

# **Fiscal Affairs Scotland Monthly Bulletin**

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## The future of the Barnett formula post the independence referendum

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The future of the Barnett formula was an important subject throughout the Scottish referendum campaign, perhaps most notably towards the end, when the leaders of the main UK political parties pledged to maintain it following a 'No' vote. However, while this pledge seemed straightforward, the future of the Barnett formula remains a complex issue.

The 'pledge', made in the Daily Record, included "***The guarantee that with the continued Barnett allocation, based on need and with the power to raise its own funds, the final decisions on spending on public services in Scotland, including on the NHS, will be made by the Scottish Parliament***".

This 'guarantee' has been widely interpreted as meaning that the Barnett formula will continue in its current form and that this will protect the existing spend per person differential between Scotland and England. In fact, the guarantee has little bearing on how the Barnett formula actually works or on how Scotland's budget is decided or divided up.

To take the three main elements of the 'guarantee' in turn, the Barnett formula:

- is NOT based on 'need';
- has little relationship with the power of the Scottish government to raise its own funds (i.e., it is currently only linked to the, as yet unused, 3p variable income tax rate);
- has no relationship with how the Barnett block grant is actually spent within Scotland which, since devolution, has been the responsibility of the Scottish Parliament.

As a result the 'guarantee' needs careful interpretation.

At present, the role of the Barnett formula is to allow for a budget settlement for Scotland, Wales and Northern Ireland without the need for detailed negotiations across each UK Departmental budget.

Much has been made of the claim that the retention of the Barnett formula 'guarantees' Scots £1,600 a head more than the English. This figure represents the current Scottish spending advantage over England, based on UK government data for 2012-13 (see Note 1).

While the application of the Barnett formula does provide a guarantee of this sort in cash terms, in real terms, or in terms of the percentage difference between English and Scottish spend per head, then no such guarantee applies.

Rather, the formula is designed to bring about some degree of convergence, in terms of the percentage difference in spend per head (see Box 1).

When rising Whitehall Departmental budgets reappear then, other things being equal, this percentage terms convergence effect should re-emerge and the differential should start to decline.

Another important point to emphasise is that the Barnett formula is not going to be retained in its current form. This is due to the increase in revenue raising powers coming to Scotland through the implementation of the Scotland Bill (2012). The Smith Commission review and subsequent negotiations between Westminster and Holyrood will lead to yet more changes to the formula.

At present, we do not know what any 'Son of Barnett' formula will look like and indeed any future formula is not a straightforward issue to resolve. It may help retain the current cash terms spending differential between Scotland and England, but it is unclear whether any underlying 'convergence' mechanism, affecting the percentage terms difference, will be faster or slower than in the existing version.

The reference to '**need**' in the guarantee is particularly intriguing as past analyses suggests that, if funds were allocated on this basis, then Scotland would be due a lower share of total spending than it currently receives (see Note 2).

The continuing role of the Barnett formula, or any variant of it, will be to decide how to distribute changes in funds across the four nations of the UK. Unless a system of full fiscal autonomy is put in place (i.e., where each nation or region retains all of its own revenues and no sharing across regions exists) then there is inevitably a role for some form of redistribution arrangement.

Such an arrangement is an inevitable consequence of a (quasi) federal set-up, as is shown in countries as disparate in their political set ups as Spain, Germany, the USA, Canada and Australia. In each case some system or formula is needed to assess how much money is transferred between 'regions' within a country and on what basis this assessment is made. The Barnett formula, often thought to be complicated and difficult to understand, is actually a highly simplistic system in comparison to possible alternatives.

Bearing all of the above in mind, we can conclude that, rather than the referendum 'guarantee' ensuring the retention of the Barnett formula in its current form, its future remains a matter for negotiation. Any revised structure could impact significantly on the speed with which the real and percentage terms spending differential changes in the medium to long term.

However, it seems likely that, in the short term at least, any revised formula will retain a, cash terms, spending differential between Scotland and England similar to that currently seen. This is because of the negative electoral repercussions in Scotland for any political party which undertook any dramatic change in the existing spending pattern.

### **Box 1: Barnett and convergence**

The purpose of the Barnett formula has always been to bring about some degree of convergence, in percentage terms, between Scottish spending levels per head of population and those lower spending levels seen in England (see Note 3).

