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Adjusting the Scottish Government's Block Grant: taking a wider perspective

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Adjusting the Scottish Government's Block Grant: taking a wider perspective

1. Introduction.

This paper builds on the Jimmy Reid Foundation Working Paper Number 1, published on 11 December 2015 and called 'IFS report provides inadequate basis for Scottish fiscal settlement negotiations'. That paper was a critique of the Institute for Fiscal Studies (IFS) report which had been published in late November 2015, and which had taken an unreasonably narrow perspective on the options available for adjusting the Scottish government's block grant as part of the post-Smith fiscal settlement. Sections 1 to 4 of this paper repeat the JRF working paper critique of the IFS report: section 5 is new, and goes on to assess a wider range of options for the block grant adjustment.

Following the result of the referendum in September 2014, the Smith Commission was established, to suggest a package of increased powers for the Scottish Parliament. Many of the Smith Commission proposals were embodied, (sometimes in modified form), in the *Scotland Bill* which is currently going through the parliamentary process. However, important details of the fiscal arrangements of the reforms were not spelled out – either in the Smith report, or in the *Scotland Bill*. Instead, the details of the so-called fiscal settlement were left to be agreed in negotiations between the Westminster and Scottish governments.

Although we still know nothing about what is happening in these secret negotiations, nevertheless, in the latter part of November the question of the fiscal settlement suddenly achieved a very high public profile. In large part, this was due to the publication of the report of the House of Lords Economic Affairs Committee on 20 November (HOL 2015) which highlighted the potential very serious effects for Scotland if wrong decisions were made about the fiscal settlement, and argued that it was impossible to scrutinise the provisions of the current Scotland Bill properly until the details of the proposed settlement were known. About the same time, the IFS report was published, looking at options for adjusting Scotland's block grant. Since the question of block grant adjustment will be at the very heart of the fiscal settlement, one might naturally expect that the IFS report will prove influential in the current negotiations.

What is argued in the first four sections of this paper is that the IFS report represents a flawed assessment of the options for adjusting the Scottish government block grant: and that there are significant dangers for Scotland of falling into a fiscal trap if the current negotiations take the IFS report as a basis.

At first sight, this might seem a surprising argument to put forward. After all, the IFS report does not recommend any specific method for adjusting the block grant. Quite the reverse, it correctly identifies the difficulty of implementing the 'no-detriment'

principles set down by Smith, while at the same time maintaining the existing Barnett formula. And the IFS report concludes by saying that resolving all the issues it identifies would require a fundamental re-assessment of the funding regime of the UK's devolved governments – a statement with which one can only wholeheartedly agree.

The problem is that, despite this apparent agnosticism, the authors of the IFS report nevertheless make certain key decisions and assumptions about the characteristics of the block grant adjustment process: and these decisions and assumptions are sometimes being made on the basis of flawed or limited analysis.

To give one example: a key area in the adjustment process is the decision on what basis the abatement to the block grant for devolved tax revenues should be indexed through time. There are a number of possibilities – it could be done in line with the growth in tax revenues, the growth in the underlying tax base, or using some other metric. And yet, on the basis of very limited justification, the IFS concentrate on just one of these choices: the three examples which the IFS report analyses in detail, and the fourth option which they put forward as a possible alternative, all use a method based on tax revenue indexation. But the decision to use tax revenues has profound implications for the types of risk to which the Scottish government's revenues would be exposed, and for the way in which Smith's second no-detriment principle will impact on the freedom of action of the Scottish government. The upshot is that, if the IFS report was taken as the starting point from which to negotiate the fiscal settlement, the decision to index on revenue, rather than tax base or some other approach, would have already been taken – effectively by default.

Other aspects which the IFS report either ignores, or to which it pays inadequate attention are:

- What effect does the Scottish government's lack of economic powers have in affecting the balance between risk and potential reward in the eventual fiscal settlement.
- What are the limitations, and risks, of trying to run a monetary union on the basis of a largely formulaic approach to distributing resources.

Section 5 of this report then goes on to look at a range of block grant adjustment options, covering a much wider perspective than the narrow focus of the IFS report. The conclusion reached is that the type of option on which the IFS concentrate, which would involve Scotland having to match the economic performance of the rest of the UK or face severe penalties, poses unacceptable risks for Scotland in the light of the Scottish government's limited economic powers. On the other hand, fully addressing the inherent contradictions in the basic principles laid down in the Smith report would require fundamental constitutional change for the UK along federal lines. There is, however, an intermediate position, involving a fixed real indexation factor for the block grant adjustment, which might provide the bones of an acceptable compromise.

2. Background

This section looks at various topics which provide useful background for the discussion in later sections

Background 1: The Smith Report Principles for the Fiscal Settlement

Paragraph 95 of the Smith Commission Report, (Smith, 2014), sets out various principles which the Commission agreed should govern Scotland's fiscal settlement. Annex 1 reproduces the relevant part of the Smith report.

