



Adjusting Scotland's Block Grant

The options on the table

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Introduction: The issue of block grant adjustment

The UK and Scottish Governments have been at loggerheads for some time over the design of the so-called 'fiscal framework' which will accompany the new tax and welfare powers being devolved to the Scottish Parliament following the Smith commission recommendations.

Key to these negotiations is how the Scottish Government's block grant should be adjusted to reflect its new devolved tax revenues and powers and welfare powers and spending responsibilities.

There is broad agreement about how the grant should be adjusted in the first year that the powers are transferred. An amount equal to that raised from the taxes transferred to Scotland will be removed from Scotland's block grant. That way, there is no change in the size of the Scottish budget in that first year. In the initial year, the transfer of tax powers will not add or subtract from the Scottish government's ability to fund public services.¹ Similarly, an amount equal to that spent on the areas of welfare transferred to Scotland will be added to Scotland's block grant.

The main challenge is to determine how the block grant should be adjusted in future years. Consider the case of taxes. Clearly, one cannot simply reduce the block grant by the actual revenue raised from devolved taxes in Scotland in each future year – this would completely undermine the case for devolution, as the Scottish budget could neither gain nor lose from changes in tax rates or from differences in the economic performance of Scotland and the rest of the UK (rUK). Any changes in revenues would be exactly offset by changes in the block grant.

A way is required to index the value of the initial block grant adjustment (BGA) for future years. If tax revenues in Scotland grow more quickly than this indexed BGA, then the Scottish budget will increase compared with what it would have been without the new tax powers. On the other hand, if revenues in Scotland grow more slowly than the BGA, then the Scottish budget will be smaller. The transfer of tax powers will mean that the size of Scotland's budget, and therefore its ability to support public services, will be more strongly linked to the performance of the Scottish economy and to the Scottish Government's tax decisions than has hitherto been the case.

In a paper last November² we examined three different ways of indexing the BGA, all of which relate its value to revenues from the equivalent taxes (also known as the devolved taxes) in rUK. Thus, each of our methods for determining the BGA relate its values to income tax to income tax revenues in rUK.

We chose to analyse variants of this general approach since indexing the BGA to equivalent revenues in rUK helps insulate the Scottish Government's budget from revenue shocks that hit the whole of the UK: something that the Smith Commission said the new system should deliver. This means that, for example, the negative effects of a monetary crisis would not affect the Scottish budget more than the Westminster budget, because, although Scotland's own tax revenues would be reduced, so also would the BGA through its link to tax revenues in rUK. The negative effects of the monetary crisis on

¹ There is some debate about whether this initial deduction should be based on one year or an average across several years, but this is a relatively minor point.

² D. Bell, D. Eiser and D. Phillips (2015), 'Adjusting Scotland's Block Grant for new Tax and Welfare Powers: Assessing the Options', IFS Publication, available at: <http://www.ifs.org.uk/publications/8060>.

Scotland's tax revenues would be offset by the smaller BGA. The extent of this offset depends critically on the design of the BGA.

We showed that none of the specific variants of this different approach performed in a way that seemed fully consistent with two further principles set out by the Smith Commission: the principle that there should be 'no detriment from the decision to devolve' and what has become known as the 'taxpayer fairness' principle. We therefore concluded that it seemed impossible to design a way of indexing the BGAs that was fully consistent with all the Smith Commission's principles, and suggested that this may make it difficult for the UK and Scottish Governments to reach agreement on a method if they prioritised or interpreted the Commission's principles differently.

At the time this earlier work was published, neither the Scottish Government's nor the UK government's preferred option was public knowledge.³ Our analysis has proved prescient, however. In the last few weeks, both governments have published information on their preferred options for indexing the BGA and the rationales behind these preferences. They were indeed a long way apart at the start of negotiations, and remain far apart in terms of principles, even if a recent proposed 'compromise' from the UK government moves a substantial way towards the Scottish government's preferred option in practise.

Therefore in order to inform public debate, this note summarises and analyses the two government's positions on BGA indexation. It also assesses recent 'compromises' from both the UK and Scottish governments that are designed to break the deadlocked negotiations. We find that the two sides have moved closer to an agreement, but that sticking points remain, notably in relation to the extent to which Scotland should bear risks associated with differential population growth.

