

Scotland's fiscal future in the UK

David Bell and David Eiser

Division of Economics
Stirling Management School
University of Stirling

Abstract. This paper looks in detail at the proposals for further fiscal devolution to the Scottish Parliament following the No vote in September's independence referendum. The proposals vary significantly in terms of the taxes proposed for devolution and the balance between welfare spending devolution and maintenance of UK-wide social welfare union, but all envisage Scotland evolving into a semi-autonomous state within a more federal UK. Drawing on theories of fiscal federalism and empirical evidence from comparator countries, the paper considers the economic and constitutional constraints (including strategic tax competition, block grant allocation, and institutional factors) that may influence how effectively the Scottish Parliament will be able to exercise devolved tax powers. The paper considers the extent to which the models of fiscal autonomy proposed will mitigate future secession demands.

Keywords: devolution; fiscal federalism; fiscal decentralisation; Scotland



UNIVERSITY OF
STIRLING



1. Introduction

The Scottish electorate voted against independence in the referendum held on September 18th 2014. During the referendum campaign, the leaders of the Conservative, Liberal Democrat and Labour parties made a commitment to introduce legislation at Westminster on a relatively rapid timetable that would bring further tax and spending powers to the Scottish Parliament.

This paper looks in detail at the proposals that these parties have made for further fiscal autonomy of the Scottish Parliament. It does so through the lens of fiscal federalism theory, which is the appropriate framework for the analysis of the allocation of powers in a multilevel government. It considers the economic and constitutional constraints that may influence how effectively the Scottish Parliament will be able to exercise devolved tax powers, and asks whether welfare spending devolution is consistent with notions of Union.

Theory suggests that fiscal decentralisation can bring economic dividends in terms of more efficient public sectors, higher levels of growth and greater public engagement in policy processes. However, realising these dividends is conditional on decentralisation conforming to a set of implicit criteria relating to the balance between levels of fiscal, political and administrative decentralisation, and the institutional arrangements underpinning decentralisation. In relation to this 'ideal type' of fiscal federalism, the main limitation of the Scottish Government's existing settlement is its very low reliance on own source tax revenues. Addressing this high vertical fiscal imbalance has been the focus of much of the recent debate in Scotland. Section 2 outlines the background to this, and the way in which it is being addressed through the recently enacted Scotland Act.

There is an argument that globalisation and international market integration strengthen the case for decentralisation by reducing the costs of smallness. The counter-argument is that the volatility and risk associated with globalisation might create a stronger role for federal governments in macro-economic stabilisation and inter-regional risk sharing. Both of these arguments are reflected in the various proposals for fiscal devolution in Scotland, which we detail in Section 3. These proposals differ markedly in terms of the taxes that are proposed for devolution, the nature of tax-sharing arrangements, and the extent to which welfare spending devolution is compatible with notions of a UK-wide social union and macro-economic risk-sharing. Section 4 compares the proposals with arrangements in other OECD countries.

Whatever fiscal devolution to Scotland is implemented, a number of factors will influence the extent to which the Scottish Government will be able to exercise its powers. In Section 5 we consider the significance of three of these factors in light of theoretical and empirical evidence. First, whether strategic tax setting considerations will constrain the extent to which the Scottish Government will be able to achieve its preferred tax rate. Second, how pressure to reform Scotland's block grant will have to strike a balance between protecting Scotland's overall budget without eroding the incentives that tax decentralisation is intended to create. Third whether UK-wide symmetric institutional reform is required to realise the benefits of fiscal decentralisation.

We conclude that, following the No vote in September 2014, even the more modest of current proposals envisage Scotland evolving into a semi-autonomous state within a fiscally federal UK. The more ambitious proposals envisage Scotland becoming one of the most fiscally autonomous regions

in the developed world, although there are many practical obstacles involved in realising this vision. The extent to which realisation of these proposals will mitigate future threats of secession will depend on the interplay of factors including the extent to which globalisation strengthens the importance of the stabilisation role of federal governments, on the way in which the notion of a social union is reflected in UK government policy, on the reform to Scotland's block grant (Barnett) arrangement and, possibly, on the trend of North Sea revenues.

2. Fiscal autonomy and the Scotland Act

The Scottish Government faces a large vertical fiscal imbalance – its spending substantially exceeds its ability to raise tax. Its expenditure budget of £34 billion (in 2012/13) is financed primarily from a block grant from the UK government; only two relatively small property taxes are devolved to Scotland, Council Tax and Business Rates, both of which raised around £2 billion in 2012/13.

Scotland's large vertical fiscal imbalance is seen as a disadvantage because it reduces the accountability of the Scottish Government to its electorate. The Calman Commission, established by the Unionist parties to review the financial accountability of the Scottish Parliament argued that: *“Funding by block grant alone means that while the Scottish Parliament is completely accountable for the spending of its budget, it is not accountable for the total of that budget or how it is raised; it has no fiscal powers that can be used as policy instruments and it does not have a direct financial stake in the performance of the Scottish economy”* (Commission on Scottish Devolution, 2009, para 3.87).

The Calman Commission's recommendations were largely enacted through the Scotland Act 2012. The main proposal in the Scotland Act is the establishment of a 'Scottish Rate of Income Tax' (SRIT), a flat rate tax set at the same rate for each (UK government-determined) income tax band (Figure 1). From April 2016, the basic, higher and top rates of income tax levied on earned income by the UK Government in Scotland will be reduced by 10p. It will then be up to the Scottish Government to determine the SRIT, the income from which will form part of the Scottish budget. If the Scottish Government chooses to set the SRIT at 10p, the basic, higher and top rates of income tax in Scotland will remain at the same levels as in the rest of the UK. If the SRIT is set at 9p, then the tax rates paid in Scotland at the basic, upper and additional levels would be 19p, 39p and 44p.