Background 2: The Block Grant adjustment mechanisms considered in detail in the IFS report

For each of the taxes which are devolved or assigned to Scotland, there will be an abatement to the Scottish government's block grant, to compensate Westminster for the revenues it will have foregone. Determining the initial size of this abatement should pose no problem: in line with principle (3b) of Smith, (see Annex 1), the initial abatement will be set at the amount of revenue raised in Scotland by the devolved tax at the then current UK tax rate and structure. The difficult problem that then arises is how this abatement should be increased, i.e., indexed, in subsequent years.

The following are the block grant adjustment methods considered in detail in the IFS report. For more detail, see that report, particularly sections 4, 5 and 7.

<u>The Indexed Deduction, (ID), Method</u>

Under this method, the initial block grant deduction is increased in line with the subsequent change in tax revenues from the equivalent taxes in rUK. An approach along these lines was originally suggested by Gerald Holtham: so methods of this broad type are sometimes referred to as Holtham indexation.

<u>The Per Capita Indexed Deduction, (PCID), Method.</u>

Under this approach, instead of indexing to the aggregate percentage change in tax revenues, (as in the ID approach), indexation is linked to the percentage change in revenues per person. More formally, this approach involves dividing the indexation factor used in the ID approach by the relative rate of population growth between rUK and Scotland over the relevant period.

<u>The Levels Deduction, (LD), Method.</u>

Under this approach, the block grant abatement is increased each year by adding a population share of the change in comparable revenues in rUK.

The IFS report spends a lot of time analysing how these different approaches perform, particularly with respect to the first 'no detriment' principle, that no government should lose from the decision to devolve power: and with respect to the second 'no detriment' principle, that there should be no detriment from subsequent policy decisions of the other government. Their conclusion is that none of the methods satisfies both principles: the ID and PCID methods, (particularly the PCID one), seem more consistent with the former principle, but less consistent with the

second. On the other hand, the LD method satisfies the second principle, but is less consistent with the first.

This inherent tension between the first and second no detriment principles led the IFS report to note that it could be resolved if the Barnett formula itself were modified. Under this approach, which they denoted the Percentage Per Capita, (PPC), method, the Barnett formula would be modified so that it delivered equal percentage changes in per capita public expenditure, (rather than equal absolute changes). Under this PPC approach, the PCID method would be used to index the abatements to the block grant. While the IFS note the possibility of using this PPC approach, they do not analyse it in detail, and do not specifically advocate it.

A key thing to be noted about the three methods the IFS analyse in detail, (namely, the ID, PCID and LD methods), and also their PPC method, is that all of these methods, in the particular forms used by the IFS, involve relating changes to the block grant abatement to changes in rUK tax revenues. It is this fact, the use of tax revenues, which will be of particular significance from the point of view of this paper: rather than the detailed characteristics of the individual methods.

Background 3: Tax Revenue and Tax Base

It is important to be clear that the use of tax revenue as the basis for indexing the abatement to the block grant is not pre-ordained by anything that is written in the Smith report: or indeed, in the more detailed proposals for implementing Smith set out by the then Westminster coalition government in Cm8990: indeed, rather the opposite.

The Smith Commission did not specify an indexation mechanism: their principle (3c) simply recommended that some appropriate basis of indexation should be used. Nor did Cm8990 recommend a specific option, indicating the final method would need to be arrived at after negotiation between the Westminster and Scottish governments, (para 2.4.8 of Cm 8990). But the wording of para 2.4.8 suggests that, for the most important abatement, that relating to income tax, the starting point for the discussions should be the corresponding arrangement for the Scottish Rate of Income Tax, (SRIT), which is being introduced following the Scotland Act 2012. What is proposed for the SRIT abatement is indexation according to growth in the UK income tax base. Here the tax base, for income tax, is specifically defined as the aggregate of all taxable incomes, after taxable allowances, reliefs, etc: (see Cm 8990 page 29, footnote 3.)

So one option for indexing the income tax abatement is indexation in relation to the tax base. But another option, and the one which, as noted above, the IFS report concentrates on, is indexation in relation to the change in tax revenues. Tax revenues vary with the size of the tax base: with variations in the tax richness of the base: and also with variations in the relevant tax rate. So indexing in relation to tax revenues raises quite different issues as compared with indexing in relation to tax base. These issues will be of great importance to the following discussion in this paper.

Background 4: The Cm 8990 approach towards achieving the 'taxpayer fairness' principle

Smith's principle (4b) states that changes to taxes in the rest of the UK, for which responsibility in Scotland has been devolved, should only affect public spending in the rest of the UK: and vice versa. This is often referred to as the principle of 'taxpayer fairness'. This seems an entirely unexceptionable principle: but, critically, there is no detail in Smith as to how this principle should actually be achieved in practice.

