

Working paper 1: Widening participation to higher education of under- represented groups in Scotland:

The challenges of using performance indicators

Elisabet Weedon

February 2014

Table of Contents

List of figures	ii
List of tables.....	ii
Key points:	1
Policy context	1
Post-16 Education (Scotland) Act and outcome agreements.....	2
HESA and SFC Performance Indicators (PIs)	3
Undergraduate students: data from the UK	4
Undergraduate students in Scotland by institution.....	5
Widening participation of under-represented groups	8
Socioeconomic status indicator – NS-SEC 4-7	8
State school attendance indicator	10
Indicator of deprivation in Scotland – SIMD20 and SIMD40	11
Low participation neighbourhoods indicator in England – POLAR3.....	14
Widening participation performance indicators and subject studied.....	14
Issues and challenges in using performance indicators	16
What do the publicly available widening participation performance indicators tell us?.....	16
Limitations of the current widening participation performance indicators.....	16
Contextualised admissions.....	18
Conclusion	19
References	20
Appendix 1.....	22
Appendix 2.....	23

List of figures

Figure 1:	Number of full-time first degree undergraduate students by institution, 2010-11	6
Figure 2:	First degree undergraduate students by institution, % who are young, 2010-2012	6
Figure 3:	Undergraduate students by institution and mode of study, 2011-12, percentages.....	7
Figure 4:	First degree young entrants to Scottish HEIs by NS-SEC 4-7, 2009 – 2012, percentages	9
Figure 5:	First degree young entrants to Scottish HEIs by NS-SEC 4-7, 2010-12, Scottish domiciled students only, percentages.....	10
Figure 6:	Percentage of first degree young undergraduate students from state schools in ancient, old, new and other institutions, 2011-12	11
Figure 7:	Students from SIMD20 neighbourhoods in Scottish universities, 2005-2012, percentages	12
Figure 8:	Students from SIMD40 neighbourhoods in Scottish universities, 2005-2012, percentages	13
Figure 9:	A comparison of students from the 40% most deprived neighbourhoods and the rest at Scottish ancient, old, new and other institutions, 2011-12, percentages	14
Figure A1:	SIMD decile graph distribution, Aberdeen City	23
Figure A2:	SIMD decile graph distribution, Aberdeenshire	23
Figure A3:	SIMD decile graph distribution, Dundee City	24
Figure A4:	SIMD decile graph distribution, Edinburgh City	24
Figure A5:	SIMD decile graph distribution, Fife	25
Figure A6:	SIMD decile graph distribution, Glasgow City	25
Figure A7:	SIMD decile graph distribution, Highland region	26
Figure A 8:	SIMD decile graph distribution, Renfrewshire	26

List of tables

Table 1:	Full-time undergraduate entrants to UK institutions, 2011-12, number and percentage	5
Table 2:	Full-time undergraduate entrants to UK institutions, 2010-11, number and percentage:.....	5
Table 3:	First degree young entrants and other degree entrants in HEIs from state schools and by NS-SEC 4-7, 2011-12.....	7
Table 4:	First degree young undergraduate students from NS-SEC 4-7 in the UK, percentages, 2002-2012	9
Table 5:	Pupils from state schools, 2010-2012, percentages.....	10
Table 6:	Fulltime first degree undergraduate entrants by PIs and subject studied, percentages, 2011-12	15
Table 7:	Young full-time first degree entrants by HESA Performance Indicators and region of domicile, percentages, 2011-12.....	15

Key points:

- Widening participation to higher education has become an increasingly important aspect of education policy since the publication of the Dearing report in 1997
- The Post-16 Education (Scotland) Act 2013 introduced outcome agreements between the SFC and universities which included duties relating to widening access
- Performance indicators (PIs) for widening participation in higher education institutions (HEIs) have been published by HESA since 2002 and the SFC currently publish widening participation indicators for Scottish domiciled students
- There has been a small increase in the UK in students in HEIs from low socioeconomic backgrounds (NS-SEC 4-7) but a decrease in Scotland and Northern Ireland
- There has been a slight increase in the UK (including Scotland) in students from state schools in HEIs
- The proportion of Scottish domiciled students in Scottish universities from SIMD20 and SIMD40 backgrounds has not changed over the past 6 years
- There is considerable variation between Scottish institutions in relation to the proportion of students from non-traditional backgrounds with the more elite institutions have a considerably lower proportion than most of the post-92 institutions
- Challenges remain in identifying indicators that provide a robust and comparable measure as well as covering all students entering university from a non-traditional background

This working paper looks at the role of performance indicators (PIs) in monitoring widening participation to higher education. These indicators are published on an annual basis by the Higher Education Statistics Agency (HESA) for HEIs in the whole of the UK. The Scottish Funding Council (SFC), drawing on the HESA data provides data specifically linked to Scottish domiciled students.

To set the context for the use of performance indicators the paper includes a brief overview of policy relating to widening participation and recent developments in Scotland following the Post-16 Education (Scotland) Act 2013. Outcome agreements between the funding council and universities form part of this act and they include measures related to widening participation. The main focus in the paper is on Scotland but some comparison is made with rest of the UK. The paper is structured as follows:

- Policy context, the Post-16 Act and outcome agreements
- HESA and SFC Performance Indicators (PIs)
- An overview of undergraduate students in the UK
- Undergraduate students in the UK by institutions
- Widening participation indicators
 - Socioeconomic status – NS-SEC 4-7
 - State school
 - Neighbourhood deprivation – SIMD20 and SIMD40
 - Low participation neighbourhood England – POLAR3
- Issues and challenges in using performance indicators
- Conclusion

Policy context

Widening access to higher education has become an increasingly important aspect of educational policy. The Dearing Report published in 1997 stressed the need to create opportunities for non-

traditional students to enter higher education, including those from low socioeconomic backgrounds ([Dearing, 1997](#)). This was also a key message of the associated Garrick report which focused on Scotland. Both reports envisaged growth in the higher education sector as a result of an increase in student numbers, economic demand and the requirements of the knowledge economy. The Garrick report noted the role of colleges in promoting access through degree programmes in colleges and articulation routes into universities.

In 2001 the Scottish Credit and Qualifications Framework (SCQF) was established building on work already started by the Scottish Credit and Accumulation and Transfer (SCOTCAT) framework. The aim of SCOTCAT was to provide a common language for educators, employers, students and professional bodies which recognised credit accumulated through learning ([George and Weedon, 2001](#)). This credit could then be used to move to a higher level of learning in the same or a different context, e.g. from college to university. SCQF continued this work and built on the framework which provides credit points, 1 credit for each notional 10 hours of learning. The learning is allocated a level, from provision at level 1 for those with severe and profound difficulties to level 12 which is doctoral level ([Raffe, 2003](#)). SCQF was considered one mechanism that would enable transfer from college to university, a route providing access to higher education particularly beneficial for non-traditional students. Other developments during this period saw the creation of the new Scottish Funding Council which brought funding for further and higher education into one body, the creation of four Wider Access Regional Forums (WARFs) and the Articulation Hubs all engaged in promoting wider access to higher education. The Scottish Wider Access Programme led to the development of Access to higher education courses aimed at mature students with low formal qualifications who wished to enter higher education.

Responsibilities for education and training were transferred to Scotland in 1992. In 1999 following devolution and the opening of the Scottish Parliament they became part of the duties of the new Parliament. However, initiatives south of the border have continued to have an impact on Scottish universities. The Schwarz report which reviewed admissions to higher education was influential in changes to the QAA code of practice ([Admissions to Higher Education Review, 2004](#)). This led to the development of contextualised admissions which recognise that school achievement is not always an accurate predictor of achievement at university. A study of students at St Andrews found students from low achieving schools performed better at university than students from higher achieving schools with similar grades can ([Lasselle et al, forthcoming](#)). A study of Edinburgh students did not find evidence of higher performance among similarly-qualified but 'disadvantaged' students, but it did find that students educated at state schools outperformed similarly-qualified students from private-school backgrounds ([Croxford et al, 2013](#)). Scottish universities endorse the policy of contextualised admissions, but little is known of its impact and its outcome. Contextualised admissions is one policy that may be particularly helpful in widening access as those from less advantaged backgrounds are more likely to attend low achieving schools.

Post-16 Education (Scotland) Act and outcome agreements

The Post-16 Education (Scotland) Act (2013) includes duties on Scottish HEIs requiring them to show a commitment to widening participation. These duties are included in the outcome agreements established between the SFC and each of the higher education institutions in 2012. In 2012 the measure adopted by the SFC was SIMD 20/40 but universities were encouraged to use '*any other measure, or set of measures, for deprivation that they felt would demonstrate their success in improving access*' ([SFC, 2012](#)). In 2013-14, the second year of outcome agreements, the main themes of the outcome agreements were:

- Opportunities for all and widening access
- The learner journey
- Research
- Knowledge exchange
- Graduate skills
- Environmental sustainability through the SFC's carbon reduction initiative

The widening access outcome focused on three areas:

- Extending opportunities for all by increasing the proportion of students entering Scottish universities from disadvantaged and challenging backgrounds
- Increasing the proportion of students from different protected characteristic backgrounds (such as age, race and disability), where these are underrepresented in the student population
- Working with universities to support students from the above groups, to help them stay at university once they have gained a place

According to the outcome agreements, universities have agreed to widen access and progress in this area will be monitored using the Scottish Index of Multiple Deprivation (SIMD). In a separate policy move, funding of £40 million has been set aside for the next 4 years to provide a total of 727 additional places each year at the ancient and old universities as well as at Glasgow School of Art ([SFC, 2013a](#)).

In the guidance to universities relating to the 2014-15 outcome agreements, the agreements are described as '*powerful tools in demonstrating what universities deliver in return for public investment*' ([SFC Guidance, AY 2014-15, 2013b, p. 1](#)). This guidance document notes that the Universities Scotland Funding Policy Group argued for measures in addition to SIMD (2012) to gauge progress on widening access, especially in those areas where SIMD does not effectively identify areas of deprivation. Institutions were therefore encouraged to use data from the Schools for Higher Education Programme (SHEP) and to monitor data on recruitment of pupils from other low progressions schools ([SFC, 2013b](#)).

This brief overview of the policy context shows that there have been a number of initiatives aimed at widening participation as well as development of indicators to measure the extent to which universities are engaging in the widening participation agenda. In Scotland there is clearly a debate between the funding council and universities in relation to which indicators to use. Although the emphasis from the funding council has been on the use of SIMD, universities have argued that this measure alone is not effective. These issues are discussed further in the conclusion. The section below examines the indicators developed by the Higher Education Statistics Agency (HESA) and the Scottish Funding Council (SFC).