The Scottish Government's position: 'no detriment', foregone revenues, and the importance of relative population growth

The Scottish Government's preferred indexation mechanism is known as Per Capita Indexed Deduction (PCID). This indexes the BGA to the growth in tax revenues per capita *in rUK* and the rate of population growth *in Scotland*. For example, if revenues per capita in rUK grow by 5% and the Scottish population grows by 1%, the BGA grows by approximately 6%.⁴ A key implication of using Scottish rather than rUK population growth in these calculations is that Scotland is insulated from differences in revenue growth compared to rUK that are the result of differences in population growth.

Why favour the PCID approach? The Scottish Government argues that the implicit insurance against differences in population growth provided by PCID is fair due to its lack of policy levers to influence the rate of population growth in Scotland relative to rUK.

³ Indeed, as we pointed out, the negotiations on which BGA indexation methods and other aspects of the new 'fiscal framework' Scotland would require was taking place behind closed doors and without scrutiny.

⁴ The precise rate of growth of the BGA is 6.05%, calculated as $(1.01) \cdot (1.05) \cdot 100 - 100$.

A second argument is that the value of the BGA should be an estimate of the tax revenues *foregone* by the UK Government through devolving income tax to Scotland. This can be argued to be consistent with paragraph 2.4.7 of ‘An enduring settlement’ which states:

*‘Tax devolution assignment will therefore need to be accompanied by a reduction in the Scottish Government’s block grant equivalent to the revenue foregone by the UK Government both in year 1 and in subsequent years. The reduction in the block grant will therefore need to dynamically and mechanically reflect changes in tax foregone by the UK Government over time’.*⁵

By supporting PCID, the Scottish Government is implicitly arguing that this approach provides the best counterfactual estimate of the revenue foregone by the UK Government through the transfer of the tax powers. This mechanism has the feature that, if tax revenues per capita grow at the same rate in Scotland and in rUK, then the Scottish budget turns out to be identical to what it would have been without tax devolution i.e. Scotland’s block grant being determined completely by the Barnett formula. This is because, with equal growth rates of per capita revenues, the amount of tax raised in Scotland is equal to the BGA, so the two effects cancel out. Put another way, if revenues per capita in Scotland remain at the same level relative to those in rUK, neither the Scottish nor UK governments would gain nor lose financially from the transfer of tax powers.⁶

Thus Nicola Sturgeon argued, in her letter to David Cameron of 9 February:

*“The Scottish Government’s objective is to agree a BGA that delivers – in letter and in spirit – what the Commission said about ‘no detriment’. My clear position is that no detriment in respect of the block grant adjustment for tax devolution means that, provided tax policy in Scotland remains the same as in the rest of the UK and Scotland’s economic performance matches that of the rest of the UK, the Scottish budget should be no better or worse off – either at the point of devolution or in the future – than if current funding arrangements continued without further devolution. Equally, no detriment under these conditions also means that the rest of the UK would be no better or worse off either.”*⁷

In making this argument the Scottish Government is implicitly comparing outcomes under ‘full’ income tax devolution with the outcome under a system where there was no income tax devolution i.e. when the block grant is determined wholly by the Barnett formula. Is this the right comparison to make? The UK Government argues not. Income tax has already been partially devolved to Scotland

⁵ Scotland in the United Kingdom: an enduring settlement, *Scotland Office*, January 2015

<https://www.gov.uk/government/publications/scotland-in-the-united-kingdom-an-enduring-settlement>

⁶ But the Scottish government would gain if its revenues per capita grew at a relatively faster rate or lose if its revenues grew at a relatively slower rate than those in rUK. Thus, it still has incentives to grow its tax revenues per capita.

⁷ <https://firstminister.gov.scot/first-minister-letter-to-the-prime-minister/>

under the Scotland Act 2012 (SA2012). The question of how to adjust Scotland's block grant in respect of that partial devolution has already been agreed: the indexation method being used for the BGA associated with the SA2012 powers and revenues is based on the so-called Indexed Deduction (ID) method.

Unlike PCID, ID takes no account of Scotland's population growth, relative to the UK's. If revenues in rUK increase by 7% as a result of 5% growth in revenues per capita and 2% growth in population, the BGA grows by 7%.⁸ Under ID, the Scottish budget is no worse off with tax devolution as without tax devolution as long as its total revenues grow at the same rate as rUK's. But with Scottish population projected to grow at about half the rate of that in rUK, indexing the BGA on the basis of ID would imply Scotland's per capita revenues would have to grow more quickly than those in rUK, to maintain the size of the Scottish budget compared with the outcome without any transfer of taxes.