Cm 8990 accepts the principle: but then goes further, by specifying the mechanism by which the principle should be achieved. Specifically, it states that, where changes in rest of UK, (rUK), income tax rates cause changes in public expenditure in Scotland, there should be an adjustment to the block grant abatement to offset these. It is worth quoting in full from para 2.4.14(ii) of Cm 8990, which deals with the case of an increase in rUK income tax: '… similarly, if the UK government spends this extra funding on reserved areas (such as pensions, benefits, defence, debt interest, etc.) then this would be spent UK wide, including Scotland, despite the 'rest of UK' income tax not applying in Scotland. The tax deduction element of the funding model therefore needs to work alongside the Barnett Formula to ensure that increases in 'rest of UK' tax do not fund higher spending in Scotland.'

This approach to implementing the taxpayer fairness principle has profound implications. In particular, it means that, if the Westminster government uses changes in rUK tax rates to alter spending on reserved services, then this will impact on the size of the Scottish government's block grant – so the Scottish government will either have to change devolved services in Scotland, or make an adjustment to Scottish tax rates to compensate: (and the required compensatory change in the Scottish tax rate could, in fact, be larger than the original change in rUK tax rates.) One crucial consequence is that the Cm8990 method of implementing the taxpayer fairness principle means that the Scottish government loses a large part of the control over income tax which it thought it was getting under Smith. But the second important point to note is that this implication is a result of the particular way of implementing taxpayer fairness chosen in Cm 8990: the effect is by no means implicit in the taxpayer fairness principle itself. This distinction, between the principle itself, and the Cm 8990 way of implementing it, is of considerable importance.

It is sometimes suggested that the Cm 8990 approach to achieving taxpayer fairness would require hypothecation of rUK income tax receipts, so it was clear whether a change in rUK income tax was being used to find 'devolved' or reserved services. In fact, hypothecation is not required. Insofar as a change in rUK income tax rates impacts on spend on 'devolved' services, there will be a Barnett consequential for Scotland, which will offset the adjustment to the Scottish government's block grant arising from the 'Cm 8990' adjustment. This means that the system, in effect, automatically computes what portion of the change in rUK income tax revenues

affects reserved services. Therefore you don't actually have to hypothecate any or all of the rUK tax change to reserved services.

3. <u>The IFS choice to use tax revenue as the basis for indexation: a problematic approach</u>

Probably the most significant passage in the whole IFS report is the first paragraph of section 4. This paragraph includes the following statement: 'In this section we assess a number of specific BGA [Block Grant Adjustment] indexation approaches that share one thing in common: in each, the BGA is linked in some way to what happens to equivalent tax revenues in the rest of the UK (rUK). We focus on such approaches because they offer a relatively automatic way of ensuring that the UK Government continues to manage fiscal risks that affect the whole of the UK.'

This short passage has profound, and many would argue, unacceptable, implications for all of the adjustment options which the IFS goes on to consider. The purpose of this section is to explain why.

Let us see first of all why the IFS claim that indexing on tax revenue has the property of automatically ensuring that the UK government continues to manage fiscal risks that affect the whole of the UK. There is a fuller description of this in the IFS section 4. But briefly, if the UK economy as a whole suffers an adverse economic shock, then overall UK tax revenues will suffer. The resulting pressure on public expenditure on devolved services in rUK will lead to cuts, (or a reduced rate of growth), in the Barnett formula block grant element of the Scottish government's finances. But since the abatement to the block grant is indexed to tax revenues, there will be a cut, (or a corresponding reduced rate of growth), in the abatement. The effect is to somewhat smooth the Scottish government's budget. If Westminster then wants to protect its services by increasing borrowing, Scotland will benefit from the Barnett consequentials, without having to increase its own borrowing.

So the IFS are correct in their claim about the effects of indexation on the management of UK wide shocks. But note that indexation on tax base also achieves a similar effect. So the IFS did not need to choose to index on tax revenues to achieve this particular outcome.

However, indexing on revenues does automatically achieve something else: it automatically delivers the Smith Commission's taxpayer fairness principle. Let's see how this happens: (again, the mechanism is described in more detail in section 4 of the IFS report.)

Suppose that the Westminster government increases the rate of income tax, and then spends the resulting increased revenues on 'devolved' services. Then the Scottish government block grant will increase because of the Barnett formula consequentials of the increased spend on devolved services: but the abatement will increase because the increase in income tax revenues will increase the abatement factor – and the two effects will, more or less, cancel out. (Whether they will cancel

out exactly depends on the specific variant of the adjustment method being used: and the IFS report devotes a lot of energy to discussing the different effects under the different variants. But for present purposes, the differences between the possible variants of the revenue indexation approach are second order effects.)

Suppose, on the other hand, Westminster increases the rate of income tax, but spends the revenues on increasing expenditure on reserved services. Then since public expenditure on devolved services has not changed, there will be no Barnett formula consequentials on the block grant element of the Scottish government's funding. But because the indexation factor will have increased with the increase in tax revenues, the abatement to the block grant will have gone up: so, overall, the Scottish government's abated block grant will have gone down. But Scotland will have benefited from a share of the increased expenditure on reserved services. So again, roughly speaking, overall public expenditure in Scotland will not have changed.