HESA and SFC Performance Indicators (PIs)

Performance Indicators (PIs) were first introduced in England, Wales and Northern Ireland after the publication of the Dearing report ([Dearing, 1997](#)). The Scottish Higher Education Funding Council (SHEFC) requested that Scotland be included in 2000. These PI indicators are now published annually by HESA (www.hesa.ac.uk) and cover the following areas:

- Widening participation indicators
 - under-represented groups
 - students who are in receipt of Disabled Student Allowance (DSA)
- Non-continuation rates

- Module completion rates
- Research output
- Employment of graduates

The focus of this report is on students from under-represented groups. HESA uses three measures to identify the number of students from underrepresented groups: (i) the number of students from state schools; (ii) socioeconomic status; and (iii) POLAR3 which uses postcode data to identify low participation neighbourhoods. The Office for National Statistics (ONS) developed a new measure of socioeconomic status to reflect labour market changes and the changes in educational levels required for particular occupations used from 2002-03. This is known as NS-SEC (National Statistics – Socio-Economic Classification). The wording of the question used in 2008-09 to gather these data by the Universities and Colleges Admissions Service (UCAS) differed from previous and subsequent years which means that NS-SEC data for that year cannot be compared to earlier or subsequent years. Polar3 draws on Census Area Statistics (CAS) from the 2001 Census. It ranks the participation of young people for the combined 2005 to 2009 cohorts providing 5 quintiles from the lowest participation (1) to the highest (5). Each quintile represents 20% of UK young cohort. The postcode of a student is used to allocate her/him to a particular quintile. Students in the lowest (1) quintile are categorised as being from a low participation neighbourhood.

Although (POLAR3) data is available for the whole of the UK the data published by HESA do not include Scottish-domiciled students. This is mainly due to the relatively high number of students in Scotland taking part in higher education in colleges:

‘[t]he relatively high (in UK terms) participation rate in Scotland coupled with the very high proportion of HE that occurs in FE colleges means that the figure for Scottish institutions could, when viewed in isolation, misrepresent their contribution to widening participation. Therefore, the low participation data has not been produced within the Performance Indicators for institutions in Scotland from 2007-08’ (HESA, PI definitions, www.hesa.ac.uk, accessed 03.04.2013)

To provide a similar measure, the Scottish Funding Council publishes participation rates for Scottish domiciled students using the Scottish Index of Multiple Deprivation (SIMD). The measure ranks areas according to level of deprivation on the following seven domains: employment; income; health; education, skills and training; geographic access to services; crime; and housing (see <http://www.scotland.gsi.gov.uk/Topics/Statistics/SIMD>). It is an area based measure which means that it does not necessarily capture an individual’s level of deprivation. This is one of the reasons for it being considered inappropriate or less effective for rural areas where populations are more widely dispersed (see e.g. [Shucksmith, 2003](#), [Geddes and Houston, 2012](#)).

Undergraduate students: data from the UK

The HESA performance indicators on widening participation refer mainly to young (below 21) undergraduate students and there are two categories of entrants: first degree entrants and other degree entrants (for a definition of these degrees see Appendix 1). There are some data for part-time and mature students; however, these are based on POLAR 3 and are therefore not available for Scotland. Table 1 shows the total number of full-time undergraduate students in the United Kingdom, as well as by country of institution. As can be seen the majority, around 91% of undergraduate students study on first degrees in the UK. In Scotland the overall proportion is 93%. The majority of first degree students are young, around 80% but the proportion in Scotland

is slightly lower at 76%. Students on other degree programmes are more likely to be older though the proportion of young other degree students is higher in Scotland and Wales than in England and Northern Ireland. Table 2 shows the same data for the previous year (2010-11) and a comparison between the two tables shows an increase in full-time first degree students in England but a decrease in Scotland.

Table 1: Full-time undergraduate entrants to UK institutions, 2011-12, number and percentage

Country of institution	First degree¹				Other degree¹		
	<i>Total FT</i>	<i>No. of young students</i>	<i>% who are young</i>		<i>Total FT</i>	<i>No. of young students</i>	<i>% who are young</i>
Scotland	30,730	23,460	76.3		2,080	1,145	55.0
England	327,130	261,390	79.9		33,660	16,425	48.8
Wales	22,260	17,855	80.2		2,125	1,180	55.6
Northern Ireland	9,035	7,265	80.4		135	70	50.4
Total UK	389,155	309,970	79.7		38,000	18,820	49.5

Source: HESA

1. See Appendix 1 for definition

Table 2: Full-time undergraduate entrants to UK institutions, 2010-11, number and percentage:

Country	First degree¹				Other degree¹		
	<i>Total FT</i>	<i>No. of young students</i>	<i>% who are young</i>		<i>Total FT</i>	<i>Number of young students</i>	<i>% who are young</i>
Scotland	31,870	24,065	75.5		2,655	1,515	57.1
England	304,015	241,025	79.3		45,465	19,165	42.2
Wales	21,075	16,485	78.2		2,250	1,240	55.2
Northern Ireland	9,035	7,210	79.8		150	80	52.3
Total UK	365,995	288,785	78.9		50,520	21,995	43.5

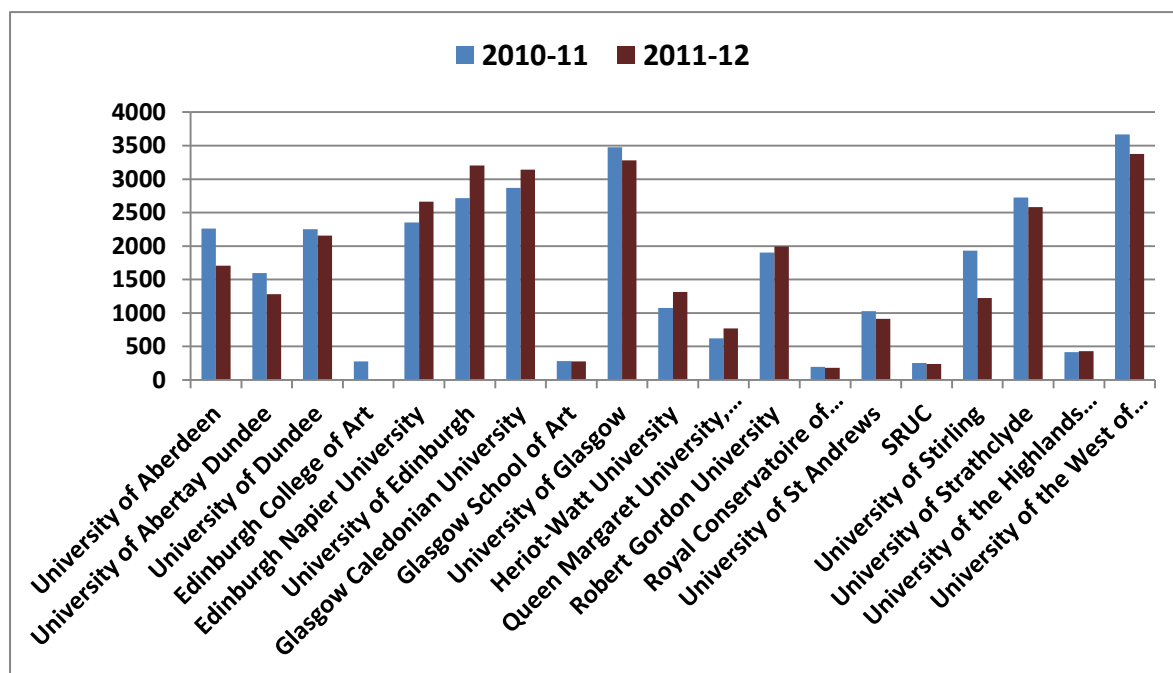
Source: HESA

1. See Appendix 1 for definition

Undergraduate students in Scotland by institution

There has been a decrease in full-time first degree students in Scotland in 2012 but an increase in England and Wales (see Table 1 and Table 2). However, this did not apply to all Scottish HEIs. In general there has been an increase in the number of students in the four universities in Edinburgh, at Glasgow Caledonian and at Robert Gordon University. The remainder have seen numbers staying static or falling, the greatest fall was at University of Aberdeen and University of Stirling.

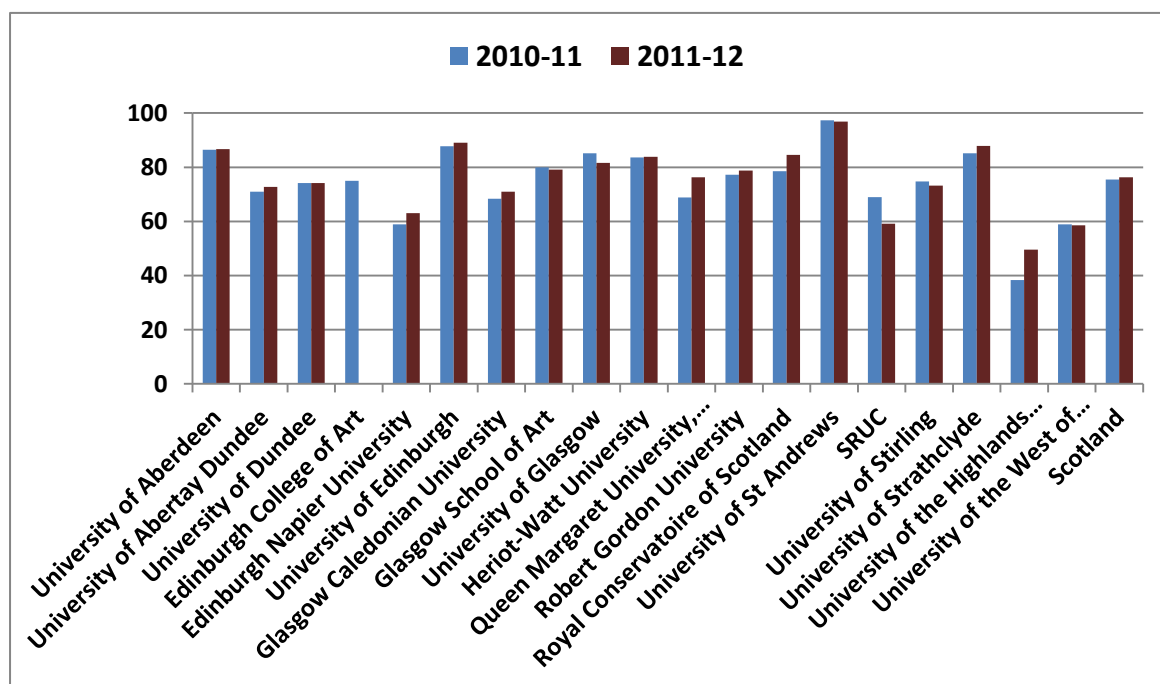
Figure 1: Number of full-time first degree undergraduate students by institution, 2010-11



Source: HESA

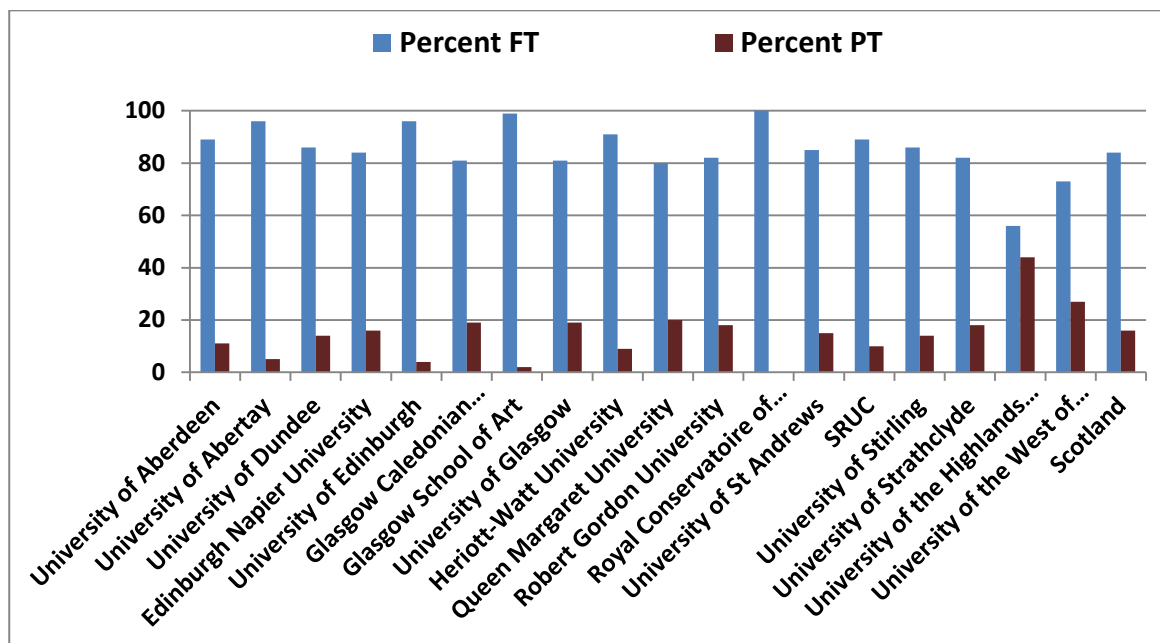
Table 2 shows that the proportion of first degree entrants who are young over the last 2 years has remained constant at around 75%. There is, however, variation between the institutions, at the University of the Highlands and Islands (UHI) around 50% of first degree entrants are young, whilst at St. Andrews almost all are below 21. In general, the ancient universities have a younger first degree entrant population than the post-92 institutions. The majority of students, over 80%, study full-time as can be seen in figure 3, there is only one institution where the proportion of full-time students is below 60%.