Together with the already devolved council tax and business rates and some smaller taxes that will also be devolved to Scotland through the Scotland Act (landfill tax and stamp duty), the Scottish Government will be responsible for taxes equivalent to around 27% of its spending, (assuming it sets a SRIT of 10%). Perhaps more importantly, it will gain the ability to vary its budget at the margin, although the level of gearing is relatively high – increasing the SRIT from 10p to 11p (so that the tax rates paid by basic, upper and additional rate payers in Scotland was 21%, 41% and 46%) would increase the Scottish Government's annual budget by just 1.25%

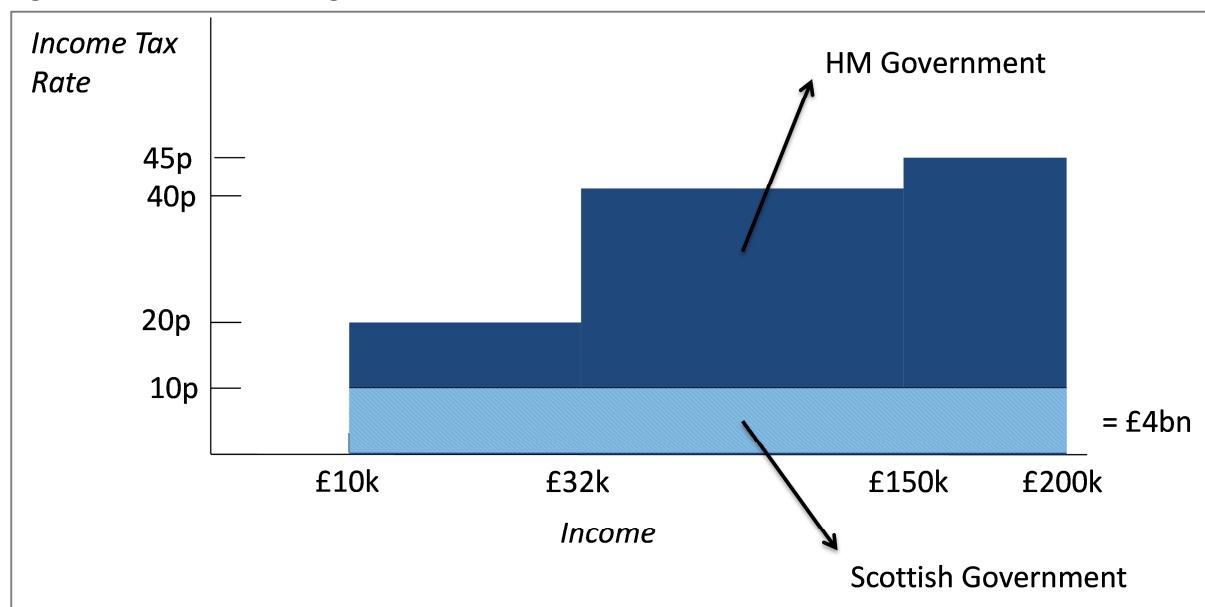
The remainder of the Scottish Government's budget will continue to be funded through a (reduced) block grant. In the initial year, the Scottish Government's block grant reduction will be equal to the value of Scotland's receipts from the SRIT, stamp duty land tax and the landfill tax in that year (so the Scottish Government's budget remains unchanged for that year). In respect of the low-revenue stamp duty land tax and landfill tax, a one-off adjustment to the block grant will be made.

For income tax, the grant from Westminster through the Barnett Formula will be reduced by an amount known as the Block Grant Adjustment (BGA). Understanding how this adjustment is made is critical to understanding the implications of extending tax powers to Scotland. Scotland could be given the power to raise income tax but the BGA could be adjusted so that the resources available are no different than from the historical Barnett formula. Scotland would not face any risk from changing the Scottish rate of income tax rate but neither would it receive any reward. Different ways of setting the BGA offer different combinations of risk and reward.

The method chosen for the BGA is that it will be indexed to the level of growth in comparable tax receipts in rUK. This is known as the 'Indexed Deduction' (ID) method (Holtham, 2009). The strength of the ID approach is that the Scottish Government is protected against cyclical risks that affect the whole UK (e.g. a recessionary downturn which depresses tax revenue growth in rUK would translate into a rise in the level of the block grant). However, the Scottish Government bears the full risks associated with differential tax-base growth¹. If tax revenues grow more rapidly in rUK than in Scotland – as they are likely to given demographic projections - then the reduction in the Scottish Government's grant will grow more rapidly than the increase in Scottish revenues. The corollary of this of course is that the Scottish Government is fully incentivised to grow the income tax base.

Because the SRIT operates effectively as a 'flat tax' (giving the Scottish Government no authority to vary thresholds, or rates individually), it implicitly leaves income redistribution as a reserved issue for the UK Government. Given the significance that has been attached to income inequality during the referendum debate (Comerford and Eiser, 2014), and the sentiment that Scots have greater preferences for a more social democratic model of fiscal policy than those in rUK, this may undermine the extent to which the Scotland Act proposals really meet the desire for greater fiscal policy autonomy.

Figure 1: Income tax arrangements under the Scotland Act



¹ Bell (2013) shows that indexation of the income tax base should take account of how any increase in its size is distributed across the tax bands, since the Scottish Government receives less than a quarter of any increase in the tax base at the additional rate, but half of any increase in basic rate tax liabilities.

