Commission on Widening Access - Technical paper on measures and targets - March 2016

1 Introduction

This paper outlines the analysis which underpins some key components of the Commission's recommendations on measures and targets, in particular:

- The use of the Scottish Index of Multiple Deprivation (SIMD) for national and institutional targets in the Commission's recommendations
- The recognition that additional measures can help to inform decisions about individuals and the support they require
- The 10% minimum entrant percentage target for individual institutions

2 Identifying individuals from disadvantaged backgrounds

The Commission is aware of the need to identify individuals from disadvantaged backgrounds in order to inform decisions about individuals and the support they require; measure progress; and set targets.

We looked at the data currently available in the education system that could be used for these purposes. In particular we considered the use of SIMD and explored additional measures.

2.1 The Scottish Index of Multiple Deprivation (SIMD) and the rationale for exploring additional measures

SIMD is a robust measure of area deprivation, based on a wide range of data, covering several domains[1]. It ranks datazones (small areas with populations between 500 and 1,000) based on their relative levels of deprivation and the bottom fifth of datazones are commonly referred to as the 20% most deprived areas in Scotland (SIMD 20).

SIMD has very good coverage of the population since it can be derived for anyone with a Scottish postcode and, although it is primarily a measure of area deprivation, it is used as a deprivation marker for individuals across the Scottish public sector, including all parts of the education system.

The decision to explore additional measures was made in response to strong views from the university sector that SIMD is not a sufficient measure to monitor access activity for two reasons:

1.   The SIMD classification, by its nature, identifies geographical concentrations of deprivation. These are less likely to occur in rural areas where those in deprivation are likely to be more dispersed geographically. This has led some institutions to say that it is unfair that targets are set and additional funding is

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[1] SIMD is based on seven individual domains: employment; income; health; education, skills and training; geographic access to services; crime; and housing.

allocated based on SIMD as this measure will not pick up those in deprived circumstances within their area.

2.   SIMD, as an area based measure, is considered too blunt to identify individual circumstances.

2.2 The consensus on a preferred approach to using additional measures

The Commission convened an expert working group on measures, evidence, tracking and targets. At the expert working group there was consensus that a 'basket of measures' would be the preferred way to identify people from socioeconomically disadvantaged backgrounds and that the 'basket' should cover three broad aspects of disadvantage:

- Area deprivation
- Household income
- School environment

There was also agreement that care experience should also be captured and considered, either as part of the basket or as a separate flag.

2.3 Work to determine feasibility of using a basket of measures

To determine the feasibility of this approach, and whether it would address the issues with SIMD identified by the university sector, the Commission looked at 2012 pupil census data on S1 to S4 school pupils in local authorities (LAs) in Scotland. We considered the following measures, suggested by the expert working group:

- Scottish Index of Multiple Deprivation (SIMD)
- Free school meals (FSM)
- Low progression schools (LPS) i.e. schools where the proportion of leavers entering higher education (HE) was relatively low

2.4 Robustness and coverage of additional measures

Free school meals data has been used here as a proxy for low household income. Eligibility for FSM is based on receipt of certain benefits. There are coverage issues with this measure as the data show the number of registrations, not the number of pupils who are eligible to register. There is no individual level information on eligibility.

The individual level FSM registration information used here is collected in the pupil census. This is not currently used as the main source of official FSM information – schools provide an aggregated return as part of the Healthy Living Survey for that purpose. There are concerns about the reliability of the individual level data, in part due to the timing of the collection, but more specifically because registrations for FSM are relatively low in secondary school and decrease considerably in upper secondary as older pupils are less likely to register.

> **The Commission considered uptake of Free School Meals (FMS) as a proxy measure for low income and found that there are issues with the coverage of this measure.**

Low Progression Schools are defined by the Scottish Funding Council (SFC) as schools that have less than 22% of leavers progressing to HE (excluding particularly small schools). In the dataset we used for this analysis, thirty five schools fell into this category covering fourteen LAs. Although this definition is currently used by the SFC it has not been endorsed across the education sector and further work would be required to agree a definition for this purpose. Furthermore, defining low progression schools in this way may introduce volatility, with schools potentially falling in and out of the LPS group.

Another factor that is not taken into account with this measure is that some schools may have a low proportion of school leavers entering HE but a relatively high percentage of school leavers in positive destinations. There may be schools where the majority of pupils aspire to go into other positive destinations (e.g. apprenticeships or employment) over HE because, for example, more of those opportunities exist in that area compared to other parts of the country.

Finally, it is important to note that a LPS marker would be a school based measure rather than an individual based measure. This means some of the issues with SIMD highlighted by the university sector are also relevant for this measure. The LPS measure would generally be *more* blunt than SIMD since the average school is larger than the school age population in the average datazone.

