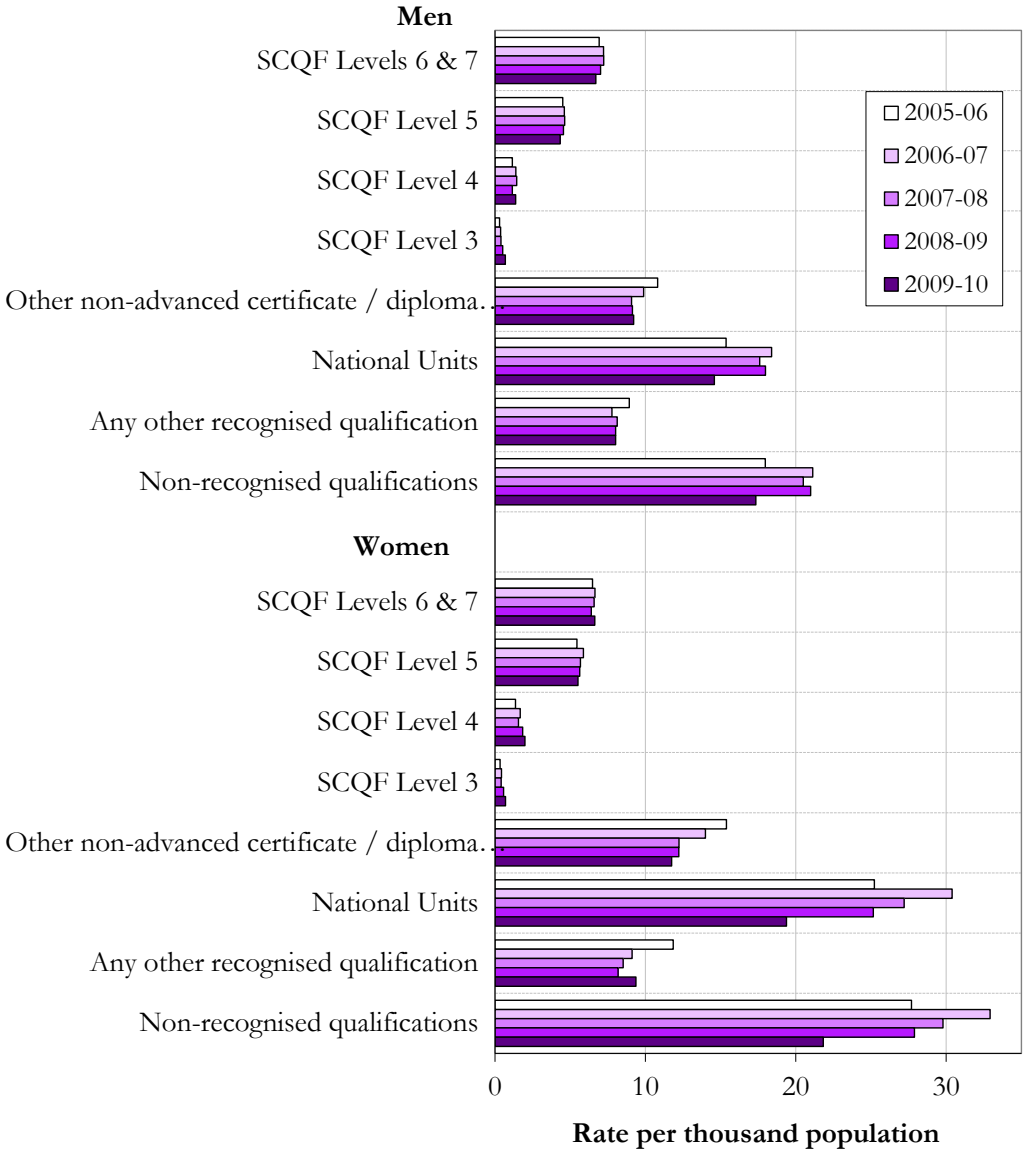


Figure 3.4.6 and Figure 3.4.7 show the participation rates for young students aged 16-19. The trends are similar to those for overall participation.

Figure 3.4.6 Headcount participation in FE by level of study for young students aged 16 – 19

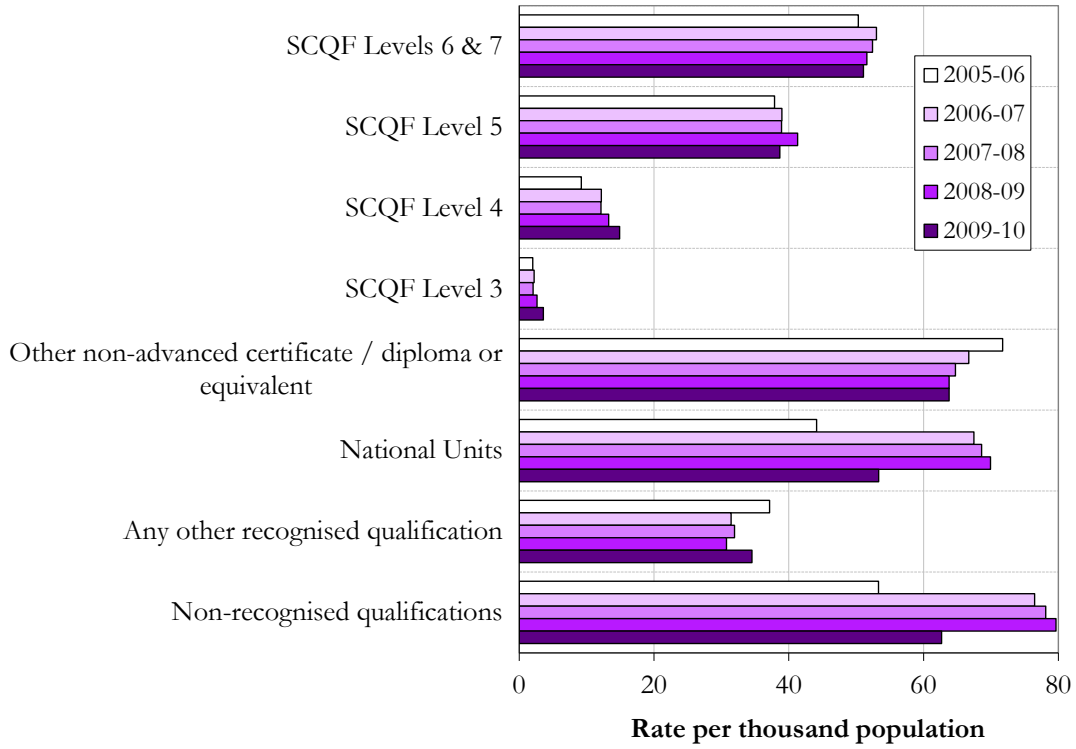
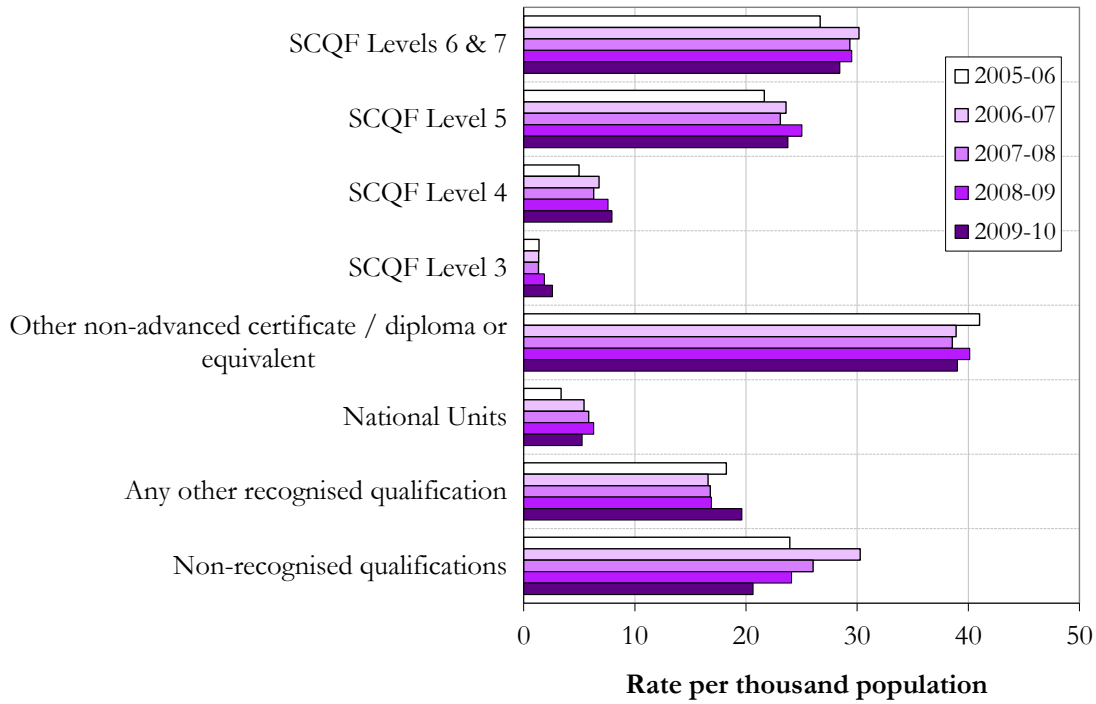


Figure 3.4.7 FTE participation in FE by level of study for young students aged 16 – 19



3.5. Local authority trends

Table 3.5.1 summarises current levels of participation in further education by local authority and trends since 2005-06. Figure 3.5.1 and Figure 3.5.2 show trends in standardised participation for headcount.

In 2009-10:

- Angus, Glasgow City, West Dunbartonshire, Orkney Islands and Shetland Islands have particularly high standardised participation in terms of headcount;
- Dundee City, Glasgow City, Inverclyde , North Ayrshire and Angus have the highest level of standardised participation in terms of FTE;
- East Lothian has the lowest standardised participation at below 70 per cent of the national rate for headcount; and
- in terms of FTE, East Renfrewshire has the lowest standardised participation rate at below 70 per cent of the national rate.

Between 2005-06 and 2009-10:

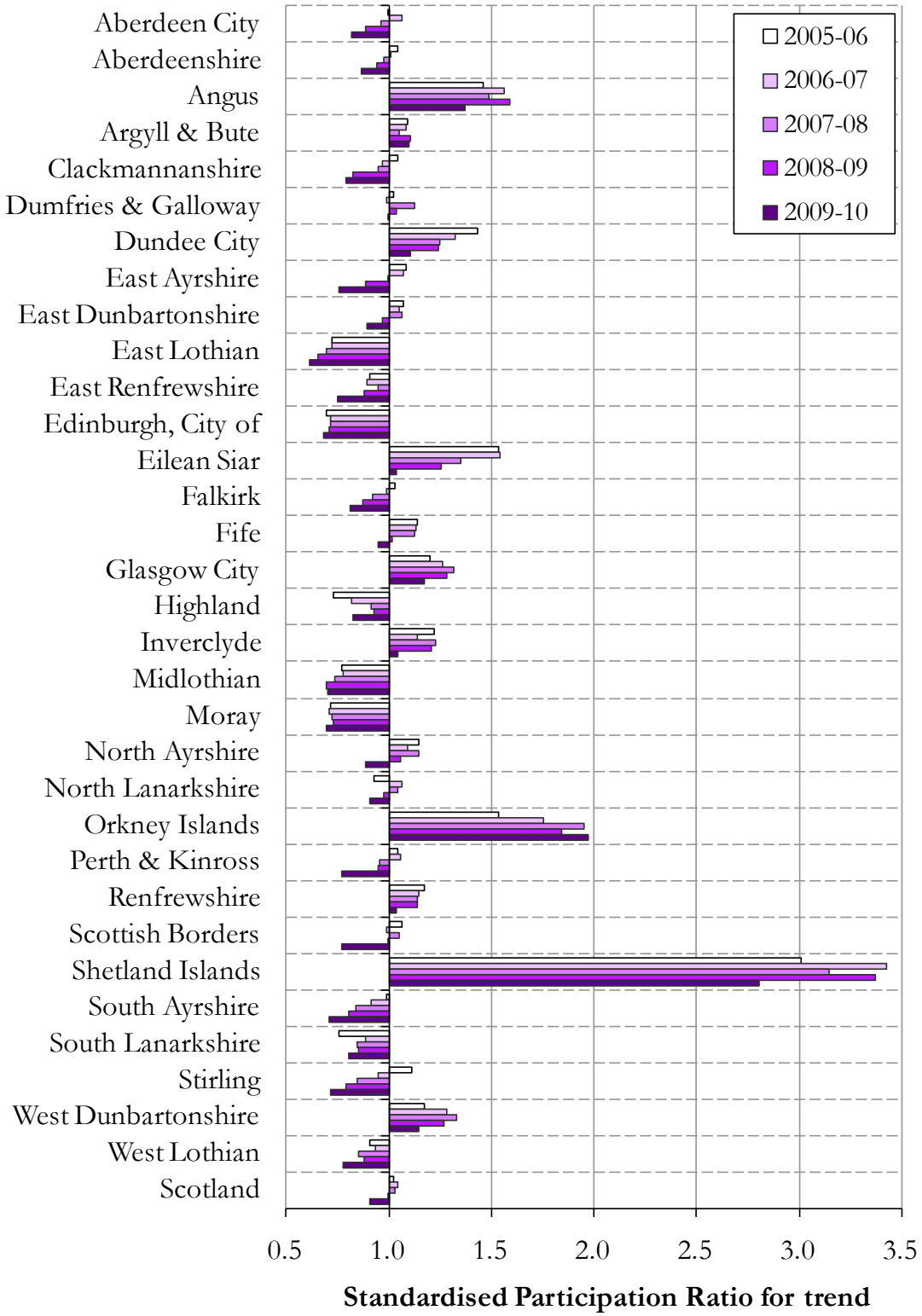
- there was evidence for a decline in headcount participation in 16 of the local authorities.

Table 3.5.1 Participation in FE by local authority

Local Authority	Headcount 2009-10 Rate /1000	Headcount 2009-10 SPR	Trend (2005-06 to 2009-10)	FTE 2009-10 Rate /1000	FTE 2009-10 SPR
Aberdeen City	50.8	0.90	↓	14.0	0.79
Aberdeenshire	53.1	0.95	↓	16.3	0.91
Angus	81.3	1.52		21.8	1.29
Argyll & Bute	65.0	1.21		14.7	0.86
Clackmannanshire	50.0	0.87	↓	18.3	0.99
Dumfries & Galloway	57.9	1.10		13.5	0.81
Dundee City	69.6	1.22	↓	23.4	1.25
East Ayrshire	47.0	0.83	↓	20.7	1.13
East Dunbartonshire	54.7	0.98	↓	14.2	0.78
East Lothian	38.3	0.68	↓	14.1	0.77
East Renfrewshire	46.7	0.82		12.7	0.69
Edinburgh, City of	43.0	0.75		15.5	0.87
Eilean Siar	61.0	1.15	↓	15.6	0.93
Falkirk	50.6	0.89	↓	16.2	0.89
Fife	59.0	1.04	↓	21.5	1.18
Glasgow City	75.8	1.29		24.5	1.31
Highland	49.6	0.91		14.2	0.82
Inverclyde	63.8	1.15		24.1	1.36
Midlothian	44.0	0.77		17.1	0.92
Moray	42.6	0.76		15.7	0.86
North Ayrshire	54.6	0.98	↓	23.4	1.30
North Lanarkshire	57.4	1.00		17.9	0.97
Orkney Islands	118.8	2.17		15.5	0.89
Perth & Kinross	46.5	0.85	↓	13.1	0.75
Renfrewshire	64.2	1.14		19.8	1.10
Scottish Borders	45.7	0.85	↓	15.7	0.92
Shetland Islands	176.9	3.07		23.5	1.24
South Ayrshire	42.0	0.79	↓	16.7	0.99
South Lanarkshire	49.9	0.89		15.9	0.89
Stirling	46.5	0.79	↓	14.8	0.74
West Dunbartonshire	71.9	1.26		21.7	1.18
West Lothian	50.0	0.86	↓	17.9	0.94
Scotland	**56.4**	**1.00**		**18.0**	**1.00**