3. Options for further fiscal devolution

The Westminster parties will have to agree the precise form of the new tax powers for Scotland. They are also committed to consult with the Scottish Parliament in respect of any Westminster legislation which affects Scotland. This means that the extension to Scotland's tax and spending powers must be discussed by the Scottish Parliament.

Much of the debate on extended powers for Scotland has focussed on the scope for revenue devolution. The context was set by two high-profile think-tanks, the Institute for Public Policy Research (IPPR) and Reform Scotland, which published proposals for tax devolution under the banners 'DevoMore' and 'DevoPlus' respectively; following this, the Liberal Democrats, Labour and Conservative parties have each published their own proposals.

These proposals are summarised in Table 1. If the proposals have anything in common, it is a view that income tax is the most appropriate candidate for devolution. This reflects the view that it consists of a broad and stable base, is visible to the electorate, its burden falls largely on those who benefit from devolved services, and it is relatively easy to collect. DevoMore, DevoPlus, the Liberal Democrats and Conservatives all propose essentially 'full' devolution of income tax with the Scottish Government being given powers to vary tax rates and thresholds (although in most cases income tax on unearned income - investments, dividends and savings – remains reserved at Westminster given the scope for cross-border avoidance, and the Conservatives recommend that Westminster should continue to set the personal allowance). The Labour Party's proposals are somewhat more modest, amounting to an extension to the Scotland Act, so that the devolved part of income tax increases from 10p at each rate to 15p. The proposals also allow the Scottish Government to vary the progressivity of income tax, albeit it in a fairly restrictive way (the Scottish Government would be able to increase the progressivity of income tax rates relative to those in rUK, but not to reduce the progressivity). Note that giving Scotland full control over income tax would avoid the difficulties of vertical tax competition over a shared tax base, which we discuss subsequently.

The next most significant tax in revenue terms is the sales tax, VAT. A number of the proposals (including DevoMore and the Conservatives) argue that this is theoretically a suitable tax for devolution, but suggest that EU Law on state aid precludes the devolution of this tax *within* the UK. As a consequence, DevoMore recommends that half of the VAT revenues raised in Scotland should be assigned to the Scottish Parliament, a proposal which the Conservatives support in principle. The debate is whether such assignment provides the Scottish Parliament with sufficient revenue control to justify the exposure to revenue risk.

National Insurance Contributions (NICs) act like a tax on earnings, but their payment entitles individuals to certain 'contributory' social security benefits that are paid at UK level. It is this link between NIC contributions and benefit entitlement that has resulted in most proposals for tax devolution arguing that NICs should remain reserved. However, the connection between NICs and entitlement has weakened over time, and there is some disagreement over whether this contributory argument is a strong one mitigating against devolution of NICs, or whether NICs should be aligned with income tax and treated as such.

Beyond the big three taxes, (and given that property taxation, the most obvious candidate for decentralisation to a sub-national government is already devolved), there is not a very close correspondence between the proposals.

- Corporation Tax has been proposed for devolution by DevoPlus on the basis that economic and business development are devolved policy areas, although most proposals recognise the risks inherent in devolving corporation tax, namely the fact that the high mobility of the tax base may trigger tax competition.
- Proposals to devolve alcohol and tobacco duties are based on the fact that these 'sin' taxes have a clear link to devolved health policy, but there are serious practical difficulties in devolving these taxes given that they currently operate as a tax on production rather than consumption (Trench 2013), and some fears that differential rates might result in 'illicit trafficking' (Scottish Conservatives, 2014).
- In terms of smaller taxes, there is some consensus that Air Passenger Duty should be devolved as a place-based tax, but less consensus on the suitability of devolving wealth taxes such as Capital Gains and Inheritance tax, which are low-visibility and low-yielding.

What emerges from this discussion is that, with the possible exception of income tax on earned income, there are no obvious candidates for further tax devolution to the Scottish Parliament, emphasising Bahl and Cyan's (2011) point that, if the theory of tax assignment was followed to the letter 'there would surely be no subnational government taxes'. The various proposals vary substantially in the proportion of the Scottish Parliament spending that would be covered by taxes raised in Scotland, from just under one third under Labour's proposals to 55% under the Lib Dem proposals, and around two-thirds under the DevoMore and DevoPlus proposals. What also emerges from Table 1 is that the tax base for several of the taxes proposed for devolution is lower in Scotland than in rUK. We return to this point subsequently.

Table 1: Proposals for tax devolution

	£m (2012/13)	Index of revenues per capita relative to UK	Devo- More	Devo-Plus	Scottish Conservatives	Scottish Liberal Democrats
Income tax	10,865	-12%	✓	✓	✓ (personal allowance reserved)	✓
VAT	9,347	0%	Shared		Potentially shared	
National insurance contributions	8,521	-2%	Devolved longer term			
North Sea revenue (geographic share)	5,581	909%		Devolved longer term		
Corporation tax (excl North Sea)	2,872	0%		✓ (thresholds reserved)		Shared
Fuel duties	2,258	2%		Devolved longer term		
Council tax	2,006	-5%			Already devolved	
Non-domestic rates	1,981	-8%			Already devolved	
Tobacco duties	1,128	41%	Devolved longer term			
Other taxes, royalties and adjustments	1,082					
Alcohol duties	980	16%	Devolved longer term			
Vehicle excise duty	481	-4%		Devolved longer term		
Stamp duties	472	-38%			Devolved through Scotland Act	
Capital gains tax	292	-11%	Devolved longer term	✓		✓
Other taxes on income and wealth	271	4%				
Inheritance tax	243	-8%		✓		✓
Air passenger duty	234	0%	✓	✓	✓	✓
Insurance premium tax	207	-18%		✓		
Betting and gaming and duties	120	17%		Partially devolved		
Landfill tax	100	7%			Devolved through Scotland Act	
Climate change levy	62	14%				
Aggregates levy	45	107%	✓	✓		

Notes: Scottish Labour proposals are not shown as they relate mainly to income tax.