There are a number of reasons why the Barnett formula may not have resulted in much, if any, such convergence in spending between Scotland and England since its inception in 1979.

These include:

- Scotland's population growing more slowly than England's over this period, which has an offsetting impact on a per capita basis;
- the formula being circumvented on a number of occasions, particularly in the 1980s;
- the convergence impact going into reverse in recent years, when Departmental budgets have been falling rather than rising, which means Scotland gets a relatively smaller cut, as opposed to a smaller rise, in percentage terms.

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## Revisions to UK GDP 1997 - 2014 Q2

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At the end of September the UK Office for National Statistics (ONS) made extensive revisions to the way that UK Gross Domestic Product (GDP) is calculated (see Note 4). This section analyses what the major causes of these revisions were and what impact they had.

The ONS has now revised all GDP related data from 1997 up to the second quarter of 2014. These revisions are substantial as they take on board exceptional changes that fundamentally alter the composition of GDP.

The sources of the revisions are principally due to (i) changes that bring the UK national accounts in line with international practice (in particular with new EU standards) and (ii) to 'regular' improvements to methods and data that occur on an annual basis.

The result of these changes has been to increase the overall size of GDP, largely because the measure now includes increased contributions from research & development, weapons manufacturing, drug use and prostitution.

Such changes have also resulted in significant shifts in interpretation of some of the UK's past performance, although some key aspects of recent performance remain as before.

Over the period 1997 - 2013:

- the level of UK GDP (in current - cash - price terms) has been revised up by between £25 billion in 1999 (up 2.6%) and £101 billion in 2013 (up 6.2%) in comparison to the previous estimates. The average increase over the full period was just over £50 billion (up 4%), of which half came from regular updates and half from applying the new standards. The average annual growth rate over this period improved slightly from 4.1% to 4.3%;
- the average annual rate of **real** terms GDP growth (i.e., adjusted for inflation) has risen by only 0.1 of a percentage point, from 1.9%, to 2.0%. However, within this overall period there were two distinct sub-periods, 1997 to 2007 (when average annual growth

remained unchanged at 3.0%) and 2007 to 2012 (when the growth rate has been revised up by half a percentage point, from -0.6% a year to -0.1% a year);

- the 2008-2009 downturn was shallower than previously estimated (-6% rather than -7.2%) and subsequent growth has been stronger, with the previous peak (2008 Q1) now surpassed by 2013 Q3. While the GDP growth profile has changed, the broad picture remains the same. The UK has still experienced the deepest recession since records began (in 1948) and the subsequent recovery is still the slowest;
- the revisions provide little in the way of an answer to the 'productivity conundrum', with the level of output per hour in the first quarter of 2014 still being 16% below its projected, pre-downturn path, as opposed to the previous 19% below;
- in terms of households, their real disposable income (i.e., after taxes and benefits), while now estimated to be higher, has been growing more slowly than was previously thought. There has been a gradual erosion in the pace of growth of real disposable income since 2000 and, post-recession, it is now thought to be 2.7% below its 2008 peak, rather than the previous estimate of 1.8% below;
- changes to the treatment of pension contributions mean that the household savings ratio has risen considerably, by up to 5 percentage points a year;
- business investment has seen one of the biggest upwards revisions, due to the reclassification of research and development as investment, and is now well above its previous 2008 peak;
- with respect to the Balance of Payments, the current account is unchanged for most years, but in 2008 (-3% of GDP) and 2009 (-1.5% of GDP) it has worsened considerably, largely due to downward revisions of the overseas earnings of UK financial companies;
- the higher level of current price GDP affects a wide range of indicators where it is used as a reference point, for example, the current account and national debt which are usually shown as a share (%) of GDP. Normally an increase in GDP would result in a lower ratio, as the denominator is now

higher. However, revisions to the numerator, be it debt or the current account, have also had an effect, so that no general conclusions can be drawn (see Note 5).

The changes in methodology will also affect Scottish GDP numbers but these have not yet been calculated and it may be some time before they are.

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### **Scottish and UK growth rates 1998 to 2013: overall and by major industry sectors**

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The revisions alluded to in the preceding section mean that Scottish and UK GDP data will not be published on a consistent basis until next year. This suggests that now is a good time to reflect on how the two economies have been performing, relative to each other, over the period since devolution.