Because the ID method is being used to index the BGA in respect of the SA2012 tax powers, the UK Government argues that the ID method forms part of the baseline funding arrangement against which 'no detriment' and 'foregone revenues' should be assessed. Relative to this 'baseline', PCID is likely to be more generous to Scotland even if revenues grow at the same rate per capita in Scotland and rUK, because the Scottish population is likely to grow more slowly than that in rUK. Differences in population growth affect total tax revenue and therefore the ID indexation, but do not affect per capita revenue growth, which determines the PCID indexation. The Scottish Government gains from PCID and the UK government suffers detriment because the BGA increases less quickly than Scotland's revenues. The result is a net financial transfer to Scotland from rUK.

Furthermore one might argue that the use of ID in the existing fiscal agreement sets a precedent for not taking relative population growth into account once income tax is fully devolved. In his 12th February letter⁹ to Pete Wishart, Greg Hands points out that the Deputy First Minister had stated in evidence to the Scottish Parliament Finance Committee in June 2015 that managing population change "is another of the wider range of risks we take on as a consequence of gaining the new responsibilities". This could arguably be seen as evidence that the Scottish Government is implicitly willing to accept population risk and therefore there is no need for a population correction as under PCID.

A key question therefore arises: has either government correctly identified the counterfactual? This is difficult to determine due to the lack of clarity in the Smith Commission report. Its recommendations make reference to maintaining the Barnett Formula as the basis for calculating the underlying block grant and indexing the BGAs 'appropriately'. But it does not mention either population-based risk or the Scotland Act 2012 in this context.

The Scottish Government's position can be summarised thus. The purpose of indexing the BGA is to provide a counterfactual estimate of what level of tax revenues the UK Government has foregone as a result of devolving income tax. PCID provides the most logical way of estimating this counterfactual; and it means the Scottish budget would suffer 'no detriment' relative to the 'Barnett-only' counterfactual if revenues per capita grow at the same rate in Scotland as rUK.

⁸ Note, the 7% figure for rUK revenue and BGA growth here is approximate: the precise figure is 7.1%.

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https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/500284/CST_response_SAC.pdf

The UK Government's starting position: should revenues from devolved taxes in rUK continue to flow north?

The main objection of the UK Government to PCID (other than its argument that the use of the ID mechanism for the SA2012 grant adjustment forms a presumption against using PCID) is its implication for the continued redistribution of part of the future growth in income tax revenues in rUK to Scotland even after income tax is devolved.

This would happen because the Barnett Formula gives Scotland a population share of *increases* in spending in rUK, whereas PCID increases the BGA by an amount based on the percentage growth of rUK per capita revenues. And because in the initial year, Scotland has lower per capita tax revenues, a percentage-based increase in its BGA is smaller than the population share of the spending increase (see Box 1).

Box 1: illustrating income tax revenue redistribution

In the first year that taxes are devolved, assume the population of rUK is 50, and that of Scotland is 5, and that tax revenue per head (also known as tax capacity) is £100 in rUK and £90 in Scotland. Total tax revenue in Scotland is thus £450 (£90 x 5) and this is the amount deducted from Scotland's block grant, leaving the Scottish budget unchanged (and satisfying the "no detriment from devolution" principle).

Tax revenues in rUK are £5,000 (£100 * 50), and for simplicity, assume that this is also the amount spent on comparable (i.e. 'devolved') functions in rUK.

In the second period, suppose that income tax and 'comparable spending' in rUK increase by 20%, driven entirely by growth in revenues per capita (i.e. population is unchanged). This is equivalent to £1,000 growth in cash terms. The Barnett Formula would provide Scotland with a population share (10%) of the rise in comparable spending: £100.

Under the PCID approach, Scotland's BGA would increase by 20% (the percentage growth in rUK revenues per capita). Assuming Scotland's population is also unchanged, Scotland's BGA would increase by £90 (£450*20%) in the second period.

So the Barnett Formula has increased Scotland's block grant by £100 and the BGA has reduced it by £90. Scotland's budget has increased by £10, because part of the increased rUK tax revenues have been in effect been allocated to Scotland via the interaction of the Barnett formula and PCID indexation. This would happen irrespective of whether the growth in rUK revenues was the result of a growth of taxable income or an increase in rUK tax rates.