> **The Commission considered attendance at a secondary school with low progression to HE (LPS) as an indicator of school environment and found that there are issues with the consistency of this measure.**

2.5 Overlap between additional measures and SIMD 20

We looked at the school population (S1 to S4 in 2012/13) to see how many learners were identified by one, two or three of the measures considered. The additional measures overlapped with SIMD as follows:

- 46% of pupils receiving free school meals were from SIMD 20 areas;
- 47% of pupils in low progression schools were from SIMD 20 areas.

This means that if we use only SIMD to identify access students we would miss just over half of the pupils receiving FSM and just over half of the pupils in LPS since they do not live in the most deprived areas.

> **The Commission found that there is a strong correlation between SIMD and the other two measures i.e. those from more deprived areas are more likely to register for FSM or attend a LPS; however around half of those receiving FSM and in LPS do not live in SIMD 20 areas.**

2.6 The distribution of learners identified by different measures across Scotland

SIMD 20 percentages vary across LAs in Scotland. In part this reflects a known issue with SIMD, explained previously in the rationale for exploring additional measures. FSM percentages vary across LAs too and the pattern for both measures is broadly similar. This suggests that in many areas a low SIMD percentage actually reflects lower levels of deprivation, and not just the fact that deprivation in rural areas is harder to identify by using SIMD.

The percentage of pupils in LPS also varies across LAs but the pattern is not the same as the pattern for the other two indicators. This is partly because LPS is a less direct proxy for individual socioeconomic disadvantage and partly because the number of LPS is small and not all LAs contain LPS.

A basket of measures approach would therefore be dominated by SIMD, FSM or a combination of the two, which means the pattern of learners identified across LAs for any combination of these measures would be broadly similar.

> **The Commission found that none of the measures considered, either singly or in combination, identify a group that is more evenly distributed across Scotland i.e. regardless of the measure used, the spread of deprivation varies across Scotland.**

2.7 The use of additional measures across all parts of the education system

The table below illustrates the availability of all three measures at each stage of learning.

Stage		Measures		
		Area Deprivation	Income indicator	Learning environment
Early Years		SIMD	n/a	n/a
Primary	P1 to P3	SIMD	n/a	n/a
	P4 to P7	SIMD	FSM	n/a
Secondary	S1 to S4	SIMD	FSM	LPS
	S5 to S6	SIMD	FSM	LPS
HE entrants (aged up to 23)		SIMD plus any additional measures shared through established data sharing arrangements. (assuming school markers are still relevant for up to 5 years after leaving school)		
Older entrants		SIMD	n/a	n/a

As things stand, the additional measures considered above could only be used for secondary school pupils and transferred on to colleges and universities for use with younger entrants. SIMD is therefore still likely to be used to identify socioeconomic disadvantage in all other parts of the system: early years; in all / part of primary school; and for older learners.

> **The Commission found that the only measure of deprivation that is available, and used, across the entire education system is SIMD.**

This means adopting the basket of measures approach explored above would create the potential for individuals to move into and out of the target group at different stages of the learner journey, even if their circumstances were unchanged throughout.

The Commission believes that this is not desirable and that a consistent measure of deprivation would need to be used across all parts of the education system if we are to provide coherent support for learners from early years through to post-16 education.

Furthermore, a range of projects and activities concerning the development of evidence and data are currently in progress across the Scottish Government Learning portfolio including but not limited to new data on early years, literacy and numeracy, health and well-being and destinations.

It is important therefore that any proposals for new measures of disadvantage should not be developed in isolation but should be considered as part of a whole system approach.

> **The Commission found that there are a number of areas of policy development in Scotland e.g. Early Years Collaborative, expansion of childcare, the National Improvement Framework and work to close the attainment gap; all of which are designed to support those from disadvantaged backgrounds and are looking at enhanced use of data to support this.**

2.8 The use of additional measures to measure progress and set targets

In the rationale for exploring additional measures we outlined the key issues with the SIMD highlighted by the university sector. As demonstrated above, however, there are similar issues associated with the proposed additional measures as well as more fundamental questions regarding their robustness, coverage, consistency and availability throughout the education system. The Commission therefore believes that SIMD is currently the best option for measuring progress and setting targets.

> **The Commission believes that, despite its limitations, the Scottish Index of Multiple Deprivation is currently the most suitable measure of disadvantage for the purposes of measuring progress and setting targets.**

2.9 The use of additional measures to inform decisions about individuals

In the Commission's view we do not have robust additional measures with sufficient coverage to use for the purposes of measuring progress and setting targets. We feel it is important, however, that decisions about individuals and the support they require are not made using SIMD alone.