Table 1 highlights differing measures of overall GDP growth for Scotland and the UK. To make these comparisons on as like-for-like a basis

as possible, we concentrate on onshore GDP, i.e., excluding North Sea oil and gas. The main reason for this is that no measure is available for real Scottish GDP growth which includes a geographic share of North Sea output (even though it seems likely that an independent or fiscally autonomous Scotland would be defined as including such a share).

The measures shown are:

- total growth
- annualised growth rate
- population-adjusted annualised growth rate (i.e., the annualised growth rate per head of population), which is the measure most commonly used by international bodies when comparing the performance of different economies over time.

Table 1 shows that while the UK economy grew faster than Scotland's over the period 1998 to 2013, so too did its population, resulting in identical real terms growth per person.

**Table 1: Overall GDP growth rates, Scotland and the UK, 1998 - 2013, %**

	<b>Scotland</b>	<b>UK</b>	<b>Difference (Scotland minus UK)</b>
<b>Overall growth</b>	29	35	-6
<b>Growth per year</b>	1.7	2.0	-0.3
<b>Growth per year, per person</b>	1.4	1.4	0

Source: Scottish government website, GDP statistics

**Table 2: Disaggregated growth rates, Scotland and the UK, 1998 - 2013, %**

Growth rates (%) per person, per year	Weights* Sc / UK	Scotland	UK	Difference (Scotland minus UK)
Agriculture	12 / 7	-2.8	-0.4	-2.4
Mining**	35 / 4	3.5	(-5.8)	(9.3)
Manufacturing	118 / 104	-0.6	-1.1	0.6
Electricity & Gas	27 / 13	-0.4	0.1	-0.5
Water & Waste	15 / 12	0.6	0.5	0.1
Construction	74 / 63	0.6	-0.2	0.7
<i>SERVICES</i>				
Retail & Wholesale	103 / 111	2.4	0.7	1.7
Accommodation, Restaurants & Pubs	29 / 27	-0.1	1.3	-1.5
Transport & Communications	75 / 108	2.2	2.7	-0.5
Financial & Insurance	69 / 95	4.1	1.9	2.3
Real Estate	93 / 97	1.7	2.1	-0.4
Business services	102 / 115	3.9	3.7	0.2
Public Admin & Defence	61 / 53	0.3	-0.4	0.7
Education	60 / 62	0.2	0.4	-0.2
Health & Social Work	95 / 76	1.4	3.1	-1.7
Other Services	32 / 34	-0.5	0.6	-1.1
<i>TOTAL</i>	1,000 / 981			

Sources: Scottish government and Office for National Statistics.

\* These weights equate to the importance within the overall economy of an industrial sector. So, for example, the 'Retail & Wholesale' sector in Scotland accounts for just over 10% of the economy, in value added to overall output terms, while for the UK as a whole it accounts for just over 11%.

\*\* The UK growth figure is not directly comparable as it includes North Sea Oil & Gas activity whereas the Scottish figure does not.

Table 2 deconstructs the overall growth rates for Scotland and the UK and illustrates a number of differences in performance between the two economies:

- 'Agriculture', 'Mining' and 'Energy' all represent significantly higher shares of the Scottish economy than for the UK. Collectively, the difference adds up to almost 5% of the economic structure;
- 'Manufacturing' and 'Construction' are both larger parts of the Scottish economy than for the UK and have been performing better in Scotland than in the UK as a whole;

- the Tourism related 'Accommodation, Restaurants & Pubs' sector has actually shrunk in Scotland, unlike the UK where it has seen growth consistent with the overall GDP average;
- 'Transport & Communications' is the sector where the UK has the biggest differential presence in comparison to Scotland (i.e., its share of the overall economy is much greater in the UK than in Scotland);
- while the 'Financial & Insurance' sector in Scotland remains a smaller part of the

economy than it does for the UK, its growth rate in Scotland has been over twice that seen in the UK;

- ‘Government Administration’ activity is smaller in the UK than in Scotland and has been shrinking in the UK, as opposed to the rise seen in Scotland;
- ‘Health & Social Work’ is the sector where Scotland has the biggest differential presence in relation to the UK. However, its growth rate in Scotland has been lower than that seen in the UK;
- ‘Other Services’ growth performance has been better in the UK than in Scotland.