Note that if rUK revenues and spending were to fall in nominal terms (which can happen during recessions, but is highly unlikely in the long-run), then PCID would redistribute *from* Scotland *to* rUK. To see this, reverse the figures above. If rUK spending falls by £1000 driven by a 20% fall in rUK income tax revenues, the Scottish block grant would fall by £100. But the deduction to the block grant would only fall by £90, causing a redistribution from Scotland to rUK of £10.

The PCID method therefore means that some of the additional future revenues raised in rUK from taxes that are devolved to Scotland do not remain in rUK – instead they are transferred to Scotland. The UK Government argues that this is unfair, and that, once a tax is devolved, it should no longer be subject to ‘pooling and sharing’. This issue is raised in paragraph 2.4.7 of ‘An enduring settlement’ which states:

“Scottish income tax revenues will be retained by the Scottish Government to be spent in Scotland rather than these taxes being pooled and redistributed by the UK Government to be spent across the whole UK.”¹⁰

In objecting to the PCID method, the UK Government also makes reference to Smith’s ‘taxpayer fairness’ principle, which states:

“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.”¹¹

For example, in his 12th February letter to Pete Wishart, Greg Hands states:

“The UK Government agrees with the [Scottish Affairs] Committee that the [PCID] model would “breach the second no detriment principle, that of taxpayer fairness”. This model would see Scotland benefiting from an ever increasing share of income tax from the rest of the UK, irrespective of the Scottish Government’s policy decisions or relative economic performance.’ The letter continues: ‘[Levels Deduction] reflects the fundamental consequence of a tax being devolved, which is that the Scottish Government keeps all revenues from devolved taxes, rather than pooling and sharing these with the rest of the UK.’¹²

It is not clear whether Smith’s ‘taxpayer fairness’ principle was intended to apply only to policy changes, or to the more general issue of revenue growth over time and the consequent implications for redistribution. The UK Government seems to have concerns about both.

In light of these concerns about the continuing redistribution of rUK income tax revenues, the UK Government initially argued that the so-called ‘Levels deduction’ (LD) approach should be used to

¹⁰ Scotland in the United Kingdom: an enduring settlement, *Scotland Office*, January 2015
<https://www.gov.uk/government/publications/scotland-in-the-united-kingdom-an-enduring-settlement>

¹¹ Smith Commission report, p.26 https://www.smith-commission.scot/wp-content/uploads/2014/11/The_Smith_Commission_Report-1.pdf

¹²

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/500284/CST_response_SAC.pdf

index the BGA. This method is based on population shares of aggregate changes in tax revenues in rUK, rather than on their percentage increase. Thus, the change in the BGA is given by the population share of the change in comparable revenues in rUK. For example, if income tax revenues increased by £10 billion in rUK, and if Scotland's population was 10% of rUK, Scotland's BGA would increase by £1bn. The rationale for the LD approach is that, by being based on a population share of a cash terms change in revenue, it is symmetric with the spending side of the Barnett Formula (which calculates the change to Scotland's block grant as a population share of the cash terms change in rUK spending).

One implication of the LD approach is that there is no redistribution of income tax revenues from rUK to Scotland. This is because, whilst the Barnett formula continues to give Scotland a population share of rUK spending increases, the LD approach removes a population share of rUK tax increases. If the extra tax revenue is spent on 'comparable' services – those for which the Scottish Government is responsible in Scotland – then the extra allocation to Scotland from Barnett will be exactly offset by the increase in the BGA.¹³ This therefore satisfies the UK government's interpretation of the 'taxpayer fairness' principle.

However, another implication of this approach is that it sets a particularly high bar for Scottish revenue growth if the Scottish budget is to keep pace with what it would be without devolution of income tax. Because Scottish revenues per capita are lower than those in rUK, Scottish revenues per capita actually have to grow at a faster percentage rate than those in rUK to keep up with the population-shared based increase in the BGA. If Scottish revenues per capita instead grow at the same rate as those in rUK, Scotland's budget falls relative to what it would have in the absence of tax devolution.