So tax revenue indexation does indeed automatically deliver Smith's principle of taxpayer fairness. But it does this by putting in place an automated version of the specific mechanism for achieving taxpayer fairness set out in Cm 8990. And, as was noted in the previous section, this mechanism comes at a significant cost, (a cost which does not attach to the principle itself): namely, it means that the Scottish government effectively loses control of its own full discretion over the income tax rates it wishes to set.

It is important to note that the taxpayer fairness principle could be achieved without putting in place the Cm 8990 mechanism. This would indeed be a non-trivial step, but eminently feasible. For example, one way of doing this would be to have an rUK block grant, with expenditure on 'devolved' services, like health and education, funded out of the aggregate of the block grant plus rUK income tax receipts. Moreover, unless this change is to be purely cosmetic, the block grant for rUK has to be settled independently of the setting of the rUK income tax rate, and of determining spending priorities for rUK devolved services. If the same body is setting the block grant for rUK as is deciding the rUK income tax rate, then rUK block grant is just a residual and we are back with the kind of unacceptable results which have already been explored. So what is required is some form of quasi-federal system.

It might be argued that this involves fundamental constitutional change which goes beyond what was envisaged in Smith. This, however, should be no bar to the possibility being on the table in the current negotiations. After all, EVEL involved fundamental constitutional change going far beyond Smith – and this was implemented without even proper parliamentary scrutiny.

But, returning to the main thread, there is another very significant cost which attaches to the decision to index on tax revenue. The size of the income tax base is, (by the standard definition, and as repeated in Cm 8990), the aggregate of taxable incomes, (net of personal allowances, etc.) The amount of tax revenue will clearly vary with the size of the tax base, and in line with variations in tax rates. But it will

also vary with another important factor – which one might call the tax richness of the tax base. To give an extreme example: the same growth in tax base, (say £1billion), could be achieved either by an increase in taxable incomes in the 40p tax band: or at the 20p band. But in the former case, the resulting growth in tax revenues would be £400 million: double the growth in tax revenues in the latter case. So very significant variations in tax revenues could take place which are entirely due to variations in tax richness, over and above any effect of changes in the size of the tax base, or of variations in the tax rate itself.

Indexing the block grant adjustment on tax revenues, therefore, means that Scotland is exposed to a whole new element of risk, as compared to an indexation approach based on tax base – namely, the risk of differential variations in the tax richness of the tax base. Moreover, there are good reasons for anticipating that such differential movements might well occur in practice:

a) the fact that the tax base which is being devolved excludes dividend income means that not just Scotland's overall tax base, but specifically the upper end of the tax base, is vulnerable if self employed high earners opt to take a higher proportion of their earnings in dividends.

b) there is some evidence that high income earners are in any event more likely to relocate in response to higher marginal rates of tax – or the threat of higher marginal rates.

The fact that the IFS has chosen to concentrate on indexation methods based on tax revenue therefore means that the methods of block grant adjustment which they illustrate all have the effect of exposing Scotland to a completely new class of risk, (the risk of adverse movements in the differential richness of the tax base), over and above risks attaching to differential movements in the size of the tax base itself.

In summary, there are three important points to be taken from the discussion in this section:

i) IFS's stated grounds for concentrating on indexation methods based on tax revenue is that this offers a relatively automatic way of ensuring that the UK government continues to manage fiscal risks which affect the whole of the UK. This argument does not stack up: indexing on revenues does indeed have this effect – but so does indexing on the size of the tax base.

ii) Indexing on revenues does automatically deliver the taxpayer fairness principle. But it does so by automatically enshrining the needlessly strong Cm 8990 delivery mechanism – which means that the Scottish government effectively loses control of its own income tax rate, whenever Westminster changes income tax to fund reserved services.

iii) And indexing on revenue comes at the huge cost of exposing Scotland to a completely new class of risk, (as compared with indexation on tax base):

namely, the risk of differential movements in the tax richness of the tax base.

4. Other areas where the discussion in the IFS report is inadequate

The asymmetry of risk and reward implicit in Scotland's lack of economic powers
The whole thrust of the Smith reforms is to set up a system of risk balanced by potential reward: where the Scottish government is exposed to financial risk if, by imprudent actions or bad luck, it fails to meet certain implicit targets – but, conversely, reaps reward if, by successful policies, or good luck, it overachieves the implicit targets. Setting up such a system has to involve an assessment of whether the Scottish government has a realistic chance of meeting the relevant targets, given the policy levers at its disposal.

The options which the IFS consider in their report, which are all based upon some variant or other of tax revenue indexation, expose Scotland to the full risk of relative economic underperformance as compared to rUK. The targets are challenging. (To be neutral initially, under the PCID variant Scotland's income tax revenues per head have to grow at the same rate as rUK's: under the ID variant they have to grow at about 1.0035 times the rUK rate: and for the LD variant Scotland's income tax revenues have to grow about 1.14 times the rUK rate. Here neutrality is defined as obtaining the same funding as would have been delivered by the original Barnett formula.) Moreover, the penalties if Scotland fails to meet these targets are very severe. In the long run, if Scotland's per capita tax receipts chronically grew less fast than those in rUK, then Scotland's public expenditure would ultimately turn negative under the ID variant: and would be reduced to probably around half rUK levels under the other two variants. (For proof in relation to the ID and PCID approaches, see Cuthbert, 2015b: the discussion there is couched in terms of tax base indexation, but the argument also holds for tax revenue indexation.)