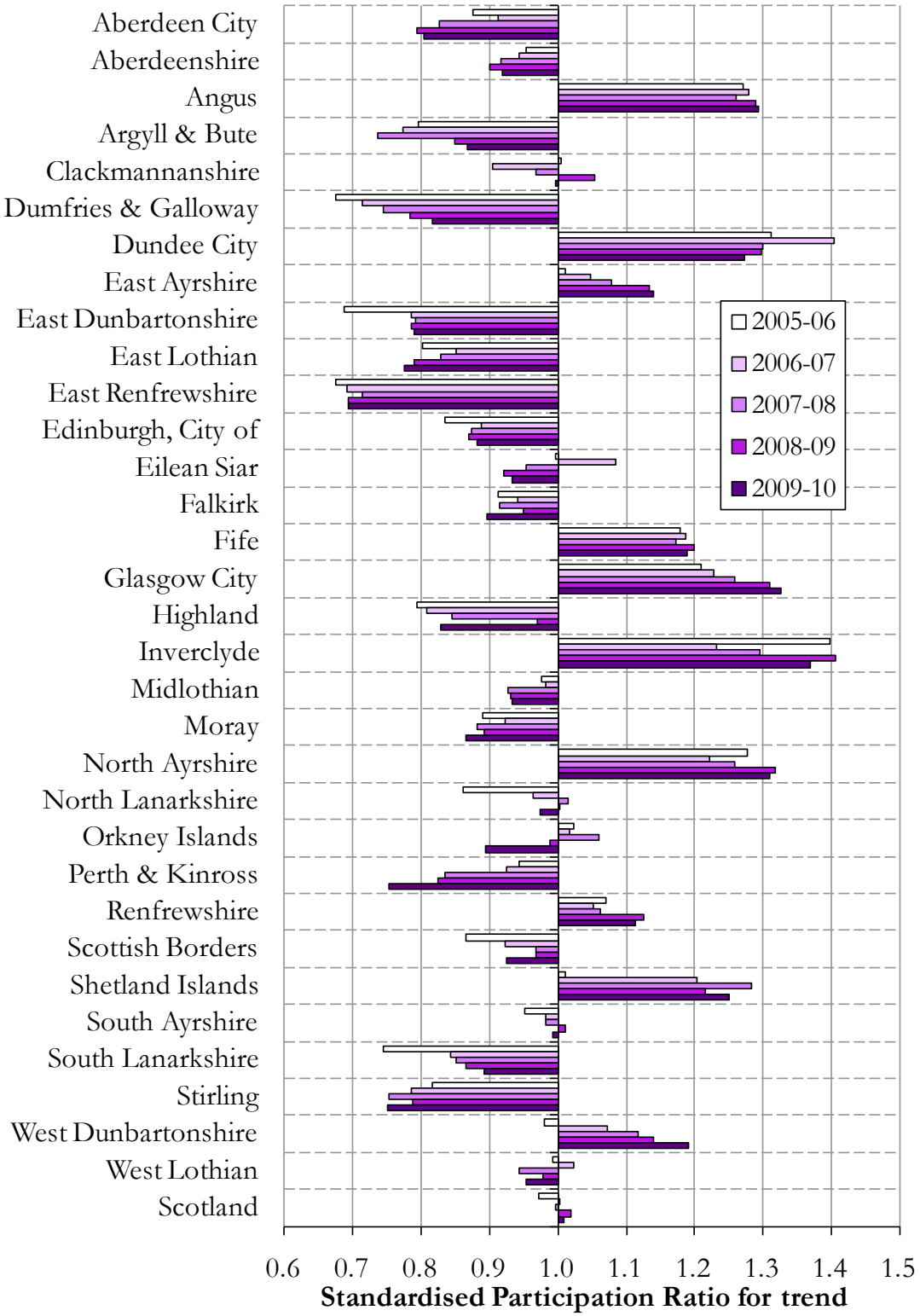
Note
A statistical model has been used to identify areas where the trend in participation is likely to be real rather than a result of random fluctuations.

Figure 3.5.1 Trends in standardised headcount participation in FE by local authority



Notes
The five-year national average Standardised Participation Ratio (SPR) for trend is one. Thus SPRs above or below one are above or below this national average.

Figure 3.5.2 Trends in standardised FTE participation in FE by local authority



Notes
The two-year national average Standardised Participation Ratio (SPR) for trend is one. Thus SPRs above or below one are above or below this national average.

3.6. Participation within deprivation classes

The Scottish Index of Multiple Deprivation 2009 (SIMD) (Scottish Government, 2009) ranks each of the 6,505 Scottish Neighbourhood Statistics data zones using a score derived from seven domains of deprivation: income; employment; health; education, skills and training; geographic access to services; crime; and housing. This ranking was used to group the data zones into two classes: the most deprived data zones, which contain approximately 20 per cent of the 2009 mid-year population, and the rest. The two classes are termed the 'most deprived' and the 'less deprived'.

Table 3.6.1 and Table 3.6.2 show participation rates, in terms of headcount and FTE, in further education by deprivation class and year together with the ratio of participation from the most deprived data zones to that from the less deprived. This is an indicator of how strongly participation is related to deprivation in an area. In particular:

- this ratio, for headcount participation, has increased since 2005-06 from 1.27 to 1.48 so that participation in the most deprived data zones is about 48 per cent higher than that in the less deprived;
- headcount participation has declined overall in the less deprived class and has returned to the 2005-06 level in the most deprived class; and
- in terms of FTE, participation is 60 to 82 per cent higher in the most deprived class compared to less deprived. This indicates that the average FTE per participant is also higher in the most deprived areas. This is in part, due to students from less deprived areas being more likely to undertake short, non-vocational, study.

Table 3.6.1 Headcount participation in FE by deprivation class and year

Year	Deprivation class		Ratio of most to less deprived
	Less deprived	Most deprived	
	Rate/1,000		
2005-06	60.6	77.1	1.27
2006-07	61.2	80.8	1.32
2007-08	60.2	83.3	1.38
2008-09	57.6	82.1	1.43
2009-10	51.6	76.3	1.48

Table 3.6.2 FTE participation in FE by deprivation class and year

Year	Deprivation class		Ratio of most to less deprived
	Less deprived	Most deprived	
	Rate/1,000		
2005-06	15.6	24.9	1.60
2006-07	15.9	25.8	1.62
2007-08	15.9	26.7	1.68
2008-09	16.0	28.1	1.75
2009-10	15.6	28.4	1.82

Figure 3.6.1 and Figure 3.6.2 show trends over years in participation by deprivation class and by gender and age group respectively. These indicate that:

- for men, participation declined in the less deprived class and rose slightly in the most deprived;
- however, for women the was an overall decline in participation for both classes; and
- between 2005-06 and 2009-10 participation in both classes increased among the 'young'; but decreased slightly in the 'mature'.

Figure 3.6.1 Trends in headcount participation in FE by gender and deprivation class

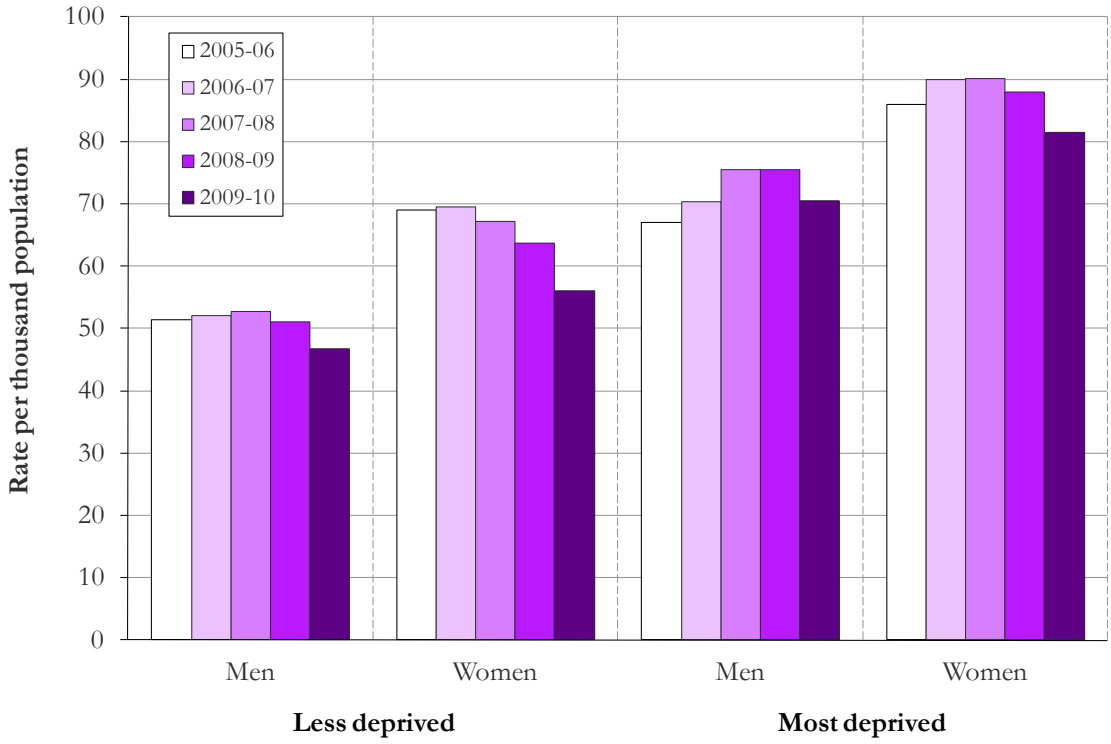
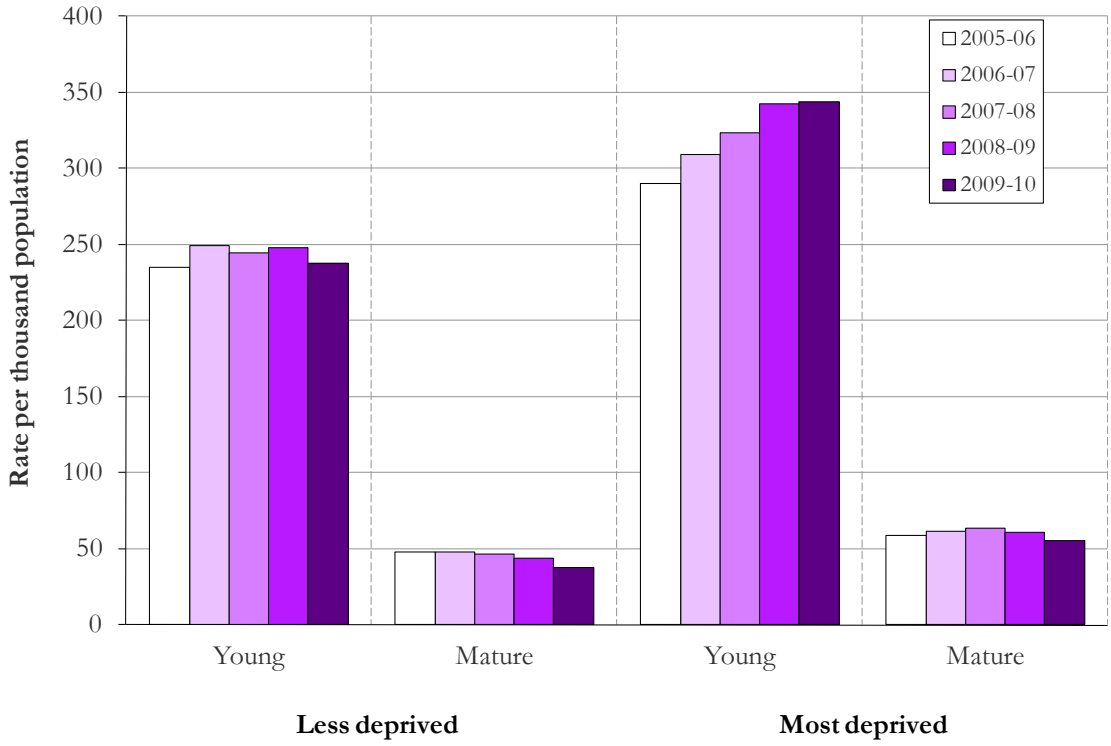


Figure 3.6.2 Trends in headcount participation in FE by age group and deprivation class



Notes
Young = 16-19, Mature = 20 and over

Table 3.6.3 shows participation rates in further education by deprivation class and local authority for 2009-10 together with the ratio of participation from the most deprived data zones to that from the less deprived. A number of local authorities have relatively small populations in the most deprived data zones and are therefore likely to have fluctuating participation rates. These have been indicated in the table.

Excluding those with small populations, the following local authorities have relatively high participation (ratio > 1.70) in their most deprived data zones compared to the less deprived: Scottish Borders, Edinburgh, Aberdeenshire and Aberdeen City.

Conversely, the following have relatively low participation (ratio < 1.20) in their most deprived data zones: Clackmannanshire, Falkirk, North and South Lanarkshire, Inverclyde, East Ayrshire and West Dunbartonshire.

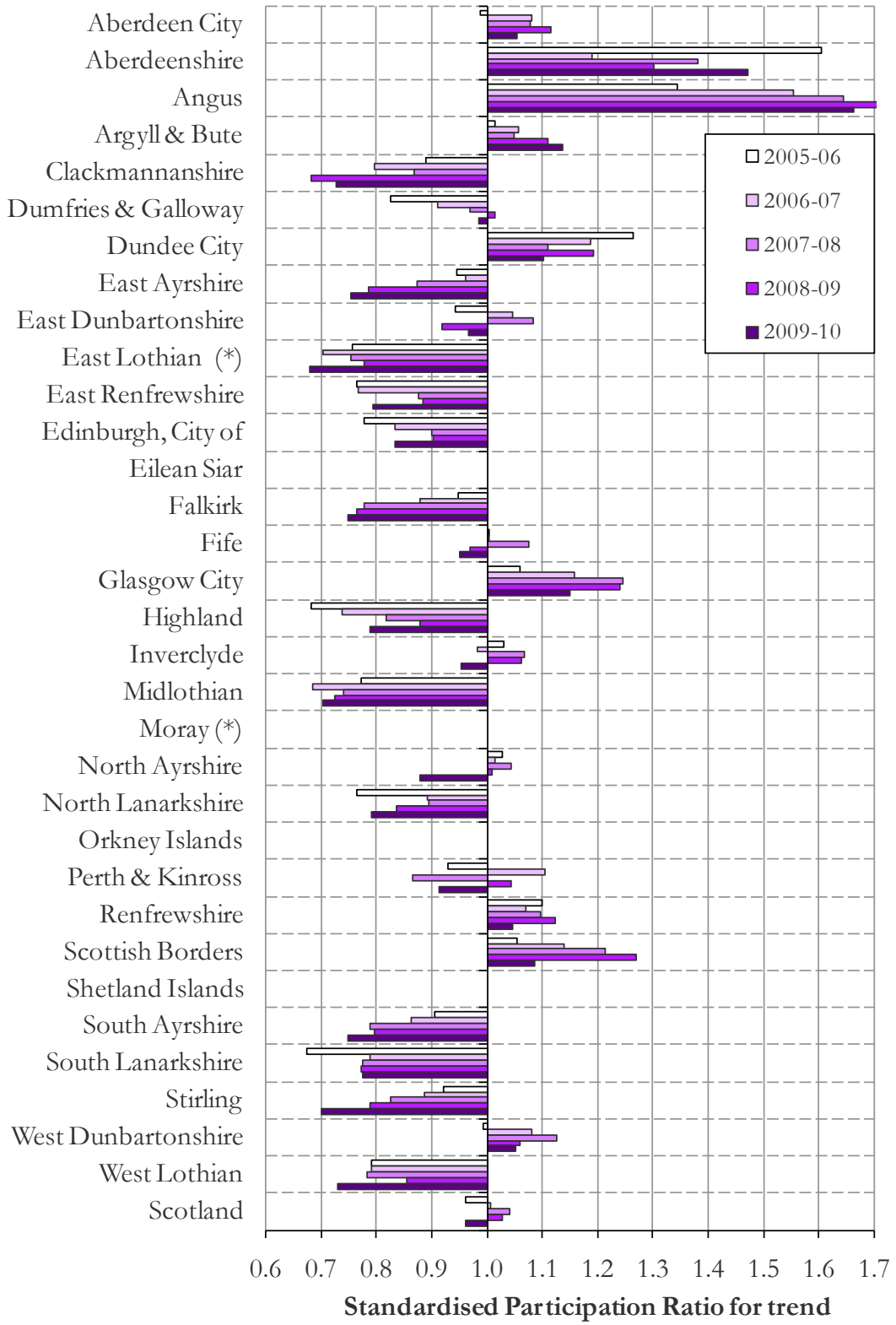
Figure 3.6.3 shows trends in headcount participation by local authority in the most deprived data zones. Trends that are less likely to be due to random fluctuations were identified using a statistical model. A downward trend was identified in East Ayrshire.

Table 3.6.3 Headcount participation in FE by local authority and deprivation class, 2009-10

Local Authority	Deprivation class		Ratio of most to less deprived
	Less deprived	Most deprived	
	Rate/1,000		
Aberdeen City	50.0	89.5	1.79
Aberdeenshire	57.0	98.0	1.72
Angus	92.0	149.7	1.63
Argyll & Bute	64.0	86.1	1.35
Clackmannanshire	51.0	56.0	1.10
Dumfries & Galloway	58.5	81.5	1.39
Dundee City	68.9	93.9	1.36
East Ayrshire	52.7	62.4	1.18
East Dunbartonshire	59.5	76.5	1.29
East Lothian (*)	39.6	70.9	1.79
East Renfrewshire	54.2	72.1	1.33
Edinburgh, City of	40.5	74.3	1.83
Eilean Siar	74.5	-	-
Falkirk	53.7	60.5	1.13
Fife	60.4	77.8	1.29
Glasgow City	68.9	99.3	1.44
Highland	54.5	70.8	1.30
Inverclyde	70.1	81.1	1.16
Midlothian	43.0	60.1	1.40
Moray (*)	44.5	-	-
North Ayrshire	58.3	80.4	1.38
North Lanarkshire	61.0	66.1	1.08
Orkney Islands	112.6	-	-
Perth & Kinross	55.8	85.4	1.53
Renfrewshire	65.9	87.9	1.33
Scottish Borders	57.7	105.0	1.82
Shetland Islands	214.9	-	-
South Ayrshire	44.8	61.5	1.37
South Lanarkshire	51.9	60.1	1.16
Stirling	50.1	65.7	1.31
West Dunbartonshire	77.6	86.8	1.12
West Lothian	54.1	69.4	1.28
Scotland	**57.6**	**82.0**	**1.42**

Notes
* = local authorities that have a relatively small population in the most deprived deprivation class (below 3,000 in 2009)
- = no population in that class

Figure 3.6.3 Trends in standardised headcount participation in FE from data zones in the most deprived class, by local authority



Notes
* = based on a relatively small population (below 3,000 in 2009)
Eilean Siar, Moray, Orkney Islands and Shetland Islands have no data zones in the most deprived class.