The main area of territorially identifiable public spending in Scotland that remains ‘reserved’ to the UK Government is welfare². This includes virtually all cash transfer benefit payments associated with

² The other main area of reserved territorially identifiable spending in Scotland is associated with science and technology. Reserved spending that is not territorially identifiable largely relates to defence and foreign affairs.

low income, unemployment and disability, as well as the State Pension and other old age benefits. Spending on these benefits amounted to £16 billion in 2011/12, representing half the value of the Scottish Government's existing devolved budget.

As well as debate around revenue devolution, there is also debate around which aspects of welfare benefit spending might be devolved to the Scottish Parliament. The areas of welfare spending most often cited as candidates for devolution include:

- Housing Benefit (a benefit to support those on low incomes with housing costs) has been proposed for devolution by Labour and DevoMore. It is a significant benefit in cash terms, accounting for £1.7 billion. The argument for devolving it is that it is linked to various areas of devolved policy, including social housing and planning. Furthermore, as a place-related benefit, Housing Benefit rates vary according to local conditions, and it is also reasonably stable over the business cycle.
- Attendance Allowance (AA) has been proposed for devolution by Labour, DevoMore and DevoPlus. AA is a benefit that is intended to help with personal care for those aged 65 or over who are physically or mentally disabled and policies. The rationale for devolving it is that Scotland already has a distinct policy with regards to elderly care, with the result that the UK and Scottish systems overlap. The same arguments could be made in respect of Disability Living Allowance paid to pensioners, though this was not part of any of the proposals.
- DevoMore and DevoPlus have also proposed devolving the Work Programme. The Work Programme is the UK Government's flagship programme for supporting the unemployed into work. The rationale for devolving it is that the Scottish Government has responsibility for skills and training policy.
- The Scottish Conservatives have also called for greater flexibility in the way that welfare benefits are provided in Scotland's devolution settlement, arguing for the Scottish Parliament to have the power to supplement existing welfare benefits legislated for at the UK level. This notion of being able to 'top-up' reserved benefits with own resources was similarly proposed by DevoMore.

However, the case for devolving aspects of welfare spending is arguably more difficult to make than the case for devolving tax responsibilities, for both reasons of principle and practicality.

In terms of principles, most proponents of further fiscal devolution have also been keen to stress the importance of maintaining the UK's social welfare union. The UK welfare state is seen as the key element in the risk sharing and resource pooling mechanisms that are seen as a defining characteristic of the Union. Thus the Labour proposals talk of 'rights enshrined at UK level that should be paid for from UK taxes', the Liberal Democrats talk of maintain the UK's social welfare union. The Conservatives describe this social union as 'hugely important to what glues us [the UK] together'.

In this context, it is unclear to what extent welfare devolution is compatible with these principles. The rationale for devolving AA is that Scotland already has a distinct policy with regards to elderly care, with the result that there are both areas where Scottish and UK policy overlap, but also where there exists a different entitlement in Scotland relative to rUK. Scotland has taken a different policy

decision on the issue of elderly care, and it is not clear that in these circumstances the universal insurance principle that underlies the UK benefit system continues to apply. Such a principle has to be built on consensus around the set of adverse events that the state should insure. Scotland has taken the view that personal care should be one of these: the rest of the UK has not.

In terms of practicalities, one issue is that the UK Government is currently in the process of combining Housing Benefit into a new benefit, Universal Credit, which brings together six existing means tested benefits for those on low incomes. The rationale for Universal Credit is to simplify the benefit system and avoid the current situation whereby benefit claimants sometimes face particularly high work disincentives as different benefits are withdrawn simultaneously. Devolving HB will almost certainly negate the proposed advantage of UC, namely that of receiving one benefit from one agency, rather than overlapping benefits from different agencies that tends to result in high benefit withdrawal rates. The practical issue that arises in relation to the Work Programme is that, given that success in placing people into work would generate positive externalities for the UK Exchequer, some kind of inter-governmental financial compensatory mechanism would perhaps have to be built into the arrangements to provide the Scottish Government with appropriate incentives for delivering the Work Programme effectively.

In summary, it is difficult to envisage meaningful devolution of welfare spending in a way that does not threaten the notion of there being some social welfare union that enshrines rights to fundamental welfare services across the UK. Because of this, there is arguably more contentiousness around welfare spending devolution than there is around revenue devolution. Furthermore, devolution of welfare spending risks attenuating the issues around the vertical fiscal imbalance that the Scottish Government already faces.

4. The Scottish proposals in an international context

There is often a perception in the UK debate that Scotland has far less fiscal autonomy than decentralised regions in federal countries. It is useful to consider how the proposals described previously would, if implemented, alter these comparative statistics.

Figure 2 compares fiscal decentralisation ratios in selected OECD countries with the proposals for further fiscal devolution to the Scottish Parliament. The horizontal axis plots the share of sub-central government (SCG) expenditure in total government spending, and the vertical axis plots the share of SCG tax revenue in total government revenues. For the UK as a whole, SCG (i.e. local authorities in England and the three devolved governments) account for 27% of total expenditure but only 5% of total revenues. However, the asymmetric nature of devolution in the UK means that this statistic is not particularly meaningful when considering devolution in Scotland specifically. Instead, it is more relevant to consider the SCGs (i.e. Scottish Government and local authorities) share of all revenues and spending in Scotland. On this basis³, SCG accounts for 50% of all public spending but only 8% of total tax revenues in Scotland, shown by the point 'UK (Scotland)'.