Figure 2: First degree undergraduate students by institution, % who are young, 2010-2012



Source: HESA

Figure 3: Undergraduate students by institution and mode of study, 2011-12, percentages



Source: HESA

Very few Scottish HEIs have students on other degree programme in substantial numbers. The majority are to be found at the UHI and somewhat smaller numbers at the University of West of Scotland. Other degree students at UHI include a sizeable proportion of young students. Although the number of students on other degree programmes are low, these programmes tend to have a higher proportion of students from low socioeconomic backgrounds and most come from state schools as can be seen in table 3 below. It is therefore important to note the differences between institutions in the composition of the student body and the type of undergraduate degrees undertaken.

Table 3: First degree young entrants and other degree entrants in HEIs from state schools and by NS-SEC 4-7, 2011-12

	Total Nos.		State school % (young students)		NS-SEC 4 – 7 (young students)	
	First degree	Other degree	First degree	Other degree	First degree	Other degree
UK: All	389,155	38,000				
Young	309,970	18,820	88.9	96.6	30.7	41.8
England: All	327,130	33,660				
Young	261,390	16,425	88.5	96.5	30.9	41.7
Scotland: All	30,730	2,080				
Young	23,460	1,145	87.9	97.4	26.6	41.0
Wales: All	22,260	2,125				
Young	17,855	1,180	91.9	97.1	29.1	43.2
Northern Ireland: All	9,035	135				
Young	7,265	70	98.9	97.0	39.1	44.6

Source: HESA

This brief overview provides information on the number of undergraduate entrants to university in the last two years, the type of degree they are studying on, the age of students and the

composition of the undergraduate student bodies in different institutions. It provides the backdrop for an examination of the performance indicators on widening participation of under-represented groups as they focus on this student group. There are very limited data on mature students and data from HESA for this group of student do not include students at Scottish institutions. There are no data on part-time students relating to widening participation. It is also worth noting that the focus is on undergraduate students and no widening participation data are published on post-graduate students.

Widening participation of under-represented groups

As mentioned above, HESA publishes two sets of performance indicators relating to students in Scottish institutions from under-represented groups – socio-economic status indicator (NS-SEC) and students from state schools. These data are also published by Scottish Funding Council for Scottish domiciled students only. In addition, the funding council publishes data for Scottish domiciled students according to SIMD20 and SIMD40. Each of these 3 indicators are examined below.

Socioeconomic status indicator – NS-SEC 4-7

This section examines data relating to the socioeconomic status of students which is published by HESA using UCAS data from students' university applications. The question asked is¹:

"If you are under 21, please give the occupation of your parent, step-parent or guardian who earns the most. If he or she is retired or unemployed, give their most recent occupation. If you are 21 or over, please give your own occupation."

(<http://www.hesa.ac.uk/content/view/2379/#nssec>, accessed 24.09.13)

This indicator has the benefit of being a measure relating to a specific individual; however, as it is based on self-reporting it is not possible to test the accuracy of the measure and data is missing for nearly 20% of the population. In addition, using NS-SEC 4-7 is an arbitrary way of categorising socioeconomic status. Other researchers have focused on categories 1-2 as the highest group and either treated 3-7 as a group or split that further into 3-4 and 5-7 (see e.g. [Croxford and Raffe, 2013](#)).

Table 4 provides data from the UK as a whole and the individual countries. Here it can be seen that there was a slight increase in the participation rate of students from NS-SEC 4-7 (2%) from 2002-03 to 2011-12 in the UK. Northern Ireland, with a very small student population has the highest overall percentage from NS-SEC 4-7 but over the period there has been a slight decrease in the percentage. In Wales and Scotland the proportion from this group has fluctuated with both countries experiencing a small decrease whilst in England there has been an increase in the proportion from this group of students. Scotland has the lowest overall participation rate by NS-SEC 4-7 based on total student numbers. If only Scottish domiciled students are included in the analysis the figure for Scotland is 29.2 (2011-12). This is close to the Welsh figure but the Welsh figure would probably be higher if only Welsh domiciled students were included. The Scottish rate was marginally higher in 2010-11 at 29.7% (www.sfc.ac.uk). It should be noted that these data do not include students studying on HE courses in colleges in Scotland who are likely to come from lower socioeconomic backgrounds.

¹ Please note that the question differed for the 2008-09 entry and data for this year relating to NS-SEC 4-7 is not comparable to other years.

Table 4: First degree young undergraduate students from NS-SEC 4-7 in the UK, percentages, 2002-2012

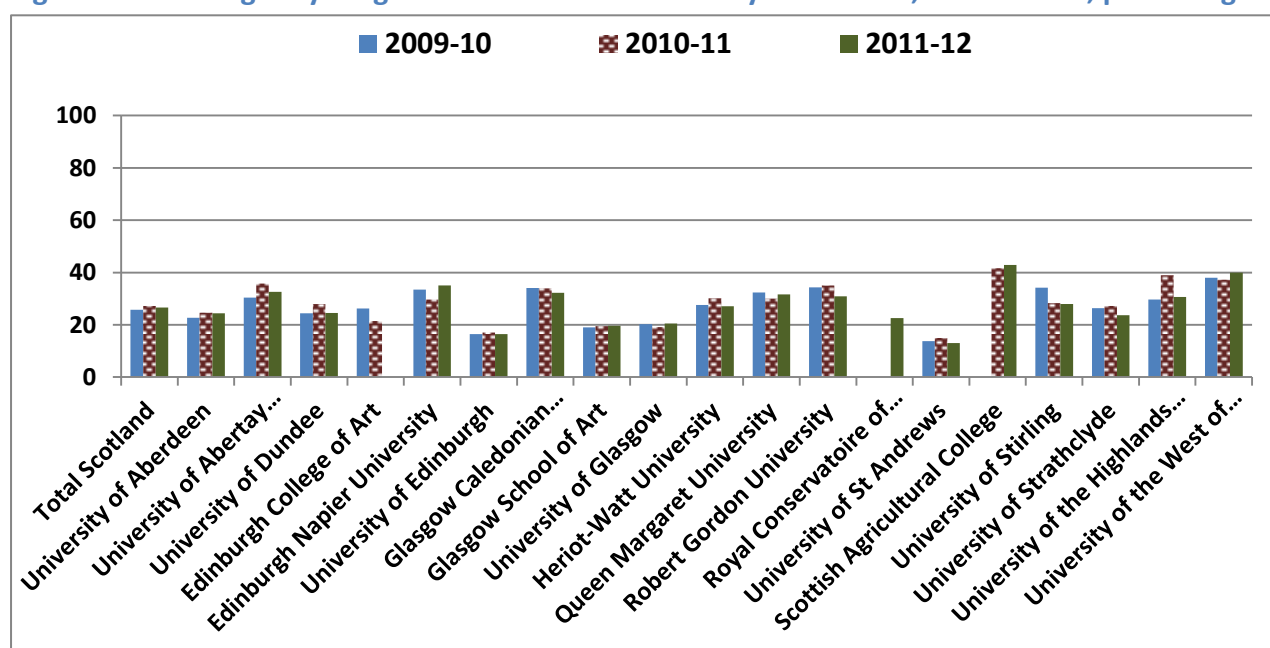
Country	2002-03 ¹	2005-06 ²	2007-08 ³	2009-2010 ⁴	2010-2011 ⁵	2011-2012 ⁶
Scotland	28.0	27.3	26.3	25.8	27.2	26.6
England	27.9	29.1	29.4	30.1	30.6	30.9
Wales	29.8	29.0	30.4	30.2	31.0	29.1
Northern Ireland	41.3	41.0	40.6	39.1	39.4	39.1
Total UK	28.4	29.3	29.5	30.0	30.7	30.7

Source: HESA

- | | |
|----------------------------------|----------------------------------|
| 1. Percent with known data 74.9% | 2. Percent with known data 78.7% |
| 3. Percent with known data 80.1% | 4. Percent with known data 80.2% |
| 5. Percent with known data 81.1% | 6. Percent with known data 82.4% |

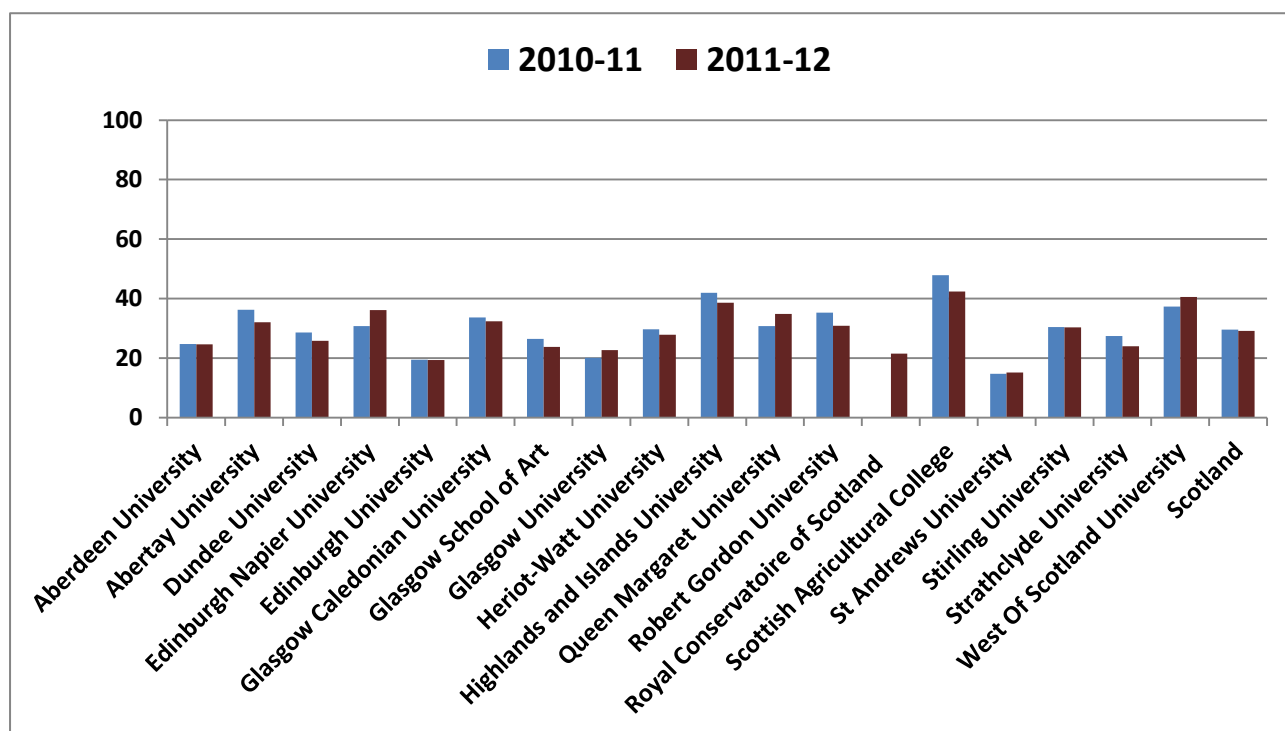
Table 4 and Figure 4 show the decline in young first degree entrants from NS-SEC 4-7 in Scotland. This decline is also reflected in the majority of Scottish institutions; only five HEIs have witnessed a marginal increase. This could be due to the recession which may affect students from different socioeconomic backgrounds differently with those on the lowest incomes being more reluctant to commit to studying and incurring debt. Figure 5 show the percentage of Scottish domiciled first degree young students from NS-SEC 4-7.