4. Participation in higher education

This section covers participation in higher education by Scottish students at universities within the UK and at Scotland's colleges. Students who are Scottish domiciled but studying abroad are not included, but they are likely to be relatively few. Students studying at all levels, postgraduate, first degree or sub-degree ('other undergraduate'), have been included unless otherwise stated. However, students classified as 'writing up', on sabbatical or 'dormant' are excluded.

The numbers presented here will differ slightly from those presented elsewhere in, for example, *Learning for All, (Scottish Funding Council, 2011)* and *Students in Higher Education Institutions* (eg HESA, 2011). This is because in this report:

- only students domiciled in Scotland are included;
- the student population is defined differently, by, for example, excluding students who are writing up; and
- we have attempted to avoid double counting of students who enrol more than once in a year.

As well as number of students (headcount), participation is also presented in terms of full-time equivalents (FTE). For students at universities, FTE is estimated with reference to a full-time full-year student who would normally receive an FTE of one. FTE for those on part-time courses or who leave part way through a year are estimated pro-rata on either a credit or time basis. For students in further education colleges in Scotland a broadly comparable FTE was calculated based on the number of hours of study as a proportion of the expected number of hours for a full-time course. See Appendix 1 for more information.

It should be borne in mind that the number of people studying in higher education in any year will depend, to some extent, on the length of courses, the numbers studying part-time and on levels of non-completion. An increase in the numbers completing courses in a shorter time will also tend to reduce participation rates. This would happen, for example, if more students on higher national courses articulate into the second or subsequent years of a degree course rather than having to start in year one. Focusing on entrants to higher education largely avoids these issues, and young entrants are covered in section 4.7.

4.1. Overview

Table 4.1.1 summarises the number of students, FTE and participation rates in higher education between 2005-06 and 2009-10 both including and excluding Open University (OU) students. Both groups are presented because the historic drop in overall participation is partly due to shifts in the type of course taken by students at the OU. More students are taking courses whose years of study fall completely within standard academic years. One result of this is that inactive students are being recorded as 'dormant' more quickly than before and so more students are being excluded from our analysis. Trends in FTEs are largely unaffected because the excluded OU students would have zero or very low FTEs. The numbers appear to be beginning to stabilise.

Table 4.1.1 Participation in HE

a) including the Open University

	Headcount		FTE	
	Count	Rate/1,000	Count	Rate/1,000
2005-06	237,087	56.7	159,350	38.1
2006-07	233,704	55.4	157,732	37.4
2007-08	227,514	53.6	157,632	37.1
2008-09	230,018	53.8	159,299	37.3
2009-10	233,445	54.3	163,219	38.0
% change 2008-09 to 2009-10	1.5	0.9	2.5	1.8

b) excluding the Open University

	Headcount		FTE	
	Count	Rate/1,000	Count	Rate/1,000
2005-06	217,783	52.3	153,824	36.9
2006-07	218,584	52.1	152,235	36.3
2007-08	208,650	49.1	152,298	35.9
2008-09	210,875	49.3	153,669	36.0
2009-10	213,573	49.7	157,132	36.5
% change 2008-09 to 2009-10	1.3	0.7	2.3	1.6

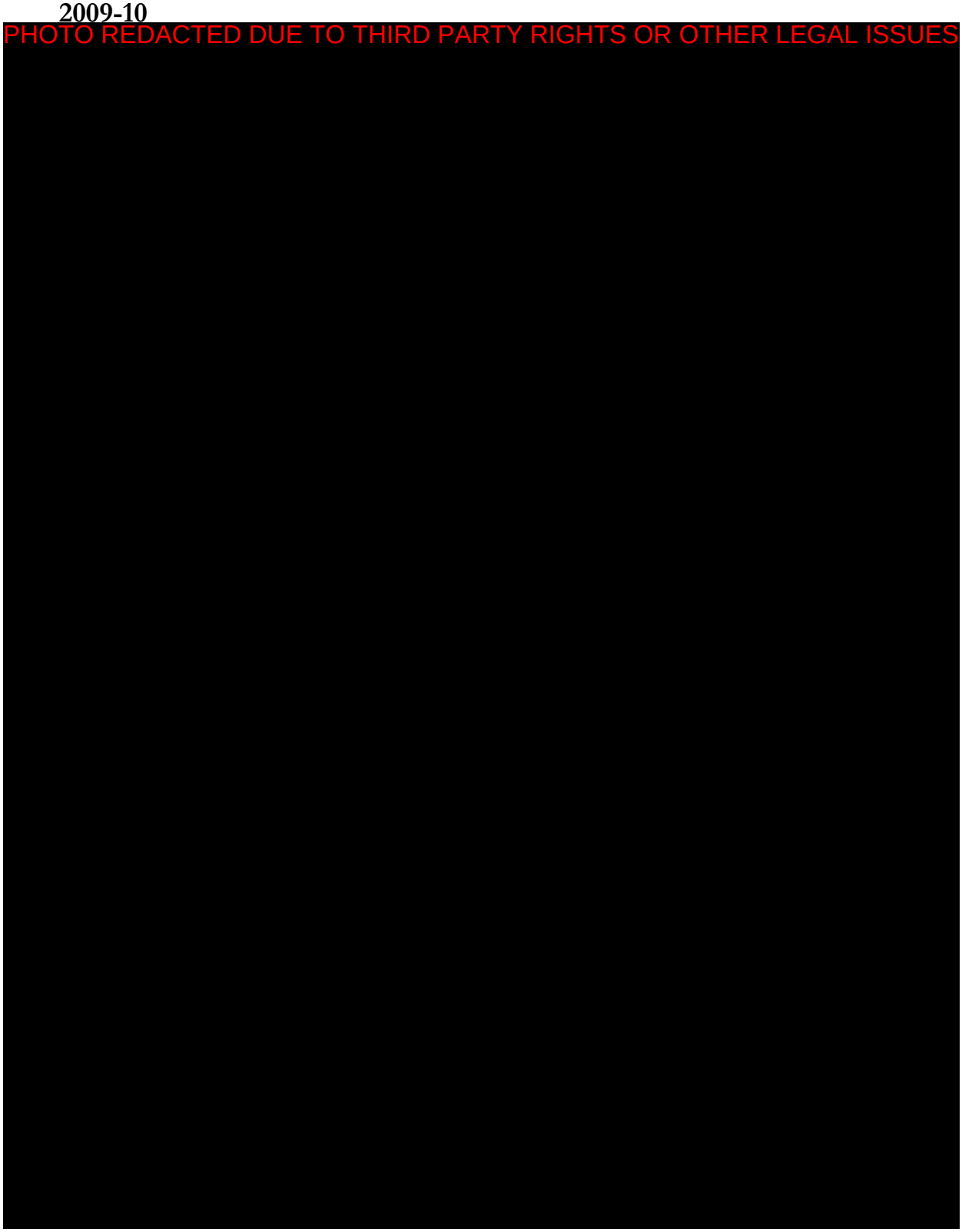
Note
Rates/1,000 are the number of students per thousand head of the population aged 16 and over.

Geographical variation in participation in 2009-10 is illustrated in Figure 4.1.1. Areas with particularly high participation are mainly in or around the major cities although some are also found in parts of Orkney, Eilean Siar, Aberdeenshire, Stirling and in east Fife. Particularly low participation is found mainly within parts of Glasgow, Edinburgh, Forth Valley, East Lothian and east Fife.

Areas that have shown an increasing or decreasing trend in participation are highlighted in Figure 4.1.2. Most Local Authority areas show a mixture of areas of decreasing trend or no evidence of a trend. A clear increase in trend is only evident in parts of Glasgow, central Scotland, Borders, Stirling, West and Mid-Lothian.

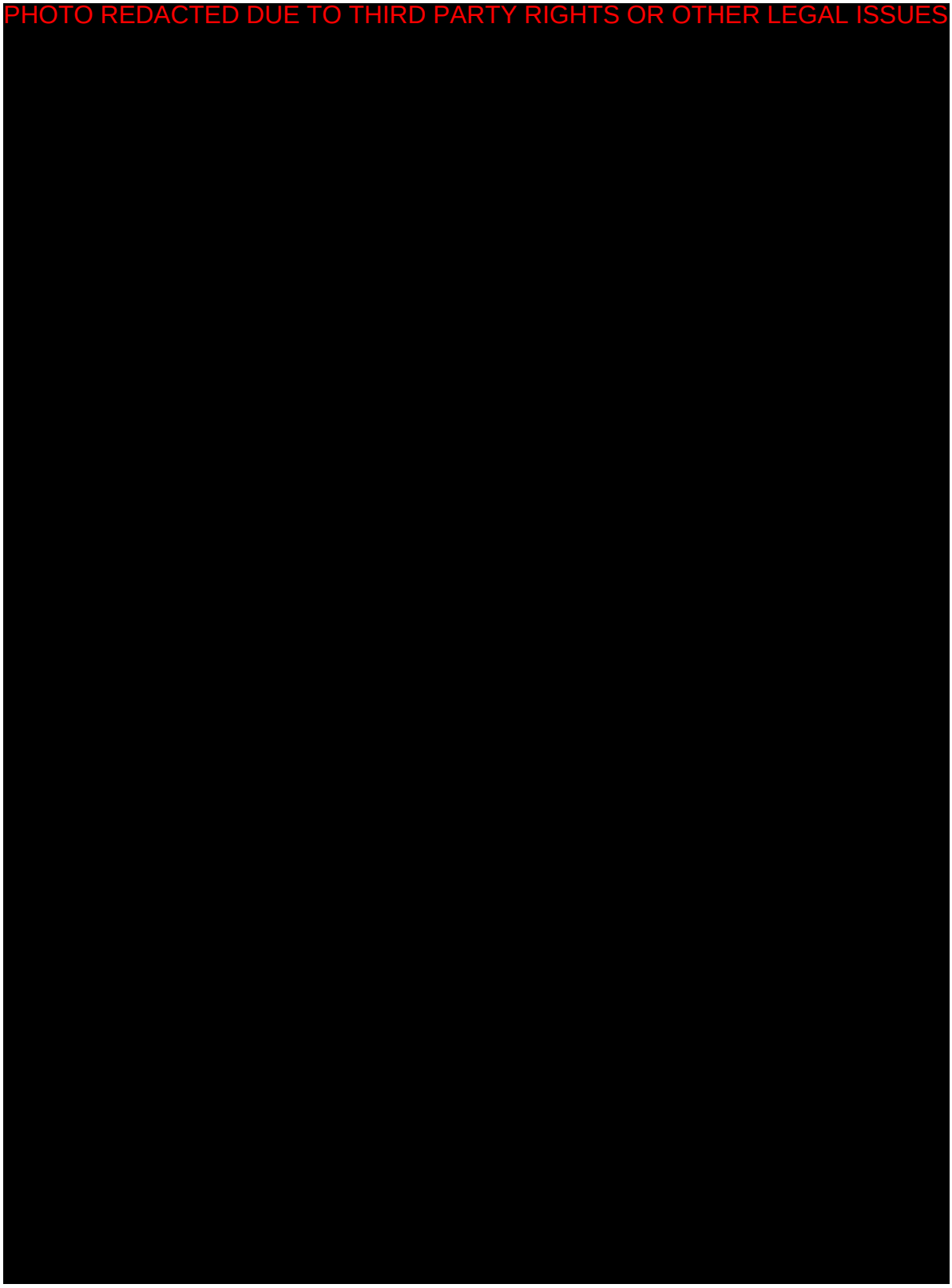
Variation in FTE participation is shown in Figure 4.1.3. Comparing with Figure 4.1.1, some areas, such as parts of the Lothians and some areas around Aberdeen, are relatively higher in terms of FTE because they tend to have a higher proportion of full-time students. Conversely, areas such as the Highlands tend to have a higher proportion of part-time students.

Figure 4.1.1 Geographical variation in headcount participation in HE, 2009-10



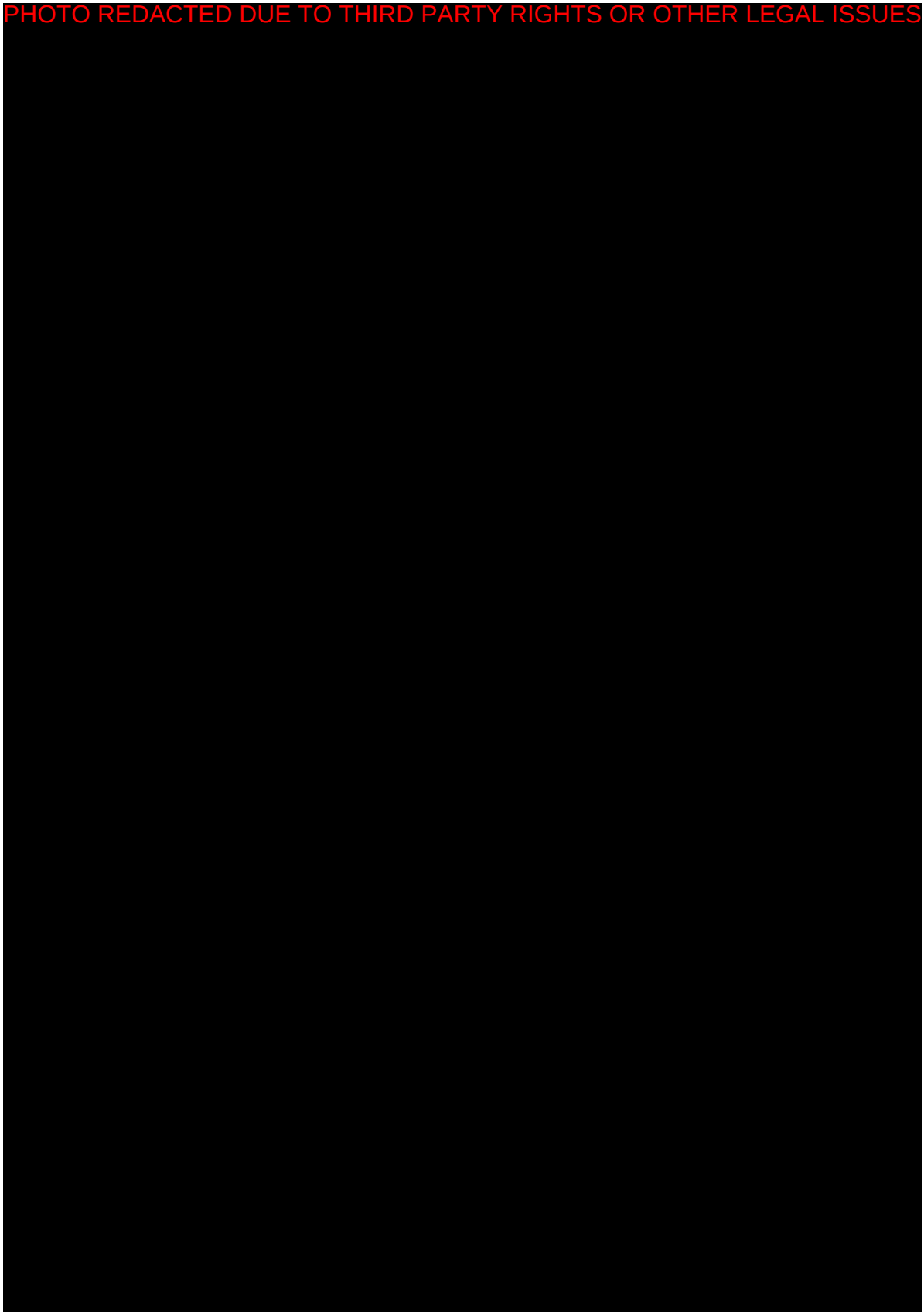
Notes
The Standardised Participation Ratio (SPR) compares the number of participants in an area with what would be expected if national age-gender specific participation rates were applied to the area's population. The SPR ensures areas with differing age-gender distributions are comparable. The national SPR is one. Areas in cyan are close to the national value.

Figure 4.1.2 Change in headcount participation in HE, 2005-06 to 2009-10



Notes
The map highlights those areas which have shown an increasing or decreasing trend in SPR as derived from a statistical model. See Appendix 1 for more information.

Figure 4.1.3 Geographical variation in FTE participation in HE, 2009-10



4.2. Trends by age and gender

Trends by age and gender are summarised in Figure 4.2.1 and Figure 4.2.2. Participation by both men and women has been variable both in terms of headcount and FTE between 2005-06 and 2009-10.