It is important to understand the reasons for these differences in relative sectoral performance. They could be due to (i) real differences in performance, (ii) variations in the methodology used in compiling the data, or (iii) poor quality of the statistics being compiled.

Interpreting accurate data is essential for the development of effective and well focused public policy and so understanding which of these possible explanations is most appropriate is important.

For this reason Fiscal Affairs Scotland will be studying this in greater detail in a future paper. In it we will attempt to better understand the actual causes of these significant variations in performance and whether any improvement in both the data quality and in its consistency might affect the best policy responses.

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## Personal well-being across the UK and Scotland, 2013/14

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The ONS have published the latest survey results in relation to the answers to four questions covering participants feelings of personal well-being. The questions were:

- overall, how **satisfied** are you with **life** nowadays?
- overall, to what extent do you feel the things you do in life are **worthwhile**?

- overall, how **happy** did you feel yesterday?
- overall, how **anxious** did you feel yesterday?

Table 3 highlights some of the main UK results from this survey for the latest year, while Tables 4 and 5 illustrate the best and worst scores across Scotland.

For the UK as a whole the main findings are:

- average scores are similar, and towards the top of the range for life satisfaction, feeling worthwhile and happiness. The anxiety score is similar in scale, given that a low score is good;
- the average ‘scores’ have improved in all four categories since the first survey in 2011-12 and it is thought that this might be due to the improving labour market performance;
- within the UK, Northern Ireland comes first in each category, by some distance. Beyond that, the three other countries have very similar scores;
- Northern Ireland’s high score is difficult to understand, given that the three factors most associated with personal well-being are health, relationship status and employment status. In fact, Northern Ireland has a relatively high unemployment rate and a lower than UK average life expectancy. It is thought there may be some ‘peace dividend’ impact or greater sense of community at work;
- within the nine English regions, London typically has the lowest average score although the North (both East and West) has the largest share of well-being recorded as being at a ‘low’ level. Equally the South East’s average score tends to be highest but the East Midlands has the largest share of well-being recorded as being at a ‘high’ level. The only English region to out-perform Northern Ireland on any measure is the West Midlands, and even then only in terms of a low anxiety score;

- within England, the worst performing local authorities (LAs) tend to be the poorer parts in and around London, for example, Lambeth, Barking & Dagenham and Dartford (Kent). Outside London, parts of the North West have the lowest scores. The highest scores tend to be around the wealthiest parts in and around London, such as the City of London and parts of Suffolk;
- while similar scores for life satisfaction, feeling worthwhile and happiness are seen across LAs, anxiety shows a different pattern, with more urban and more affluent LAs showing high anxiety levels.

**Table 3: Survey responses at the UK level\***

	<b>Most common answer</b>	<b>Average Answer</b>	<b>% giving a low score</b>	<b>% giving a high score</b>
<b>Life satisfaction</b>	8	7.5	6	27
<b>Worthwhile</b>	8	7.7	4	33
<b>Happiness</b>	8	7.4	10	33
<b>Anxiety</b>	0	2.9	20	39

Source: ONS Statistical Bulletin on Personal Well-being in the UK, 2013/14

\* People surveyed are asked to give their answers to the questions on a scale of 0 to 10. As the average scores for the first three questions is between 7 and 8 then a 'low' score is deemed to be between 0 and 4, while a 'high' score is deemed to be either 9 or 10. Unlike the first three measures, for anxiety a score of 0 is very good and of 10 is very bad. As a result, a 'low' anxiety score in Table 3 is equivalent to raised levels of anxiety and is therefore scored as between 6 and 10, while a 'high' score, equivalent to little or no anxiety, is either 0 or 1.

Within Scotland, the high scores in the Island councils are consistent with similar findings in relation to other quality of life surveys, and which have been connected to a strong community spirit although, as with Northern Ireland, the strength of evidence is weak.

Beyond the Islands the top scores tend to be in more rural areas such as the Highlands and the Borders. Amongst non-rural areas, the wealthier parts of Scotland tend to do best. Finally, with respect to the lowest scores, there appears to be a strong correlation with the high unemployment areas of Scotland.

