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# *Economic* PERSPECTIVE

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## THE SCOTTISH PARLIAMENT AND THE BARNETT FORMULA

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### 1. INTRODUCTION

In this paper we shall look at the implications of the conventions and devices to be adopted for funding the Scottish parliament. It will be argued that there are major problems with the basic mechanism to be adopted (the Barnett formula) and that the discretionary tax raising powers for the Parliament may actually create more problems than it solves. Further, the Barnett formula is designed to lead to the eventual convergence of public spending levels per head in Scotland with those prevailing in England. Consequently, questions of whether or not Scotland is over-subsidised relative to England really miss the point since the practical issue is not a question of whether there should a reallocation of public spending from Scotland to England, but rather when and how quickly this will occur. Some economic and political implications of these arguments are considered and we finish with some proposals for dealing with the dangers to the Scottish Parliament posed by the Barnett formula.

### 2. PUBLIC EXPENDITURE IN SCOTLAND AND THE BARNETT FORMULA

Public expenditure in the UK can be split into two main categories, identifiable and non-identifiable. Identifiable public expenditure is that which can be recognised as having been incurred on behalf of a particular population, while non-identifiable is that which is deemed to be incurred on behalf of the UK as a whole (such as defence expenditure). The Treasury produces territorial analyses of identifiable public expenditure for each of the four home countries in the Public Expenditure: Statistical Analyses series. In turn, identifiable public expenditure in the case of Scotland can be allocated into two major categories,

expenditure which remains the responsibility of Whitehall Departments (mainly social security) and that which falls within the responsibility of the Secretary of State for Scotland (such as health, education, and transport). The later category can be also be split into two categories, the so-called "Scottish Block" which accounts for about 96%, the remainder being "agriculture, fisheries and food" and spending on nationalised industries<sup>1</sup>.

The total for programmes supported by the Scottish Block is found by application of the Barnett formula to comparable public spending programmes in England (or England and Wales in certain cases). The government has also announced that the Block and Barnett formula conventions will be adopted to decide the settlements for programmes that fall under the responsibility of the Scottish parliament. This paper will be concerned with the implications of the Barnett formula for public spending in Scotland and the working of the Scottish Parliament.

The Secretary of State for Scotland commented in December 1997 that, "In the past the Block and formula arrangements have been shrouded in mystery for most people and that has undoubtedly contributed to a misunderstanding of their purpose and effect"(Scottish Office, 1997b). As we shall see in this paper, this has certainly been the case. There is widespread misunderstanding of the nature of the Barnett formula and its implications for Scotland. However, the principle underlying the Barnett formula is extremely simple, it is the actual calculation and operation of the funding arrangements for Scotland where we encounter problems of confusion and lack of transparency. Before we look at the latter set of issues, it may help to consider the implications of the Barnett principle.

The Barnett formula<sup>2</sup> is named after the then Chief Secretary to the Treasury (Joel Barnett) and was introduced in 1978. It is intended to deliver to Scotland "a population-based share of changes of in planned spending on analogous programmes in England managed by the (Secretary) of State for Scotland" (Treasury Committee, 1997)<sup>3</sup>. So if there is a cash increase (or decrease) in spending in an English programme, then the application of Barnett would mean that the Scottish budget is adjusted up (or down) by a corresponding amount, adjusted for Scotland's population share relative to England. If government

spending per head goes up by £4 per head in England, the Barnett principle implies the Scottish budget (or Block) will be adjusted by £4 a head in Scotland as well. The principle could hardly be simpler, it is a straight one or one - for every pound increase in English government programmes corresponding to those in the Scottish Block, there will be a pound increase in Scottish government programmes, on a per capita basis. Once the total for the Block is calculated, the Secretary of State has discretion to allocate funds to Departments and programmes within the Block according to perceived Scottish needs and priorities. However, the Treasury Committee (1997) noted that since much public expenditure is continuing or demand-led, the scope for the exercise of this discretion is limited in practice.

The mechanism is devised to maintain the same absolute increase in public spending per head in both Scotland and England. However, the absolute levels of public spending per head of population is higher in the programmes supported by the Scottish Block than in the corresponding English programmes. About £132 is spent per head on the Scottish Block for every £100 spent per head in comparable English programmes<sup>4</sup>.

If Scottish public spending was to grow at the same rate as for corresponding English programmes, then spending on programmes in the Scottish Block should be increased by 32% more in Scotland compared to the rest. However, the Barnett formula restricts the Scottish increase to the same absolute increase as for corresponding English programmes. This means that in *percentage* terms the increase for Scots is worth less than in England and Wales. For example, if public spending is increased by 4% in England and Wales, the higher base for Scottish public spending levels means that Barnett translates this into a percentage increase in Scottish spending of about 3%.

In itself this might not seem too bad an outcome for Scotland. After all, a 3% increase compared to a 4% increase may seem tolerable, especially in the context of pressure for a more dramatic redistribution of Scotland's public spending budget to other parts of the UK.

However, there are two problems with this situation. The first is inflation. Typically most public spending increases are to cope with the effects of rising prices. Suppose public

spending is increased in England by 4% to deal with an inflation rate of 4%. The increase in public spending down south would just compensate for the effects of rising prices, but Barnett would convert the English settlement into a real decline of 1% in the Scottish Block

The problem is that it is margins like these that represent the battleground for improving/maintaining services, and for paying public sector wage increases. Once basic services are provided, it reduces the scope for pay increases. That wise Englishman Mr Micawber was well aware of the importance of margins in the context of human happiness; in this context we could say that public sector settlements above the level of inflation increases the chances of public sector happiness, while public sector settlements below the level of inflation are likely to increase the chances of public sector misery<sup>5</sup>. The Barnett formula means that Scotland is more likely to be miserable, and more often, about public expenditure settlements than is England. This clearly has political as well as economic implications.

The second particular problem is time. The difference between, say, a 3% and a 4% increase may be tolerable as a one-off, but the Barnett formula implies a continuing squeeze on Scots public spending, or at least for as long as it takes for policy to change. Its precise impact on a yearly basis will depend on actual levels of cash public spending increases and the effects of inflation. However, it means that Scottish public spending increases more slowly relative to England and Wales over time, and is more quickly overtaken by inflation. In real terms, Scottish levels of public expenditure per head of population will be pulled inexorably towards convergence with the levels set down south as a consequence of what Cuthbert (1998) has described as "the Barnett squeeze".

It is generally recognised that Scotland has needs for higher levels of public spending per head of population for reasons that include population density, health, climate and levels of public housing (Treasury Committee, 1998). However, "the Barnett formula does not directly reflect public expenditure 'need'" (Twigger, 1998). In fact, rather than sustaining higher levels of public spending in Scotland relative to England, Barnett is designed to erode differentials and lead to the eventual convergence of Scottish spending levels with those in prevailing in England.