It is thus extremely important, before setting up any such system, to consider the economic tools and levers available to the Scottish government. These tools have to be adequate to give the Scottish government a sporting chance, not just of meeting the implied targets in normal times: but also of breaking out of any progressive spiral of decline if such were to be instituted by, say, an adverse economic shock: (see Cuthbert, 2015a for a discussion of the adverse dynamics potentially implicit in the kinds of variant being considered by IFS.)

The Scottish government will, in fact, lack many of the important economic powers. As a reminder of just how limited the Scottish government's powers will be, its worth remembering that it will, of course, have no control over monetary policy; it will have limited ability to devise a flexible package of taxation, since it will have control of only a single major tax, income tax; it will have restricted borrowing powers; and it lacks control of competition policy, international trade development, licensing of North Sea oil, utility regulation, and a number of labour market responsibilities.

Given this lack of powers, setting up any system where the Scottish government's implicit target is to match economic growth in rUK will imply a substantial asymmetry between risk and reward: the chances of falling short, and being penalised, will far outweigh the chances of exceeding the implicit target, and being able to reap rewards. It is a striking lapse in the IFS report that they concentrate on indexation arrangements, (based on tax revenue indexation), which imply such strong implicit targets, without examining or acknowledging the resulting asymmetry between risk and potential reward, given Scotland's limited economic powers.

To what extent is it possible to rely on rule based systems?
The sixth point in the Smith Commission's principles for Scotland's fiscal framework states that the arrangements should not require frequent ongoing negotiations: but should be subject to periodic review. This has clearly been interpreted by the IFS as a requirement that the arrangements should be largely formulaic: there is a brief discussion on page 45 of the IFS report of the possibility of having ongoing needs assessments, but this is largely dismissed on the grounds that it would tend to weaken the incentives on the Scottish government.

However, the assumption that the required arrangements should be largely formulaic involves glossing over a major issue. It is extremely difficult to design formulae which will operate satisfactorily over extended periods. (The Barnett formula is often put forward as an example of a formula which was fairly successful in this respect: but during the period for which the Barnett formula operated, something like £150 billion worth of oil revenues were quietly transferred out of Scotland, over and above the relatively higher levels of public expenditure which were maintained in Scotland, and after making full allowance for Scotland's share of reserved services and historic debt interest: this was certainly not a satisfactory outcome as far as Scotland is concerned.) In addition, the UK is, of course, a monetary union: and it is now widely recognised that monetary unions cannot operate successfully without periodic adjustments to intra union fiscal transfers. As experience in the Eurozone indicates, it is extremely difficult to adjust such transfers automatically, using a formula based system.

For the above reasons, there are good grounds for arguing that it is a mistake to opt for a system which is overly formulaic. A less sophisticated formula, accompanied by regular adjustments at the periodic reviews envisaged by Smith, might be better than a very sophisticated formula intended to operate for long periods. Discussion of this type of option is missing from the IFS report.

The interpretation of Principle 8 on UK economic shocks
As has been noted in section 3 above, the IFS used Smith's eighth principle (that the UK government should continue to manage risks and economic shocks that affect the whole of the UK), as their justification for concentrating on tax revenue based indexation. Not merely is this argument wrong – a similar effect is achieved by tax base indexation. But in addition, it effectively pushes the IFS into a misinterpretation of principle 8 itself.

While the principle says that the UK government should be responsible for UK economic shocks, it does not say that Scotland should be responsible for all other risks and shocks. Indeed, such a strong interpretation of principle 8 would be quite inconsistent with the concept of a well-functioning monetary union, (which involves pooling of resources against asymmetric within-union shocks and trends.) It would also be inconsistent with the kind of rhetoric that was bandied about in the referendum campaign, about the advantages of the union. And yet, in concentrating on options which put all the risks of differential economic performance on Scotland, the IFS came close to an interpretation of principle 8 which one might characterise as '*if it affects the whole of the UK, its up to the UK government: if it differentially affects Scotland,(other than relative population change, under the PCID and ID approaches), its up to you'.*

Overall, the discussion in this and the preceding section prompts the question: how did the IFS report end up in this unsatisfactory position, particularly given the expertise of the authors in this area? It is possible that the fascinating complexity of this area might have led them to concentrate unduly on what are essentially technical issues: and that, in doing so, they missed part of the broader picture.

5. Implications

The IFS report is quite right in identifying the difficulty of simultaneously satisfying all of the principles which Smith identified for the fiscal framework. What this means is that, in arriving at the final fiscal settlement, the Smith principles will inevitably have to be modified in some respects. There will need to be a process of agreeing which principles are vital: and what others can be relaxed, and by how much.

The problem with the IFS report is that it did not embark on this process in a judicious and even-handed fashion. Instead it plunged in, giving certain principles primacy on arbitrary or ill-considered grounds, while entirely neglecting other important issues.