Participation is consistently higher by women than men, and it should be noted that the difference in the overall participation rates ('All ages') is affected by the fact that there are rather more elderly women than men in the post school leaving population. As participation is low in the elderly they have the effect of reducing overall rates and more so in women than men. Thus, the difference between men and women in the 'Working age' rates is rather larger than in the 'All ages' rate.

Looking at change for young people under 21, there has been a decrease in participation since 2005-06, although participation in 2009-10 has returned to levels similar to those seen in 2005-06.

Figure 4.2.1 Headcount participation rates in higher education by age and gender

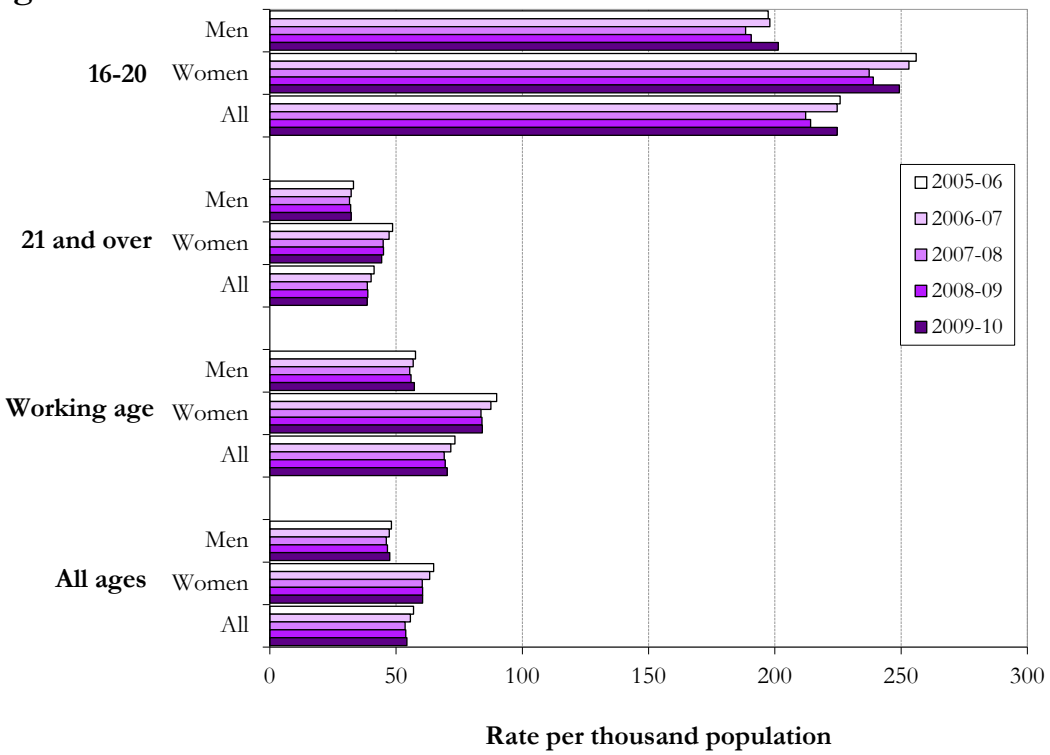
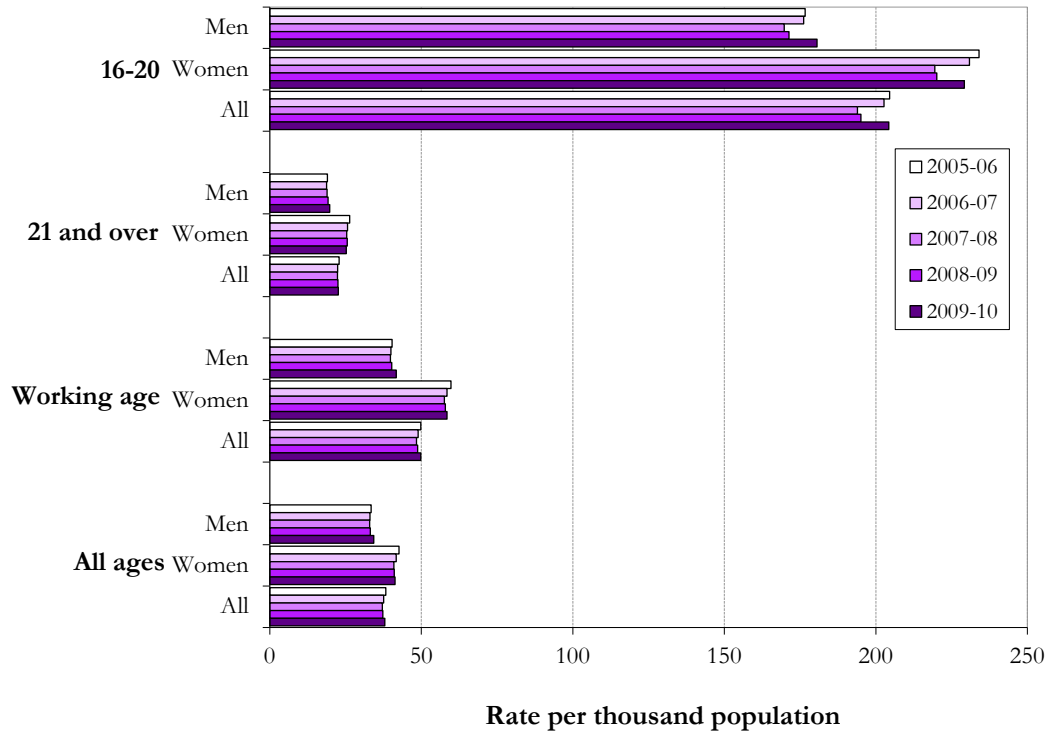


Figure 4.2.2 FTE participation rates in higher education by age and gender

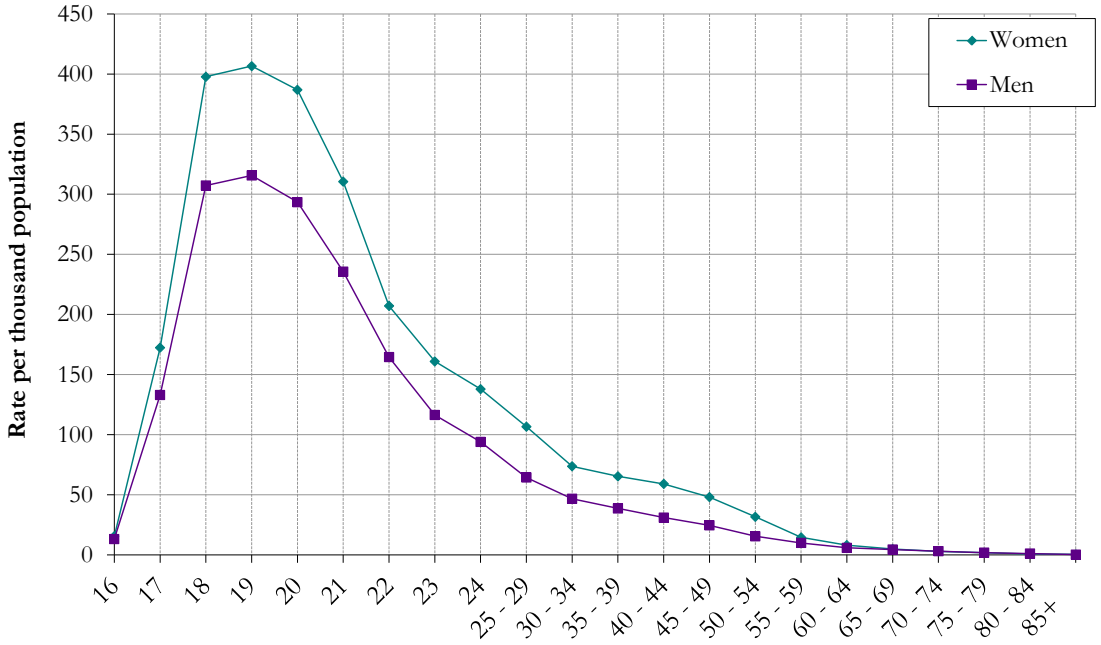


Note
Rates are calculated using the relevant population group, eg women aged between 16 and 20.

The age distribution of participation in men and women is shown for 2005-06 and 2009-10 in Figure 4.2.3. Participation is higher in women at most ages and the gap between male and female participation at its maximum at age 19. These features are seen in both years presented.

Figure 4.2.3 Participation rates in HE by age and gender, 2005-06 and 2009-10

a) 2005-06



b) 2009-10

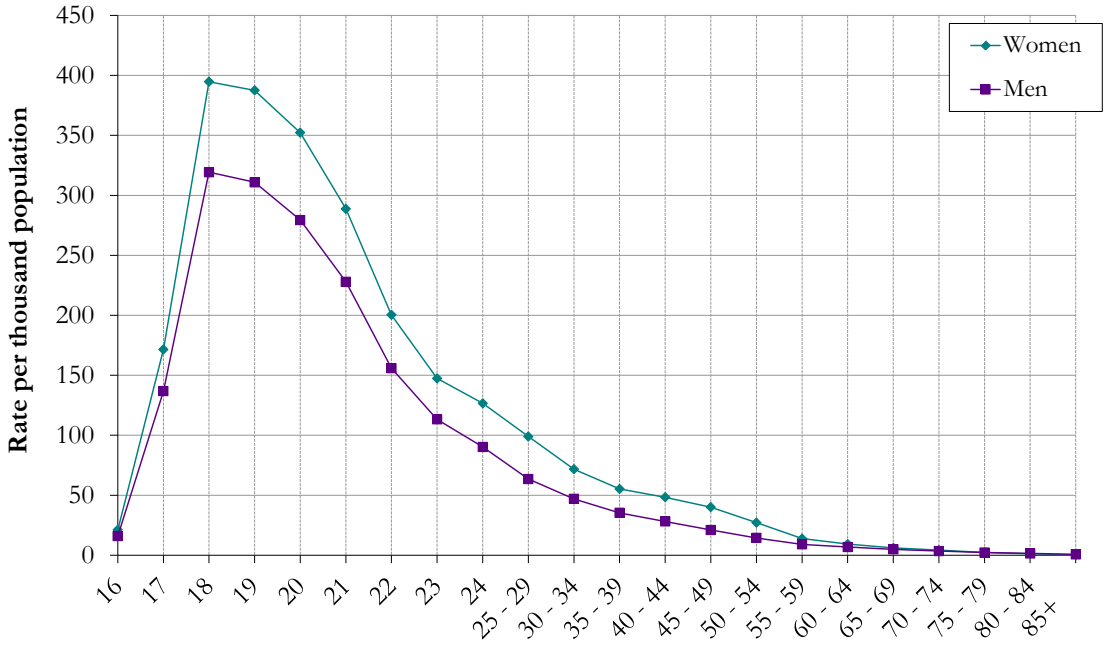


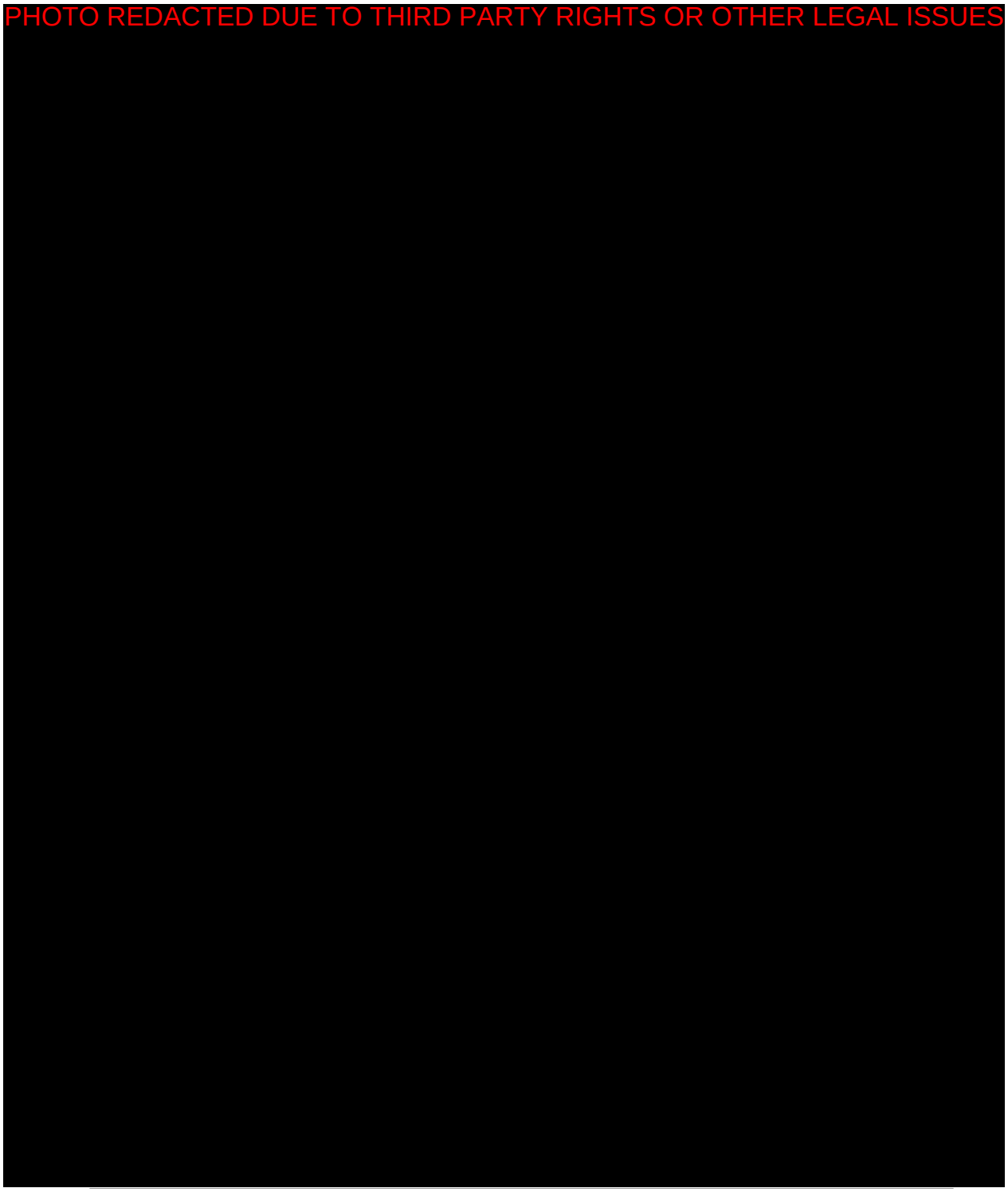
Figure 4.2.4 illustrates variation between local authorities in gender balance in 2009-10, measured as the ratio of the participation rate for young (16-20 year old) men to that for young women. Areas with a value below one are those where young men are less likely to go into HE than women and the converse is true for values greater than one. In this case, all values were less than one. The map shows that:

- men are less likely to be in HE than women in all local authorities;
- participation in young men is highest relative to women in Dundee City, Aberdeen, Angus, Stirling, Edinburgh and East Lothian; and
- participation in young men is lowest relative to women in Dumfries and Galloway, Eilean Siar, Moray and the Shetland Islands.

For Scotland as a whole, the participation rate for young men is about four-fifths that for women (Figure 4.2.1).

It should be noted, however, that the degree of gender balance will vary between years and relatively small changes may result in a change of class on the map.

Figure 4.2.4 Gender balance among young participants in HE by local authority, 2009-10 (< 1 means young men less likely to participate than young women)



Notes
The scale shows the ratio of young male to female participation rates. Thus, values are less than one where young men are less likely to participate than young women. The converse is true for values greater than one.

4.3. Trends by mode of study

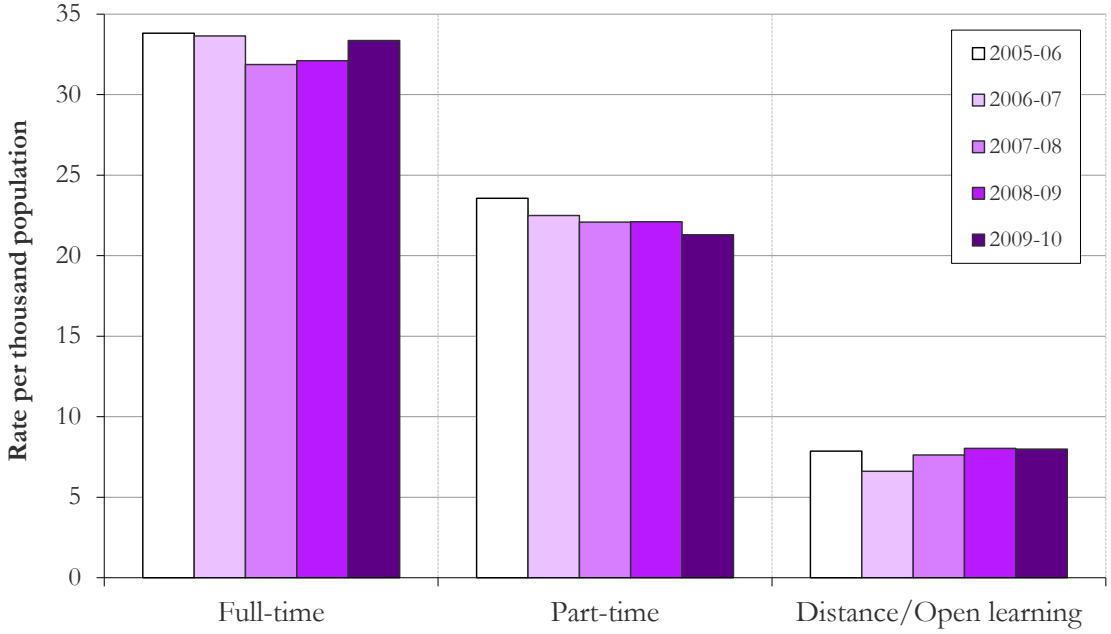
Figure 4.3.1 shows the rates of participation according to mode of study. The small numbers of students on 'short full-time' courses have been classed as part-time.