These properties of the Barnett Formula are

quite different from the popular perception of its nature and purpose, but they are in fact well recognised features, acknowledged and studied by academics and policy-makers alike. A recent Note by the Treasury to the Select Committee on the Treasury<sup>6</sup> stated that, subject to certain influences, "the application of the formula will tend to lead over time to convergence of spending relativities between the countries of the Union on the programmes contained within the Block budgets". They note that a number of factors may influence the rate of convergence in practice, including the level of cash increases in comparable English programmes and changes in population relativities.

As Bell et al (1996, p. 29) note, "The way in which the Barnett formula currently operates will eventually lead to equal per capita expenditure in the territories (though ... the rate of convergence can be slow). This is not necessarily appropriate since it takes no account of variations in need across different parts of the country, nor in differences in the cost of delivery of services,"

This also raises the question of ascertaining what pattern of public spending would be needed to reflect Scotland's needs. The last official assessment of needs was conducted in the late-Seventies in the context of plans for devolution, and looked at the six main services to be devolved (broadly corresponding to the Scottish Block); it concluded that per capita funding in Scotland would have to be about 16% higher in Scotland to provide comparable service levels. But in his evidence to the Treasury Select Committee investigation into the Barnett formula, "Professor Midwinter<sup>7</sup> was not persuaded of the value of another needs assessment. He noted that needs assessment are imprecise, leaving political acceptability more important than technical feasibility, and that, secondly, 'the (earlier) Treasury study was far from foolproof, and arguments can be and were made over the weighting of factors in the report'" (Treasury Committee, 1997). As far as the degree to which Scotland has higher needs for public spending, Midwinter argued that "the extent of this higher needs ... has never been established with precision because precision in needs assessment is impossible" (Treasury Committee, 1997).

The Barnett formula has been in operation since 1978 and it has had two decades of application to the Scottish public spending. We should therefore expect to see the moves

towards convergence visible in the patterns of public spending now. However, there is no evidence of the kind of moves towards convergence on the scale implied by the formula. In the Note referred to above (Treasury Committee, 1998), the Treasury looked at trends in identifiable government spending per head in the different countries of the Union as published in successive issues of *Public Expenditure Statistical Analyses*. They found that spending per head in England as share of the UK average remained relatively stable over the period 1985-86 to 1995-96, while the corresponding measure for Scotland declined from 21% above the UK average to 19% over the same period. A decline certainly, but a relatively modest one.

Part of the reason for these results may lie in the fact that the published figures for identifiable government spending by country include spending on programmes outside the Block, notably Social Security spending. For example, the latest figures for identifiable government expenditure in Scotland in 1996-97 is £24.75 bill<sup>8</sup> while the part to which the Barnett formula applied - the Scottish Block - was only £13.98 bill for that year<sup>9</sup>. Social Security spending in Scotland in 1996-97 was £9.14 bill, but was only 9% above UK levels measured on a per capita basis. Non-Block elements such as Social Security may dampen the observed trend towards convergence and it is entirely possible - indeed likely - that the Block elements in identifiable public spending for Scotland could be declining faster than the other elements in this measure.

However, there are other factors which may have slowed the actual rate of convergence of Scottish and English spending levels. These were analysed by Heald (1994) and he concluded that there were a number of factors that had led to the effects of the Barnett formula being muted or suppressed. He also concluded there was no sign of the predicted convergence of per capita block expenditure over the period 1979-80 to 1987-88. Heald notes that over the period 1976-92, Scotland's relative share of UK population had declined markedly, though the Treasury was still using the old population relativities in the Barnett calculations. This would have been to Scotland's benefit in terms of Block settlements. In addition, a number of other features led to what Heald describes as "formula bypass" and which could have affected the rate of convergence of Scottish to English spending levels. However, Heald notes that it was not possible to estimate the quantitative importance of formula bypass on

the basis of available published information.

A separate analysis by Cuthbert (1998) summarises the major reasons for Barnett's "weak discipline" on Scottish public spending as (a) a tendency to uprate English and Scottish programmes by a common percentage (as opposed to absolute) increase in the early years of Barnett (b) Major public sector awards such as those to teachers and health service workers were funded in full irrespective of Barnett (c) as noted above, the population ratio on which Barnett is based was not updated for a number of years, despite Scotland's population declining relative to England.

It is not possible to evaluate on the basis of the published information to what extent formula bypass continued, but the reportedly sharper scrutiny to which the funding arrangements for Scotland were being subjected could have reduced the opportunities for casual formula bypass, and accelerated the trend towards convergence. McGregor *et al* also note (1997, p. 73, "the (population) weights of the formula were changed for the first time in 1992 and now reflect current population share and should promote faster convergence". The government has now decided to update the population figures from 1999-2000, and annually after that. More generally Cuthbert (1998) concludes that sources of bypass identified by him have been effectively plugged by the Treasury in the early Nineties and that "the Barnett formula now has teeth, in a way that it did not have originally ... it is already delivering, and will continue to deliver, a squeeze on Scottish public expenditure" (Cuthbert, 1998, p.3).

Interestingly, the Treasury has published two separate estimates of the ratio of the Scottish Block to corresponding English programmes in recent years. In the first case<sup>10</sup>, "Excluding expenditure within the Scottish block which has no English equivalent, the Treasury has calculated the per capita block relative for Scotland in 1993-94 to be 138 (England = 100) (Heald, 1994, p. 172). In the second case, the Treasury again estimated the relative size of the Scottish Block relative to comparable English spending programmes on a per capita basis, this time for 1995-96. It was concluded that, "the analysis suggests that in 1995-96, for Scottish Block spending of about £13.7 billion or £2670 per head, equivalent spending in England was around £98.7 billion or 2020 per head" (Treasury Committee, 1998). If we again take the English figure for government spending per head in 1995-96 as a base of 100,

then the Scottish Block per capita relative is now 132. These estimates suggest that on a per capita basis, the Scottish Block fell from being 38% higher than its English equivalent in 1993-94, to just 32% higher in 1995-96.

These figures have to be treated with caution since the ratio may be affected by factors other than Barnett, for example, adjustments to the composition of the Blocks from one year to the next. Some of the complicating factors are discussed in the Treasury Note. Further, it is not clear whether the Treasury used the same methodology and set of assumptions to construct the corresponding or implied English Block in both cases<sup>11</sup>. Nevertheless, the change in the ratio is certainly in the right direction if we expected to see convergence at last being set into train by the changes of the early Nineties.

At this point we can take stock of the implications of adopting the Barnett formula under devolution. The White Paper on the Scottish Parliament is quite clear on its advantages.