The result is that, if one were to take the IFS report as the starting point in determining the fiscal settlement, one would find oneself working in one narrow part of the overall space of possible decisions – a part of the space with some very specific properties. The eventual fiscal settlement which would result would be one which involved indexing the block grant adjustments using some form of indexation based upon tax revenues. It would therefore expose Scotland to the whole risk of differential economic performance, (including the risk of differential changes in the tax richness of the tax base, as well as in the size of the base) – a position which is totally unacceptable in the light of the limited economic powers the Scottish government possesses. It would involve the strong Cm 8990 mechanism for delivering the principle of taxpayer fairness – which has the inevitable drawback of meaning the Scottish government loses control of its own tax rates whenever Westminster changes income tax to fund reserved services. It would involve an unjustifiably narrow interpretation of Smith's principle 8 on UK economic shocks.

And it would be a rigid, rule based system, quite unable to deliver the flexibility required in running a successful monetary union.

So, rather than concentrating on the narrow decision space implied by the IFS's misplaced assumptions, let's take a broader view. The following table shows the decision space defined by two important axes: namely, the method of indexation to be used for the block grant adjustment: and how the Smith principle of taxpayer fairness is going to be fulfilled. Four possible options are illustrated, covering different combinations of choices on these two axes.

Option	Indexation	Taxpayer Fairness
A.	Tax Revenue	Cm 8990 mechanism is automatic.
B.	Tax base	'Manual' Cm 8990.
C.	Fixed (low) real percentage increment	'Manual' Cm 8990.
D.	Fixed (low) real percentage increment	'Manual' Cm 8990, plus Westminster decisions on income tax restricted to 'devolved' services.

This is a bit cryptic, so let's start by defining more precisely what is involved in each of these four options.

Option A is the part of the decision space where the IFS report located itself. Block grant adjustment would be based on tax revenue: (e.g., the tax revenue versions of ID, PCID and LD methods as defined by the IFS): use of tax revenue indexation implies, as seen above, that the Cm 8990 mechanism for achieving taxpayer fairness automatically applies.

Option B would imply block grant indexation based on some version or other of movement in the tax base: (e.g., the tax base versions of the ID or PCID methods.) Indexing on tax base means that the Cm 8990 mechanism for taxpayer fairness is no longer automatic, (since a decision by rUK to change tax rates, while it has a direct effect on tax revenue, has no direct effect on the tax base: so it will not trigger the kind of automatic adjustment to the abatement which would cancel the effect of the Barnett consequentials of the tax change). So to achieve taxpayer fairness would involve a manual application of the Cm 8990 mechanism: whenever Westminster changed rUK income tax, there would need to be a corresponding offsetting change to the block grant adjustment, based on the estimated revenue effect of the rUK tax change.

Option C would index the block grant adjustment by a fixed real percentage each year: so the actual indexation percentage would be the fixed real percent plus inflation. To give Scotland a fighting chance of meeting this target reasonably often, the real percentage factor would have to be low: e.g., 1% per annum initially. But clearly, there would need to be a good deal more to the system than that. If it turned out that Scotland was comfortably exceeding the target year after year, there would be a good case for adjusting the target up: and vice versa. So there would need to be regular reviews. But the resulting changes would need to be done in a way which avoided moral hazard: e.g., if Scotland was exceeding its target, but if it knew that the target would be adjusted up to completely to close the gap, there would be no incentive for Scotland to act prudently, and to improve economic performance. Thus the reviews would need to be conducted according to well understood and agreed ground rules: so that, in effect, Scotland and rUK would split the difference if Scotland consistently outperformed the target: and similarly, would split the pain if Scotland consistently underperformed. On taxpayer fairness, Option C would involve the same manual implementation of the Cm 8990 mechanism as Option B.

Option D takes the previous option a step further. It addresses the problem that, as was noted earlier, the Cm 8990 mechanism for taxpayer fairness has the downside that Scotland loses control over its own income tax rate when Westminster changes rUK income tax to fund reserved services. So Option D would restrict Westminster so that it could only change income tax in relation to 'devolved' services. Mechanisms for doing this would involve something akin to federalism. There would need to be an over-arching chamber setting a block grant for each of the parts of the UK, and making decisions on reserved services. Westminster, (or that part of it which would be akin to an English parliament), would be responsible for topping up its block grant through income tax, and other devolved taxes, to fund its spending on 'devolved' services. This would obviously be a major constitutional step.

Having set out these different options, what are their comparative properties? Since an advantage from one perspective is often a disadvantage from another, it is not really meaningful to set out two columns of advantages and disadvantages. So the following table has one column, labelled 'disadvantages, (or sometimes not).'

Option	Disadvantages, (or sometimes not)
A.	Exposes Scotland to full risk of economic underperformance (on tax richness and size of tax base). Neutrality almost certainly unachievable given limited economic powers. Penalties very severe. Scotland loses control of income tax rate when Westminster changes income tax to fund reserved services.
B.	Exposes Scotland to risk of economic underperformance (on size of tax base). Neutrality difficult given limited economic powers. Penalties very severe. Scotland loses control of income tax rate when Westminster changes income tax to fund reserved services.