Comparing Scotland with the rest of the UK we see similar scores for some of the cities which suffered considerable long term industrial decline prior to their current re-emergence, for example, Glasgow, Dundee, Liverpool and Manchester. Some of the offsetting factors between quality of life and standard of living are highlighted by the comparable happiness scores for the Highlands and Kensington & Chelsea (both 7.6)

While the highest and lowest score rankings discussed above are of interest, it should be remembered that the scores are actually quite similar, and high, across all LAs. For example, the average scores for life satisfaction for East Dunbartonshire and West Dunbartonshire are 7.73 and 7.33 respectively, and over 70% of those surveyed in West Dunbartonshire considered their life satisfaction level to be high or very high.

At this early stage in collecting and analysing the personal well-being data it is difficult to judge how important fairly small differences in scores are. It may be that people have a generic and/or personal score for well-being to which they will naturally tend to gravitate. If true, this suggests that even small variations between the scores could be important measures of difference in actual well-being. However, more work needs to be done, and data collected, in order to better understand this issue.

**Table 4: Best performing Scottish local authorities, personal well-being measures, 2013-14**

	Life satisfaction	Worthwhile	Happiness	Anxiety
<b>All Scotland</b>				
Orkney	8.16 (1)	8.15 (1)	8.06 (1)	2.08 (1)
Eilean Siar	8.03 (2)	7.99 (3)	8.02 (2)	2.40 (3)
Shetland		8.06 (2)	7.78 (3)	2.21 (2)
<b>Mainland</b>				
Highland	7.87 (=3)	7.94 (=5)	7.61 (=5)	
Borders	7.87 (=3)	7.95 (4)	7.61 (=5)	
Aberdeenshire		7.94 (=5)	7.62 (4)	2.27 (5)
Dumfries & Galloway				2.26 (4)
<b>Non rural areas</b>				
Aberdeen City	7.74 (8)	7.79 (9)		
East Dunbartonshire	7.73 (9)	7.88 (7)	7.59 (7)	
West Lothian		7.81 (8)		
Falkirk			7.56 (8)	
Clackmannanshire				2.58 (6)
South Lanarkshire				2.65 (9)
<b>Scotland average</b>	<b>7.57</b>	<b>7.73</b>	<b>7.38</b>	<b>2.90</b>

Note: the figure in brackets represents where the LA comes in terms of being closest to the highest score. Hence (1) is equivalent to the highest scoring LA, (2) to the second highest scoring LA, etc.

**Table 5: Worst performing Scottish local authorities, personal well-being measures, 2013-14**

	Life satisfaction	Worthwhile	Happiness	Anxiety
<b>All Scotland</b>				
West Dunbartonshire	7.33 (1)		7.21 (5)	
Glasgow City	7.34 (2)	7.53 (=1)	7.11 (2)	3.20 (4)
North Lanarkshire	7.39 (3)		7.18 (4)	
North Ayrshire	7.40 (4)	7.57 (3)		3.26 (1)
Dundee City	7.42 (5)	7.53 (=1)	7.09 (1)	
East Ayrshire		7.60 (4)		
Moray			7.13 (3)	
South Ayrshire				3.25 (2)
City of Edinburgh				3.24 (3)
<b>Scotland average</b>	<b>7.57</b>	<b>7.73</b>	<b>7.38</b>	<b>2.90</b>

Note: the figure in brackets represents where the LA comes in terms of being closest to the lowest score. Hence (1) is equivalent to the lowest scoring LA, (2) to the second lowest scoring LA, etc.

## Notes:

1. This differential covers both Barnett related and non Barnett (e.g. Social Protection) spending.

2. See for example, the Holtham Commission (2010), a House of Lords study (2009) and past needs assessments (1979 and 1993) by the UK government and Scottish Office.

3. As an example, from a baseline where Scotland gets £1,200 per person and England gets £1,000 per person, i.e., where Scotland's advantage is equivalent to 20%, then a £100 increase in both budgets, in accordance with the population based methodology of the Barnett formula, would result in Scotland getting £1,300 per person and England £1,100. This results in Scotland's advantage, in percentage terms, falling to 18%, even though the cash terms differential remains the same, at £200.

4. The ONS have published a variety of papers on this topic. Readers may find of particular interest the 'Economic Review, September 2014' (3rd September) and 'Impact of changes in the National Accounts and economic commentary for Q2 2014' (30th September).

5. In the case of national debt it remains at a historically high level and rising, so revisions are unlikely to have much, if any, impact on current austerity plans.



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