Figure 4: First degree young entrants to Scottish HEIs by NS-SEC 4-7, 2009 – 2012, percentages



Source: HESA (note: Edinburgh College of Art merged with University of Edinburgh in 2011)

Figure 5: First degree young entrants to Scottish HEIs by NS-SEC 4-7, 2010-12, Scottish domiciled students only, percentages



Source: SFC based on HESA; Note

Note: There were no data available for the Royal Conservatoire in 2010-11

State school attendance indicator

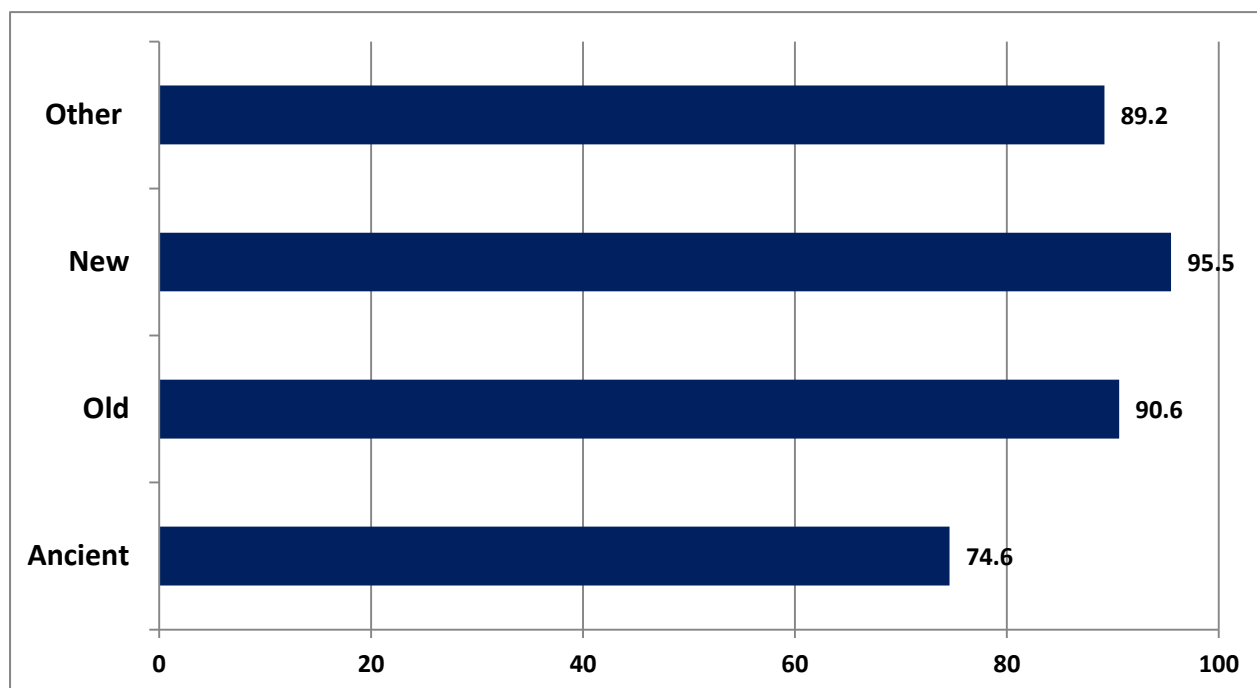
The second indicator used by HESA is state school attendance. Although not all state school pupils come from low socioeconomic backgrounds they are more likely to do so than pupils from independent schools. Around 5% of Scottish pupils and around 7% of English pupils attend independent schools. In the UK overall about 89% of undergraduate students come from state schools and colleges suggesting an overrepresentation of students from independent schools in higher education, particularly in England and Scotland (Table 5). Northern Ireland has no independent schools and has had a selective secondary education system until recently which is likely to account for the higher proportion of students from state schools. The proportion of students from independent schools is greater in the more elite institutions as can be seen from Figure 6 below. One ancient institution, University of St Andrews has less than 60% of its students from state schools. This indicator can be useful when considered in conjunction with others but does not necessarily indicate that a student comes from a lower socioeconomic background.

Table 5: Pupils from state schools, 2010-2012, percentages

	2002-03	2005-06	2007-08 ³	2009-10	2010-11	2011-12
UK	87.2	87.4	88.0	88.8	88.7	88.9
England	86.4	86.9	87.4	88.4	88.2	88.5
Northern Ireland	99.9	99.8	99.7	99.2	98.9	98.9
Wales	91.9	91.8	93.4	93.2	92.2	91.9
Scotland	87.5	85.7	86.8	86.8	88.3	87.9

Source: HESA

Figure 6: Percentage of first degree young undergraduate students from state schools in ancient, old, new and other institutions, 2011-12



Source: HESA

Ancient institutions are: Universities of Aberdeen, Edinburgh, Glasgow and St Andrews

Old institutions are: Universities of Dundee, Heriot-Watt, Stirling and Strathclyde

New institutions are: Universities of Abertay, Glasgow Caledonian, Edinburgh Napier, Queen Margaret, UHI and the West of Scotland

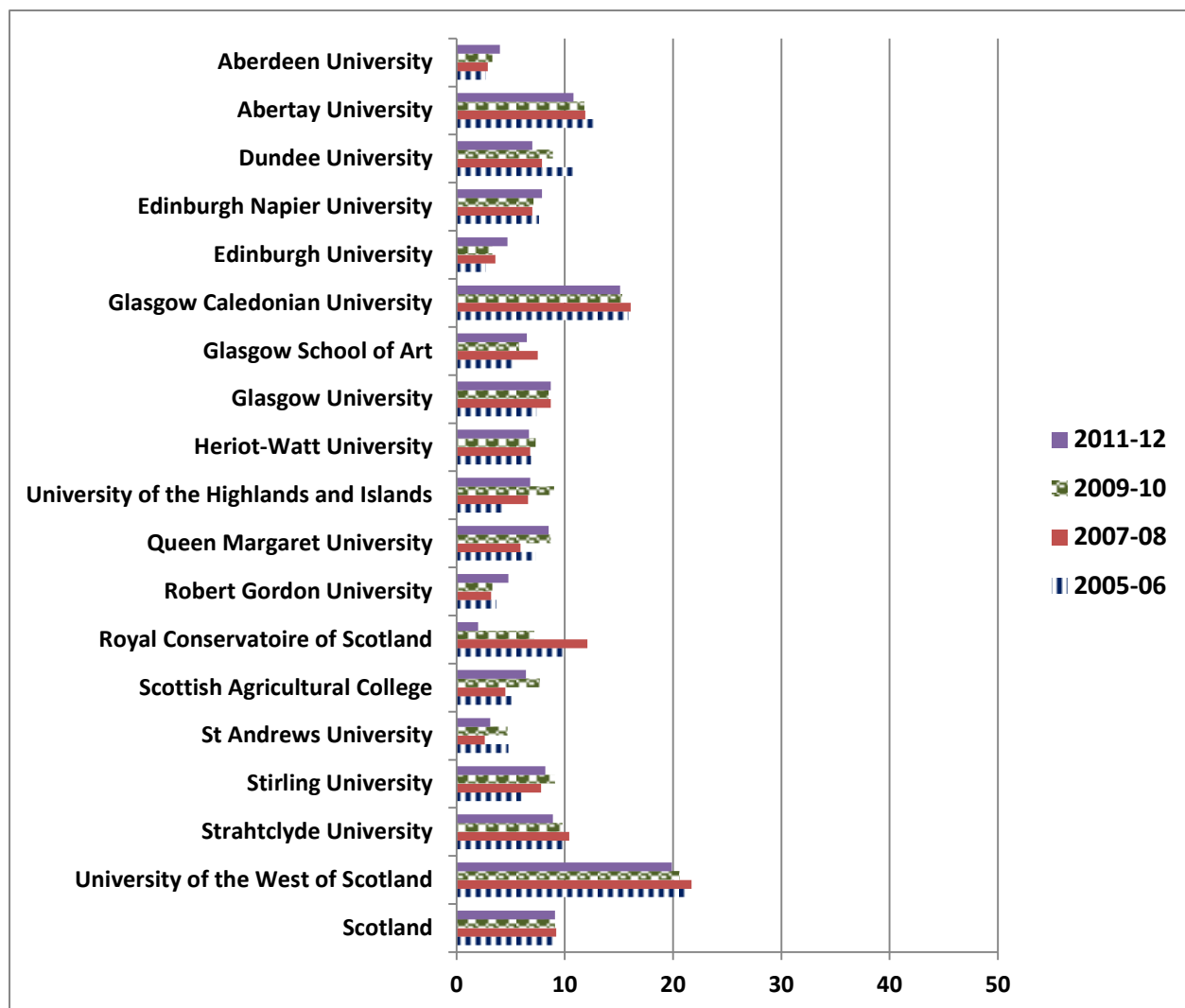
Other institutions are: Scottish Agricultural College, Glasgow School of Art, the Royal Conservatoire

Indicator of deprivation in Scotland – SIMD20 and SIMD40

As mentioned above, the low participation neighbourhood indicator used in the rest of the UK is not suitable for Scotland. The Scottish Funding Council therefore draws on the Scottish Index of Multiple Deprivation (SIMD) to examine the participation of Scottish domiciled young undergraduate students from less advantaged neighbourhoods. SIMD20 refers to the 20% most deprived neighbourhoods in the country. In

Figure 7 it can be seen that just under 10% of students come from such neighbourhoods in Scotland. This masks considerable variation between institutions with a range from 3.1% at the University of St Andrews to 19.9% at the University of the West of Scotland in 2012.

