Economic perspectives

The Barnett squeeze in spending review 2000

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Introduction

The Departmental Expenditure Limit (DEL), represents over 80% of the financial resources available to the Scottish Executive: for example, following the Spending Review 2000 (SR2000: HM Treasury, 2000a), total managed expenditure under the control of the Scottish Executive in 2001-02 was £19.7 billion of which the DEL represented £16.2 billion: Budgeting in Scotland's Parliament (Scottish Executive 2000). With a few minor exceptions, changes in Scottish Executive's DEL are determined by the Barnett formula. This means that for every £1 increase per head in spending in England on services which are devolved, Scotland receives £1 per head. Fairly detailed information on how the Barnett formula is applied, (including detailed information on which spending sub-programmes for each Whitehall Department feed into the Barnett calculations) is set out in annual statements published by HM Treasury on Funding the Scottish Parliament. (See HM Treasury (2000b))

Since public expenditure per head in Scotland starts from a higher level than in England, then the implication of a strict application of Barnett is that Scotland would receive a smaller percentage increase in public expenditure than England: in other words, Scotland will receive less in cash terms than if it had experienced the same percentage growth as England. This effect is known as the Barnett squeeze. The theoretical existence of the Barnett squeeze is common ground: the extent of its practical impact, however, has been a matter of considerable debate. (See for example, Kay (1998), Midwinter (2000)). There are a number of reasons why there is debate on what should be a straightforward empirical question, in particular:

One form or other of the Barnett formula has been operational since 1978. However, while the government has published annual figures for the Scottish Block, and for its post devolution successor, the Scottish DEL, it has failed to publish the corresponding expenditure aggregate for England. This corresponding English aggregate has no administrative meaning in itself in the English context, since it consists of elements of programmes of a number of Whitehall Departments: this is why, presumably, the government has not bothered to publish this figure. But without knowledge of this aggregate, it is not possible to check directly how the corresponding aggregates in England and Scotland have evolved.

Secondly, the government does not publish the detailed calculations on how Barnett is applied.

Barnett did not apply at all strictly for the first fifteen years of its existence. In particular, prior to 1993, in establishing the new end-planning year at the start of each public expenditure planning round, the previous end year figure for both Scotland and England was uprated for inflation. This meant that a substantial part of the cash increases required for inflation was taken out of the Barnett discipline. (HM Treasury (1997)).

Finally, although the Barnett formula is simple to state in words, it is difficult, without going into the algebra, to uncover the subtlety of how Barnett interacts with differences in population growth between Scotland and England.

This paper is primarily intended to provide an estimate of the size of the squeeze on Scottish expenditure implied by the SR 2000, over the planning period for that review. Our findings are that Scotland will experience a relative squeeze of over £1 billion by 2003-04, compared with the funding it would have received on English expenditure growth rates.

The article by Midwinter (2000) discussed the Barnett squeeze. The discussion in this note, and the companion note by J.Cuthbert in this issue on the effect of relative population growth in relation to Barnett, allow Midwinter's paper to be viewed in a new light. In a brief final section, we therefore comment on Midwinter's arguments.

Estimating the Squeeze Implied by SR2000

SR2000, which was published in July 2000, included the final allocations of DEL for Scotland, for the planning period of the review, namely 2001-02 to 2003-04. This enabled the Scottish Executive in turn to determine its own spending plans for individual services over this period. These plans were published in Autumn 2000 in the Scottish Executive's Budgeting in Scotland's Parliament (BISP).

As we have already noted, the detailed calculations underlying the application of the Barnett formula, and hence giving the derivation of the Scottish DEL, are not published. This lack of published detail enables the government to hide behind what amounts to a convenient smoke screen: namely, that it is not possible to measure the size of the Barnett squeeze exactly. Indeed, a government spokesman was recently quoted in the press making exactly this claim. We will argue that this is a disingenuous position for the government to adopt. First, however, we need to consider, in more precise terms than we have so far, how the concept of the Barnett squeeze should most reasonably be defined.