On this basis, the Scottish Government argues that LD is an unfair way of indexing the block grant adjustment. In her letter to David Cameron of 9 February, Nicola Sturgeon states:

“The UK Government’s proposals for adjusting the block grant would require Scotland to grow receipts from devolved taxes more rapidly than the corresponding receipts in the rest of the UK simply to ensure its budget was not reduced. This does not meet the Smith Commission’s no detriment principles. In addition, we could not accept the risk that Scottish funding might be reduced below what it would have been under current funding arrangements simply as a result of differential population growth. The Scotland Bill does not give the Scottish Parliament control over the levers that would allow us to grow our population at a faster rate. We could not accept that relative demographic trends within the UK – which have been built up over generations – should lead to a reduction in the Scottish budget.”¹⁴

¹³ If the spending is not on 'comparable' services that are devolved to Scotland but instead on 'reserved matters' that are available or deemed to benefit people across the UK, Scotland receives no extra allocation under Barnett. However, it still sees an increase in its BGA which means that its budget is reduced. This may seem to violate the "no detriment" principle but it should be recognised that it does not. This is because these reserved items – which include things like pensions or defence – are also, at least in principle, of benefit to Scots. The reduction in the Scottish Government's block grant when the BGA increases therefore represents Scotland's contribution to the funding of these services that citizens in the rest of the UK have made via extra income tax. The Scottish Government could increase its own income tax to restore its budget.

¹⁴ <https://firstminister.gov.scot/first-minister-letter-to-the-prime-minister/>

Summary of starting positions

The two governments thus started from very different positions.

For the Scottish Government, the purpose of indexation is to estimate the amount of income tax revenues foregone by the UK Government. The Scottish Government believes the relevant counterfactual for this is how the Scottish budget would have changed in the absence of any tax devolution (i.e. with funding under the Barnett formula only). And because the Scottish Government has no control over relative population growth between Scotland and rUK, it argues that any method should insulate Scotland from revenue risk associated with differences in population growth. The Scottish Government's interpretation of 'no detriment' is that the Scottish budget should be no worse off with tax devolution as without, if Scottish tax revenues per capita grow at the same percentage rate as those in rUK. These objectives lead the Scottish Government to favour PCID. One implication of this approach is the continued redistribution of a portion of the growth in rUK income tax revenues to Scotland even once income tax is devolved.

For the UK Government, primacy is given to the 'taxpayer fairness' aspect of no detriment. For the UK Government, this means that a tax that is devolved is no longer pooled and shared, meaning that Scotland should not benefit from redistribution of rUK income tax revenues in future. Thus the UK Government favours the LD approach. The implication of adopting the LD approach is that Scottish tax revenues per capita would have to grow faster in percentage terms than those in rUK if the Scottish budget were to match the outcome without devolution.

The UK Government's new proposal: a fair compromise?

In an earlier paper published last November we showed that the difference in the amount of money available to the Scottish government under the **PCID** and **LD** approaches could easily differ by over a billion a year after just a decade or so.¹⁵ It is therefore perhaps unsurprising that agreement has been difficult to reach.

However, in an attempt to break the deadlock on the fiscal framework negotiations, both the UK and Scottish governments have recently put forward new 'compromise proposals'. Details of the Scottish Government's new proposals are not publicly available so we cannot assess it. Details of the UK Government's proposals are though. Its 'compromise' is based on the LD approach, but takes into account Scotland's lower initial tax capacity, at least for income tax.¹⁶

Rather than Scotland's BGA increasing by a population share of the increase in rUK tax revenues, Scotland's BGA would increase by a *tax-capacity adjusted* population share of the increase in rUK revenues. For example, imagine that Scotland's tax capacity is 90% of rUK's (tax capacity is the amount of tax raised per person for a given tax rate; for example, if rUK raises £100 tax per capita and Scotland raises £90 tax per capita, Scotland's tax capacity is 90% of rUK's). If rUK income tax revenues

¹⁵ D. Bell, D. Eiser and D. Phillips (2015), 'Adjusting Scotland's Block Grant for new Tax and Welfare Powers: Assessing the Options', IFS Publication, available at: <http://www.ifs.org.uk/publications/8060>.