Both full-time and part-time participation (headcount) have declined since 2005-06, although there was an increase in full-time rate between 2008-09 and 2009-10. In terms of FTE, there has been a slight increase for full-time courses (0.8 per cent), and a decline of seven per cent for part-time courses.

Within the colleges 'distance/open learning' students include those on courses designed for private study and flexible learning. The vast majority of all distance learners are mature students (21 and over) and around 57 per cent are studying at the OU. Around 14 per cent of all HE students are enrolled on distance/open learning courses. It should be noted, however, that many institutions allow a range of mixed modes of study with students able to move between distance and face-to-face learning. Thus the student record may not always clearly differentiate distance/open learning modes from other forms of part-time study.

Overall, between 2005-06 and 2009-10, participation rates in distance/open learning increased by just under two per cent in terms of headcount, and by just under four per cent in terms of FTE.

Figure 4.3.1 Participation in HE by mode of study



Trends in full-time and part-time participation for men and women are illustrated separately in Figure 4.3.2. Part-time participation has declined since 2005-06 in both males and females. Full-time participation rates in men have declined gradually since 2005-06; although there has been an increase in full-time participation in 2009-10 to levels seen in 2005-06. Full-time participation in women has declined overall, although it has been increasing since 2007-08.

In both colleges and universities part-time participation has declined (Figure 4.3.3). Full-time participation has been increasing since 2007-08; albeit with an overall increase in participation in colleges, and an overall decrease in universities from 2005-06.

Figure 4.3.2 Headcount participation in HE by mode of study and gender

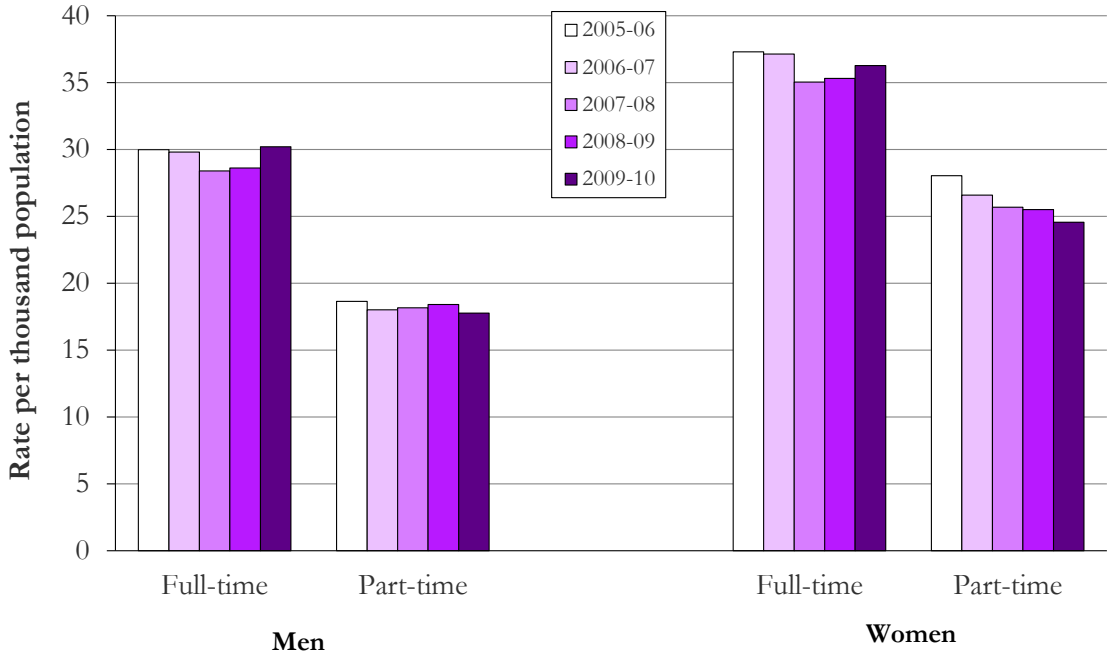


Figure 4.3.3 Headcount participation in HE within colleges and universities by mode of study

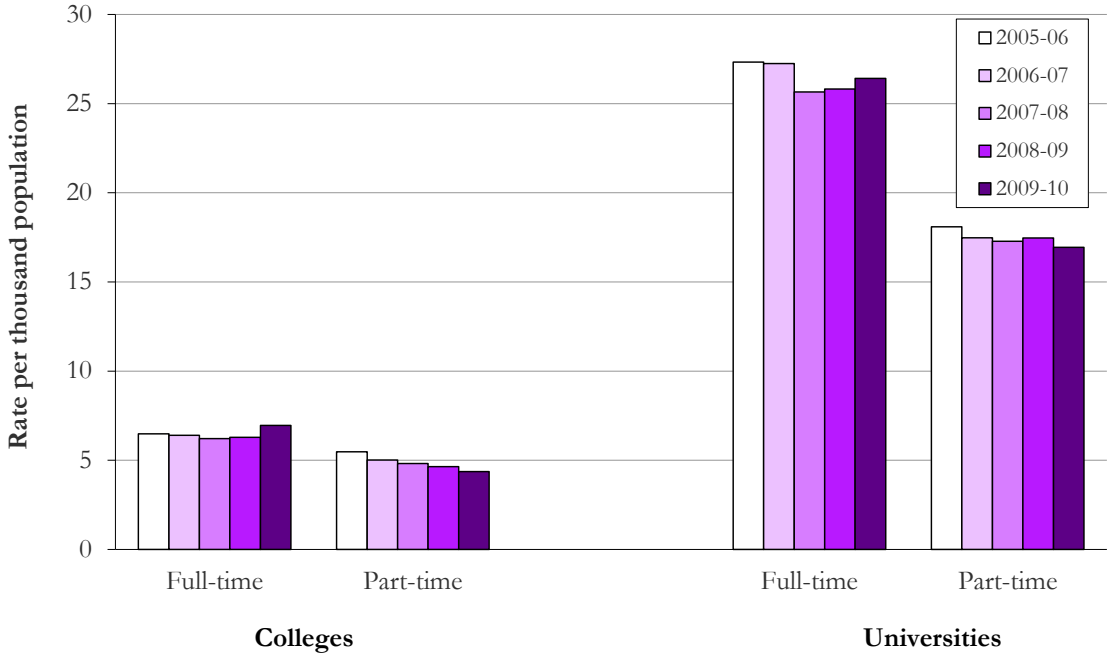
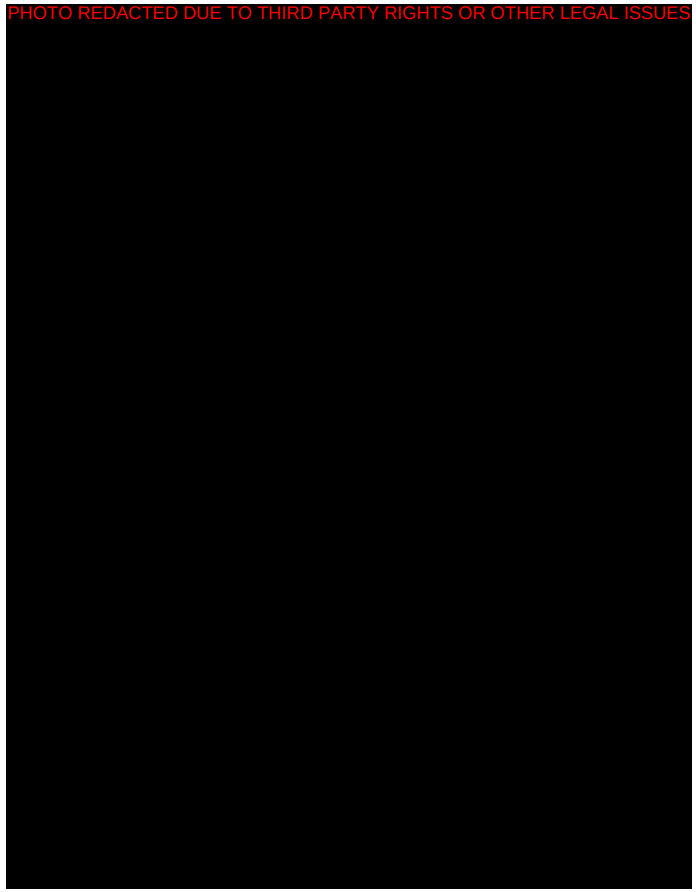


Figure 4.3.4 shows the geographical variation in the percentage of students that are studying part-time, for young and mature students separately. Overall, only about nine per cent of young students studied part-time in 2009-10 but the percentage is relatively high in the Moray, Highland and East Ayrshire and relatively low in Argyll and Bute, Stirling, Perth and Kinross, Borders, Edinburgh and East Dunbartonshire.

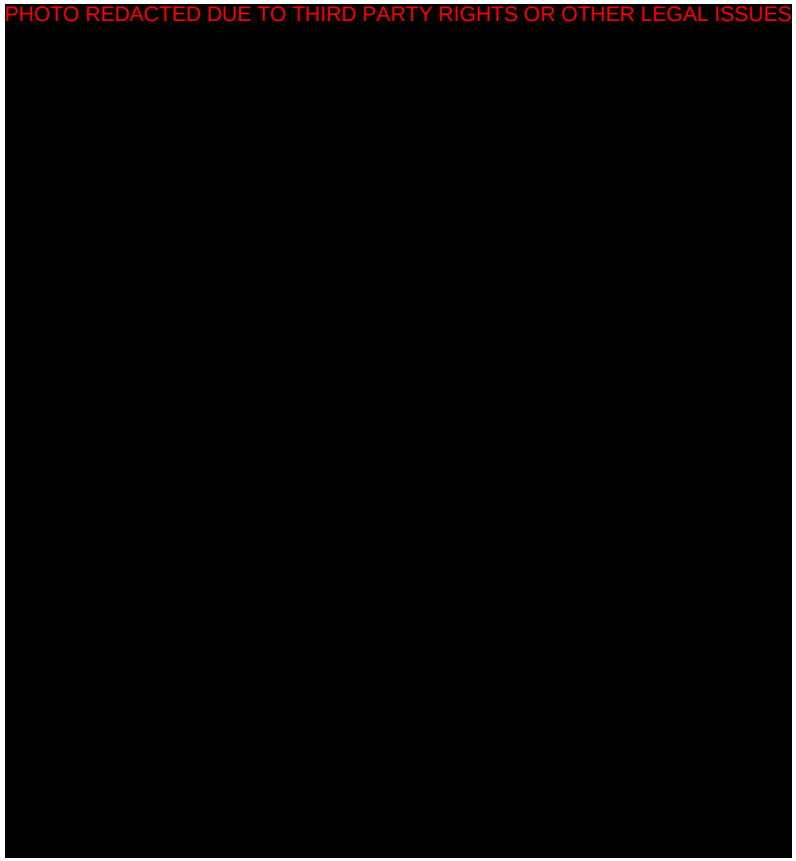
Among mature students, part-time study is much more common, at 55 per cent of students overall. Again the percentage studying part-time is relatively high in the Shetlands and Orkney Islands. Conversely, the percentage is relatively low in Dundee and Edinburgh.

Figure 4.3.4 Percentage of HE students studying part-time, by age and local authority, 2009-10

a) Young students



b) Mature students



Note
Areas coloured green are close to the national percentages.

4.4. Trends by level of study

Figure 4.4.1 shows participation rates according to level of study. Open University (OU) undergraduate students are shown separately. Students at the OU study individual modules and are not required to link these to a specific qualification aim. They may do so at some point but the circumstances and timing of this can vary considerably from one student to another. The decline in OU participation is a historical change largely due to the restructuring of courses described in section 4.1, although as expected the numbers are stabilising.

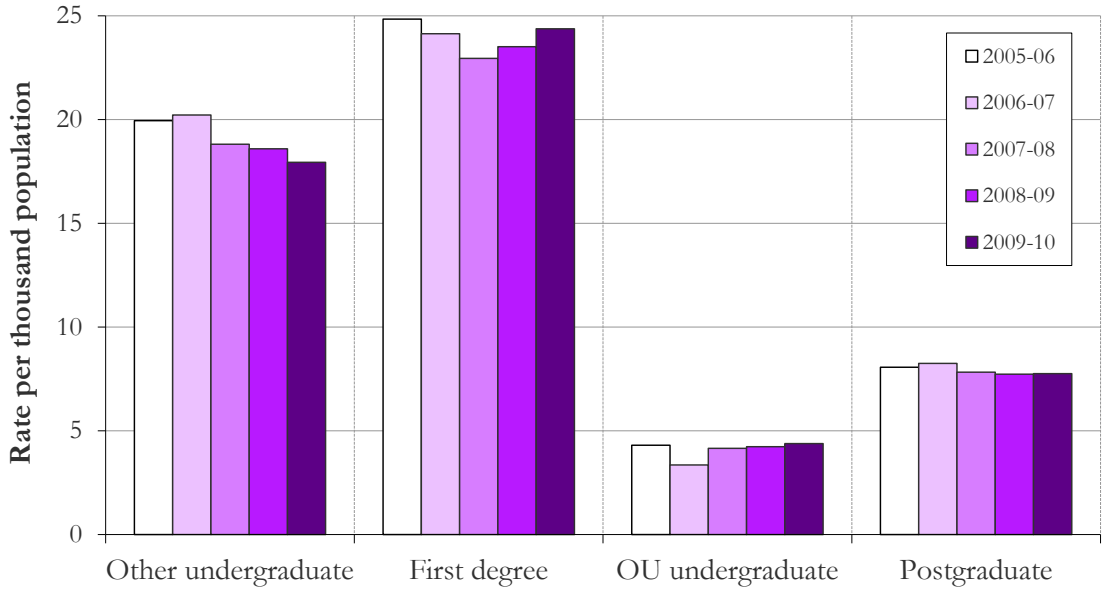
The category 'Other undergraduate' comprises a variety of qualification aims. Within the colleges the vast majority of HE students fall into this category and most are studying for an HNC, HND, or HN units. The number studying for these has been in decline between 2005-06 and 2008-9, but there in an increase in the numbers studying for HNCs and HNDs in 2009-10 (Figure 4.4.2).

Excluding the OU, the most popular qualification aims for 'Other undergraduates' within the universities are undergraduate credits, which may be counted towards other HE qualifications, followed by Diploma of Higher Education and HNC/HND (although these two positions are reversed in 2009-10 due to a decline in the numbers studying for diplomas) The number studying for undergraduate credits has increased whereas Diploma and HNC/HND numbers have declined overall (Figure 4.4.3). 'Other undergraduate' numbers at universities have also declined since 2005-06.

Thus, the decline in the total number of 'Other undergraduates' in colleges and universities as a whole, as shown in Figure 4.4.1, has mainly been in those studying for Diplomas. 'Other undergraduates' headcount and FTE rates declined by ten and five per cent, respectively, between 2005-06 and 2009-10.

Participation has decreased overall between 2005-06 and 2009-10 for those studying for first and post graduate degrees; with the participation rate declining to its lowest in 2007-08.

Figure 4.4.1 Participation in HE by level of study



Note
There is a small overlap between the levels of study as some students studied courses at more than one level in the same year.