In fairly loose terms, the "Barnett squeeze" represents the difference between the actual size of the Scottish DEL, and what the Scottish DEL would have been if Scotland had received the same growth as England in the aggregate of expenditure covered by the DEL. More precisely, we suggest that the most reasonable definition of the Barnett squeeze would be as follows:

Consider aggregate expenditure in England on those services and other categories of expenditure which are covered by the Scottish DEL: and determine the growth of this aggregate in England. Then the Barnett squeeze over a given period is the difference between the actual size of the Scottish DEL and what the Scottish DEL would have been if the English rate of growth had been applied over the period.

There are two important points to be noted about this suggested definition:

It involves the growth rate of an aggregate of English expenditure. In other words, the growth rate would equal the growth rate of individual sub-programmes in England, weighted together by their relative English expenditure weights at the start of the period.

Since the outturn growth for English expenditure sub-programmes may turn out to be different from what was originally planned, the actual outturn for the Barnett squeeze may be different from the squeeze estimated on the basis of planned growth.

It is presumably this latter point which lies behind the government's position that it is not possible to calculate the Barnett squeeze. But there is nothing to stop the government if it wished from producing an estimate of the likely size of the squeeze based on planned growth and expenditure at the time of the SR. Nor is there anything to stop the government publishing after the event the actual outturn figures for the English aggregate corresponding to the Scottish DEL, so that the outturn size of the squeeze could be compared with the original estimate. It is the government's failure to carry out either of these perfectly feasible steps which leads us to say that their position on calculating the size of the Barnett squeeze is disingenuous.

It is not possible, on the basis of published figures, to produce a direct estimate of the likely size of the Barnett squeeze over the SR2000 planning period, using the definition above. The reasons for this are that this definition would involve weighting together planned English expenditure growth rates, by the relevant English expenditure weights at the start of the period: and neither the English expenditure weights, nor the growth plans for the individual sub-programmes, are published in sufficient detail.

However, it is possible to use the published figures in SR2000 and BISP to produce an answer to the following question: namely "how much extra funding would be required if spending on individual Scottish services were to

experience the same percentage growth as is planned for corresponding services in England." This is the question we answer in this section. Note that the answer to this question does not correspond exactly to the definition of the Barnett squeeze given above, for the following reasons:

First of all, this question involves weighting together planned English expenditure growth rates by the relative Scottish base expenditure weights, rather than by English base weights. Further, note that the calculation, given the limitations on data availability, has to be undertaken at a more aggregate level than the government's own application of Barnett.

Secondly, it makes sense to consider the full scope of service provision overseen by the Scottish Executive, including services provided by local authorities, rather than restricting attention only to grant payments to local authorities, which, along with capital borrowing consents, is how local authority services come into the DEL. Broadening our calculation to include services funded by non-domestic rates and Council tax means that any resulting funding gap may reflect relative movements in the amounts of revenue generated from these sources, as well as a pure Barnett squeeze. A discussion of the importance of the implicit assumptions on non-domestic rates and council tax which underlie the devolution settlement is given in Cuthbert and Cuthbert, (1999).

From the point of view of the pressures which will face the Scottish Executive in managing service provision, the funding squeeze which we will measure is arguably a more relevant concept than the Barnett squeeze itself, strictly defined, would have been. For all practical purposes, the Barnett squeeze element is likely to be the dominant component in the funding squeeze as estimated here.

The expenditure that we consider covers central government services funded from the DEL, and local authority expenditure on current services (including loan charges). We have excluded from our expenditure basis local authority capital consents, which also fall within the Scottish DEL, but for which we have no planning assumption for England from SR2000: we also exclude the relatively small amount of expenditure retained outside the Scottish Executive's DEL by the Secretary of State for Scotland, for running his own departments. The Annex sets out the calculation of the shortfall in funding over the SR period which would result if the services within this expenditure envelope were to grow at planned English rates of growth, compared with the funding that is actually available.