"In practice (the) arrangements based on the (Scottish) Block and (Barnett) formula have produced fair settlements for Scotland in annual public expenditure rounds and have allowed the Secretary of State for Scotland to determine his spending decisions in accordance with Scottish needs and priorities. They have largely removed the need for annual negotiation between The Scottish Office and the Treasury. The government have therefore concluded that the financial framework for the Scottish Parliament should be based on these arrangements with, in future, the Scottish Parliament determining Scottish spending priorities" (Scottish Office, 1997a, p. 22).

But if Scotland has been delivered fair settlements in public spending rounds over the years, it is precisely because these settlements have been produced despite the formula, not because of it. Had the formula actually been effective and operated as it was designed to do, Scottish public spending would now be at significantly lower levels and would be well on the way towards convergence with English levels. It is therefore ironic that it should be commended and adopted for devolution in the context of its having to fail to work as intended, especially since the changes of the early Nineties suggest that this failure may be a thing of the past. It is rather like commending guns for being safe on the basis

that they have only fired blanks in the past, just as they are being loaded with live ammunition.

In the next section we shall consider the implications of the Barnett formula for Scottish devolution.

### 3. ESTIMATING THE EFFECTS OF THE BARNETT FORMULA

The difficulties of establishing whether there has been a move towards convergence of Scottish and English levels of public spending are compounded by the absence of published information on the level of the corresponding English programmes (or "English Block") relating to the programmes comprising the Scottish Block; "(The Barnett) formula allocates to Scotland a population weighted share of the changes in an unknown block of English and Welsh spending programmes" (McGregor et al, 1997, p. 73, italics added): "Although the Scottish and Welsh Blocks are published information (their) English equivalents have never been published". (Heald, 1994, p. 148: italics in original). This means that researchers have not had an accurate picture of the relative magnitudes of the Scottish and (implied) English Blocks and so have not been able to infer issues such as the extent of convergence in the course of a year, and rate of convergence over time.

One solution is to adopt a bottom-up approach by identifying English Departments which have correlates within the Scottish Block and aggregating government spending on them to obtain a measure for the English Block. This approach can be followed up to a point since there are Westminster departments (such as Health) which clearly have counterparts within the Scottish Block just as there are departments (such as Social Security) which fall outside it. However, there are also departments, some of whose spending is English level (and which would have a corresponding element in the Scottish Block) and some of which is UK level and so outside Block calculations. So beyond a point any bottom-up calculations of the inferred English block are subject to guesswork<sup>12</sup>.

However, in March 1998 the Treasury provided an actual estimate of the English Block in response to a request from the Treasury Select Committee. As noted above, they estimated it as £98.7 billion for 1995-96.

This offers up the possibility of an alternative top-down approach to estimating the possible

implications of the application of the Barnett formula. For 1995-96 we now have figures for the Scottish Block and the corresponding "English Block". We know what the cash increase in the Scottish Block is for 1996-97 from 1995-96 from the published figures. This increase is calculated from the programmes constituting the corresponding English Block by applying the Barnett or Portillo factor<sup>13</sup> (.1066 for that year) to those figures. This means that we should be able to reverse the process and obtain a figure for the increase in the English Block from 1995-96 to 1996-97 by dividing the corresponding cash increase in the Scottish Block by the Barnett or Portillo factor. If we add the resulting figure to the English Block estimate for 1995-96, this gives us an estimate for the English Block for 1996-97. We can repeat this process to derive estimates for the English Block for 1997-98, and so on for years afterwards, including planned expenditure over the period of the Comprehensive Spending Review, 1999-2002.

Having derived a series for both the Scottish Block and the implied English Block in cash terms from 1995-96 to 2011-2002, we can calculate growth rates of the respective Blocks both in cash and real terms over the period. The method of calculating these figures and the results are discussed in the Appendix. The resulting growth rates of the Scottish Block and the implied English Block are shown in Charts 1 and 2, in turn derived from Tables 5 and 6 respectively in the Appendix.

How reliable are the various estimates produced by this exercise? We can rephrase this question in two ways. If we were to ask how accurate the estimates of the English Block are, it is subject to a variety of qualifications and these are discussed further in the Appendix. There is inevitably a degree of imprecision in the estimates, some of which reflects future uncertainty and some which may reflect elements extraneous to the Barnett formula affecting the outcome of the Block settlement. So the answer here is that there is inevitably a degree of imprecision in estimates produced by this process.

If we were to ask instead whether the exercise produces estimates of comparative growth that are indicative of the likely comparative growth levels of the respective Blocks, then we have more reason for confidence in the general conclusions we draw from this exercise. Since both the changes to the English Block and the English Block itself (here EDEL from 1999-2000)<sup>14</sup> are found by assuming that the

Scottish Block has been derived by a straight application of the Barnett formula, the critical issue is whether and to what extent there has been - or is planned to be - a bypass of the formula in calculating the Scottish Block. However, many of the sources of bypass in the past identified by Heald (1994) were anomalies or temporary situations and these sources have since been generally plugged up. Also, significant bypass would contradict the stated intention of the government to make Barnett the dominant force in this area. It would seem reasonable to conclude, in the absence of information to the contrary, that Barnett has been fairly consistently applied to the totals for the Scottish Block (and its successor, post-1998-99) and that Charts 1 and 2 are reasonably indicative of the comparative growth (actual and/or estimated and/or planned) of the respective Blocks and their successors over the period in question.

The Charts give some interesting results for the implied effects of the formula. As can be seen from Table 5 and Chart 1, there was little in the way of an implied Barnett squeeze on Scottish public spending relative to English public spending in the three years to 1998-99, for the simple reason there was little in the way of cash increases in public spending north or south of the border. There was however a real squeeze on Scottish public spending over the three year period of about 2.2% a year as Chart 2 indicates, a pain that was almost equally shared south of the border (implied real fall in corresponding English spending levels of about 2.1% a year).

The situation looks very different for the three years covered by the Comprehensive Spending Review, 1999-2002. There are significant cash increases in public spending planned for all parts of the UK over the period and Charts 1 and 2 show the estimated growth rates for both Scotland and England in cash and real terms respectively. As can be seen in Table 5, the successor to the Scottish Block (here the SDEL) is expected to grow at about 4.8% a year in cash terms, while the Barnett conversion suggests that the corresponding English programmes will grow by an average of 6.3% over the period. Here we expect this to correspond to a 2.2% real increase (Scotland) and a 3.7% real increase (England). No real squeeze any more in England or Scotland, but the figures imply a strong Barnett squeeze with growth in Scottish public spending falling about 1.5 percentage points less than growth in corresponding public spending programmes in England, or a little over 4.5% in total over the

three year period of the Comprehensive Spending Review.