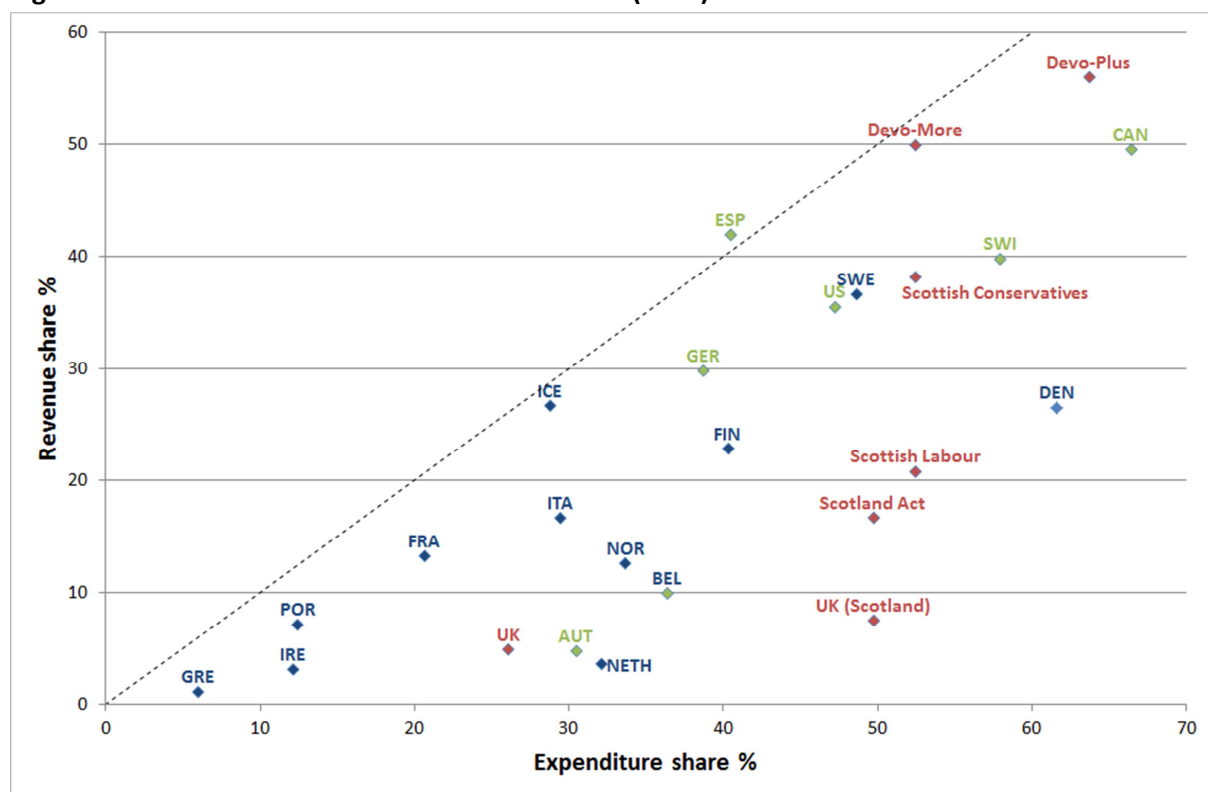
The Scotland Act proposals result in the Scottish Government's revenue share increasing to 17%, whilst the Scottish Labour proposals would increase both the revenue and expenditure

³ We allocate to Scotland per capita shares of UK spending on debt interest, non-identifiable public services such as defence and foreign affairs, and a geographical share of tax revenues from North Sea production.

decentralisation ratios slightly further (the expenditure share increases because of the proposal to devolve expenditure on housing benefit to Scotland).

The Devo-More and Devo-Plus proposals result in radical increases to the Scottish Government’s revenue share. When fully implemented, the Devo-More proposals bring the Scottish Government’s revenues into line with spending (although this is achieved in part through the assignment of some VAT revenues; the extent to which tax assignment can be thought of as tax devolution is discussed below). The Devo-Plus proposals, when fully implemented, would see the Scottish Government responsible for 65% of all public spending in Scotland and 56% of all revenues raised. The Devo-More and Devo-Max proposals, fully implemented, would effectively imply that the Scottish Government is one of the most fiscally autonomous sub-central governments in the world⁴.

Figure 2: Decentralisation ratios in OECD countries (2010)



Source: OECD and author analysis. Federal countries are plotted in green, unitary countries in blue.