While the Annex shows the detailed calculations, and results, at individual programme level, a convenient summary of the overall results, for both central government services funded from DEL, and for local authority current services, is given in the following table.

Expenditure on Central Government Services Funded from DEL, and Current Local Authority Services, £m

	2000-01	*2001-02*	*2002-03*	*2003-04*
Central Government Services				
projected on basis of English growth	10433	11638	12707	13669
Scottish Executive Expenditure plans	10433	11288	12000	12706
Difference	0	350	707	963
Local Authority Current Exp.				
projected on basis of English growth	6746	7092	7446	7821
Scottish Exec. planned contribution	5714	6039	6434	6698
Difference (funded by Council Tax)	1032	1052	1012	1123

As regards central government services, after three years there will be a shortfall of £963 million. The main services where this shortfall will occur are in Enterprise and Lifelong Learning, (where the shortfall will be over £300 million by 2003-04), Health, (a shortfall of over £200 million), Communities, (almost £200 million), and Transport, (almost £100 million).

As regards local authority services, the table shows the funding which would be required if spending grew in line with planned growth for local authority services in England, compared with the planned funding contributed by way of grant from the Scottish Executive DEL and by way of non-domestic rates. The difference between these figures is not, therefore, an absolute shortfall but represents the funding gap that has to be met from council tax. It is therefore the growth in this element that is particularly relevant. Note that the growth in this element is £90 million over the period.

Overall, the extra funding required in both central and local authority services amounts to some £1050 million in 2003-04: in other words, the current effect of the squeeze on Scottish expenditure is about £350 million per annum, which, it should be remembered, is cumulative.

Note that the actual funding gap is likely to be larger than implied by these figures, because at least one important expenditure commitment is not included in the Scottish Executive's expenditure plans. No extra funding has been allocated by the Scottish Executive for the costs of the McCrone Committee recommendations on teachers' pay and conditions. These are estimated conservatively at £550 million in total over the next three years.

Brief Comments on Midwinter's Paper

Midwinter (2000) examined the empirical evidence of the impact of the Barnett formula on expenditure outturns since 1992. He concluded that the evidence of convergence is modest, and that a convincing case for a review of the Barnett formula has not been made.

In this section, we do not attempt a detailed critique of Midwinter's paper. However, our approach in section 2 of this paper, and the modelling work on the effect of relative population change in the accompanying paper by J Cuthbert, prompt two main observations on Midwinter's approach and conclusions.

The first relates to the expenditure basis which Midwinter uses. The debate regarding Barnett does not primarily relate to total per capita expenditure as measured by identifiable public expenditure. The main concern in the debate has been the funding of the Scottish Executive and its ability to provide in Scotland those services for which it is responsible. Conceptually, there are three main levels at which one could in principle compare spending. These are

a) at the level of the Scottish Executive's DEL, which effectively is the level at which Barnett operates.

b) at the level of the funding available to spend on services for which the Scottish Executive is responsible, (but excluding those services which cannot be reasonably subject to firm three year limits or that should have special control regimes). This is broader than (a) as it includes spending funded by council tax and non-domestic rates.

c) at the level of identifiable public expenditure for Scotland. In addition to (b) this includes annually managed expenditure, like the Common Agricultural Policy, within the control of the Scottish Executive, and expenditure incurred on behalf of people in Scotland administered by other departments, the largest element of which is Social Security expenditure.

We would argue that expenditure at level (b) above is the most appropriate basis to consider when the key focus of interest is the provision of services by the Scottish Executive. It is within this level of expenditure that the Scottish Executive has the freedom to allocate resources and make spending decisions. The analysis in section 2 of this paper has accordingly been conducted at this level. Midwinter, however, tends not to distinguish the different possible expenditure bases clearly enough. Consider, for example, the following quotation from Midwinter,

"In the Scottish case the outcomes [of identifiable public expenditure per head] reflect the growth in agriculture, fisheries and food programme from 1996-97 (which is outwith Barnett) and the growth in the social security differential in 1997-98. This confirms our argument that non-formulaic spending programmes influence the convergence effect (as can population decline)."