¹⁶ The UK Government proposes that for other taxes, there will be a presumption to take some but not full account of Scotland's lower initial tax capacity. The method the UK proposes for income tax could be extended in full to other taxes subject to further negotiation, however.

increased by £10 billion, and if Scotland's population was 10% of rUK, Scotland's BGA would increase by £900m (as opposed to £1bn under the unadjusted LD approach).¹⁷

This new proposal – let's call it tax-capacity adjusted levels deduction, or TC-ALD – clearly removes one of the major objections to LD; by taking into account Scotland's lower initial tax capacity, it would no longer require Scottish per capita revenues to grow faster than rUK revenues in percentage terms simply to match the Barnett-only outcome. Indeed, when population and revenue growth are the same in Scotland as in rUK, then PCID, ID and TCA-LD all provide the Scottish budget with the same outcome as Barnett.

The flip side is that by proposing TCA-LD, the UK Government is effectively conceding part of its initial taxpayer fairness argument for favouring the LD approach. By taking account of Scotland's lower initial tax capacity, there will continue to be some redistribution of rUK income tax revenues to Scotland in future.

However, what the TCA-LD method leaves unresolved is the argument about whether it is appropriate for tax devolution to transfer revenue risk associated with population growing at a different rate in Scotland than rUK. Consider what happens if population grows relatively more slowly in Scotland than rUK.

Under PCID, the Scottish budget is protected from the fact that revenues may grow less quickly in Scotland as a result of this; all that matters is whether Scotland's revenues per capita are growing at the same rate as rUK's.

Under TCA-LD (and LD), Scotland loses out from lower population growth. To see clearly suppose that revenues in rUK are growing only due to population growth – revenues per capita are constant –, and Scotland's population and revenues are constant. Under TCA-LD (and LD), Scotland's BGA would be increased by an (adjusted) share of the rUK tax revenue increase. Combined with Scotland's constant own-revenues this would lead to a fall in the Scottish government's overall budget.¹⁸

The UK Government argues that the treatment of relative population change under the LD and TCALD approaches is appropriate (even if it sometimes leads to perverse outcomes), because it is symmetric with the somewhat perverse treatment of relative population change by the Barnett Formula. The Barnett Formula rewards Scotland for relatively slower population growth on the spending side, because it allocates Scotland a population share of increased rUK spending without taking into account differential population growth. Thus it allocates extra money to Scotland even if increases in rUK spending are driven purely by its population growth, and Scotland's population is not growing.

Arguably, it could be considered unfair if Scotland benefited from its slower population growth on the spending side but insulated from negative effects on the revenue side. This seems to be the UK

¹⁷ Note that, to date, the UK Government has only offered to fully take into account tax capacity for income tax. For other taxes to be devolved, the UK Government proposes to take an average of 100% and tax capacity; in other words, it proposes a compromise between TCALD and LD.

¹⁸ While exposing Scotland to some revenue risk associated with differential population growth, LD and TCA-LD, these risks are not as great as under the so called ID method (used for the Scotland Act 2012 tax powers). This is because while the ID method never adjusts for population, the LD and TCA-LD methods use updated population figures each year when calculating increments to the BGAs. Population change is therefore accounted for partially (at the 'margin') under these methods.

Government's position. As already discussed above, the UK Government also argues that the correct counterfactual against which 'detriment' should be assessed should include the Scotland Act 2012 income tax provisions, which do not adjust for differential population growth at all.

The Scottish Government on the other hand argues that by 'penalising' Scotland for its slower population growth relative to a system without any income tax devolution (i.e. full funding via the block-grant), this 'compromise' still does not satisfy the 'no detriment' principle.

The argument about whether TCA-LD or PCID is the most appropriate method for indexing the BGA thus hinges on the differing interpretations of how the no detriment principles relate to population growth, and the appropriate counterfactual against which to assess whether detriment has occurred.

Practical implications

Can we say one side is right and the other wrong? No. Both governments make arguments that are consistent with (different parts of) the Smith Commission's principles. However, we can attempt to quantify the effects of the different proposals on Scotland's budget using assumptions for population growth, revenue growth and public spending growth. This allows us to assess whether, in practical terms, TCA-LD is likely to lead to an outcome closer to the Scottish Government's preferred position (PCID) or the UK Government's starting position (LD). In other words, how much of a compromise do the new TCA-LD proposals represent?

Table 1 does this for *income tax only*. It takes the ONS' principal population projections for Scotland and rUK, and OBR estimates of long-term revenue growth for the UK. In addition it assumes income tax revenues per capita grow at the same rate in Scotland as in rUK, and comparable government spending in rUK grows at the same rate as income tax revenues.