> **The Commission recognises that additional measures, like those identified above, can help with decisions about individuals and the support they require. A consensus, built on research, is required on the best combination of measures for this purpose.**

3 Minimum entrant percentage for institutions

The Commission was keen to set a minimum entrant percentage target for institutions to make clear our expectation of each institution's contribution to fairness. We wanted to set a target for Scottish domiciled full-time first degree entrants that was challenging but achievable. To do this we considered each institution's recent and past performance, their local context and the scale of the challenge a minimum percentage target would present. The Commission recommends the following target:

By 2021, students from the 20% most deprived backgrounds should represent at least 10% of full-time first degree entrants to every individual Scottish university.

3.1 Recent and past performance

A table showing the percentage of Scottish domiciled full-time first degree entrants from the 20% most deprived areas of Scotland in 2014/15, by institution, is provided in Annex A.

At **thirteen** of the eighteen universities in Scotland, **over 10%** of full-time first degree entrants came from the 20% most deprived areas of Scotland in 2014/15.

At **one** institution **under 10%** of full-time first degree entrants came from the 20% most deprived areas of Scotland in 2014/15, however, **over 10%** of entrants came from SIMD 20 areas in **three of the last ten** academic years.

The Commission believes it is reasonable to expect the fourteen universities highlighted in Annex A to maintain or achieve a SIMD entrant percentage of over 10% based on current and past performance.

At the **four remaining universities** (Robert Gordon University, the University of Aberdeen, the University of Edinburgh and the University of St Andrews), **less than 10%** of full-time first degree entrants came from the 20% most deprived areas of Scotland in 2014/15, and the institutions had **not reached 10% before**, in any of the last ten academic years. The Commission looked closer at the local context and the scale of the challenge for these institutions.

3.2 To what extent should local context be taken into account?

Some universities argue that it is important to take account of the characteristics of their local population. Other universities argue that they recruit nationally (and internationally) so the concept of a relevant local population does not apply.

Data on the term-time accommodation of entrants shows that those from deprived areas are more likely to stay at home when studying at university. Approximately two thirds of full-time first degree university entrants from the 20% most deprived areas live in their parental/guardian home or their own permanent residence i.e. do not relocate to attend university (compared to two fifths of entrants from the 20% least deprived areas).

The Commission also looked at recent patterns in the LAs which full-time first degree entrants from the 20% most deprived areas of Scotland come from. For the four universities listed above, the proportion of these entrants coming from surrounding LAs[2] ranged from around one third for the University of Aberdeen to over one half for the University of Edinburgh. The remainder of their SIMD 20 entrants tended to come from a range of LAs across Scotland with Glasgow the main contributor. This is unsurprising since Glasgow has the largest concentration of SIMD 20 areas. The pattern for all full-time first degree entrants (not just those from the 20% most deprived areas) was broadly similar.

This analysis suggests that since those from deprived areas are generally less likely to relocate to enter university, we should take some account of the characteristics of an institution's local population. On the other hand there are still many students from deprived areas who are willing to relocate so we should not necessarily expect the intake of an institution to closely mirror the characteristics of the local population.

The Commission believes that consideration should be given to the deprivation levels within the local population when discussing expectations for progress with individual institutions; however consideration should also be given to how institutions can better support access students to attend institutions from outwith their local area if they wish to do so.

Further analysis of 2013/14 school leaver data was carried out to estimate the number of leavers from SIMD 20 areas across Scotland who achieved at least four 'B' grades in their Highers. This grade combination was used as a proxy for a minimum level of attainment required to undertake a full-time first degree course at a more selective institution, informed primarily by the entrance requirements of the St Andrews Gateway to Physics initiative.

There are, of course, limitations to these figures. The threshold used may not be relevant for all courses and types of programme, the figures only include school leavers (and not older entrants), and school leavers who achieve these grades will not necessarily go to a local university or go on to university at all. The figures do,

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[2] A list of surrounding LAs for Robert Gordon University, the University of Aberdeen, the University of Edinburgh and the University of St Andrews is provided in Annex B.

however, give a broad indication of the potential school leaver applicant pool in surrounding SIMD 20 areas which is helpful when contextualising the improvement required from institutions.

3.3 Local context and scale of the challenge

When we look closer at the local context of the four remaining institutions they naturally fall into two groups: the two universities in the east of Scotland (University of St Andrews and University of Edinburgh) and the two in the north east (Robert Gordon University and University of Aberdeen).