Figure 7: Students from SIMD20 neighbourhoods in Scottish universities, 2005-2012, percentages

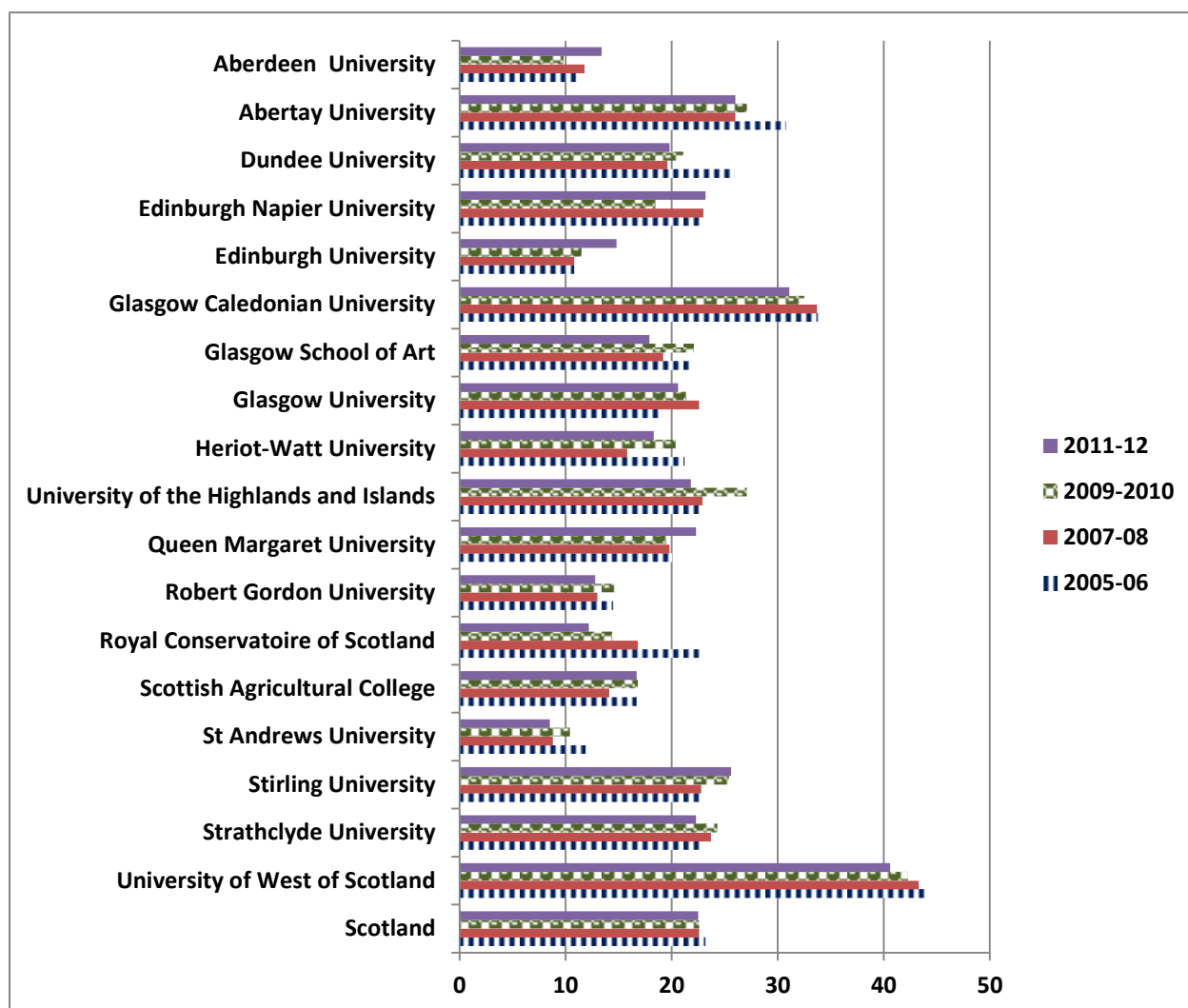


Source: SFC

The second measure of area deprivation used is SIMD40 which refers to the 40% most deprived neighbourhoods. The level of participation in higher education is greater but the overall pattern in terms of institutions attended is similar as can be seen in

Figure 8.

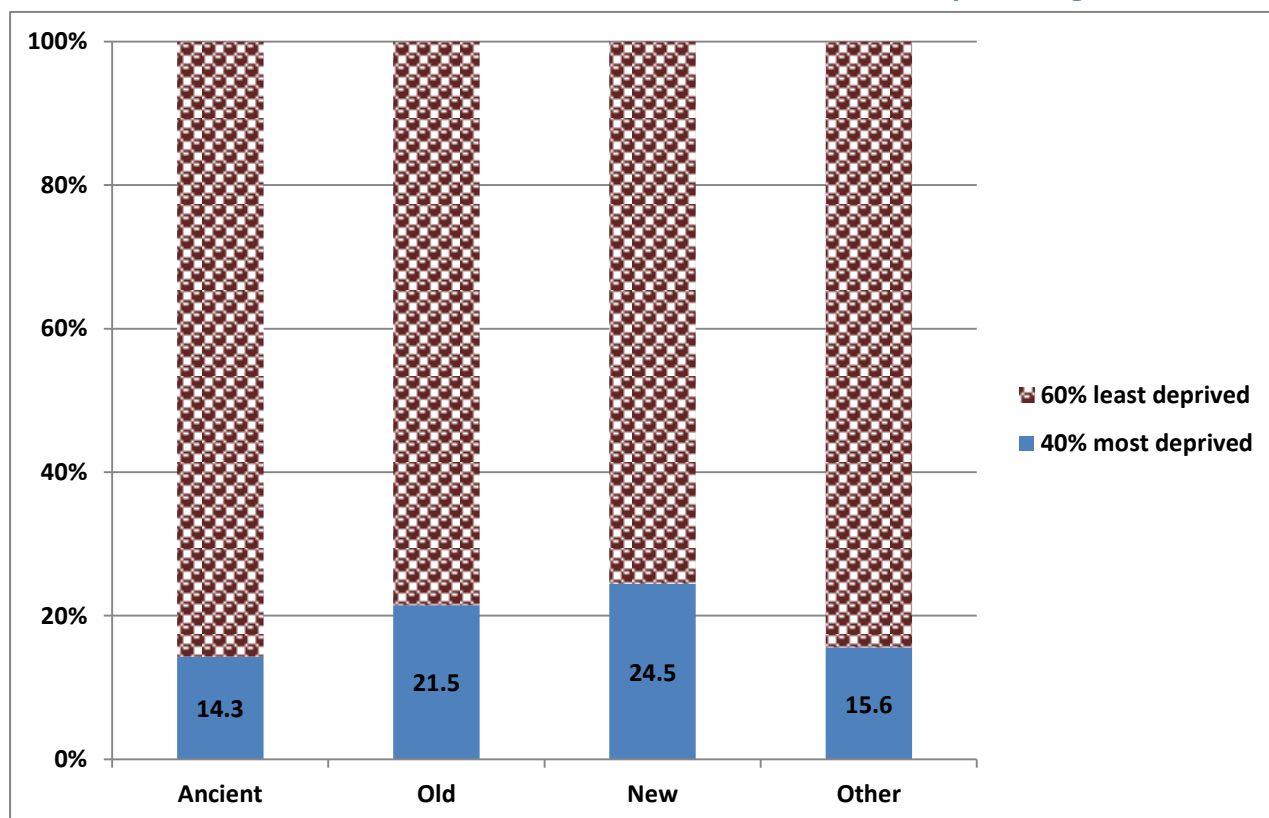
Figure 8: Students from SIMD40 neighbourhoods in Scottish universities, 2005-2012, percentages



Source: Scottish Funding Council

SIMD20 and SIMD40 provide clear evidence of lower participation rates among students from less advantaged areas and, that when these students are in higher education, they are more likely to attend less prestigious institutions (Figure 9). The use of SIMD quintiles has the advantage that the national population distribution is known - it is spread evenly across the quintiles - and there is no need for data on non-participants. However, this may be less of an advantage if institutions tend to recruit locally, as deprivation is very unevenly spread across areas of Scotland. On the other hand, it has to be noted that this measure is based on neighbourhood and not individual characteristics. A further complication is that the level of deprivation in the local authority within which a university is situated varies considerably. In Glasgow City around 48% of the population live in the 20% most deprived neighbourhoods and in Dundee City about 38%. The equivalent figure for Fife is 19%; for Edinburgh City and Aberdeen City 12% and in Aberdeenshire the figure is 2% (SIMD 2012, see Appendix 2)). It also is not as effective at capturing rural deprivation as urban deprivation.

Figure 9: A comparison of students from the 40% most deprived neighbourhoods and the rest at Scottish ancient, old, new and other institutions, 2011-12, percentages



Source: Scottish Funding Council

Ancient institutions are: Universities of Aberdeen, Edinburgh, Glasgow and St Andrews

Old institutions are: Universities of Dundee, Heriot-Watt, Stirling and Strathclyde

New institutions are: Universities of Abertay, Glasgow Caledonian, Edinburgh Napier, Queen Margaret, UHI and the West of Scotland

Other institutions are: Scottish Agricultural College, Glasgow School of Art, the Royal Conservatoire

Low participation neighbourhoods indicator in England – POLAR3

As mentioned above, POLAR3 is used in the rest of the UK to examine participation from neighbourhoods that traditionally have low participation in higher education. This measure differs from SIMD as it measures participation in higher education by area rather than neighbourhood deprivation. HESA data from 2011-12 indicate a wide variation between institutions in the proportion of students from low participation backgrounds. At one end are elite institutions such as Oxford, Cambridge and the London School of Economics with 2.5% to 3% from this type of background, at institutions such as Durham and Exeter the proportion is marginally higher at 4.9%, whilst at universities such as Sunderland, Teeside and Edge Hill around 22% to 27% of students come from low participation backgrounds. The pattern is similar to that seen in Scotland.

Widening participation performance indicators and subject studied

Widening participation PIs are also gathered by HESA on subject area studied and region of domicile. There is some research evidence that subjects studied at school influence access to certain degree programmes and institutions, especially in relation to the more elite institutions ([Iannelli, 2013](#)). It is clear from table 6 that there are fewer non-traditional students in certain subject areas. This is most apparent in the area of medicine, dentistry and veterinary science where less than a quarter of students come from state schools, only 16% from NS-SEC 4-7 and 4.3% from POLAR3 backgrounds. A further six subject areas also fall into this category (shown in *italics* on table 6). Education and computer science attracts the greatest number from state schools, NS-SEC 4-7 and POLAR3 followed by creative art and design, subjects allied to medicine,

law and biological sciences. These discrepancies may be due to resources available in schools for certain subject areas but also admission procedures that favour certain types of entrants, as well as a range of other factors.