It is important to note that the figures represent only an indicative scenario – revenue, spending and population are unlikely to evolve exactly as projected, and differences in any of these factors would affect how the Scottish Budget would fare under either the UK Government's 'compromise' TCA-LD approach or the Scottish Government's PCID approach for income tax. We present this table to give a sense of the order of magnitudes involved. Clearly arrangements for other devolved taxes will also matter in any final agreement.

As already noted, with Scottish revenues per capita growing at the same rate as those in rUK, the Scottish budget would be no better or worse off than it would have been with no tax devolution, and a continuation of the Barnett Formula.

However, under the Scotland Act 2012 – which has of course been enacted – then with around 40-45% of Scottish income tax having been devolved, and with the corresponding reduction to Scotland's block grant being indexed by the ID approach, then Scotland's relatively declining population is likely to result in its budget being somewhat lower than under this 'no devolution' baseline.

If the remainder of Scottish income tax devolution was indexed according to the ID, then given our assumptions of relative population decline, and no 'catch-up' in Scottish per capita revenue growth, then the Scottish budget would be some 2.4% below the Scottish Government's preferred counterfactual baseline.

The Scottish budget would be smallest under the UK Government’s initial LD proposals. After 15 years, the difference would be equivalent to around 4.5% of the Scottish budget (income tax revenues plus remaining block grant), or just under £1.3 billion in that year in today’s terms.

The UK Government’s compromise TCA-LD approach moves a long way but not fully towards the Scottish Government’s preferred outcome: after 15 years, the gap with the Scottish Government’s preferred approach would be equivalent to just under 2% of the Scottish budget, or just over £0.5 billion in that year in today’s terms. The flip-side is additional rUK income tax revenues of around £0.8 billion a year in today’s terms would be implicitly redistributed to Scotland under this TCA-LD approach after 15 years.

Compared to what would happen under the Scotland Act 2012 powers, the Scottish Government’s proposals would lead to an increase in Scotland’s annual budget of around 1% after 15 years, while the UK Government’s compromise approach would lead to a decrease of around 1% (in both cases equivalent to around £0.2 – 0.3 billion in today’s terms).

Table 1: Difference in Scottish Government’s budget (from block grant and devolved income tax) after 5, 10 and 15 years, relative to two “no change” counterfactuals

	Scottish Government’s Proposals (PCID)	UK Government’s initial proposals (LD)	‘Compromise’ proposals (TCA-LD)
Counterfactual: No income tax devolution			
After 5 years	0.0%	-1.9%	-0.8%
After 10 years	0.0%	-3.3%	-1.4%
After 15 years	0.0%	-4.5%	-1.8%
Counterfactual: Partial devolution under Scotland Act 2012			
After 5 years	+0.4%	-1.5%	-0.4%
After 10 years	+0.8%	-2.6%	-0.6%
After 15 years	+1.1%	-3.5%	-0.7%

Source: Authors’ calculations using ONS population projections, OBR’s Fiscal Sustainability Report, HMT’s Public Expenditure Statistical Analysis and Statement of Funding Policy, and HMRC’s Disaggregated Tax Revenue Statistics

Concluding points

The Smith Commission identified two no detriment principles which are relevant to the design of the block grant adjustment.

One of the no detriment principles is the so-called ‘taxpayer fairness’ principle. In essence, both governments agree that the Levels Deduction (LD) method most effectively achieves this principle *when there are tax rate changes in rUK*. A tax rate change which increases revenues in rUK provides Scotland with a population share of the resultant spending increase; taxpayer fairness requires that the BGA deducts from Scotland’s block grant a population share of the revenue increase in order that Scottish taxpayers do not benefit from higher tax rates in rUK.

How to interpret the taxpayer fairness principle in relation to general revenue growth is proving more contentious. The UK Government argues that, once a tax is devolved, it ceases to be a UK wide tax,

and should no longer be redistributed across the constituent parts of the UK. Thus the UK Government has argued for the application of the LD approach to determine the BGA, not only when there are tax rate changes, but also to deal with revenue growth from one year to the next.

Whether the Smith Commission intended the taxpayer fairness to be interpreted in this way for general revenue growth can be debated. The Scottish Government argues that application of the LD approach is unfair to Scotland, as it would require Scottish revenues per capita to grow at a faster rate than those of the UK to keep pace with the 'no-devolution' counterfactual. Thus they argue that it breaches the other key Smith principle, that of 'no detriment from the decision to devolve'.