This implies a major change in Scotland's relative share of public spending in these areas over a very short period. It would be possible to get at least a partial cross-check on these figures by doing a bottom-up analysis of how the major components of the spending programmes under the control of the Secretary of State/Scottish Parliament are planned to change compared to those in England over the period. One analysis along these lines has been provided by Midwinter and McVicar<sup>15</sup>. They found that over the three years of the Comprehensive Spending Review, government health spending in Scotland was planned to increase by 10% (compared to 25% in England), the corresponding figure for housing expenditure was a rise of 22% in Scotland (49% in England), while education spending was programmed to rise by 15% in Scotland (19% in England).

These are three major programme areas within the Scottish Block and are also the three priority areas identified by the Secretary of State for Scotland<sup>16</sup>. In these cases, the actual planned drift between percentage increases in Scottish and that of corresponding English programmes is actually greater than would be expected from a straight application of the Barnett formula. The important message from this bottom-up approach is that there is no evidence that our method is exaggerating the extent of the Barnett squeeze, if anything it suggests we may be underestimating the effect of the squeeze, certainly as far as major components of Scottish public spending is concerned.

We can draw some general conclusions from this overview of the effects of Barnett over the course of three lean years and three fat years (seen in public spending terms). The irony is that when Barnett formula leads to significant redistribution (the Barnett squeeze), it is at times when its effects may be overlooked by the relatively high cash settlements in Scottish public spending (here 1999-2002). When both sides of the border are suffering real squeezes on public spending (here 1996-99) the pain is shared almost equally on both sides of the border and there is little in the way of a Barnett squeeze.

There is no typical year in the analysis above since the two periods of three years each fall into two distinctive categories of low and high cash increases. But we can work out the

average increases in public spending per year north and south of the border. Scotland will just about break even in terms of an average real increase in public spending of about 0% a year over the six year period, while the corresponding programmes in England will have received a real increase of about 0.8% a year. The squeeze on Scottish public spending programmes relative to English is almost 5% over six years

In the next section we shall draw some conclusion this analysis may have for the implications of the Barnett formula, the Tartan Tax, and the question of whether Scotland is oversubsidised relative to the rest of the UK.

#### 4. SOME POLICY IMPLICATIONS OF "THE BARNETT SQUEEZE"

In this section we shall draw some conclusions about the implications of the Barnett formula. The formula itself can be questioned from the perspectives of arbitrariness and fairness. The "Tartan Tax" can be questioned from the perspectives of its potential effectiveness and the reasonableness of its objectives. Finally it will be suggested that the issue of whether or not Scotland is over-subsidised really misses the point, since in practice it is not a question of whether public spending should be redistributed from Scotland to other parts of the UK, but when this will occur. We shall take each of these issues in turn.

One of the most striking characteristics of the Barnett Formula is its arbitrariness. Suppose the government has a policy of keeping public spending increases in line with inflation. In the absence of inflation there are no cash increases in English programmes and Barnett means that the same holds for corresponding Scottish programmes. Public spending is maintained at the same real level in both England Scotland. Now suppose inflation is 4% a year, English public spending rises by 4% a year to cope with its effects, Barnett converts the increase in corresponding Scottish into 3% and so Scottish public spending in these programmes declines by 1% a year in real terms. Whether or not Scottish public spending keeps pace with English spending or falls behind it in these cases has little to do with rational policy decisions but is dependent on the rate of inflation.

The White Paper on Scotland's Parliament (Scottish Office, 1997a) argues that Barnett has produced "fair settlements for Scotland in annual public expenditure rounds" (p. 22). But

if it is fair this has been a matter of accident rather than design, and this is likely to be a temporary rather than a structural feature of the system. Let us suppose that Barnett has delivered a "fair" settlement for Scotland in 1998-99. Our analysis above suggests that the Scottish Parliament will lose about 4.6% of its funding for programmes under its control relative to comparable English programmes over the next three years, compared to what the increase would have been had the Scottish programmes received the same percentage increase. It is hard to see what changes in Scottish public spending could justify such a reallocation of funding and, as far as is known, there has been no attempt to justify such a switch by the Government or its agencies<sup>17</sup>. If Scotland's settlement was fair in 1998-99, it is unlikely to be fair in just a few years time.

As far as the Tartan Tax is concerned, doubts must be expressed about its potential effectiveness as a source of discretionary income for the Scottish Parliament. The Constitutional Convention was instrumental in framing the major parameters under which the Parliament will operate and it argued in its Report that:

"The power to vary the rate of tax is vital if the Parliament is to be properly accountable. Critics of the proposal to establish a Parliament in Scotland repeatedly state that such a power is essential for an effective Parliament

Scotland's Parliament will have the power to increase or cut the basic rate of income tax for Scottish taxpayers by a maximum of 3p in the pound. This will give it a greater degree of independence" (p. 27)

The document goes on to argue:

"Tough decisions will have to be made, but these will be the decisions of the people of Scotland, made by their elected representatives. There will be hard decisions but they will be our decisions

For example, if Scotland's elected representatives wanted a different level of investment for education, health or other services, they would either have to find savings from existing budgets or raise the necessary revenues and answer for their actions at the ballot box." (p. 28)

The problem with these statements is that they are not based on an accurate understanding of the potential effectiveness of the "Tartan Tax". This can be seen under alternative regimes; for example, we have a real squeeze on Scottish public spending over the three years 1995-99, and a planned Barnett squeeze on Scottish public spending over the 1999-2002 period. Let us lay aside any grand ideas of the Tartan Tax actually enhancing public spending levels; how effective could it be in the more modest task of just compensating for either of these squeezes, real or Barnett-driven?

It would be not at all effective. The White Paper (Scottish Office, 1997a) calculates that if the Parliament used its discretionary powers to the full and added 3p on income tax, it could raise about £450million in extra income. So, suppose the Scottish Parliament had already been in operation during the late-Nineties and had tried to use its discretionary powers to stem the erosion of public spending in Scotland. Since the Parliament will inherit the Barnett formula, and a modified version of the Scottish Block, this may be seen as a reasonable first test of its powers. What would have been the result?

Table 2 in the Appendix helps suggest the answer. In just one year, from 1995-96 to 1996-97, the Scottish Block declined by £409million in real terms. After that it continued to decline by a further £220million and £300million respectively in the subsequent two years. The Parliament could have stemmed the real decline in Scottish public spending levels, but for only little more than a year; 3p on the basic rate (and £450 million revenue) would have compensated for the loss of the £409million in 96-97, but not by much. After that, the real squeeze on spending would have begun to bite in 1997-98 and 1998-99 with the Parliament all but powerless to use tax raising powers to deal with it. A years decline in real public spending would have been staved off on a one-off basis - but at the expense of Scottish income tax rates now having a built-in 3p in the pound disadvantage relative to the rest of the UK.