Table 6: Fulltime first degree undergraduate entrants by PIs and subject studied, percentages, 2011-12

Subject areas	State school	NS-SEC 4-7	POLAR3¹
<i>Medicine, dentistry and veterinary science</i>	70.8%	16.1%	4.3%
Subjects allied to medicine	93.0%	34.6%	11.1%
Biological sciences	91.0%	32.2%	11.1%
Agriculture & related subjects	88.8%	35.6%	9.2%
<i>Physical sciences</i>	86.3%	25.6%	8.4%
<i>Mathematical sciences</i>	90.5%	26.3%	8.8%
Computer sciences	96.2%	40.3%	13.6%
<i>Engineering & technology</i>	87.8%	29.6%	8.7%
Architecture, building & planning	86.5%	32.0%	8.3%
<i>Social studies</i>	84.1%	28.8%	9.0%
Law	91.0%	32.7%	12.1%
Business & administrative studies	89.9%	33.9%	9.6%
Mass communications & documentation	95.4%	32.9%	12.3%
<i>Languages</i>	80.6%	22.9%	8.4%
<i>Historical & philosophical studies</i>	78.5%	22.4%	7.4%
Creative arts & design	94.1%	32.4%	11.8%
Education	96.5%	38.3%	13.5%
<i>Combined subjects</i>	86.3%	27.0%	8.2%
All subjects	88.9%	30.7%	10.2%

Source: HESA

1. Does not include Scotland

Table 7 shows the breakdown by UK region and this suggests differences between the northern and southern regions in England. The South East, London and the South West have the lowest proportion of students from state schools in England and three of these are below the Scottish average. The proportion from NS-SEC 4-7 in these English regions, apart from London, is below average and below the Scottish average. All four regions have a lower than average proportion from POLAR3 backgrounds and this is the case for Northern Ireland too.

Table 7: Young full-time first degree entrants by HESA Performance Indicators and region of domicile, percentages, 2011-12

Region of domicile	State school	NS-SEC 4-7	POLAR3¹
North East	90.9%	34.4%	19.8%
North West	93.0%	33.3%	14.4%
Yorkshire and the Humber	92.4%	33.2%	16.2%
East Midlands	91.0%	32.0%	13.5%
West Midlands	90.9%	35.0%	11.8%
East of England	88.1%	26.9%	9.7%
London	85.0%	34.0%	1.7%
South East	83.7%	23.8%	7.9%
South West	85.9%	27.6%	11.9%

Wales	95.2%	32.5%	13.6%
Scotland	87.8%	27.7%	N/A
Northern Ireland	99.4%	36.0%	5.9%
UK total	88.9%	30.7%	10.2%

Source: HESA

1. Does not include Scotland

This brief overview of the relationship between widening access, subject studied and regional variation shows that certain subject areas are more likely to be dominated by students from more affluent areas. It also shows regional variation within England broadly based on a geographical north/south divide. More affluent students are concentrated in institutions in the southern regions. The section that follows examines the issues and challenges in relation to the use of widening access performance indicators.

Issues and challenges in using performance indicators

This section starts with a summary of what is known from the performance indicators in relation to widening participation. It then explores the limitations of these performance indicators before considering the development of contextualised admissions and the data used by institutions when making offers to students from widening participation backgrounds.

What do the publicly available widening participation performance indicators tell us?

The overview of the data from the performance indicators show that the majority of students entering undergraduate degrees are young (under 21) and study on first degrees rather than other degrees. The first HESA published widening participation performance indicators appeared in 2002-03 and there has been little change in the proportion of students from NS-SEC 4-7 backgrounds in higher education. In the UK overall it has gone up from 28.4% to 30.7%. England had the lowest proportion in 2002-03 (27.9%) but this increased to 30.9 in 2011-12. In Scotland over the same period there has been a slight decrease from 28% to 26.6%; however, if only Scottish domiciled students are included the figure for 2011-12 is 29.2%. In relation to the proportion of students from state schools the change has also been limited, from 87.2% overall in the UK to 88.9%; the equivalent figures for England are 86.4% to 88.5% and Scotland from 87.5% to 87.9%. There are no published data on Scottish domiciled students only relating to students from state schools. Overall the majority of young first degree students come from middle-class backgrounds and the more socially advantaged are most likely to study in prestigious institutions. The indicators tell us relatively little about mature students and part-time students. Data on mature students use POLAR3 as a measure and is therefore not published for students in Scottish institutions.

Limitations of the current widening participation performance indicators

The **NS-SEC 4-7** indicator comes from data gathered by the Universities and Colleges Admissions Service (UCAS) on applicants. It relies on the young applicant knowing the occupation of the person in her/his family who has the highest salary or the occupation of that person in case of unemployment or retirement. Although the level of known data has increased from 75% in 2002-03 to 82% in 2011-12 for the whole of the UK, nearly 20% of students do not complete this question, this includes valid nil responses.

The **state school** indicator has the advantage of being linked to the individual and, as the level of known data is high (around 97%), it is a relatively reliable statistic. As already mentioned though, it is problematic as it does not necessarily denote low socioeconomic background. NS-SEC 4-7 and

state school indicators relate directly to an individual's circumstances which make them different from SIMD20/40 and POLAR 3 indicators.

SIMD20 and **SIMD40** use the postcode of the parents of a young student to categorise a student as coming from a socially deprived background. The data are known for virtually all Scottish domiciled young students; however, the indicator is a measure of the neighbourhood where the person resides and it does not therefore necessarily reflect an individual's socioeconomic status. Among a recent cohort of SQA-qualified undergraduate students at the University of Edinburgh, exactly half of the MD40 students with known social-class background had a managerial or professional parent. Among the MD20 students this proportion was more than four in ten ([Croxford, 2014](#)). In addition, it is a measure that tends to be more relevant in an urban setting than for rural areas as it does not necessarily identify pockets of rural deprivation (see e.g. [Shucksmith, 2003](#), [Geddes and Houston, 2012](#)). This possibly accounts for the very low levels of deprivation in Aberdeenshire. However SIMD20/40 is also affected by the considerable differences that exist between urban areas. Those that traditionally relied on particular industries which have suffered a decline such as Glasgow but also to some extent Dundee have overall high levels of deprivation. Areas that had different occupational profiles or that have attracted new investments, such as Edinburgh and Aberdeen have lower levels of deprivation overall. The graphs in Appendix 2 show the different levels of deprivation in selected Scottish local authorities. These differences between local authorities lead to some anomalies when comparing an institution's performance using several widening participation indicators. There is a contrast between NS-SEC 4-7 and state school on the one hand and SIMD20 on the other for Robert Gordon University. This institution had only 4.8% of its students from SIMD 20 in 2011-12, well below the Scottish average of 9.1% but it had 31% of students from NS-SEC 4-7 (Scottish average 27.2%) and 93.4% from state schools (Scottish average 88.3%).

POLAR3, as already mentioned, is similar to SIMD. It benefits from the fact that data are known for virtually all young first degree students. Like SIMD, it is a measure of the area rather than the individual and students from low participation neighbourhoods are not necessarily from families with low participation in higher education. Interestingly there seems to be a similar anomaly with POLAR3 as the one identified for SIMD in relation to Robert Gordon University. London Metropolitan University has 47.8% students from NS-SEC 4-7 compared to UK average of 30.7%; 97% of students from state schools compared to UK average of 88.9% but only 5.9% of students from POLAR3 backgrounds compared to the UK average of 10.2%.

To summarise, two of the measures currently used, NS-SEC 4-7 and state school attendance, are based on individual characteristics. The former is problematic as it is based on self-evaluation and just under 20% of data are missing; the latter is accurate but state school attendance only denotes lower socioeconomic background for some students. The area deprivation measures are based on postcodes and are accurate but do not necessarily reflect an individual's actual socioeconomic status. A further point to note is that these performance indicators relate mainly to young (under 21) undergraduate students. There are some limited data gathered on mature students in England, Wales and Northern Ireland using the low participation (POLAR3) indicator. POLAR3 data indicate little difference overall between mature and young full-time first degree undergraduates as 10.9% of mature students and 10.2% of young students come from low participation backgrounds.

As performance indicators for widening participation focus mainly on young students (under 21) and on first year entrants they do not capture students entering through articulation, e.g. from

HNC/D programmes into 2nd or 3rd year of a course. This is a route into higher education for a number of mature non-traditional students which was highlighted by the Garrick report as an important route for non-traditional students. However, there are data available on this latter group of students and publishing these data might help to provide a better picture of all widening access measures.

Contextualised admissions

Universities in the UK have been encouraged to make use of contextualised data when making decisions on applications to ensure that admissions are 'fair' to all applicants irrespective of background. The report for Supporting Professionalism in Admissions (SPA) examining the evidence on contextualised admissions (see Moore, et al, 2013) categorised these data into four broad areas: area/community focused (e.g. SIMD20 or POLAR3); school or college focused (e.g. state or independent school attendance); individually focused (e.g. NS-SEC 4-7); or outreach focused (e.g. attendance at summer school). The SPA report provided evidence of increasing use of contextual data in the admissions process but noted differences in their use between institutions. Institutions with a high number of highly qualified applicants tended to use them to select those considered most likely to benefit from the programme. Institutions with less competition for places used such data more for ensuring that support was in place for those that needed it. It is clear then that contextual data are in use but that there is variation across the sector. The authors also noted a number of concerns:

[p]roviders are working with contextual data in the context of major data limitations and there is no easy solution owing to problems with data accuracy, coverage, reliability and timeliness. Access to better quality data and more individual level data might overcome some of the problems associated with using proxy data indicators of educational disadvantage. Providers wish to focus on individuals, which may be in conflict with external policy drivers towards a focus on populations/area based groups. ([Moore, et al, 2013, p. 54](#))

The report goes on to note that the differences between institutions in the use of contextualised data could potentially be confusing for prospective students and that contextualised admissions was narrowly focused on young full-time undergraduate entrants potentially at the expense of other groups of non-traditional students. The report also included a range of recommendations to different stakeholders, including the following one for the funding councils:

[t]hose reviewing the performance indicators should be minded to consider that higher education providers may well be using contextual data as part of admissions decision making. Any indicator must take this into account, especially the widening participation indicators. ([Moore, et al, 2013, p. 57](#))

Conclusion

This working paper has provided an overview of the higher education policy context and noted a strong emphasis on widening participation to higher education for non-traditional students including those from low socioeconomic backgrounds. It also examined the development of widening participation performance indicators to monitor access to higher education. A review of these indicators shows that students from lower socioeconomic backgrounds are considerably less likely to participate in higher education than those from more advantaged backgrounds. It also found that students from less affluent backgrounds were more likely to attend new universities and (in the case of Scotland) to study on higher education courses in colleges

In order to monitor progress of widening participation in all Scottish institutions, the Scottish Funding Council has adopted SIMD20/40 as its main measure of widening participation in HEIs (SFC, 2013a); however, in its guidance for 2014-15 it also allows institutions to use data from SHEP and other low progression schools to demonstrate widening access. This seems to recognise that SIMD20/40 is problematic in some instances as it does not necessarily reflect historical differences between urban areas in relation to deprivation in addition to not capturing rural deprivation. However, if a range of indicators are used and these are not the same across higher education institutions it could affect transparency in admissions criteria and lead to difficulties in monitoring and comparing progress towards greater inclusion. The use of SIMD20/40 also makes comparison with the rest of the UK problematic.