Figure 4.4.2 Headcount participation in HE within colleges by level of study

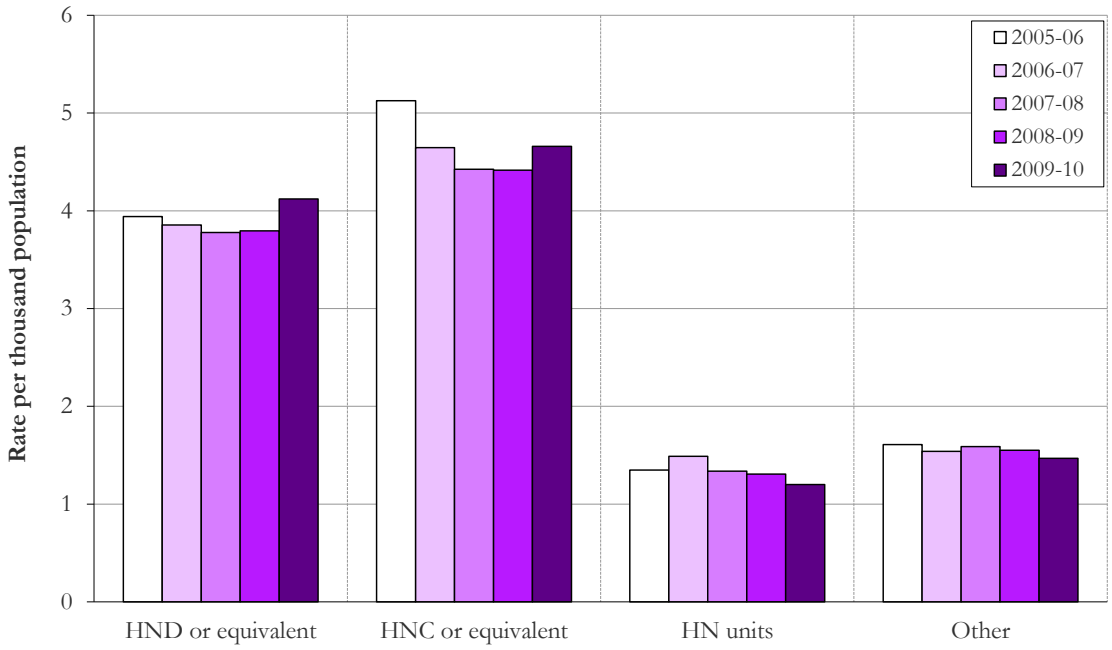


Figure 4.4.3 Headcount participation in HE within universities by level of study (excluding Open University undergraduate students)

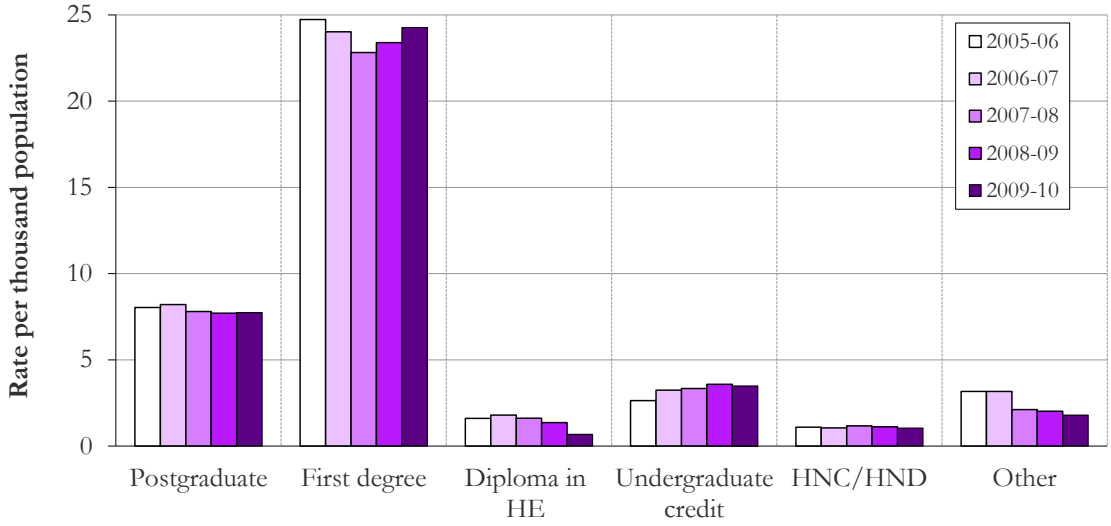


Figure 4.4.4 and Figure 4.4.5 show trends in headcount and FTE participation by level of study and gender between 2005-06 and 2009-10. Participation at first degree level follows a similar pattern for both males and females, with an overall decline in headcount, but slight increase in FTE. Participation at post graduate level has slightly declined for both men and women.

At 'other undergraduate level' there is a decline in headcount rates for both males and females, with the decline being more pronounced in females. Overall, FTE increased in males, but decreased in females.

Figure 4.4.4 Headcount participation in HE by level of study and gender (excluding Open University undergraduate students)

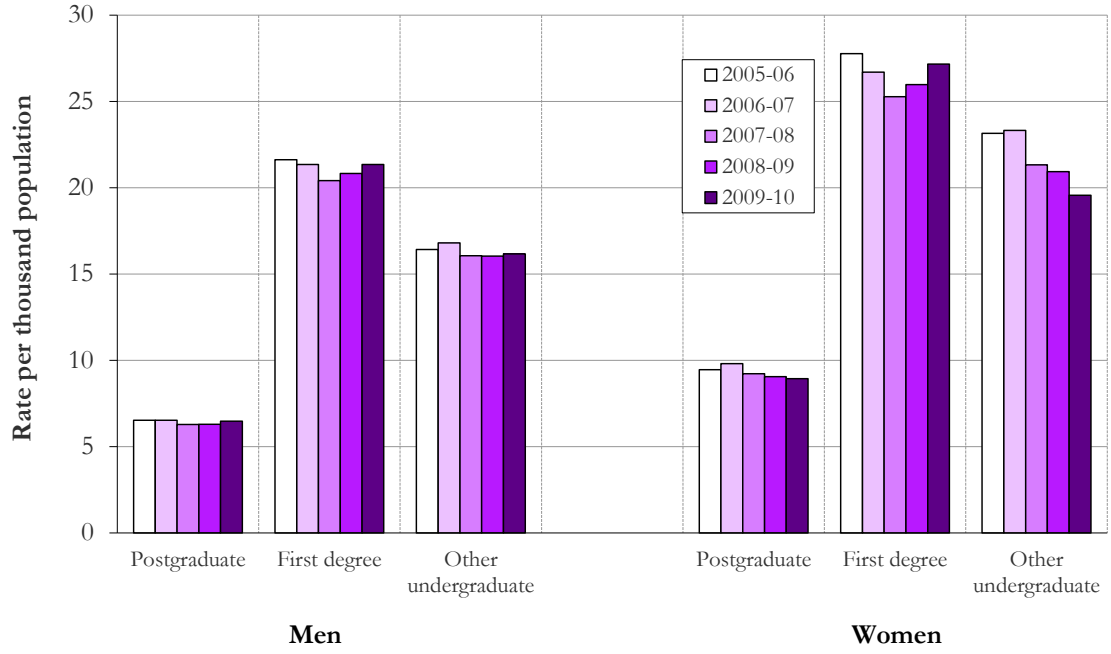
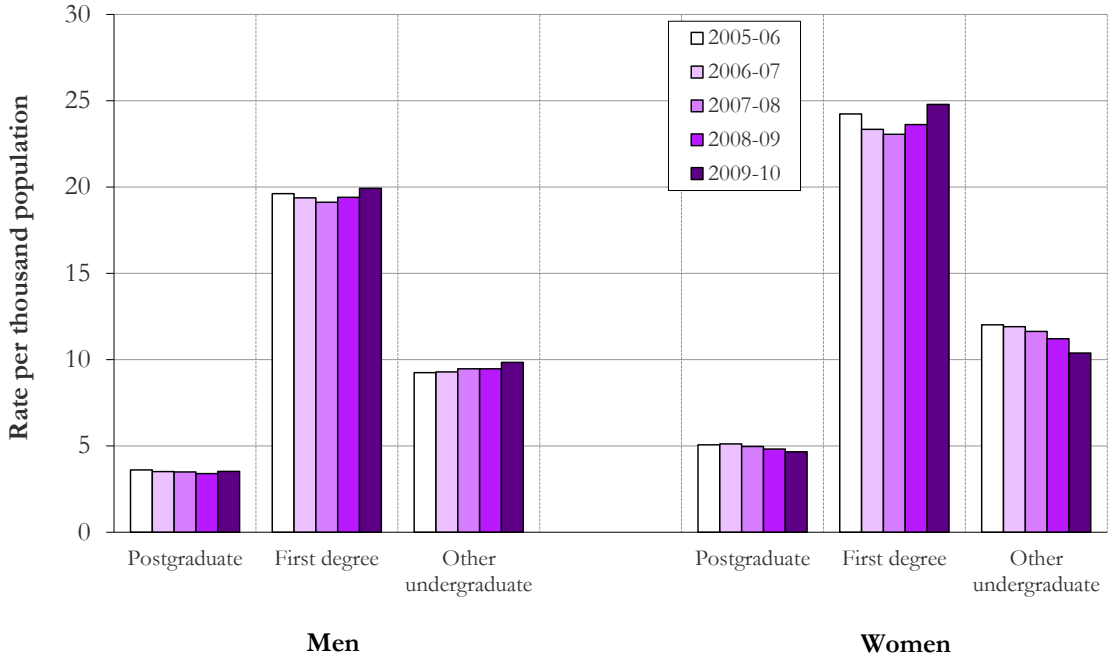


Figure 4.4.5 FTE participation in HE by level of study and gender (excluding Open University undergraduate students)



4.5. Local authority trends

Table 4.5.1 summarises current levels of participation in higher education by local authority and trends since 2005-06. Figure 4.5.1 and Figure 4.5.2 show trends in standardised participation for headcount and FTE respectively.

In 2009-10:

- East Dunbartonshire and East Renfrewshire have particularly high participation in terms of both headcount and FTE. Both areas have a relatively high proportion of school leavers entering higher education (see Appendix 2);
- Falkirk, West Lothian and Midlothian have the lowest standardised participation at around 80 per cent of the national rate for both headcount and FTE; and
- Dumfries and Galloway has one of the lowest raw rates of participation but has a relatively high standardised rate because it has a relatively old population compared to other local authorities (in 2009 an estimated 53 per cent of those above school leaving age (16 and over) were 50 or over compared to 44 per cent for Scotland as a whole).

Between 2005-06 and 2009-10:

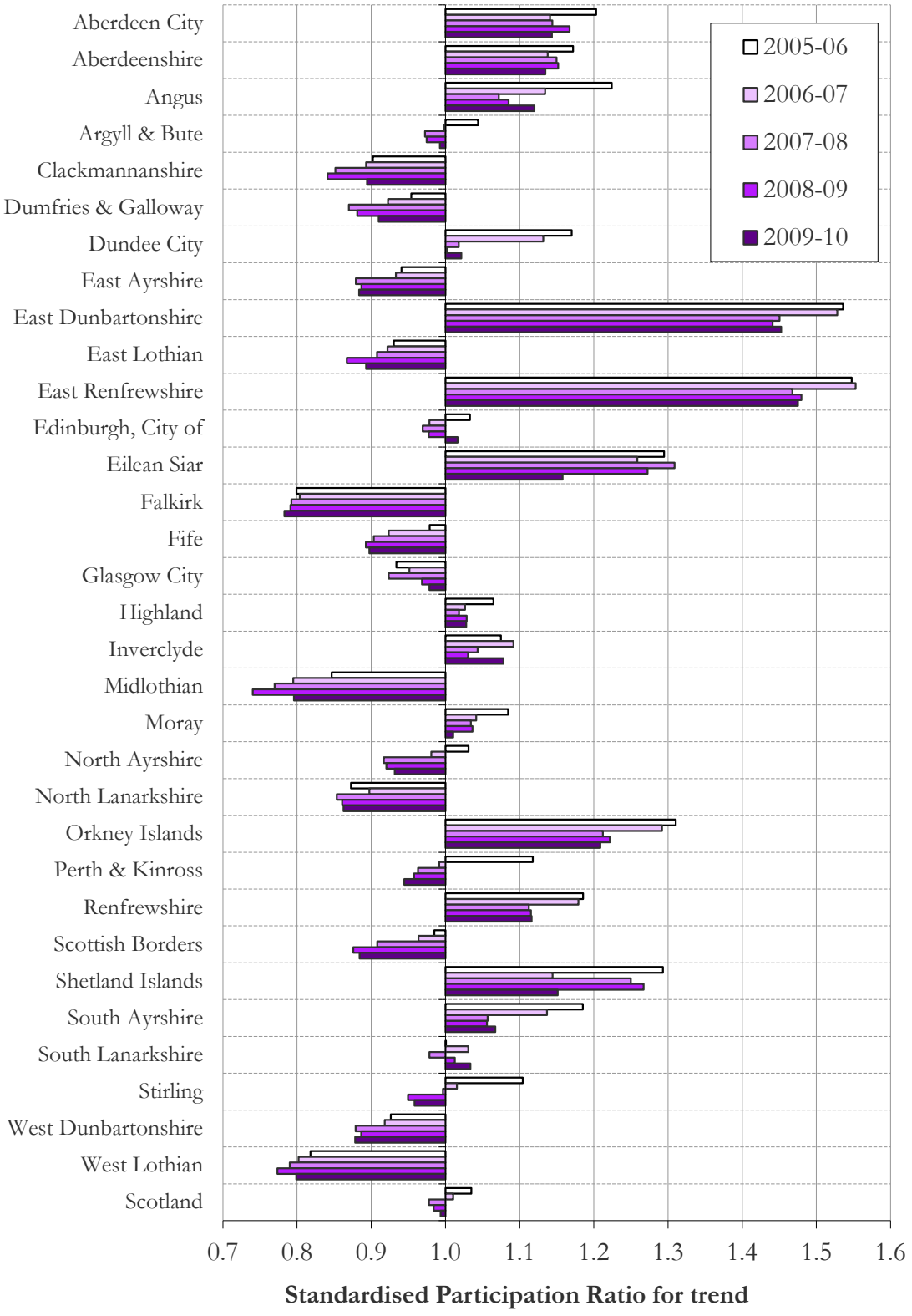
- the majority of local authorities have experienced a declining trend in participation both in terms of headcount and FTE.

Table 4.5.1 Participation in higher education by local authority

Local authority	Headcount			FTE	
	2009-10 Rate /1,000	2009-10 SPR	Trend (2005-06 to 2009-10)[1]	2009-10 Rate /1,000	2009-10 SPR
Aberdeen City	65.3	1.15		42.0	1.06
Aberdeenshire	58.5	1.14		39.9	1.12
Angus	54.9	1.13	↓	39.1	1.16
Argyll & Bute	49.5	1.00		33.5	0.96
Clackmannanshire	48.6	0.90		36.0	0.95
Dumfries & Galloway	43.9	0.92		29.5	0.88
Dundee City	59.3	1.03	↓	43.9	1.06
East Ayrshire	47.8	0.89	↓	33.7	0.89
East Dunbartonshire	75.4	1.46	↓	54.8	1.51
East Lothian	47.5	0.90		35.2	0.94
East Renfrewshire	77.7	1.48	↓	57.8	1.56
Edinburgh City	58.8	1.03		41.9	1.07
Eilean Siar	56.7	1.16		38.0	1.12
Falkirk	42.6	0.79		30.2	0.80
Fife	50.1	0.90	↓	34.9	0.88
Glasgow City	59.0	0.99		41.1	0.98
Highland	51.8	1.03		34.2	0.98
Inverclyde	57.8	1.09		39.9	1.07
Midlothian	43.2	0.80		30.8	0.81
Moray	53.3	1.02		34.4	0.93
North Ayrshire	49.2	0.94	↓	34.6	0.94
North Lanarkshire	48.0	0.87		34.3	0.89
Orkney Islands	61.6	1.22		39.6	1.11
Perth & Kinross	49.3	0.95	↓	36.3	0.99
Renfrewshire	60.0	1.12	↓	42.0	1.13
Scottish Borders	43.8	0.89	↓	31.1	0.91
Shetland Islands	62.1	1.16		37.1	0.98
South Ayrshire	53.5	1.07	↓	38.1	1.09
South Lanarkshire	55.1	1.04		37.7	1.02
Stirling	56.1	0.96	↓	40.5	0.95
West Dunbartonshire	48.7	0.88		34.6	0.90
West Lothian	44.7	0.81		32.0	0.83
Scotland	**54.3**	**1.00**		**38.0**	**1.00**

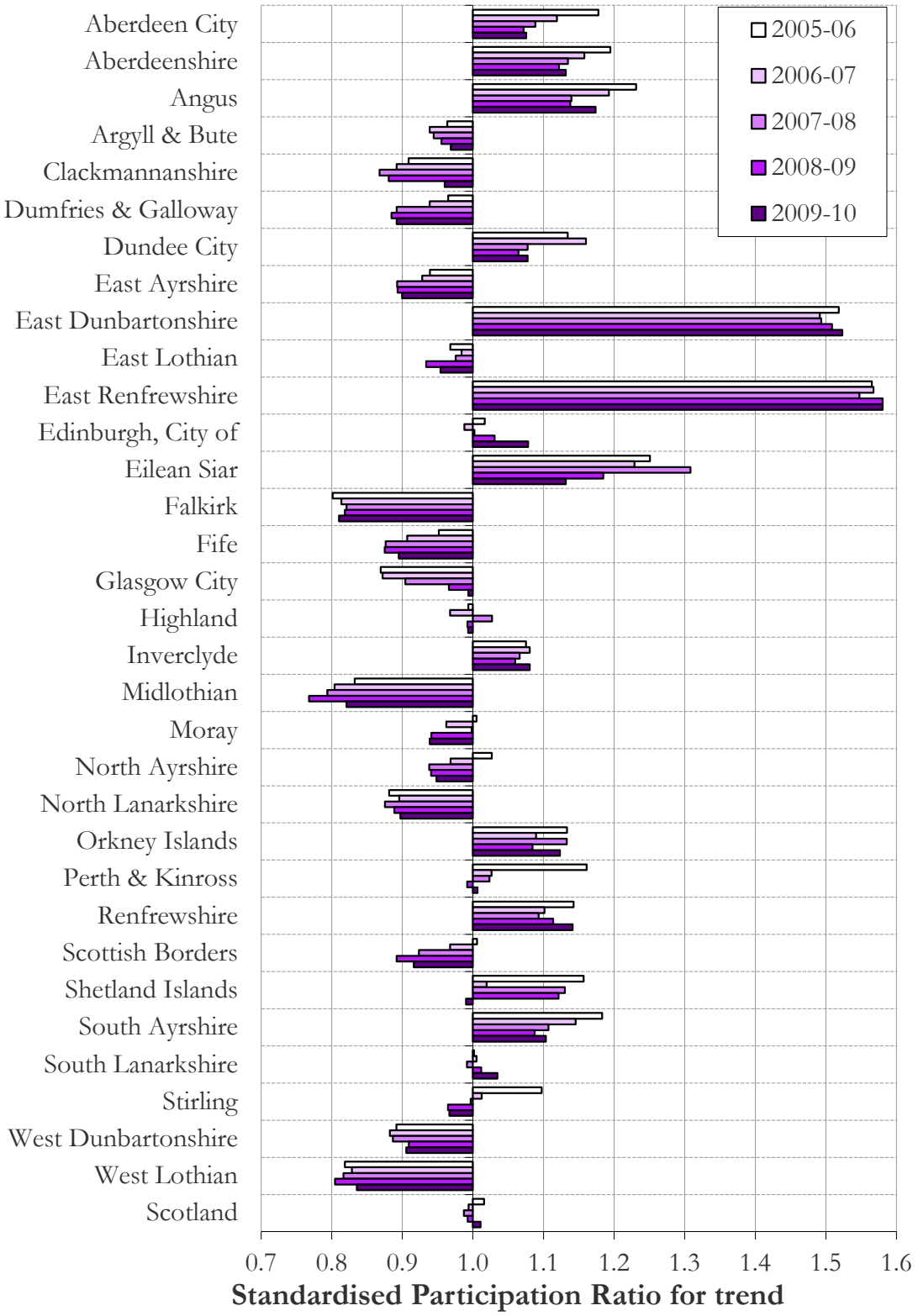
[1] A statistical model has been used to identify areas where the trend in participation is likely to be real rather than a result of random fluctuations

Figure 4.5.1 Trends in standardised headcount participation in HE by local authority



Notes
The five-year national average Standardised Participation Ratio (SPR) for trend is one. Thus SPRs above or below one are above or below this national average.