C.	Need for regular review: (not necessarily a problem.) Moral hazard: (but not if ground rules agreed in advance.) Pro-cyclical: (but not if UK crisis triggers automatic review). Scotland loses control of income tax rate when Westminster changes income tax to fund reserved services.
D.	Need for regular review: (not necessarily a problem.) Moral hazard: (but not if ground rules agreed in advance.) Pro-cyclical: (but not if UK crisis triggers automatic review). Implies major constitutional change: (quasi-federalism.)

One big advantage of Option A, it is sometimes argued, is that it means that the tricky problem of achieving taxpayer fairness is delivered automatically: and not merely that, but the problem of correcting for secondary effects of rUK tax changes is automatically solved too. (What is meant by this: well, a decision to, say, raise the upper rate of income tax will have a primary effect which can be estimated by applying the change in the tax rate to the existing distribution of taxable incomes: but it will have a secondary effect by altering the distribution of taxable income.) But this advantage comes at a steep price: as noted earlier, tax revenue indexation exposes Scotland to the full risk of economic underperformance. Effectively, the cost of tax revenue indexation is to remove the whole of income tax from the common resource whose pooling is meant to be an advantage of the union.

A major downside of Option A is that, as described earlier, the neutrality conditions, (for Scotland to achieve the same funding it would have done under the Barnett formula), look almost certainly unachievable – given Scotland's lack of economic powers. And the penalties if Scotland fails to achieve are very severe.

It has been argued by a senior negotiator on the unionist side that, in fact, Scotland has adequate powers – because the ultimate weapon would be to lower higher rates of income tax below those in rUK, so attracting wealthy individuals, and increasing tax revenues. Even if this argument were sound, (which is doubtful), it hardly amounts to an advantage from the point of view of the majority of Scots who are interested in a more socially just, progressive, tax system. They are likely to be very unenthusiastic about signing up to a system where we are likely to be faced with a fiscal crisis unless we implement a more regressive tax system than rUK.

The position on Option B is similar to that on Option A, but less extreme. Scotland is exposed to a somewhat smaller risk of economic underperformance, (on size of tax base, but not on the tax richness of the base.) But again, Scotland is pitched into an economic race with rUK: and the risks and penalties look unacceptable, given Scotland's lack of economic powers.

Option C is quite different. Supporters of Options A or B might argue that this is a particularly poor option, because there would need to be regular reviews, which would simply provide an opportunity for disagreement: that regular reviews would imply moral hazard, destroying the incentive for Scotland to act prudently, and to grow its economy: and that the fixed indexation factor would be pro-cyclical, (boosting Scotland in good times, depressing it in poor), and would act against the

principle that Westminster should shoulder the burden of whole UK shocks. But actually, each of these arguments is weak, if not perverse. Regular reviews are not a disadvantage: they are a requirement if the fiscal transfers necessary in any well functioning monetary union are to be flexibly adjusted. It is odd for unionists, who spent the referendum talking up the advantages of the UK as a monetary union, to argue now, in effect, that the UK is such a dysfunctional union that it cannot cope with the kind of flexible adjustments that any mature union has to handle. Moral hazard is not an issue if proper ground rules are agreed. And the pro-cyclical element of Option C would be largely removed if there was an understanding that the regular review process would be triggered in the case of an extreme event, like the 2008 shock. Overall, the major downside of Option C would be that it still shares the feature of the Cm 8990 mechanism, of Scotland losing control of its income tax rate in the event rUK changes income tax to fund devolved services.

Option D solves this problem, at the price of having to implement major constitutional change, which would be equivalent to introducing federalism. There are two big arguments against this option. One is – is something akin to federalism feasible, given the demographic and political imbalance of the UK? The second is – if you are going as far as implementing a quasi-federal system, why not go the whole hog, and opt for the devolution of a proper range of tax and other powers?

Overall, where does this leave us? Options A and B look unacceptable, on the grounds that both options involve Scotland engaging in an economic race with rUK, when the risks and penalties are out of kilter with the limited economic powers available to Scotland. And A and B look even more unacceptable to those Scots interested in implementing a more progressive tax system, now we know that elements on the unionist side regard these options as requiring Scotland to do precisely the opposite, and introduce more regressive taxation. Option D is probably a step too far, given public attitudes in England - which means there may be room for compromise around Option C, perhaps.

Afterword

This paper has been concerned with the difficult problems that arise when proposals to give control of own resources to a devolved government interact with existing block grant arrangements like the Barnett Formula. As pointed out in a referee's comments on an earlier version of this paper, the existing arrangements for handling Non Domestic Rates,(NDR), and the current proposals for changing the handling of NDR, are already giving rise to substantial problems. So the whole area of the handling of NDR is another issue that needs to be sorted out - over and above the issues discussed in this paper in relation to income tax.