Alternatively, could the discretionary tax raising powers be effective in staving off a Barnett squeeze? Again, not really. If Scottish public spending was to overcome the Barnett squeeze and grow at the same rate as comparable English programmes over the next three years, Table 5 indicates that it

would have to grow by about an extra 1.5% a year, which means that every year over the period the extra revenue to be found ratchets up by an average of about an extra £200million. The Parliament would be able to use its tax raising powers to find the extra cash required to stave off the Barnett squeeze for little over half the lifetime of the Parliament. After that, the Barnett squeeze overcomes the ability of the Parliament to compensate for it, and Scottish public spending again begins to grow at a slower rate than that for corresponding English programmes. Again, the Parliament will have had just one shot at using its discretionary tax raising powers, could have been effective at staving off another squeeze on spending (this time a Barnett squeeze) for only a few months, and again finds that the price of a temporary respite is permanently (or indefinitely) high tax rates relative to the rest of the UK. This is not an effective tool.

As a cross check, it should be noted that these conclusions are broadly consistent with those of Cuthbert and Cuthbert (1998, pp. 16-17). They calculated that if Westminster was setting public expenditure increases in England simply to compensate for a 3% inflation rate, then the Parliament could would only be able to stave off real cuts in spending by using its discretionary tax raising powers for about 4-5 years.

But perhaps more dangerous than the reality of ineffectiveness is the illusion of effectiveness, and the implications for the reasonableness of its objectives. The White Paper on the Scottish Parliament explicitly designed the tax to be consistent with the recommendations of the Convention (Scottish Office, 1997a, p. 23). But the vision behind the framing of the tax by the Constitutional Convention as detailed above is severely flawed since it talks of the tax encouraging "accountability", and "a degree of independence" and "hard decisions...but our decisions". This completely fails to recognise that any decision that the Parliament may make about raising revenues is liable to be quickly overtaken by events and indeed swamped by the Barnett squeeze. Put in the wider context of the Barnett-controlled drive towards convergence of public spending levels between Scotland and England, the tax is an irrelevance. But it is potentially more dangerous than that because it may give the illusion of discretion and power where none really exists. This may lead to false expectations as to what the



Parliament is or should be capable of, and may engender cynicism and disenchantment when it fails to deliver.

Finally, there is the issue of whether or not Scotland is oversubsidised at the expense of the rest of the UK. This question is really beyond the scope of our paper but we can note that the debate here tends to consistently miss the important point, which is that the Barnett mechanism is a device for levelling per capita public spending in that of Scotland to that of England, irrespective of whether or not such levelling is warranted or not. On current trends we would estimate that the Barnett squeeze will result in funds for programmes under the control of the Parliament being about 6% lower over the course of a four year Parliament than it would have been had Scotland been given the same proportionate increase in public spending as England. This is equivalent to lopping off about \$1bill a year in Scottish public spending by the end of the Parliament's term. Those who would argue for a reduction in Scotland's share of public spending do not have to win their arguments, or even have to make them. They just have to wait. It is programmed to happen anyway, and on a continuing basis.

## 5. CONCLUSIONS

We have argued that the Barnett formula is arbitrary in its effects and that if it does lead to a fair distribution of public spending for Scotland relative to England in any one period, this is likely to be a temporary arrangement which will quickly be overtaken by the Barnett squeeze. It is likely to institutionalise conflict between the Scottish and Westminster Parliaments as its effects on spending relatives are perceived or felt in Scotland. The Tartan Tax would be an ineffective device as far as obtaining discretionary funds for the Scottish Parliament in the face of either a real squeeze or a Barnett squeeze on public spending. It is worse than ineffective because it may give the dangerous illusion of responsibility and effective control where they do not really exist. The question of whether or not Scotland is oversubsidised relative to England really misses the point that the Barnett formula programmes Scotland to converge on English public spending levels anyway. It is not a question of whether Scottish public spending should be reduced relative to English ones, but by how much and how quickly.

There is a further point that seems to have escaped the attention of the policy-makers; the Barnett formula will have to be abandoned sooner or later. Now that it is working effectively it can only be a stop-gap measure. As Heald (1994) noted "the Scottish Office has received an assurance that the operation of the Barnett formula will not lead to a reduction in Scotland's public expenditure below that justified on the basis of relative need" (p. 172). Suppose somehow that that point could be established when the Scottish public spending levels have been reduced to a certain level above English public spending levels. There would be little point in deciding that this was the appropriate floor to which Scottish public spending levels relative to England should be allowed to decline - and then allowing the Barnett formula to continue to be applied to further erode Scottish public spending levels down towards English levels. There is no notion of a floor to spending relatives in the operation of the Barnett formula. If at some point it was decided that enough was enough, then Barnett would have to be abandoned or some means found to counteract its effects.

Further, as Heald (1994, p. 172) suggests, at some point the Secretary of State for Scotland, or successor, may have to make a political judgement to call for a needs assessment study to re-determine the case for additional funds for Scotland. However as noted earlier precision in needs assessment is impossible. We can see this in the context of one spending area, education. Does Scotland need so many small rural Primary schools? Probably yes, if you value the contribution these can make to a community; possibly no, if you tend to emphasise economies of scale from concentrated schooling in the urbanised South. Should Scotland be spending so much on Secondary schooling compared to England? Probably yes, if you value children of all classes being educated together and being given equal access to education; possibly no, if you value parental choice and a greater role for the private sector in secondary education. Does Scotland need a four year Honours degrees? Probably yes, if you value the broad based tradition of Scotland's education system, and the role of the 4-year degree as a standard commodity in most countries of the world. Possibly no, if you would emphasise parity with the rest of the UK.

There is no such thing as a standard needs

assessment when it comes to cultural values and traditions. Any attempt to impose a UK template in these areas would be dominated by the perceptions of those who draw up the assessment, and would probably result in the harmonisation and homogenisation of perceived standards to those prevailing south of the border, to the detriment of the Scottish case.

It could be argued that it is one thing to criticise, but are there any solutions to the dismal scenarios implied in this paper? We can suggest a couple of improvements over the existing situation. Firstly, in line with the new emphasis in transparency, the figures for the corresponding "English Block" should be published. Since these figures must have been identified in the first place (albeit in disaggregated form) in order for the appropriate figure for the "Scottish Block" to be derived, it should be a simple matter to collect them together and publish them as the "parent" block figure from which the "child" Scottish Block is derived. This would help confirm the extent to which there is, or is not, a Barnett squeeze on Scottish public spending. Admittedly this could cause political problems for the government since evidence of Barnett squeeze could be held against it north of the border, while any attempts to bypass the formula could show up in the figures and be held against it south of the border. However, it would certainly help to focus and enlighten the debate in a Scottish context. It is difficult to see how continuing not to produce these figures could be defended, especially when the Treasury has been able to produce estimates for the "English Block" for two years in response to questions from two government committees.