Challenges remaining therefore include identifying an indicator that is robust enough and is fair to all institutions whilst at the same time offering some degree of comparability between institutions. A further challenge is to include students who are not adequately covered by the current indicators. The outcome agreements include monitoring of number/proportion of Scottish domiciled learners who enter university either through articulation from college or from gaining advanced standing as a result of completing an employer apprenticeship, and the proportion of learners from these backgrounds who complete their degree. These measures do not feature among the widening access measures, they form part of the 'learner journey' theme. In 2013-14 an additional £54 million was made available to pay for over 1000 full-time places. The funding is targeted to a greater extent on the new universities and there is no funding for the Universities of St Andrews and Edinburgh. This route potentially offers a flexible route in to university and students from lower socioeconomic backgrounds are more likely to study at college and enter university through this route. It is likely that these students would include more mature learners from lower socioeconomic backgrounds who are not included in the Scottish widening access performance indicators. Perhaps a further challenge then is to ensure that any indicator(s) capture not only young students but also mature students and those who use a more flexible route to gaining a degree qualification. A further challenge would be to extend this to allow for comparison with the rest of the UK. This may necessitate the use of POLAR3 rather than SIMD20/40 as SIMD is not relevant to the rest of the UK and it would need to include Scottish college students as they are not currently captured by POLAR3.

References

- Admissions to Higher Education Steering Group (2004) *Fair admissions to higher education: recommendations for good practice*. (Schwartz Report). Nottingham: Department for Education and Skills. <http://www.admissions-review.org.uk/downloads/finalreport.pdf>
- Croxford, L. (2014) Unpublished analysis of data on Widening Participation at the University of Edinburgh. Edinburgh: Centre for Educational Sociology
- Croxford, L. and Raffe, D. (2013) Differentiation and social segregation of UK higher education, 1996-2010. *Oxford Review of Education*, 39, 2, 172-192.
- Croxford, L., Docherty, G., Gaukroger, R. and Hood, K. (2013) Widening Participation at the University of Edinburgh: Entry, Progression and Degree outcomes of SQA-qualified students http://www.ed.ac.uk/polopoly_fs/1.120547!/fileManager/REACH%20SQA%20report%20Final.pdf
- Dearing, R. (1997) Higher education in the learning society. Report of the Committee under the chairmanship of Sir Ron Dearing. London: Stationery Office.
- Geddes, A., and Houston, D., (2012), *Understanding Rural Deprivation*. Available at: http://www.churchofscotland.org.uk/data/assets/pdf_file/0010/9676/Rural_Research_Findings_Report_2012.pdf
- George, J. and Weedon, E., (2001) Credit transfer: what does it mean? A SCOTCAT case study, *Journal of access and credit studies*, Spring 2001, pp. 29-41
- Iannelli, C. (2013) 'The role of the school curriculum in social mobility', *British Journal of Sociology of Education*, 34 (5/6): 907-928
- Lasselle, L., McDougall-Bagnall, J. & Smith, I. (forthcoming) School grades, school context and university degree performance: Evidence from an Elite Scottish Institution. *Oxford Review of Education*.
- Moore, J., Mountford-Zimdars, A. and Wiggans, J. (2013) Contextualised admissions: examining the evidence, Research into the evidence base for the use of contextual information and data in admissions of UK students to undergraduate courses in the UK. Report to SPA, the Supporting Professionalism in Admissions Programme, UCAS on behalf of SPA
- Raffe, D. (2003) 'Simplicity itself': the creation of the Scottish Credit and Qualifications Framework, *Journal of education and work*, 16, 3, pp. 239-257
- Scottish Funding Council (SFC) (2012), *Overview of university sector outcome agreements 2012-13*, http://www.sfc.ac.uk/web/FILES/Funding_Outcome_Agreements_2012-13/Overview_of_University_sector_outcome_agreements_2012-13.pdf
- Scottish Funding Council (SFC) (2013a) *2013-14 University sector outcome agreements*. Available at: http://www.sfc.ac.uk/web/FILES/Funding_Outcome_Agreements_2013-14/University_Sector_Outcome_Agreements_2013--14_Summary.pdf
- Scottish Funding Council (SFC) (2013b) *SFC Guidance: University Outcome Agreement Guidance for AY 2014-15*,

http://www.sfc.ac.uk/web/FILES/GuidanceOA1415/University_Outcome_Agreement_Guidance_2014-15.pdf

Shucksmith, M. (2003) *Social exclusion in rural areas: a review of recent research*, University of Aberdeen: Arkleton Centre for Rural Development Research

Appendix 1

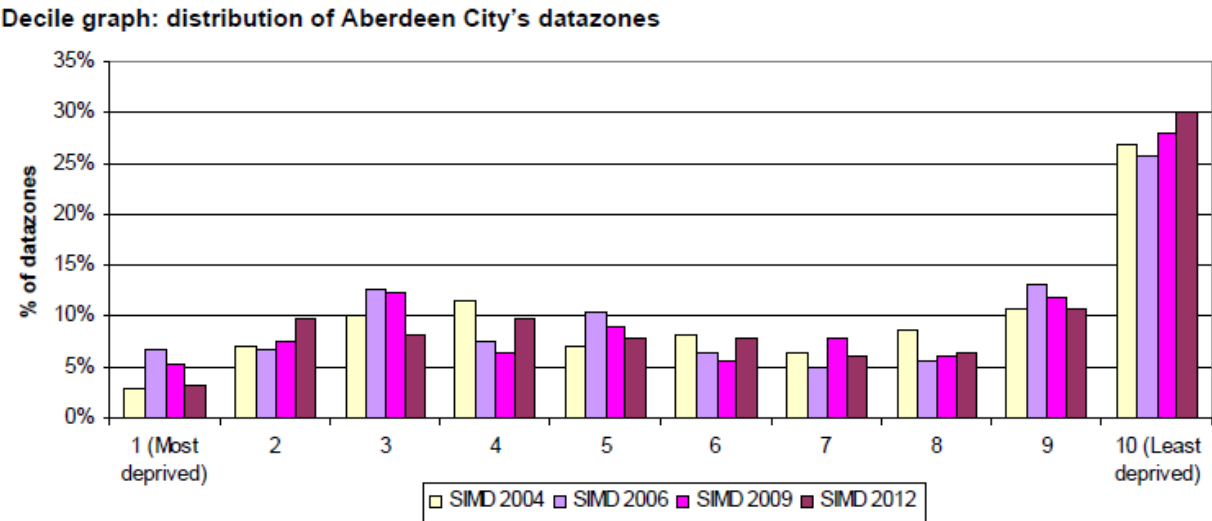
Definitions used by HESA for undergraduate degrees

First degree includes first degrees (including eligibility to register to practice with a health or social care or veterinary statutory regulatory body), first degrees with Qualified Teacher Status (QTS)/registration with a General Teaching Council (GTC), postgraduate bachelors' degree at level H, enhanced first degrees (including those leading towards obtaining eligibility to register to practice with a health or social care or veterinary statutory regulatory body), first degrees obtained concurrently with a diploma and intercalated first degrees.

Other degree is undergraduate, includes qualification aims equivalent to and below first degree level, including, but not limited to, Professional Graduate Certificate in Education (PGCE) at level H (unless shown separately), foundation degrees (unless shown separately), diplomas in higher education (including those with eligibility to register to practice with a health or social care or veterinary statutory regulatory body), Higher National Diploma (HND), Higher National Certificate (HNC), Diploma of Higher Education (DipHE), Certificate of Higher Education (CertHE), foundation courses at higher education level, National Vocational Qualification (NVQ)/Scottish Vocational Qualification (SVQ) at NQF levels 4 and 5, post-degree diplomas and certificates at undergraduate level (including those in Teaching in the Lifelong Learning Sector), professional qualifications at undergraduate level, other undergraduate diplomas and certificates including post-registration health and social care courses, other formal higher education qualifications of less than degree standard, institutional undergraduate credit and non-formal undergraduate qualifications.

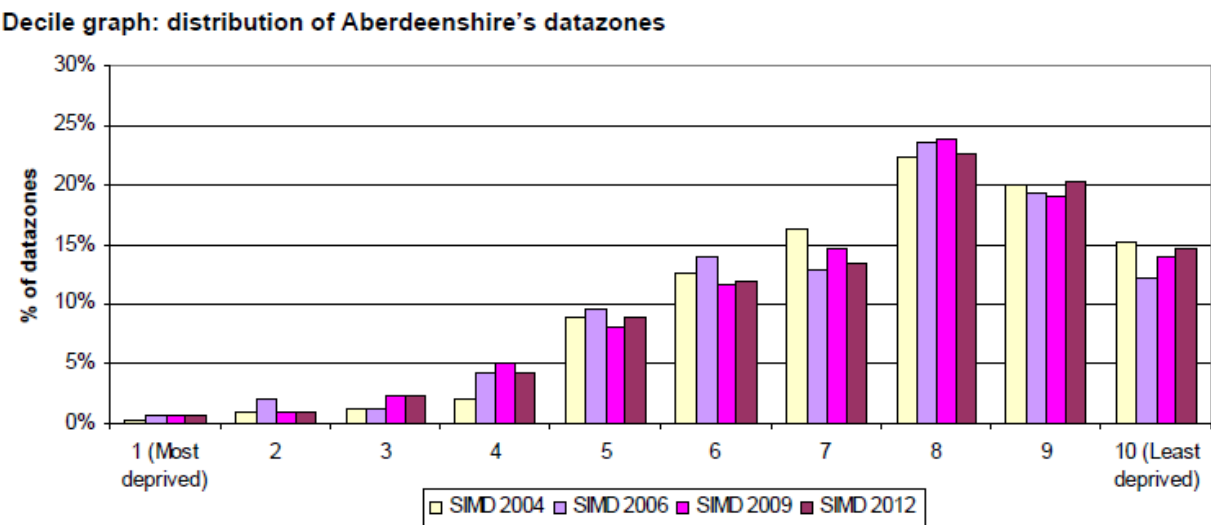
Appendix 2 Analysis of local authorities by Scottish Index of Multiple Deprivation (SIMD)

Figure A1: SIMD decile graph distribution, Aberdeen City



Source: Scottish Government, SIMD website, accessed 25.03.2013

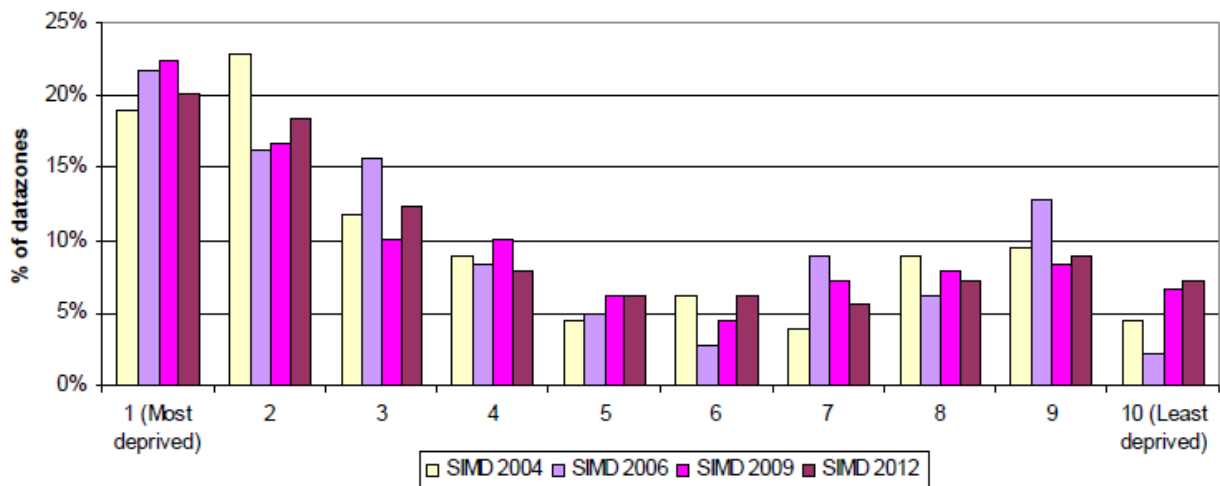
Figure A2: SIMD decile graph distribution, Aberdeenshire