Figure 4.5.2 Trends in standardised FTE participation in HE by local authority



4.6. Participation within deprivation classes

The Scottish Index of Multiple Deprivation 2009 (SIMD) (Scottish Government, 2009) ranks each of the 6,505 Scottish Neighbourhood Statistics data zones using a score derived from seven domains of deprivation: income; employment; health; education, skills and training; geographic access to services; crime; and housing. This ranking was used to group the data zones into two classes: the most deprived data zones, which contain approximately 20 per cent of the 2009 mid-year population, and the rest. The two classes are termed the 'most deprived' and the 'less deprived'.

Table 4.6.1 shows participation rates in higher education by deprivation class and year together with the ratio of participation from the most deprived data zones to that from the less deprived. This is an indicator of how strongly participation is related to deprivation in an area. In particular:

- this ratio has increased since 2005-06 from 0.61 to 0.66 so that participation in the most deprived data zones is about two-thirds that in the less deprived; and
- participation has declined in the less deprived class and has been increasing since 2007-08 in the most deprived class. At least part of the change will result from the historical changes in course arrangements at the OU (see Section 4.1).

Table 4.6.1 Headcount participation in higher education by deprivation class and year

Year	Deprivation		Ratio of most to less deprived
	Less deprived	Most deprived	
	Rate/1,000		
2005-06	61.7	37.5	0.61
2006-07	60.3	37.0	0.61
2007-08	57.8	36.3	0.63
2008-09	57.9	37.2	0.64
2009-10	58.2	38.2	0.66

Figure 4.6.1 and Figure 4.6.2 show trends in participation by deprivation class and by gender and age group respectively. These indicate that:

- for men and women, participation has declined in the less deprived data zones, and these is a slight increase in male participation from the most deprived data zones;
- young participation declined in the less deprived data zones, and slightly increased in the most deprived zones; and
- mature participation was little changed in the most deprived, although there was a slight decline in the least deprived zones.

Figure 4.6.1 Trends in headcount participation in HE by gender and deprivation class

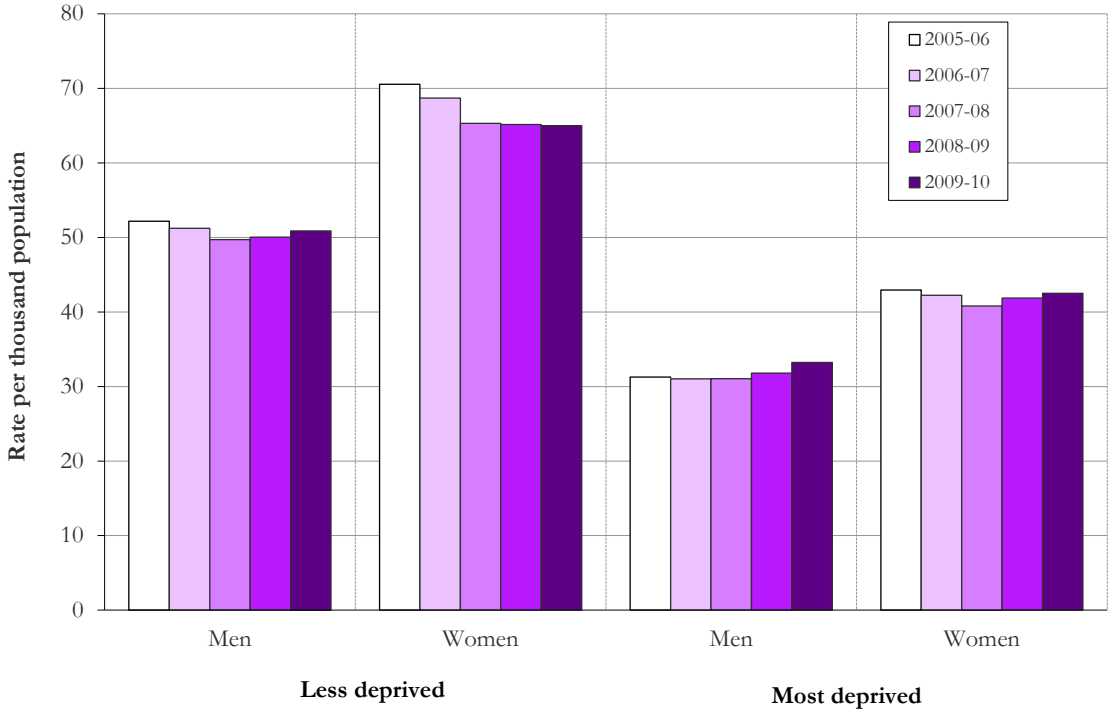
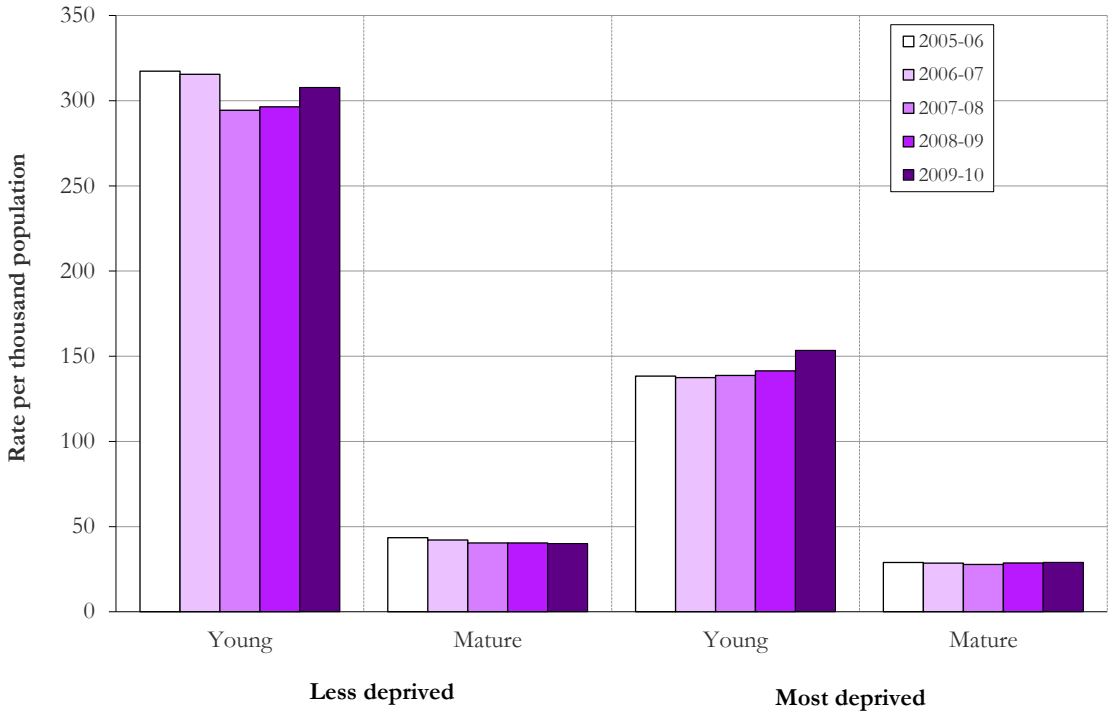


Figure 4.6.2 Trends in headcount participation in HE by age group and deprivation class



Notes
Young = 16 - 20, Mature = 21 and over

Table 4.6.2 shows participation rates in higher education by deprivation class and local authority for 2009-10 together with the ratio of participation from the most deprived data zones to that from the less deprived. A number of local authorities have relatively small populations in the most deprived class and are therefore likely to have fluctuating participation rates. These have been indicated in the table.

Excluding those with small populations, the following local authorities have relatively low participation in their most deprived data zones compared to the less deprived: Aberdeenshire and Stirling. Conversely, the following have relatively high participation in their most deprived data zones: Midlothian, North and South Ayrshire, Perth and Kinross, Highland, Renfrewshire, Angus, Dumfries and Galloway, Dundee, Aberdeen City and West Dunbartonshire.

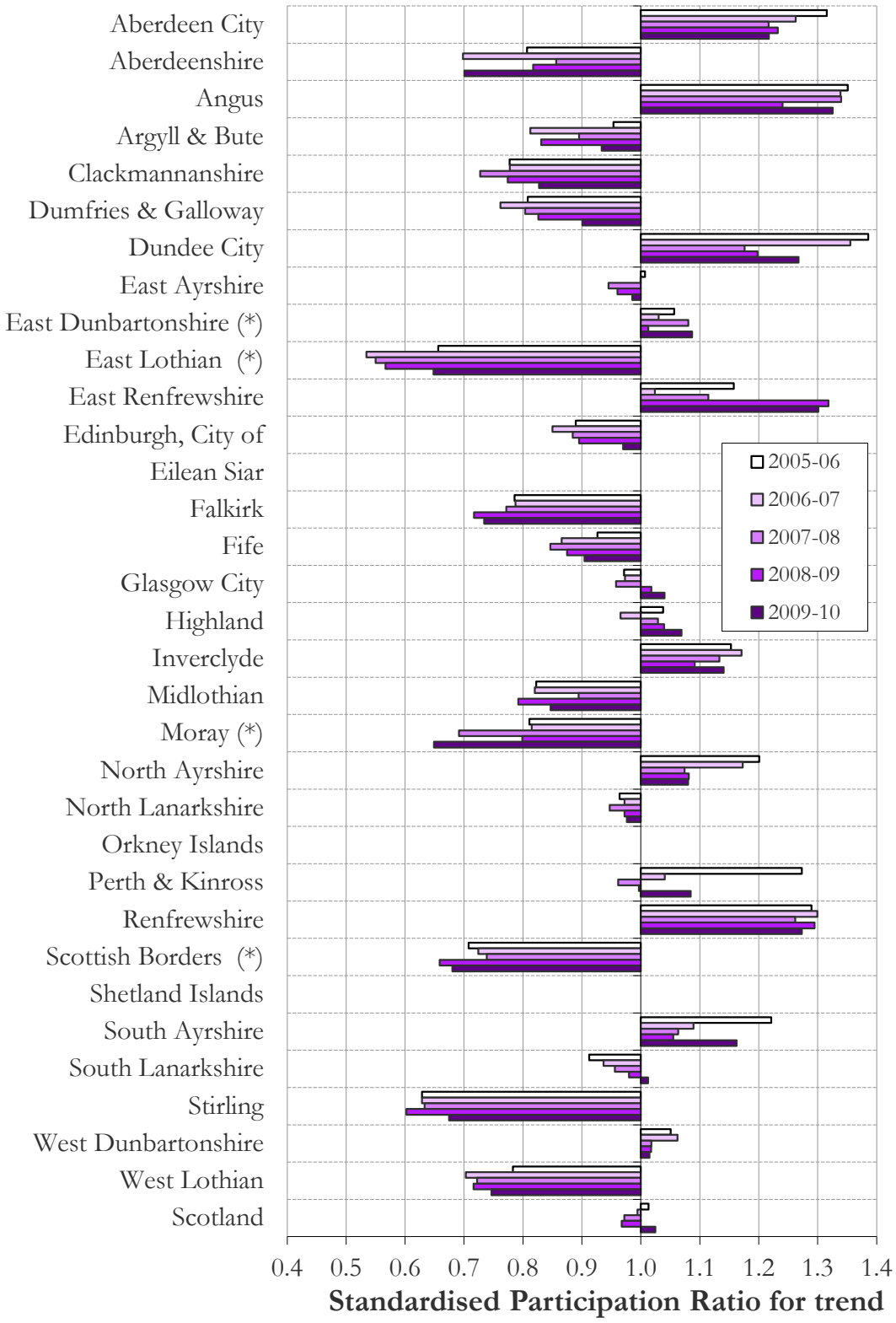
Figure 4.6.3 shows trends in headcount participation by local authority in the most deprived data zones. Trends that are less likely to be due to random fluctuations were identified using a statistical model. Dundee City and North Ayrshire both experienced decreases in participation, while Glasgow City showed an increase.

Table 4.6.2 Headcount participation in HE by local authority and deprivation class, 2009-10

Local Authority	Deprivation class: Less deprived Rate/1,000	Deprivation class: Most deprived Rate/1,000	Ratio of most to less deprived
Aberdeen City	67.8	47.4	0.70
Aberdeenshire	59.2	27.3	0.46
Angus	55.2	49.4	0.89
Argyll & Bute	50.8	32.8	0.65
Clackmannanshire	54.1	31.1	0.58
Dumfries & Galloway	45.1	32.6	0.72
Dundee City	67.0	46.9	0.70
East Ayrshire	53.5	35.1	0.66
East Dunbartonshire	76.9	41.2	0.54
East Lothian (*)	48.4	26.4	0.54
East Renfrewshire	79.6	47.9	0.60
Edinburgh, City of	61.8	38.1	0.62
Eilean Siar	56.7	-	-
Falkirk	45.3	26.9	0.59
Fife	53.8	33.4	0.62
Glasgow City	77.0	39.8	0.52
Highland	53.1	40.0	0.75
Inverclyde	71.3	39.7	0.56
Midlothian	44.0	32.9	0.75
Moray (*)	54.2	24.8	0.46
North Ayrshire	54.3	38.7	0.71
North Lanarkshire	53.4	35.4	0.66
Orkney Islands	61.6	-	-
Perth & Kinross	49.6	43.4	0.88
Renfrewshire	64.4	46.9	0.73
Scottish Borders	44.7	24.3	0.54
Shetland Islands	62.1	-	-
South Ayrshire	55.9	41.4	0.74
South Lanarkshire	59.5	36.1	0.61
Stirling	58.7	24.9	0.42
West Dunbartonshire	53.6	38.7	0.72
West Lothian	48.5	28.0	0.58
Scotland	**58.2**	**38.2**	**0.66**

Notes
* = local authorities that have a relatively small population in the most deprived deprivation class (below 3,000 in 2009)
- = no population in that class

Figure 4.6.3 Trends in standardised headcount participation in HE from data zones in the most deprived class, by local authority



Notes
* = based on a relatively small population (below 3,000 in 2009)
Eilean Siar, Moray, Orkney Islands and Shetland Islands have no data zones in the most deprived class.

4.7. Trends for young entrants

The number of new young entrants to HE provides an up-to-date picture of likely future trends in young participation. A decline in the number of entrants will be reflected in subsequent years by a decline in the total number of participants as more people complete courses and leave HE then start in HE for the first time.

First time entrants to higher education in the universities have been identified as those in their first year of study and who do not hold an existing HE qualification. Within the colleges, where previous qualification information is less complete, entrants are simply defined as those in the first year of an HE course. The vast majority of young, under 21, entrants to the colleges will have had no, or very limited, previous HE experience. Note that young entrants are those aged between 16 and 20.

Table 4.7.1 shows numbers and FTE for young entrants for full-time and part-time study. In 2009-10, total headcount and FTE have both returned to the 37,000 and 32,000 levels seen in 2005-06. Part-time numbers have increased since 2005-06 by four per cent.