The second recommendation would involve a simple amendment to the Barnett formula. Instead of forcing convergence to English levels of public spending by giving Scotland the same absolute increase in spending per head as in England, this could be reformulated to give Scotland the same percentage increase per head as in England. This would at least broadly preserve the existing distribution of public spending on a share of population basis and recognise Scotland's needs for a structurally and permanently higher level of public spending compared to the UK. This would halt the trend of Scotland's public spending levels converging inexorably towards levels set by English needs and give the Scottish Parliament a chance to operate in a financial

environment where it is not permanently disadvantaged compared to its bigger sister down south.

The advantages of this amendment can be summarised as follows:

1. Automaticity of settlements, which means that it retains a crucial advantage of Barnett in that it removes the need to bargain and argue over annual settlements.
2. It is simple. It could be simply grafted on to the existing proposed arrangement for calculating the Departmental Expenditure Limit for the Scottish Parliament on a population-weighted basis, the only change being that the programme figures for Scotland are calculated to give the same percentage increase per capita as in England, rather than the same cash increase per capita. Further, the Barnett formula is (and is intended to be) a non-statutory administrative arrangement. It is not prescribed in legislation so it should be relatively straightforward to make changes to it.
3. This solution recognises and maintains a higher level of public spending per capita for Scotland relative to England. The Barnett formula does not do this.
4. It actually formalises and institutionalises what is commonly believed to be the funding arrangement that exists at the moment. The conventional wisdom is that Barnett was intended to preserve funding relativities between England and Scotland. This is not surprising since the suggested reformulation actually reflects more closely the way the Scottish Block was calculated over most of the period of its existence than does the Barnett principle. If, as the government has suggested, the existing arrangements have delivered fair settlements to Scotland for the last couple of decades, then this reformulation helps to re-affirm, perpetuate and institutionalise this arrangement.
5. It may be politically attractive since it solves the Micawber problem of the margins discussed earlier; that is it removes the built-in tendency of the Barnett formula to deliver higher public expenditure percentage increases in England compared to Scotland, settlements which may turn out to be acceptable in England but not in Scotland. In the case of Charts 1 and 2, this

means that the bar for Scottish public spending for Scotland in any given year would be comparable to the corresponding bar for England. Such parity should reduce the chances of a confrontation between Holyrood and Westminster along budgetary lines.

6. This solution may actually help create a niche for the so-called "Tartan Tax". As we noted before, the sums involved in the discretionary tax raising powers for the parliament are small and cannot cope with real or Barnett squeezes. However, the solution proposed here eliminates the Barnett squeeze. If, then, public spending increases in England are designed to cope with the effects of inflation, then there may be some scope for the tax to deliver something extra at the margin in Scotland, and as we have noted it is the margin which can make the difference between satisfactory and unsatisfactory outcomes at this level.
7. It is cheap solution seen from a UK perspective.

This would be essentially a pragmatic solution to the problems posed by the Barnett formula. It does not claim that the existing relative levels of spending in England and Scotland are necessarily appropriate, but as others have noted there are no precise instruments for a proper needs assessment in this area anyway. In any case, it does not preclude the possibility of a reassessment of the spending relativities further down the line, though removing the pressure of the Barnett squeeze means that this could be done in a more controlled fashion, rather than crisis-induced by the convergence pressure of Barnett - and , as we noted above, Barnett will have to abandoned at some future date anyway. This solution would allow the Parliament to settle without having to cope with the added pressure of the Barnett squeeze.

Would this solution be politically acceptable down south? To the extent that this is what most people apparently think happens anyway, it should not make much difference. It could be justified as just maintaining the current relativities, and simply preserving the current shares in public spending per head. Indeed, it can be pointed out that Scotland's declining population share (relative to England) would mean that its corresponding share of total public spending in these areas would still be programmed to go down, even with this reformulation.

There are no ideal solutions in this area, it is matter of choosing between imperfect alternatives. However, the Barnett formula is a highly imperfect alternative. Now that it is working as originally intended, it will be like an ever tightening tourniquet around the areas of public spending that many Scots see as crucial to their quality of life. Unless this is recognised along with a willingness to consider alternatives such as the one suggested here, the prospects for the Holyrood Parliament are gloomy indeed.

#### APPENDIX: ESTIMATING THE BARNETT SQUEEZE

We begin with the cash figures (outturns and plans) for the Scottish Block and the Scottish Office Departmental Expenditure Limit<sup>18</sup>, 1995-2002.

The outturns and plans for the Scottish Block are also provided in real terms, 1995-2002.

For the years 1995-99, the Barnett formula indicates that;

$$\Delta S = 0.1066 \Delta E$$

(Where S = Scottish Block and E = corresponding programmes in England)

This means that changes in funding for the corresponding English programmes (the implied "English Block") can also be expressed as a function of changes in the Scottish Block;

$$\Delta E = 9.38 \Delta S$$

Since we can work out  $\Delta S$  for each year 96-99 from Table 1, we can also now work backwards to estimate  $\Delta E$  also. These measures are shown in Table 3.

Since figures for "E", the corresponding "English Block" are not published, in general it has not been possible to accurately measure how cash and real changes in the Scottish Block for a given year compare to corresponding changes in the English figures. However, the recent Special Report by the Treasury Committee (1998) provides estimates of E for a single year 1995-96. In that year, the Treasury estimates that for spending on Scottish Block programmes of around £13.7 billion or £2,670 per head, the "English equivalent" was around £98.7 billion or £2020 a head. This means that in Table 4 we can now

fill in a 1995-96 entry for the corresponding "English Block" of £98,700 million.

But since we have already estimated  $\Delta E$  for each of the subsequent three years (Table 3) this means that we can now estimate E for each of these years also. The estimate for 1996-97 is derived by adding  $\Delta E = -19$  to E for 1995-96, and the process is repeated for each of the two subsequent years, 1997-98 and 1998-99. This gives us the range of estimates for the "English Block" over the period 1995-99 in Table 4.

In principle, the process can also be repeated for the three years spanned by the Comprehensive Spending Review. We know what the planned Scottish Office Departmental Expenditure Limit (SDEL) is in each year (Table 1), and can estimate the cash increase in SDEL. Since this is the total to which the Barnett formula is to be applied, we should also be able to work backwards to estimate the cash changes in a constructed estimate of the corresponding English programmes (defined here as EDEL) and in turn work out an estimate of the cash size of the corresponding EDEL for each year over the period of the Comprehensive Spending Review.