Source: Scottish Government, SIMD website, accessed 25.03.2013

Figure A3: SIMD decile graph distribution, Dundee City

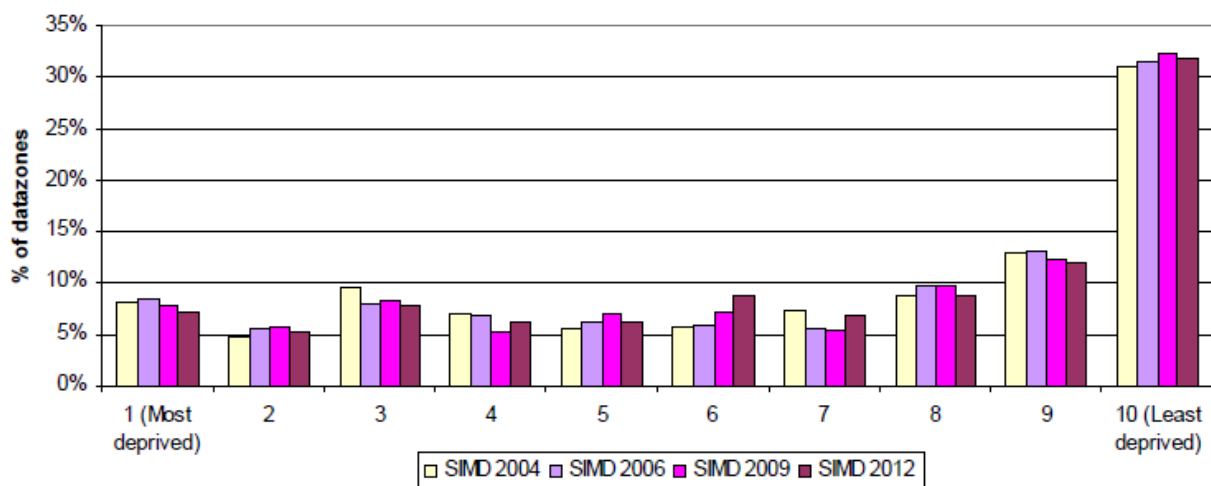
Decile graph: distribution of Dundee City's datazones



Source: Scottish Government, SIMD website, accessed 25.03.2013

Figure A4: SIMD decile graph distribution, Edinburgh City

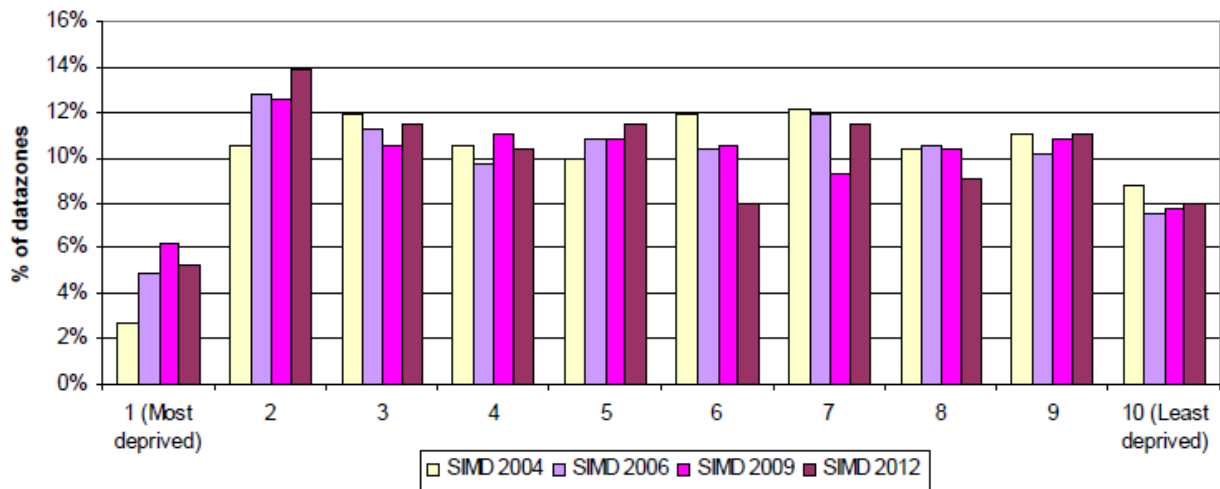
Decile graph: distribution of Edinburgh City's datazones



Source: Scottish Government, SIMD website, accessed 25.03.2013

Figure A5: SIMD decile graph distribution, Fife

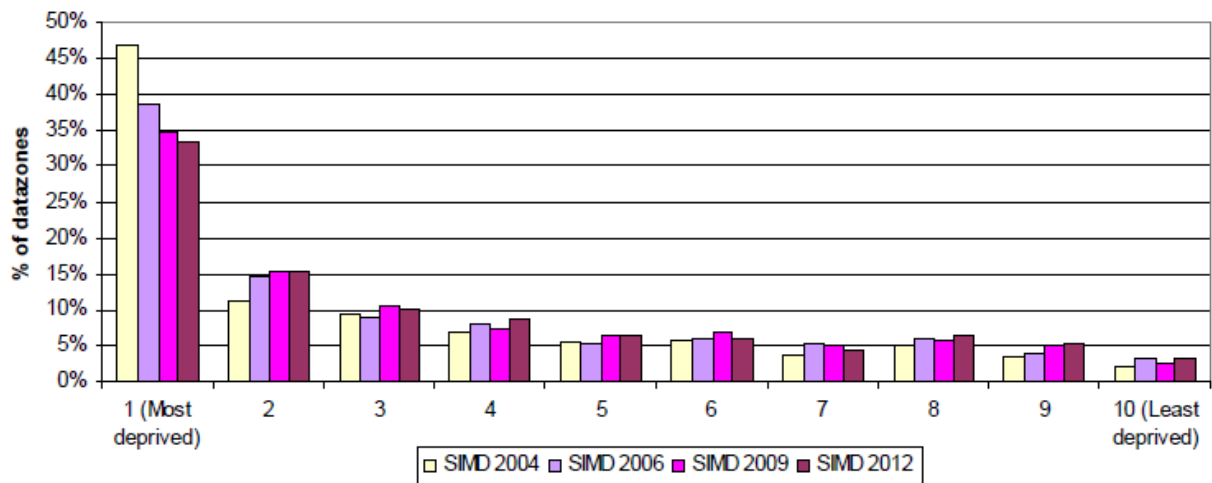
Decile graph: distribution of Fife's datazones



Source: Scottish Government, SIMD website, accessed 25.03.2013

Figure A6: SIMD decile graph distribution, Glasgow City

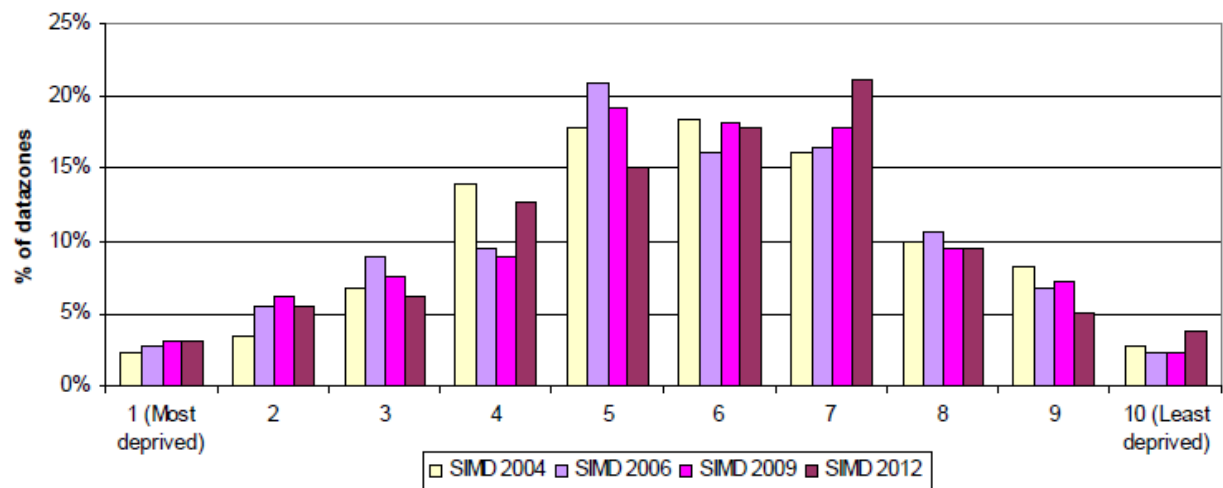
Decile graph: distribution of Glasgow City's datazones



Source: Scottish Government, SIMD website, accessed 25.03.2013

Figure A7: SIMD decile graph distribution, Highland region

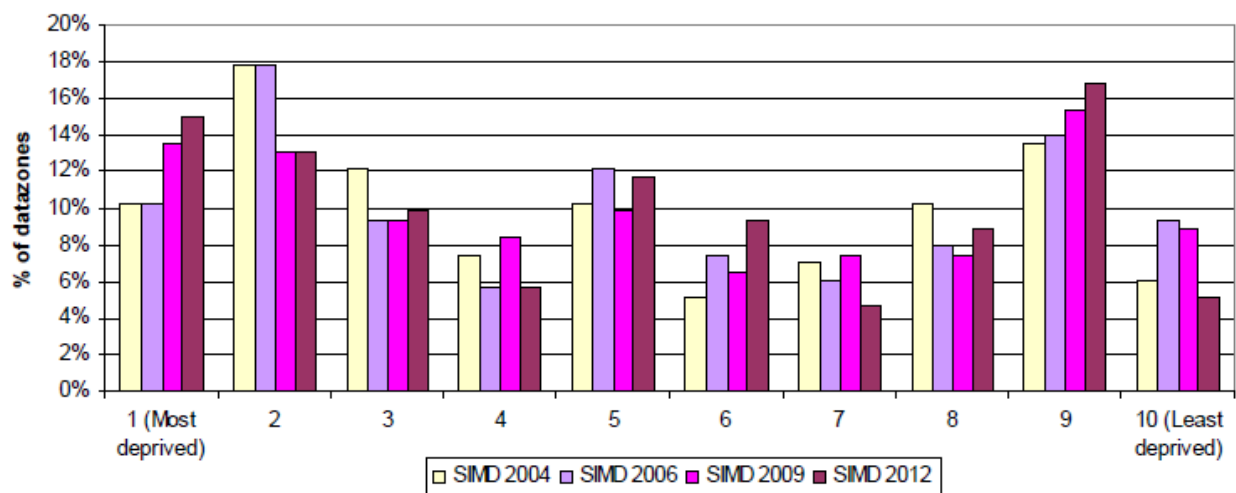
Decile graph: distribution of Highland's datazones



Source: Scottish Government, SIMD website, accessed 25.03.2013

Figure A 8: SIMD decile graph distribution, Renfrewshire

Decile graph: distribution of Renfrewshire's datazones



Source: Scottish Government, SIMD website, accessed 25.03.201