In other words, Midwinter identifies the effect of the non-formulaic elements of agriculture and social security, which occur only in (c) above, as being to offset the convergence which would otherwise have resulted from Barnett. There is, however, little comfort to be drawn from this conclusion of Midwinter, because

a) these non-formulaic elements are not relevant to the provision of the services with which we are concerned, and

b) spending on these elements is equally likely to fall as to rise in the future.

Our second main comment relates to the effect of relative population growth in England compared to Scotland. As can be seen from the quotation above, Midwinter recognises that relative population growth can play a role in moderating the Barnett squeeze. As is clear from J Cuthbert, relative population growth in England will have provided a significant offset to convergence in per capita spending ratios at times during the 1990s. However, as the modelling work in Cuthbert's paper also shows, this cushioning effect diminishes rapidly as public expenditure growth rises. So while Midwinter notes relative population growth as a significant offsetting factor historically, it would be quite wrong to draw inferences from this about the future.

To summarise, we are suggesting that the major offsetting factors identified by Midwinter cannot be relied upon to continue. This is because:

a) the direction of the effect of the non-formulaic factors identified by Midwinter is effectively random

b) relative population change has a much reduced moderating effect at times of public expenditure growth (although it will still have a significant effect on the limiting per capita ratio).

Moreover, we have taken no account of the possibility of the Treasury introducing an administrative adjustment to the way in which the Barnett formula is applied. If expenditure base lines for England and Scotland were rolled on using projected population movements, when the new final year of each public expenditure planning cycle is being established, then this would have the effect of removing the relative population offset factor almost entirely.

References

J Cuthbert and M Cuthbert (1999) "Monitoring the Financial Aspects of the Devolution Settlement: Issues and Data Requirements", Quarterly Economic Quarterly, September.

HM Treasury (1997) Supplementary Memorandum in the Second Report of the Treasury Committee, "The Barnett Formula", (London: The Stationery Office).

HM Treasury (2000a) "Spending Review 2000: New Public Spending Plans 2001-2004., July.

HM Treasury (2000b) "Funding the Scottish Parliament, National Assembly for Wales and the Northern Ireland Assembly".

N Kay (1998) "The Scottish Parliament and the Barnett Formula", Quarterly Economic Commentary, December.

A Midwinter (2000) "Devolution and Public Spending: Arguments and Evidence", Quarterly Economic Commentary, October.

Scottish Executive (2000) "Budgeting in Scotland's Parliament", October.

Annex: Notes on calculations.

The logic of the calculation is to roll forward from the published Scottish 2000-01 figures as base, using English growth factors, and to compare the resulting funding requirement with the public expenditure plans in BISP. The expenditure figures on these two bases, together with the difference between them are shown in Table A1: the English growth factors used are shown in Table A2.

The coverage of the figures is central government services funded from the DEL, and local authority expenditure on current services (including loan charges). We have excluded from our expenditure basis local authority capital consents, which also fall within the Scottish DEL, but for which we have no planning assumption for England from SR2000.

Central Government figures in the first column of Table A1 are mainly taken from Table 1 in BISP, giving a central government total for the Scottish Executive for 2000-01 of £10,432.7 million. Services are as in Table 1 of BISP, with the exception that Justice and Enterprise and Life Long Learning have been further split, using information from the appropriate later tables in BISP, to reflect better the application of the correct English factors. There is a slight problem about this further split, since the detailed figures in the later tables of BISP are on a Total Managed Expenditure basis, rather than DEL basis, with depreciation having been allocated to the service headings in the later tables. We have allocated the difference (TME-DEL) pro rata to what seemed to us to be the appropriate sub components of Justice, and Enterprise and Life Long Learning.