<u>University of Edinburgh and University of St Andrews</u>

The University of Edinburgh had 120 (6%) full-time first degree entrants from SIMD 20 areas in 2014/15 and around 60% of those entrants were from surrounding local authorities. Based on the 2014/15 entrant figures, the institution would need around 80 **more** entrants from SIMD 20 areas to reach the 10% minimum.

For context, the percentage of the 16 to 29 year old population in surrounding LAs who were living in SIMD 20 areas in 2014 was 18%. Similarly, the percentage of secondary school pupils (S1 to S4) in surrounding LAs who were living in SIMD 20 areas in 2012/13 was around 20%. Finally, for illustration only, over 260 school leavers from SIMD 20 areas in surrounding LAs achieved at least four Bs in their Highers in 2013/14.

The University of St Andrews had 35 (5%) full-time first degree entrants from SIMD 20 areas in 2014/15 and just under one half were from surrounding local authorities. Based on the 2014/15 entrant figures, the institution would need around 35 **more** entrants from SIMD 20 areas to reach the 10% minimum.

For context, the percentage of the 16 to 29 year old population in surrounding LAs who were living in SIMD 20 areas in 2014 was 17%. Similarly, the percentage of secondary school pupils (S1 to S4) in surrounding LAs who were living in SIMD 20 areas in 2012/13 was around 20%. Finally, for illustration only, over 160 school leavers from SIMD 20 areas in surrounding LAs achieved at least four Bs in their Highers in 2013/14.

> **The Commission believes that it is reasonable to expect the University of Edinburgh and the University of St Andrews to achieve a SIMD entrant percentage of 10%, based on the level of deprivation in the surrounding local authorities and the fact that around 40 to 50 per cent of their entrants from deprived areas typically come from the rest of the country.**

<u>Robert Gordon University and University of Aberdeen</u>

Robert Gordon University had 135 (7%) full-time first degree entrants from SIMD 20 areas in 2014/15 and just under one half were from surrounding local authorities. Based on the 2014/15 entrant figures, the institution would need around 60 **more** entrants from SIMD 20 areas to reach the 10% minimum.

For context, the percentage of the 16 to 29 year old population in surrounding LAs who were living in SIMD 20 areas in 2014 was 7%. Similarly, the percentage of secondary school pupils (S1 to S4) in surrounding LAs who were living in SIMD 20 areas in 2012/13 was also around 7%.

The University of Aberdeen had 75 (5%) full-time first degree entrants from SIMD 20 areas in 2014/15 and around one third were from surrounding local authorities. Based on the 2014/15 entrant figures, the institution would need around 70 **more** entrants from SIMD 20 areas to reach the 10% minimum.

The contextual percentages for the surrounding LAs are the same as those for Robert Gordon University.

The Commission recognises the particular challenge that a SIMD 20 based entrant target of 10% presents to institutions in the north east of Scotland, due to the level of deprivation in surrounding local authorities.

Measure(s) which better reflect the link between deprivation and access in the local population should be used in addition to SIMD when monitoring the progress of Robert Gordon University and the University of Aberdeen towards the entrant percentage of 10%.

Annex A

Percentage of Scottish domiciled full-time first degree entrants from the 20% most deprived areas of Scotland, by institution, 2014/15.

Institution	Percentage of entrants from SIMD 20
Aberdeen, University of	5.3%
Abertay Dundee, University of	15.7%
Dundee, University of	14.9%
Edinburgh Napier University	10.1%
Edinburgh, University of	6.0%
Glasgow Caledonian University	21.0%
Glasgow School of Art	22.2%
Glasgow, University of	12.9%
Heriot-Watt University	11.0%
Highlands and Islands, University of the	11.2%
Queen Margaret University, Edinburgh	10.9%
Robert Gordon University	7.0%
Royal Conservatoire of Scotland	7.4%
Scottish Agricultural College	10.5%
St Andrews, University of	5.0%
Stirling, University of	14.4%
Strathclyde, University of	12.5%
West of Scotland, University of the	27.6%

Source: Higher Education Statistics Agency

Annex B

Surrounding LAs for Robert Gordon University, the University of Aberdeen, the University of Edinburgh and the University of St Andrews are listed in the table below. The list of surrounding LAs for each institution was created by considering geographic proximity and recent entrant patterns.

Robert Gordon University	University of Aberdeen	University of Edinburgh	University of St Andrews
Aberdeen City	Aberdeen City	Clackmannanshire	Clackmannanshire
Aberdeenshire	Aberdeenshire	East Lothian	Dundee City
Angus	Angus	Edinburgh, City of	Edinburgh, City of
Moray	Moray	Falkirk	Falkirk
		Fife	Fife
		Midlothian	Perth & Kinross
		North Lanarkshire	West Lothian
		West Lothian	