A complication is that the new SDEL does not precisely match the old Scottish Block, and as Table 1 indicates it is about 6.5% smaller than the old Scottish Block (1998-99 figures). The major change between the old Scottish Block and the new SDEL is the exclusion of non-domestic rates from the calculation of SDEL<sup>19</sup>.

We shall assume here that the switch from Scottish Block to SDEL has a neutral effect on the ratio of spending on Scottish programmes relative to spending on corresponding English programmes. This means that for 1998-99, we assume:

$$S/E = 0.1386 = \text{SDEL}/\text{EDEL}$$

Since we know planned SDEL for 1998-99, this allows us to derive a base estimate for EDEL for that year. We can now estimate  $\Delta \text{EDEL}$  for each of the three years of the Comprehensive Spending Review by using the same technique that allowed us to construct an inferred English Block in Table 4. However, the Barnett or Portillo factor is to be changed in 1990-2000 to reflect changes in population and in that year it is intended:

$$\Delta \text{SDEL} = 0.1045 \Delta \text{EDEL}$$

As noted earlier, it is also intended that the Barnett or Portillo factor be reviewed every year from 1999-2000 to reflect changes in population. For our purposes we shall assume that SDEL in the three years 1999-2002 will be derived from EDEL by using the factor 0.1045. The results are shown in Table 4.

We can now use these figures to estimate and compare the cash growth (Table 5) and real growth (Table 6) of Scottish and comparable English programmes under the Barnett formula. A 2.5% inflation rate was used to calculate expected real growth in SDEL and EDEL estimates over the period 1999-2002. This is the governments target rate of inflation and is also currently the Bank of England's central projection for the 18 month period beginning mid-1999 (Bank of England, 1998).

The actual estimates of cash and real growth should be treated with some caution. There are a number of possible sources of error which include;

(1) It should be remembered that all published figures relating to 1997-98 are estimated outturns while those for later years are plans.

(2) We have also assumed that moving to SDEL from the Scottish Block has a neutral effect as far as the ratio of spending on Barnett influenced Scottish Programmes to comparable English programmes is concerned. To the extent that this switch actually raises (lowers) the ratio of spending on Scottish programmes to English programmes, the analysis above will overestimate (underestimate) the percentage change in the corresponding English EDEL.

(3) There may also be changes to the SDEL made outside the Barnett calculation which will result in error in calculating the affect the level of EDEL if the Barnett formula is used without appropriate modification.

(4) Some of the calculations performed to derive a budget for Scottish spending on a particular programme may relate to corresponding English and Welsh programmes, not English only, in which case a different factor may be used.

(5) Further, there may be subsequent changes in the Barnett or Portillo factor (currently 0.1066, shifting to 0.1045 in 1999-2000) to take into account changes in Scotland's relative share of population.

Each of these may affect the accuracy of our

estimates. The first source of possible error is unavoidable and reflects future uncertainty. The second and third source of error may have a marginal effect on inferred growth rates but given that we are talking about marginal adjustments to the old Scottish Block we would be surprised if this finished up having a major impact on implied EDEL growth rates. It is difficult to be sure about the fourth possible source of error except to note that the various ways in which Barnett was circumvented in the old Scottish Block in the past (Heald, 1997) appear to reflect the circumstances of these times. In the absence of further information to the contrary, it is reasonable to assume that Barnett is now, and will be, the dominant driver behind the allocation of SDEL spending. Finally, the relatively slow rate at which the population of Scotland is declining relative to England<sup>20</sup> (Office of National Statistics, 1998) means that errors on forecasting the appropriate Barnett or Portillo factor is likely to be a minor source of error as far as calculating  $\Delta EDEL$  is concerned.

In short, while there are undoubtedly reasons for regarding the estimation and comparison of growth rates in Tables 5 and 6 with some caution, there are also reasonable grounds for believing that the growth estimates in Table 5 and 6 are at least indicative of how Barnett has influenced, and will influence, the growth of public spending in Scotland relative to that of England.

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**Table 1 Scottish Block and Planned Scottish Departmental Expenditure Limits, 1995-2000, Cash Terms, £million**

	Outturn 95-96	Outturn 96-97	Estimated outturn 97-98	Plans 98-99	Plans 99-00	Plans 00-01	Plans 01-02
S	13,750	13,748	13,893	13,979			
SDEL				13,071	13,768	14,431	15,045

S = Scottish Block

SDEL = Scottish Office Departmental Expenditure Limit

Source: (1) Scottish Office 1998 (a) Table 1.3 for Scottish Block  
(2) Scottish Office 1998 (b) Table 1 for SDEL

**Table 2 Scottish Block, 1995-99, Real Terms, 1996-97 Prices, £million**

Outturn 95-96	Outturn 96-97	Estimated outturn 97-98	Plans 98-99
14,153	13,748	13,528	13,228

Source: (1) Scottish Office 1998 (a) Table 1.4

**Table 3 Changes in Scottish Block and Inferred Changes in English Block, 1996-99, Cash Terms, £million**

	96-97	97-98	98-99
ΔS	-2	145	86
ΔE	-19	1359	807

E= Inferred "English Block"

**Table 4: Inferred English Block and Inferred EDEL, 1995-2002, Cash Terms, £million**

	95-96	96-97	97-98	98-99	99-00	00-01	01-02
E	98,700	98,681	100,040	100,847			
EDEL				94,294	100,964	107,309	113,185

EDEL = Inferred "English Departmental Expenditure Limit"

**Table 5: Estimated Annual Growth in Public Spending Compared to Previous Year, Cash Terms**

	96-97	97-98	98-99	99-00	00-01	01-02
S	0%	1.1%	0.6%			
E	0%	1.4%	0.8%			
SDEL				5.3%	4.8%	4.3%
EDEL				7.1%	6.3%	5.5%

**Table 6: Estimated Annual Growth in Public Spending Compared to Previous Year, Real Terms**

	96-97	97-98	98-99	99-00	00-01	01-02
S	-2.9%	-1.6%	-2.2%			
E	-2.8%	-1.3%	-2.1%			
SDEL				2.8%	2.2%	1.7%
EDEL				4.5%	3.7%	2.9%

**ENDNOTES**

<sup>1</sup> See Twigger and Dyson (1997) for further discussion of these issues.

<sup>2</sup> For discussion of the history and logic of the formula, see Heald (1994) Treasury Committee (1997 and 1998) Twigger (1998), Twigger and Dyson (1997).

<sup>3</sup> Similar arrangements are made for Wales and Northern Ireland, though the corresponding Blocks are composed of different programmes in the respective territories.

<sup>4</sup> See the Note by HM Treasury in Appendix 2 (Treasury Committee, 1998)

<sup>5</sup> This slightly misrepresents Mr Micawber's strictures (which were about spending more than you earn) while still being in sympathy with his emphasis of the role of the margins in influencing satisfaction.