The local authority figures in column 1 of Table A1 are figures for Government Supported Expenditure (GSE) taken from Table 8.2 of *Investing in You*. GSE is the government's estimate of what local authorities in Scotland need to spend on the current services which they are responsible for providing, and includes loan charges.

The first part of Table A1 has then been derived by applying the English growth factors in Table A2 to the figures in the first column of Table A1. The factors used are mostly taken from the most appropriate English programmes in SR2000: notes on the sources of the factors used are given below.

In a few cases, (indicated by an asterisk in the table), there is no obvious English programme to use as a counterpart. These cases have been treated as follows. For European Structural Funds, the Scottish rate of expenditure growth for that category of expenditure has been assumed. For the other categories indicated with an asterisk, the assumption has been adopted of no expenditure growth over the period: this amounts to a conservative way of treating these categories.

For years from 2001-02 on, the second part of Table A1 shows, for central government, the Scottish Executive's planned spending under each heading as published in BISP. Again, in the two cases noted above, we have used a more detailed service breakdown than that given in BISP, and have had to estimate the allocation of depreciation.

For local authority services in Scotland, the government does not publish planned GSE figures for the whole planning period, (although corresponding figures are published for England). We have, accordingly, used instead, in the second part of Table A1, the planned contribution to funding local authority services which the government intends to make by means of grants and non-domestic rates, taken from BISP. (As noted in the main text, this means that, for local authority services, the difference between the two parts of Table A1 includes the funding contribution which would require to come from council tax.)

Notes on Factors in Table A2

Education, Arts, Sport and Culture: annual growth in England education, employment DEL from SR 2000 T1.1.
Communities: annual growth in England, housing and regeneration, from T9.1 of SR.
Crown Office: growth in Law Officers departments from T11.1 of SR.
Enterprise and Life Long Learning, Education. This category comprises student awards, and higher and further education funding. Factors used as for Education, Arts, Sport and Culture.
Enterprise and life long learning, non- Education: paragraph 15.13 of SR states plan of 6.6% annual real growth in DTI other than liabilities. Inflation of 2.5% added.
EU Structural Funds: Scottish expenditure plans throughout.
Food Standards Agency: from T8.1 of SR 2000.

Forestry Factors from SR2000
Health annual growth in England NHS DEL from SR 2000
T1.1.
Community Care: as for Health.
Justice: Legal Aid from T11.1 of SR.
Justice: Other from T10.1 of SR.
Rural Affairs from T16.1 of SR, MAFF Domestic Programme.
Transport: relevant line from T9.1of SR.
Environment relevant line from T9.1of SR
Local Authority Services Standard Spending Assessment figures from T33.1 of SR.
LA Capital Finance: assumed to increase in line with inflation.

Table A1: Expenditure Projected on Basis of English Growth Factors, Compared with Plans