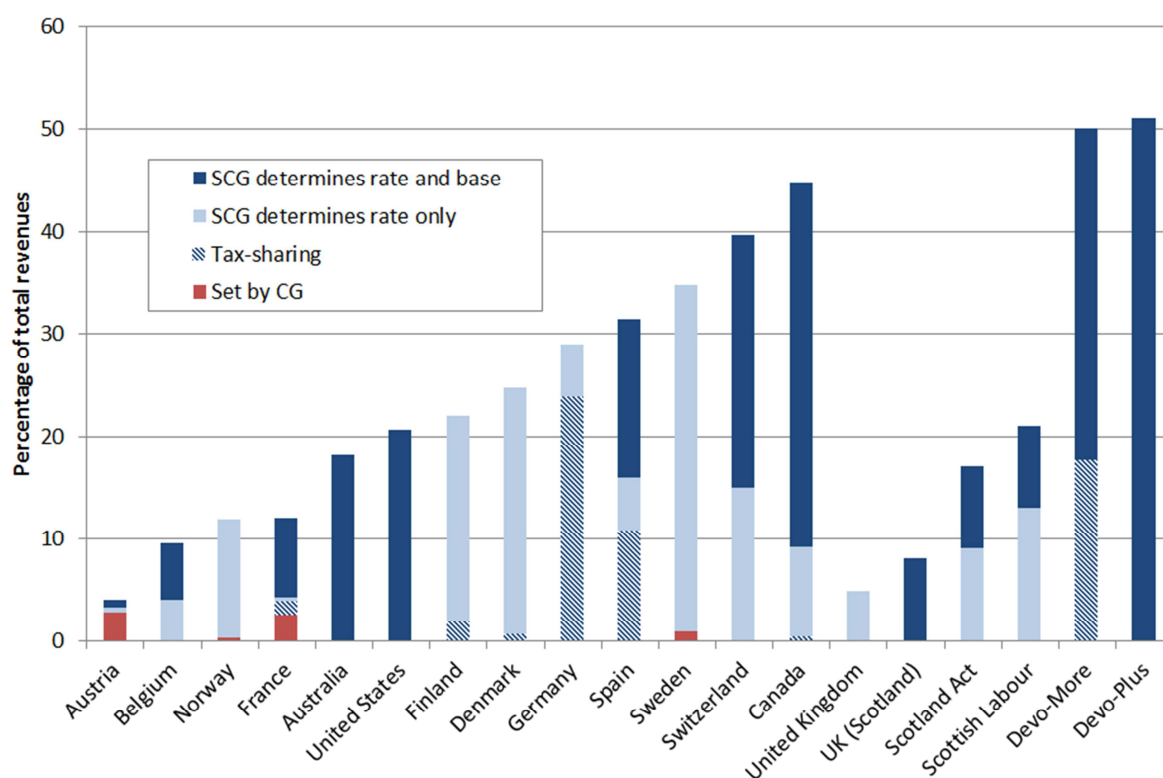
However, looking at simple measures of revenue shares does not tell the whole story. SCGs have varying levels of control over ‘devolved’ taxes. Broadly speaking, three types of tax decentralisation are most often implemented. First, SCG has full control over a tax if it can vary both the tax rate and the tax base (i.e. thresholds). The second category of tax decentralisation is where SCG can only vary the tax rate. Third, tax assignment arrangements occur when a tax is shared between different levels

⁴ Some other countries also have asymmetric decentralisation settlements which are not reflected in this chart. In Spain for example, the Basque and Navarre regional governments operate under the devo-max model, and thus have a higher level of fiscal autonomy than the Scottish Government would under either Devo-More or Devo-Plus. Similarly, Quebec has a somewhat asymmetric fiscal settlement in Canada.

of government, with the tax rate and base either agreed bilaterally or, more often, unilaterally by the central government.

Figure 3 shows the tax power of SCG in selected OECD countries. Some countries, notably Germany, which initially appear to have high levels of tax decentralisation, actually use tax-sharing arrangements to a large extent, giving SCG little direct autonomy over tax revenues. Others such as Finland and Denmark constrain SCG to have control over rates only. The Scotland Act proposals will give the Scottish Government control over tax rates but not the tax base. The Devo-More and Devo-Max proposals will bring significantly more autonomy to vary tax rates and bases, although Devo-More also makes use of tax-sharing arrangements in the case of VAT. (As in the previous graph, the data points for Spain and Canada consider the average arrangements for Autonomous Communities and Provinces respectively, and do not reflect the arrangements of ‘special’ regions – Basque and Navarre in Spain, and Quebec in Canada).

Figure 3: Tax power of sub-central governments in OECD countries



Source: OECD and author analysis.

5. Issues and constraints

The debate around further tax and spending devolution to the Scottish Parliament takes place alongside several related fiscal debates, and we review three of these here. First, to what extent would the Scottish Parliament be constrained in how it uses new tax powers given fiscal interactions with the UK Government; second, how might fiscal devolution interact with block grant reform and what implications will this have for the Scottish Government’s grant; third, whether institutional reform needs to occur in tandem with fiscal devolution.

5.1 Fiscal competition

Theoretical and empirical studies in the economics of fiscal federalism indicate that there are likely to be significant inter-dependencies between national and devolved governments in how the tax rate is set. The literature identifies two types of taxation externalities: a horizontal externality, working among governments of the same level; and a vertical externality, working between different levels of government.

Theory suggests that the presence of vertical externalities is likely to lead to tax rates that are too high compared to the social optimum, because different layers of government do not consider the effect of their tax rate on erosion of the tax base. Dahlby and Wilson (2003) describe this as ‘the public sector version of a common property resource problem’, leading to over-exploitation of shared tax bases (in effect, the regional government takes its marginal cost of public funds, MCPF, function as being lower than the social MCPF). However, the few empirical studies that have looked at this issue have found evidence that the tax rate set by regional governments can be both positively or negatively related to the national level tax, depending on the tax considered and various institutional factors (Esteller-Moré and Solé-Ollé, 2001).

On the other hand, theory suggests that horizontal externalities, which have received much more attention in the literature, are likely to lead to tax rates that are too low relative to the social optimum. Horizontal externalities are most often discussed in relation to fiscal competition (where, given tax base mobility, the tax rate on a mobile factor can affect the budget constraints of neighbouring jurisdictions). But they can arise through other channels, including expenditure spillovers (where the public services provided by one jurisdiction enter the welfare function of a neighbouring jurisdiction because their citizens might benefit from such expenditures) and yardstick competition (where the views of an imperfectly informed electorate as to the efficiency of their jurisdiction in the provision of public services are inferred in part by using neighbouring jurisdictions as a yardstick, which leads to mimicking) (Revelli, 2005).