<sup>6</sup> Note by HM Treasury in Appendix 2 (Treasury Committee, 1998)

<sup>7</sup> Professor, Department of Government, University of Strathclyde

<sup>8</sup> Treasury Committee (1998) Table 7.1.

<sup>9</sup> See Scottish Office (1998a) Table 1.3.

<sup>10</sup> This was reported in Scottish Affairs Committee (1993).

<sup>11</sup> The issue of convergence is also complicated by the fact that figures for the Block may also be affected by shifts in areas for which the Secretary of State is responsible, while comparisons of programmes within the Block itself can also be affected by transfers of areas of responsibility between sectors and programmes. See Scottish Office (1998a, Table 1.1, p13) for details of these shifts, 1992-99.

<sup>12</sup> I am grateful to several civil servants in the Scottish Office who responded promptly and informatively (in so far as they were able to) to my communications and requests for advice on this matter.

<sup>13</sup> Here we use the term "Barnett or Portillo factor" to refer to the figure measuring the ratio of changes in Scottish Block programmes to changes in their counterparts in the corresponding English programmes in a given year. This is the term used by Bell et al (1996, pp. 21 and 74)

<sup>14</sup> See Appendix for discussion of this re-definition of the implied "English Block".

<sup>15</sup> Unpublished paper by A. Midwinter and M. McVicar presented at a conference in Hull, November, 1998. Reported in The Scotsman, Monday, November 9<sup>th</sup> 1998, p. 4

<sup>16</sup> The Secretary of State commented that for the extra government funding for programmes under his responsibility over the period of the Comprehensive Spending Review, "In allocating these resources I have placed particular emphasis of education, health and housing" (Scottish Office, 1998b).

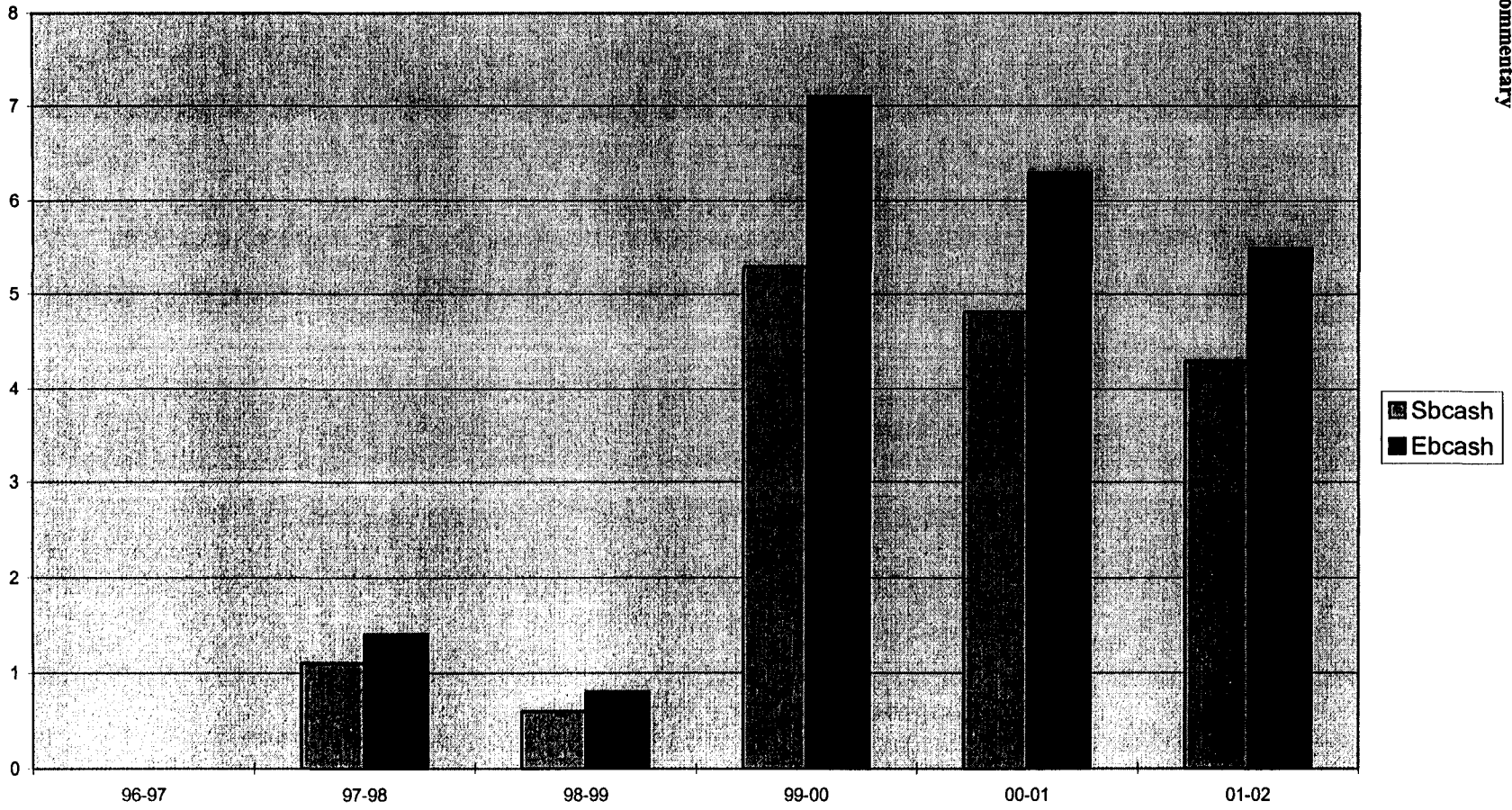
<sup>17</sup> Scotland is expected to suffer a decline in population relative to England over that period, but the decline is too small to account for switches of this magnitude. See Office of National Statistics, 1998, Table 2

<sup>18</sup> This is the measure that broadly corresponds to the old Scottish Block following the Comprehensive Spending Review.

<sup>19</sup> See Scottish Office (1998b).

<sup>20</sup> See Office of National Statistics, 1998, Table 2. The population of Scotland is projected to decline at the rate of about 0.4% per year relative to that of England over the period 1996-2006. If the Barnett or Portillo factor was updated yearly to incorporate such declines (as is now intended), it would only have a marginal effect each year on comparative  $\Delta$ EDEL and  $\Delta$ SDEL outcomes.

**Chart 1 Estimated Growth Rates for Scottish Block or SDEL and Comparable English Programmes, Cash Terms, 1996-2002**



Sb = Growth in Scottish Block or Scottish Office Departmental Expenditure Limit  
 Eb = Growth in Inferred English Block or Inferred English Departmental Expenditure Limit



**Chart 2 Estimated Growth Rates for Scottish Block or SDEL and for Comparable English Programmes, Real Terms, 1996-2002**