£ million	*Projected on UK basis*				*Scottish Plans DEL+NDRI*				*Difference*			
	2000-01	*2001-02*	*2002-03*	*2003-04*	*2000-01*	*2001-02*	*2002-03*	*2003-04*	*2000-01*	*2001-02*	*2002-03*	*2003-04*
Children and Central Government Education	464.6	523.8	577.2	630.8	464.6	468.4	529.4	584.4	0	55.4	47.8	46.4
Communities	654.1	830.1	932.1	1025.4	654.1	707.2	755.2	845.2	0	122.9	176.9	180.2
Crown Office	49.8	59.7	61.1	62.9	49.8	53.6	58.1	59.6	0	6.1	3.0	3.3
Enterprise and Lifelong Learning:Education	1328.8	1498.2	1650.7	1804.3	1328.8	1469.2	1512.8	1564.0	0	29.1	137.9	240.3
Enterprise and Lifelong Learning:Non Educ	553.6	604.0	658.9	718.9	553.6	577.2	586.9	606.7	0	26.7	72.0	112.2
EU Structural Funds	138.0	205.6	200.6	141.6*	138	205.6	200.6	141.6	0	0	0	0
Food Standards Agency	3.7	4.4	4.7	4.7	3.7	4.8	5.1	5.3	0	-0.4	-0.4	-0.6
Forestry	29.3	36.2	38.7	38.7	29.3	30.7	30.7	30.7	0	5.5	8.0	8.0
Health	5474.3	5928.7	6426.7	6966.5	5474.3	5881.6	6300.6	6753.6	0	47.1	126.1	212.9
Community Care	1.6	1.7	1.9	2.0	1.6	8.1	10.8	11.3	0	-6.4	-8.9	-9.3
Justice:Legal Aid	132.8	129.2	129.6	130.1	132.8	134.8	134.8	134.8	0	-5.6	-5.2	-4.7
Justice:Other	403.3	473.9	507.0	523.8	403.3	457.9	492.3	516.7	0	16.0	14.7	7.1
Rural Affairs	213.4	255.7	278.4	287.0	213.4	218.6	231.6	236.6	0	37.1	46.8	50.4
Scottish Executive Administration	205.4	205.4	205.4	205.4*	205.4	221.9	223.5	225.3	0	-16.5	-18.1	-19.9
Sc. Parlt. and Audit Scotland	93.8	93.8	93.8	93.8*	93.8	90.3	97.3	63.4	0	3.5	-3.5	30.4
Transport	298.1	366.7	448.8	555.6	298.1	344.6	380.6	465.6	0	22.1	68.2	90.0
Environment	356.4	388.8	459.6	445.4	356.4	380.3	382.3	393.3	0	8.5	77.3	52.1
Modernising Govt Fund	31.7	31.7	31.7	31.7*	31.7	14.5	14.5	14.5	0	17.2	17.2	17.2
Reserve	0.0	0.0	0.0	0.0*	0	18.1	53	53	0	-18.1	-53.0	-53
Total CG	10432.7	11637.6	12707.1	13668.6	10432.7	11287.4	12000.1	12705.6	0	350.2	707.0	963.0
LA Education	2718.2	2867.7	3039.8	3219.1								
LA Social Work	1144.4	1199.3	1264.1	1347.5								
LA Other Services	616.9	644.0	672.4	702.0								
Police	741.9	808.7	850.7	884.8								
LA Roads and Transport	323.3	331.4	340.0	348.8								
LA Leisure and Rec	230.6	240.7	251.3	262.4								
Fire	186.9	196.2	204.1	212.3								
LA Capital Finance	784.0	803.6	823.7	844.3								
Total LA	6746.2	7091.7	7446.1	7821.1	5714.4	6039.4	6433.8	6698.4	1031.8	1052.3	1012.3	1122.7

Table A2: Growth Factors

	2001-02	*2002-03*	*2003-04*
Education, Arts, Sport and Culture	1.128	1.102	1.093
Communities	1.269	1.123	1.100
Crown Office	1.199	1.024	1.028
Enterprise and Lifelong Learning:Education	1.128	1.102	1.093
Enterprise and Lifelong Learning:Non Educ	1.091	1.091	1.091
Food Standards Agency	1.195	1.067	1.000
Forestry	1.237	1.068	1.000
Health	1.083	1.084	1.084
Community Care	1.083	1.084	1.084
Justice:Legal Aid	0.973	1.003	1.004
Justice:Other	1.175	1.070	1.033
Rural Affairs	1.198	1.089	1.031
Transport	1.230	1.224	1.238
Environment	1.091	1.182	0.969
LA Education	1.055	1.060	1.059
LA Social Work	1.048	1.054	1.066
LA Other Services	1.044	1.044	1.044
Police	1.090	1.052	1.040
LA Roads and Transport	1.025	1.026	1.026
LA Leisure and Rec	1.044	1.044	1.044
Fire	1.050	1.040	1.040
LA Capital Finance	1.025	1.025	1.025