This 'no detriment from the decision to devolve' principle is proving highly contentious. The Scottish Government argues that any adjustment mechanism other than PCID would breach this principle. Under PCID, the Scottish budget will be as well off as it would have been with no tax devolution, as long as Scottish revenues per capita grow at the same rate as those of rUK. Any other adjustment mechanism either requires Scottish revenues per capita to grow at a higher rate than those of rUK (which is argued to be unreasonable), or for Scottish population growth to maintain pace with rUK population growth (which is argued to be unrealistic and out of the control of the Scottish Government), in order for the Scottish budget to be as well off as without tax devolution. The UK Government argues this is the wrong counterfactual: partial income tax devolution has already been agreed.

Can we say one side is right and the other wrong? No. Both governments make arguments that are consistent with (different parts of) the Smith Commission's principles. Table 2 summarises the BGA indexation methods they propose, how these treat population growth, and how they relate to the differing interpretation of the 'no detriment' principles. It paints a complex picture.

What is clear is that the UK Government's latest proposal, which adjusts LD for Scotland's lower tax capacity, and therefore ensures some continued redistribution of rUK revenues to Scotland in future, concedes quite a lot of ground relative to its starting position. At the moment, this does not seem to be enough for the Scottish Government, who want assurance that the Scottish budget will be protected from relatively slower population growth. Hundreds of millions of pounds a year in funding are still at stake.

Both governments have taken different interpretations of Smith's no detriment principles. There are not necessarily right or wrong answers here – just differences in opinion. Perhaps it's not surprising that a deal is still illusive. Reaching one will take good will and further compromises by either or both governments.

Table 2: Summary of the BGA methods and their implications

	Treatment of relative population growth	Treatment of differential tax capacity	Meets Smith Commission ‘no detriment from decision to devolve’ principle?	Meets Smith Commission ‘taxpayer fairness’ principle?
Per Capita Indexed Deduction (PCID)	Fully compensates Scotland for slower population growth (but offers no reward to Scotland in the event of faster population growth).	Does not penalise Scotland for lower initial tax capacity.	Yes according to SG, because Scottish budget would be no worse off relative to Barnett if its revenues per capita grow at same rate as those of rUK. No according to UKG, as relevant counterfactual is SA2012. Thus PCID likely to provide an overly generous outcome.	Both governments seem to agree it does not in relation to rUK tax rate changes. This is because a tax rate increase in rUK would result in some additional resource transferring to Scotland through the Barnett Formula (and vice versa for a tax rate cut). For underlying revenue growth, answer depends on whether one believes that it is ‘fair’ that revenues from a tax that has been devolved should continue to be redistributed to regions with weaker fiscal capacity. UKG argues ‘no’ and SG implicitly argues ‘yes’. Commission’s reports’ wording does not make clear which interpretation is correct.
Indexed Deduction (ID)	Takes no account of differential population growth.	As PCID.	No according to SG, as Scotland would be penalised for declining relative population (relative to no devolution), over which it has no policy control. For UKG, ID is more likely to satisfy ‘no detriment’ than PCID, as exposure to relative population change is consistent with existing devolution arrangements and therefore a more appropriate counterfactual against which to assess detriment	As PCID.
Levels Deduction (LD)	Partially taken into account, by updating population shares used to increments to the block grant adjustment, but not updating the baseline adjustment on to which those	Takes no account of Scotland’s lower initial tax capacity: Scotland’s per capita revenues have to grow faster than rUK’s in percentage terms to ‘keep up’.	No according to SG. By not accounting for Scotland’s lower tax capacity, requires Scottish revenue’s to grow faster in percentage terms than rUK’s simply to keep up. UKG seems to imply that it considers that ‘no detriment’ applies to the initial year only, not subsequent years. Only the initial grant adjustment would need to be assessed against	Yes. There is no future redistribution of revenues which have been devolved.

	increments are added.		this principle, not the subsequent indexation.	
Tax-Capacity Adjusted Levels Deduction (TCALD)	As LD	As PCID.	<p>Unfair to Scotland according to SG as this method requires Scottish population to keep up with rUK population if budget is to keep pace with 'no devolution' counterfactual.</p> <p>Too generous to Scotland according to UKG as it results in ongoing redistribution of revenues from a tax that has been devolved – but acceptable as a compromise.</p>	As PCID

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