Table 4.7.1 Participation in HE for young entrants

	2005-06	2006-07	2007-08	2008-09	2009-10
Headcount					
Part-time only	3,952	4,466	4,244	4,890	4,110
Full-time	33,268	31,291	30,886	33,131	33,229
Total	37,220	35,757	35,130	38,021	37,339
FTE	32,518	30,755	30,613	32,841	32,738

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Appendix 1: Methodology

Further detail of the methods used to prepare and analyse the data used in this report is presented in a separate technical report, which is available on request.

Data sources

The principal sources of data are the Further Education Statistics student record (FES) for FE and HE participation within the college sector; the Higher Education Statistics Agency (HESA) student records for HE participation in the university sector; and population estimates from the National Records of Scotland (NRS). Data from the pupil census of publicly-funded schools in Scotland were also included in some analyses. All pupils, including those at special schools, were included.

FES student record

The FES student record contains details of all enrolments on courses at FE Colleges in Scotland that attract funding from SFC.

The enrolment data were used to estimate a headcount of the number of participants on FE and HE courses in each academic year, and a FTE measure that roughly quantifies a student's total study time in relation to that for a full-time course. Multiple enrolments by an individual student were detected by matching enrolments by students with the same student number, initials, gender, date of birth and the same or similar surname.

The FTE for each enrolment was calculated in a way designed to be broadly comparable with data from the HESA student record. FTE for full-time enrolments is calculated as the proportion of course days completed, so those completing a course get an FTE of one. For part-time enrolments FTE was estimated using the number of hours of study as a proportion of the expected number of hours for a full-time course. This was set at 720 hours for FE enrolments, 600 hours for Higher National Diploma courses and 480 hours for other HE enrolments. The number of hours of study had to be imputed for non-funded students, using information from students on the same or similar courses.

FTE could not be calculated reliably for each year of courses split across two academic years. Therefore students on these courses were given an FTE for the whole course when in their final year of study. This should not substantially affect overall estimates of FTE where the full-course FTE

given to final year students will compensate for first year students getting a zero FTE, but may slightly bias estimates for small geographical areas.

For each student, the FTE for each enrolment were summed to give an overall FTE and, where relevant, a separate FTE for their HE and FE courses. A maximum FTE of one is set for all students from the FES record except those on courses for special needs students whose full-time courses can take rather longer than 720 hours of study. These were allowed a maximum FTE of two.

Because of a change to the definition of full-time FE courses in 2005-06, it is not possible to reliably estimate a comparable FTE for earlier years. Prior to 2005-06, the actual number of hours of study for full-time courses is unknown but in many cases will have been rather less than the 720 hours required from 2005-06 onwards. Therefore, for participation in FE, and for combined FE and HE participation, we have only presented FTE for 2005-06 onwards.

HESA student record

The HESA student record covers all students enrolled at a university in the UK for each academic year. Thus, this analysis does not cover students studying abroad. The student record includes the institution's academic judgement of a student's FTE which is calculated by the institutions with reference to a full-time, full-year student who would normally receive an FTE of one. FTE for those on part-time courses or who leave part way through a year are estimated pro-rata on either a credit or time basis. A complication arises when an academic year spans two HESA years which runs from 1 August to the 31 of July. Institutions are not required to split a student's FTE across the years provided the overall FTE for the programme of study is correct. This will not affect overall estimates of FTE but may slightly bias estimates for small geographical areas.

Inclusions/Exclusions

For each academic year students and school pupils were included if their domicile was in Scotland and they were 16 or over by the 28 February of the academic year in question. Thus the vast majority of schoolchildren who were not eligible to leave school either prior to, or during the academic year were excluded. Nonetheless, as the school census is carried out in September we have unavoidably included pupils who leave school in December rather than staying on for post-compulsory education. In addition, there will be a small amount of double counting when pupils leave

school in December and then undertake an FE or HE course in the same academic year.

For some courses at FE colleges that are funded from sources other than SFC (full cost recovery courses) only a summary of the number of enrolments is available. These have, of necessity, been excluded as there is insufficient information to identify multiple enrolments by the same individuals. However, the vast majority of courses are funded by SFC and in 2007-08 data was unavailable for only about 23,000 enrolments.

Population estimation

NRS has published annual mid-year population estimates for Scotland by data zone, gender and single year of age for 2005 to 2009. As with the 2001 census, full-time students and schoolchildren studying away from home are recorded at their term-time address which raises an issue for measuring participation. To estimate the proportion of an area's resident population which is engaged in study, students should ideally be recorded at their home residence. Otherwise, the resident population will be over-estimated for areas with significant amounts of student accommodation and under-estimated for areas with students studying away from home.

Information is available from the 2001 census on the number of schoolchildren and students in full-time education living away from home in term-time and on the number of full-time students and schoolchildren in an area by their accommodation type. Those recorded as living in student group households or educational establishments are likely to be living away from home. For each area and year, the number of students away from home and the number who live elsewhere were estimated and used to estimate the area's resident population. This revised estimate of the mid-year population was then aged by three months to provide estimates of the population on the 1 October.

These estimates of the resident population may still be inaccurate in that we can only calculate very approximate estimates for the number of students. However, they will be closer to the true resident population than the NRS published figures.

Comparable figures for the number of students according to their age on 1 October were then used to calculate participation rates.

Measuring participation

National levels of participation for student subgroups have been presented as rates per thousand head of population. However, to facilitate an examination of geographical variation in participation some standardisation is required as different areas are likely to have different participation rates simply because one area has a different demographic composition – an older population or a different gender balance for example. Such rates have therefore been standardised by comparing the observed number of participants to what would be expected if national age-gender specific participation rates applied. This gives rise to a *Standardised Participation Ratio* (SPR) where values above or below one indicate that the area has higher or lower participation respectively than Scotland as a whole, taking into account the area's age-gender composition.

FTE has been presented in the same way as headcount: as population rates and SPRs.

Mapping participation

Participation has been mapped using the Scottish Neighbourhood Statistics Intermediate Geography. Intermediate geography areas, or intermediate zones, are aggregations of data zones within local authorities and contain between 2,500 and 6,000 people. Data zones are too small to provide stable participation rates and too numerous to allow easy detection of geographical patterns. There are 1,235 intermediate zones thereby providing a reasonable level of local detail.

Students were allocated to data zones, and thence to intermediate zones, using their home postcode. Data zones for students whose postcode were missing, invalid or found to match an institutional postcode were imputed using a process called hot-decking. This uses characteristics which are available for all students which help estimate where a student's data zone is likely to be. For FE college students, their campus and local authority were used as the characteristics, whereas the student's previous institution (usually a school or FE college) and local authority were used for university students. Overall, data zones for 1.8 per cent of both college and university students were imputed.

Participation has been mapped in terms of the SPR using a common scale that shows in green those areas close to the national rates and uses shades of yellow to red and of blue for those above or below the national rates respectively. Inevitably when values are mapped using a small set of classes

(colours), some values will be close to the boundary with the adjacent class. This should be kept in mind when interpreting the maps.

A problem arises when SPRs for relatively small areas like intermediate zones are based on a small number of participants. An extreme value for the SPR can arise by chance that doesn't reflect the underlying level of participation for that area. Smoothed estimates of the underlying SPR can be obtained by using statistical models that incorporate information about the participation in the neighbourhood surrounding each area. If participation in this neighbourhood tends to be homogeneous then it makes sense to use this neighbourhood as a guide to what the area's SPR would be if more information were available. The resulting SPRs are called shrinkage estimates because the models tend to shrink an area's SPR towards the SPR of the whole neighbourhood.

However, the shrinkage estimate is only substantially different from the original SPR if the number of participants is small and the neighbourhood is fairly uniform. Thus models have little effect on maps of overall FE or HE participation but more so for subgroups of students.

Smoothed estimates are presented using, for simplicity, the local authority containing each intermediate zone as the neighbourhood.

Detecting trends

To examine change in participation within intermediate zones and local authorities, participation rates were standardised using the combined national rates across the five years included in the study, rather than the rates for each year separately. The resulting measure is termed the Standardised Participation Ratio for Trend, or Trend SPR for short. Thus the Trend SPR will be greater than one for years with a higher participation than the overall national rate across the five years.

Statistical models were used to identify significant trends over the five years considered (ie those not likely to be simply due to random fluctuation). The models take account of the consistency that is likely in an area's participation from one year to the next as some of the same students will be studying in both years and many of the factors that affect an area's participation will change slowly.

Deprivation

To examine levels of participation in relation to deprivation, the Scottish Index of Multiple Deprivation 2009 (SIMD) was used (Scottish

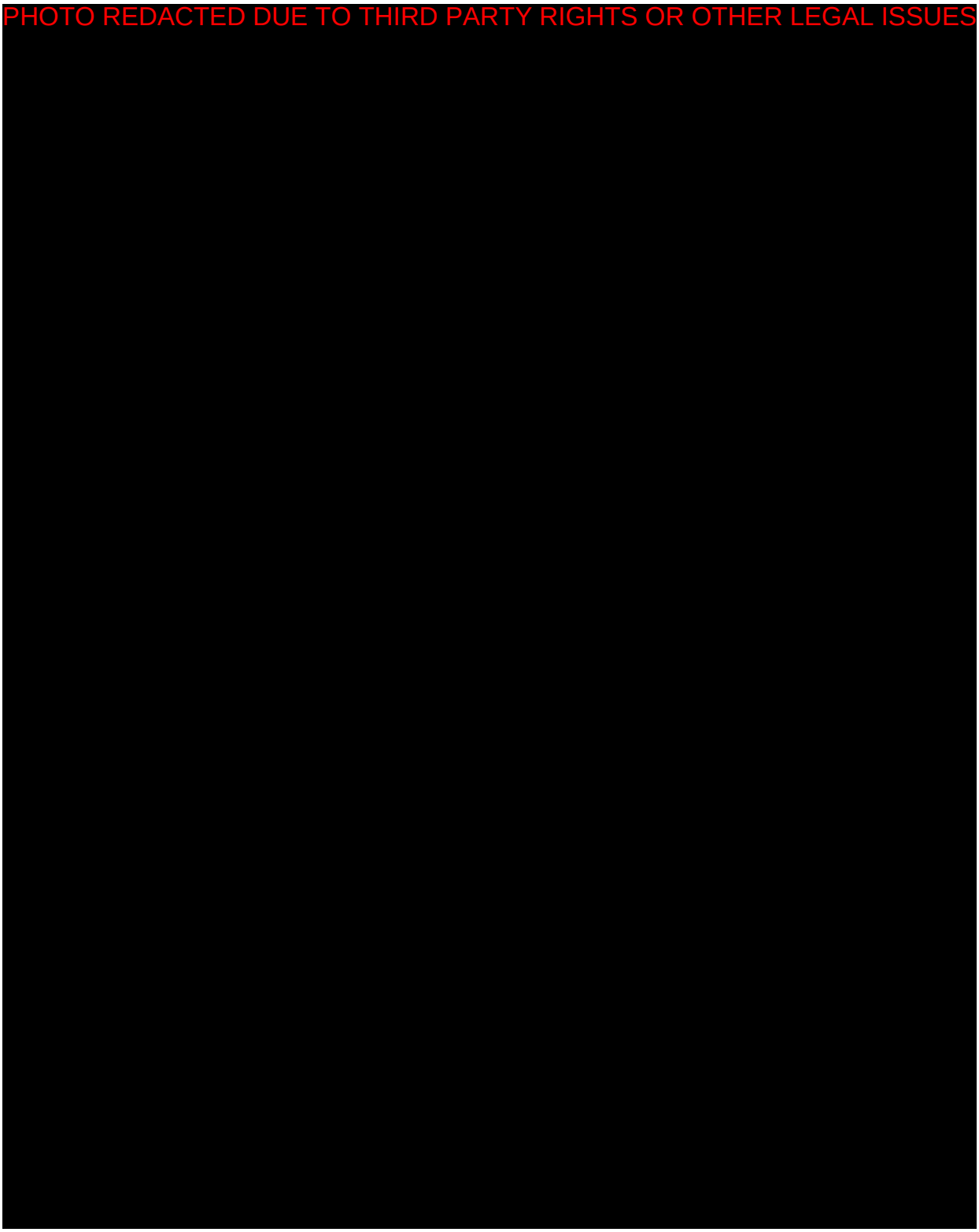
Government, 2009). This provides a ranking for each data zone derived from seven domains of deprivation: income; employment; health; education, skills and training; geographic access to services; crime; and housing. This is in contrast to the 2007-08 report where the 2006 SIMD version was used. The ranking was used to group the data zones into two classes: the most deprived data zones, which contain approximately 20 per cent of the 2009 mid-year population, and the rest.

Two classes were used in preference to a common alternative of dividing the data zones into five quintiles of equal population. This is because the SIMD is designed to primarily detect particularly deprived areas and the less deprived quintiles are not so clearly distinguishable.

It should also be noted that earlier academic years are also being compared with SIMD 2009, and that in some areas which are now recorded as deprived might not have been recorded as deprived in previous editions of SIMD.

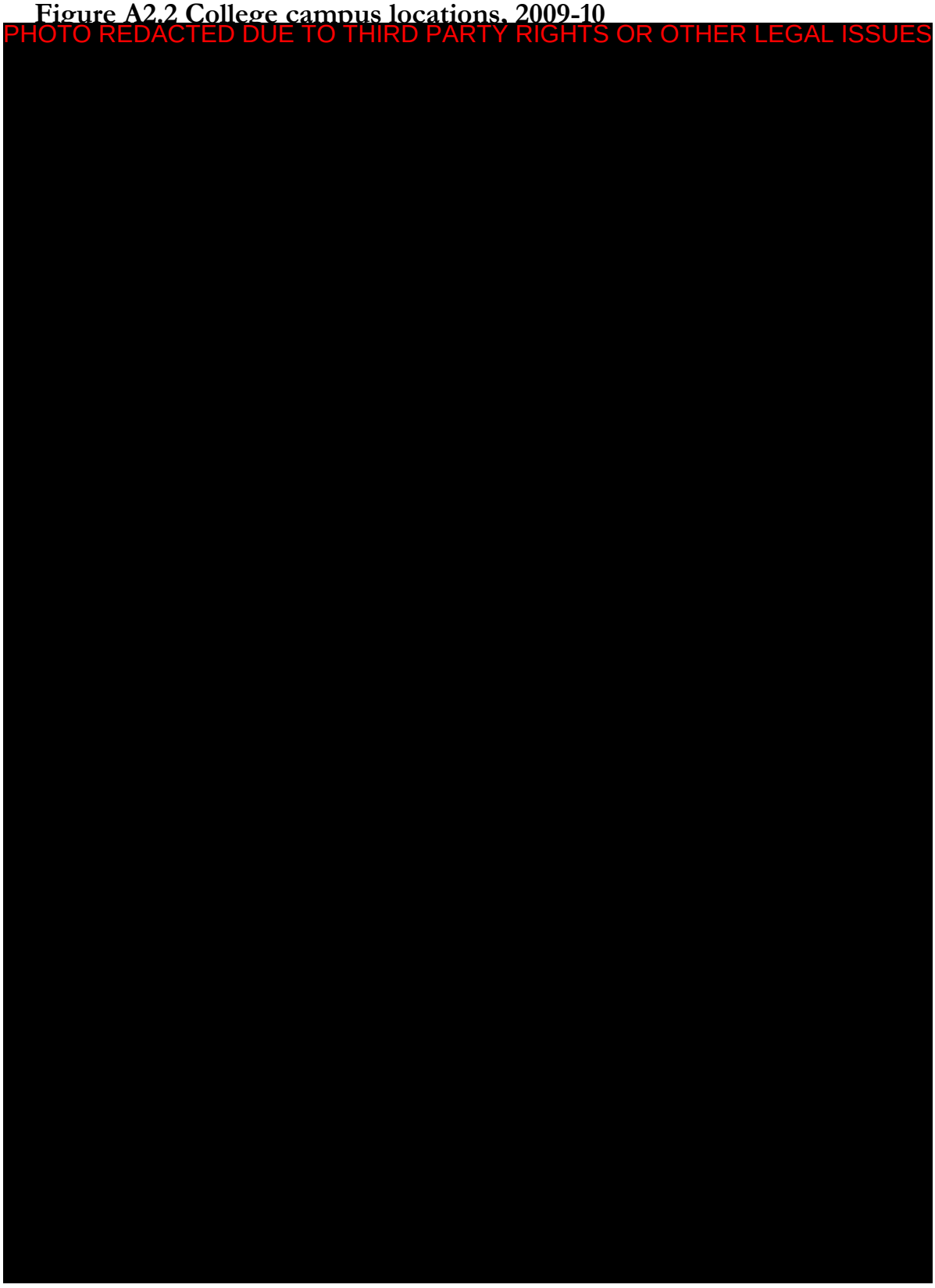
Appendix 2: Context maps

Figure A2.1 University campus locations, 2009-10



Notes
Campuses identified from a combination of university websites and HESA student returns, and was not updated from 2007-08, as no new main campuses were formed.

Figure A2.2 College campus locations, 2009-10



Notes
Only campuses with more than 500 enrolments (excluding outreach centres) from 2007-08 are shown. Locations identified from college returns.

Figure A2.3 Scottish Index of Multiple Deprivation, most deprived data zones, 2009