A large number of empirical studies find evidence for horizontal tax interdependencies. Evidence suggests that horizontal tax interactions are stronger for more mobile tax bases (personal and business taxes) than property or consumption taxes, stronger among smaller local governments than larger regional governments, and are reduced by equalisation grants. There is evidence of spatial autocorrelation in tax rates across jurisdictions in Switzerland and Sweden. There is also evidence that much of this competition is driven by factor mobility. Milligan and Smart (2013) for example show that the shifting of taxable income between provinces accounts for about two thirds of the total tax avoidance in response to unilateral provincial tax changes in Canada. Day and Winer (2001) find evidence of fiscally-induced migration across Canadian provinces. Feld and Kirchgasser (2002) show that income tax-rate differences across Swiss Cantons influence firm location through the influence of firms’ ability to attract skilled labour.

However, there is also evidence that tax competition between sub-central governments is not as strong as is sometimes supposed. One reason for this is that higher tax rates are generally associated with better public services, thus competition should be thought of in terms of fiscal competition rather than purely tax competition. Moreover, although tax base mobility is increasing over time, particularly for the highest earners (OECD, 2013), the extent to which tax or fiscal competition triggers migration depends in part on the extent to which people respond to a tax rate increase by

working less (rather than migrating), and the extent to which tax differences are capitalised into house prices. Hilber et al (2011) find that windfall central government grants to English local authorities are almost fully capitalised into house prices, (although whether such an effect will mitigate the migratory incentives of such grants or itself is the result of a migratory response is less clear). Brulhart and Parchet (2014) show that, although a ‘domino-like’ reduction in Swiss Cantonal inheritance tax rates over a long period was blamed on concerns about tax base competition, mobility of the relevant tax base (wealthy retirees) is in fact very inelastic with respect to the tax rate. They conclude that ‘alleged pressures of tax competition did not seem in reality to exist’.

The OECD (2013) finds that, in most countries, SCG tax rates have converged rather than diverged over time, but that they have converged upwards (perhaps counter to the expectation of those who predict a ‘race to the bottom’ in tax rates). This might reflect the fact that, for most taxes, the elasticity of revenues with respect to the tax rate is less than one, so that SCGs have to raise rates to raise revenues in response to demand for higher spending; taxes for which the elasticity of revenues with respect to the rate is greater than one are generally not devolved (e.g. corporation taxes), precisely because of the race to the bottom argument.

A priori, in cases of a shared tax (such as income tax under the Scotland Act) it is not clear whether the horizontal or vertical externality is likely to dominate, (Brulhart and Jametti, 2006). This is particularly the case when considering the Scotland Act, as it will involve the Scottish Government facing vertical and horizontal fiscal externalities from the same Westminster Government (which is in effect setting a UK-level income tax and the ‘devolved’ element of income tax in rUK).

More generally, the extent to which the Scottish Government will feel constrained in setting a different tax rate from that in rUK for any devolved tax will clearly depend on the mobility of the tax base. In relation to income tax, although there is some evidence that households are generally not very mobile between Scotland and rUK, mobility increases rapidly with income, and with the highest earning 10% of Scottish income taxpayers accounting for almost half of Scottish income tax revenues (Bell and Eiser 2013), it may be the case that the Scottish Government faces a relatively high marginal cost of public funds where these are funded through income tax. The Scottish Government has always had powers to vary income tax rates slightly, but these have never been exercised. On the other hand, a tax rise could have a relatively elastic effect on revenues if preferences are conducive to this (Comerford and Eiser 2014). The timing of tax decisions is also important, and it may be that the Scottish Government is more inclined to ‘follow’ the UK Government if the UK Government ‘goes first’.

A related question is the extent to which such tax interaction effects would be any less if Scotland was fully independent. On the one hand, vertical fiscal externalities would no longer be relevant. But the risk of mobility induced horizontal tax competition would still be present, particularly in relation to income tax rates for high earners (Landais et al 2013). In the long-run, horizontal externalities in tax rates between countries may be just as high as those between a semi-autonomous Scotland and rUK, given global integration.

5.2 Block grant

The Scottish Government relies on a block grant from the UK Government to finance the large majority of its expenditure. Even under some of the more radical proposals for revenue decentralisation to Scotland, the Scottish Government will continue to face some level of vertical fiscal imbalance. The way in which this grant is allocated, and the extent to which it attempts to equalise differences in spending need or revenue capacity will have profound implications for the Scottish Government's budget.

The Scottish Government's existing block grant is determined by the Barnett Formula, which is also used to allocate funding to the Welsh Government and Northern Ireland Assembly (HM Treasury, 2010). The Barnett Formula has been extensively criticised on several grounds:

- First, it takes no account of the relative spending needs of the UK territories and is therefore seen as inequitable. It is generally perceived to provide a particularly generous grant allocation to Scotland. This has long created a source of considerable tension in UK territorial politics which has intensified in recent years, with the UK media often quoting an estimate by Gerald Holtham that the Scottish Government is 'overfunded by £4 billion'. (However, the generous allocation to Scotland is largely the result of a generous baseline allocation rather than with the formula itself).
- Second, the formula bases changes to the Scottish Government's budget on policy changes in England. The notion of basing grant to a devolved government on the policy decisions of another parliament is argued to be inconsistent with the aims of devolution, effectively forcing the Scottish Government to become a 'policy taker' (Trench, 2012).
- Third, the formula – although simple in theory – lacks transparency in how it is operated in practice by the UK Treasury.