References

Cm 8990: 'Scotland in the United Kingdom: An Enduring Settlement': H. M. Government, January 2015.
Cuthbert, J. R., (2015a): 'The Barnett formula under the Smith reforms':
Fraser of Allander Institute Economic Commentary, Vol (39)1, June 2015.
Cuthbert J. R., (2015b):. 'Note for House of Lords Economic Affairs Committee following evidence session on 9th September': accessible at
http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/economic-affairs-committee/the-devolution-of-public-finances-in-the-united-kingdom/written/21826.pdf
House of Lords, (2015): 'A Fracturing Union: The implications of Financial Devolution to Scotland': Select Committee on Economic Affairs. 1st Report of Session 2015-16: HL Paper 55.
Institute for Fiscal Studies, (2015): 'Adjusting Scotland's Block Grant for Tax and welfare Powers; Assessing the Options': by D. Bell, D. Eiser and D. Phillips: November.
Smith, (2014): 'Report of the Smith Commission for Further Devolution of Powers to the Scottish Parliament': 27 November.

Annex 1: Smith Commision Fiscal Framework Principles

The following principles are reproduced from paragraph 95 of the Smith Commission Report.

(1) Barnett Formula: the block grant from the UK Government to Scotland will continue to be determined via the operation of the Barnett Formula.

(2) Economic Responsibility: the revised funding framework should result in the devolved Scottish budget benefiting in full from policy decisions by the Scottish Government that increase revenues or reduce expenditure, and the devolved Scottish budget bearing the full costs of policy decisions that reduce revenues or increase expenditure.

(3) No detriment as a result of the decision to devolve further power: the Scottish and UK Governments' budgets should be no larger or smaller simply as a result of the initial transfer of tax and/or spending powers, before considering how these are used.

(a) This means that the initial devolution and assignment of tax receipts should be accompanied by a reduction in the block grant equivalent to the revenue forgone by the UK Government, and that future growth in the reduction to the block grant should be indexed appropriately.

(b) Likewise, the initial devolution of further spending powers should be accompanied by an increase in the block grant equivalent to the existing level of Scottish expenditure by the UK Government, including any identified administrative savings arising to the UK Government from no longer delivering the devolved activity, and a share of the associated implementation and running costs in the policy area being devolved, sufficient to support the functions being transferred, at the point of transfer.

(c) The future growth in the addition to the block grant should be indexed appropriately.

(4) No detriment as a result of UK Government or Scottish Government policy decisions post-devolution

(a) Where either the UK or the Scottish Governments makes policy decisions that affect the tax receipts or expenditure of the other, the decision-making government will either reimburse the other if there is an additional cost, or receive a transfer from the other if there is a saving. There should be a shared understanding of the evidence to support any adjustments.

(b) Changes to taxes in the rest of the UK, for which responsibility in Scotland has been devolved, should only affect public spending in the rest of the UK. Changes to devolved taxes in Scotland should only affect public spending in Scotland.

(5) Borrowing Powers: to reflect the additional economic risks, including volatility of tax revenues, that the Scottish Government will have to manage when further financial responsibilities are devolved, Scotland's fiscal framework should

provide sufficient, additional borrowing powers to ensure budgetary stability and provide safeguards to smooth Scottish public spending in the event of economic shocks, consistent with a sustainable overall UK fiscal framework. The Scottish Government should also have sufficient borrowing powers to support capital investment, consistent with a sustainable overall UK fiscal framework. The Scottish and UK Governments should consider the merits of undertaking such capital borrowing via a prudential borrowing regime consistent with a sustainable overall UK framework.

(a) The Scottish Government's borrowing powers should be agreed by the Scottish and UK Governments, and their operation should be kept under review in conjunction with agreement on the mechanism to adjust the block grant to accommodate the transfer of taxation and spending powers.

(b) Borrowing powers should be set within an overall Scottish fiscal framework and subject to fiscal rules agreed by the Scottish and UK Governments based on clear economic principles, supporting evidence and thorough assessment of the relevant economic situation.

(6) Implementable and Sustainable: once a revised funding framework has been agreed, its effective operation should not require frequent ongoing negotiation. However, the arrangements should be reviewed periodically to ensure that they continue to be seen as fair, transparent and effective.

(7) Independent Fiscal Scrutiny: the Scottish Parliament should seek to expand and strengthen the independent scrutiny of Scotland's public finances in recognition of the additional variability and uncertainty that further tax and spending devolution will introduce into the budgeting process.

(8) UK Economic Shocks: the UK Government should continue to manage risks and economic shocks that affect the whole of the UK. The fiscal framework should therefore ensure that the UK Government retains the levers to do that, and that the automatic stabilisers continue to work across the UK. The UK Parliament would continue to have a reserved power to levy an additional UK-wide tax if it felt it was in the UK national interest.

(9) Implementation: the Scottish and UK Governments should jointly work via the Joint Exchequer Committee to agree a revised fiscal and funding framework for Scotland based on the above principles. The two governments should provide updates to the Scottish and UK Parliaments, including through the laying of annual update reports, setting out the changes agreed to Scotland's fiscal framework.