Despite these criticisms, the Barnett Formula has remained the preferred mechanism for allocating grant to the devolved governments since 1979, suggesting that it also has some advantages. One is that it provides stable and predictable funding (Select Committee on the Barnett Formula, 2009, paragraphs 49-50). The stability arises because the formula applies only to change in grants, ensuring that the Treasury cannot attack the budgets of the DGs collectively or sequentially.

The formula's longevity is usually explained by characterising it as part of a more nuanced 'formula plus influence' system which has advantages for both the central and devolved governments (Christie and Swales, 2010), and which represents the 'codification of a bargaining outcome' (Smith, 2006). Simply put, this argument asserts that Scotland's relatively generous grant reflects its bargaining power arising from the threat to secede from the Union (McLean and McMillan, 2005; Christie and Swales, 2010; Hallwood and MacDonald, 2009). In this respect, it is noted that the extent to which Scotland is 'over-funded' through the Barnett formula is almost exactly offset by the value of North Sea oil and gas taxation revenues derived from Scottish waters (Ashcroft 2013; Armstrong and McLaren 2014).

Following the implementation of the Scotland Act, the Scottish Government will continue to receive a Barnett Formula determined block grant from the UK Government, but this grant will be adjusted downwards to reflect the revenues raised through the SRIT. No formal agreement has yet been agreed by the UK and Scottish Governments as to the precise adjustment rules to be adopted.

Dissatisfaction with the Barnett Formula has led to growing calls for it to be replaced with a formula which would allocate grant based on assessment of the devolved territories relative spending needs (Select Committee on the Barnett Formula, 2009; Independent Commission on Funding and Finance for Wales, 2010; All Party Parliamentary Group on Taxation 2013; Local Government Association in England, 2013). Calls to replace Barnett with a needs-based formula are particularly strong in Wales, indeed desire for devolution of income tax powers to Wales is predicated on reform of the Barnett Formula (The SILK Commission). In contrast, most of the Unionist party's proposals for devolution in Scotland envisage a continuation of Barnett, with only the Scottish Liberal Democrats explicitly in favour of adopting a needs-based formula.

Scotland's spending on devolved services is some 20% per capita higher than England's. Most analysis suggests that Scotland faces relatively higher costs (i.e. spending needs) for delivering public services, but that the costs gap is not as large as 20 per cent. The Holtham Commission estimated that Scotland's per capita spending need for devolved services is 6% higher than England's. Scotland's relative per capita spending need for health services has been estimated as 7-11% higher than England's (Ball et al. forthcoming), whilst per capita spending need for school-age education services is estimated as 1-2% lower in Scotland (Ball et al. 2012); weighting these two service areas according to their share of the total Scottish budget also suggests an aggregate relative need 6% higher than England's.

However, although needs assessment is used extensively within each of the UK territories to distribute resources to health boards, local authorities, schools, and colleges (Smith, 2006; National Audit Office, 2011), allocating grant to a semi-autonomous devolved government according to spending need is likely to be particularly challenging. The normative aspect of determining needs raises difficult questions about which needs are 'legitimate' rather than reflecting policy choice, and which indicators should be used to measure needs; consensus between the UK and Scottish Governments may be unlikely (Midwinter, 2006; McLean and McMillan, 2005). Implicitly, needs assessment requires a broad consensus between governments about the size and scope of the public sector, so that needs assessment might be problematic if this consensus does not exist (because of divergent policies in the funding of major public services for example). The dominance of England in UK population terms is likely to undermine any attempt to derive some measure of 'average' policy across the UK (King and Eiser, forthcoming).

It is also not clear how needs assessment arrangements could be given the statutory backing that would provide any guarantee of their longevity. Laws (2008) argues that "entrenchment" – insulating legislation from future repeal – is inherently difficult in the absence of a written constitution. However, he argues that statutes are now regarded as implicitly either 'ordinary' statutes or 'constitutional' statutes. He cites as examples the Act of Union, the Scotland Act (1998) and the Government of Wales Act (1998). In his definition, a constitutional statute is one which enlarges or diminishes the scope of what we would now regard as fundamental constitutional rights. Whether legislation to support the use of needs assessment as a mechanism for allocating resources to the constituent parts of the United Kingdom could be thought of as affecting fundamental constitutional rights seems doubtful. Embedding such an arrangement as part of a wider agreement between the home nations that clarifies their inter-relationships would perhaps be a necessary condition to ensure the longevity of the allocation mechanism.

The issue of whether a needs-based grant system can be consistent with the notion of semi-autonomous devolved government is a matter of contention. Canada has repeatedly rejected the idea that grant should be allocated to provinces based on spending need, as this is seen to threaten provincial autonomy (Lecours and Belland, 2010). Germany does make limited grant allocations to Länder on the basis of spending needs, but this must be seen within the context of Länder which have little policy autonomy and largely deliver federal policy at a decentralised level. Spain does allocate grant to its Autonomous Communities (ACs) on the basis of spending need, but the formula is very simple, reflecting the parameters that the ACs could agree on, and largely consists of a small number of basic demographic variables (Bosch, 2009). It is only in Australia where extensive needs assessment is used to allocate grant to States. Although the system relies on a complex set of calculations to determine average policy levels, it is not without controversy.

Given that Scotland's spending needs for devolved services are somewhat higher than those in rUK, a block grant allocated to Scotland without any allowance for differential spending needs, but instead allocated on a per capita basis, is likely to result in an inferior overall level of public services in Scotland compared to rUK. Although the assessment of spending needs is difficult in the case of devolved governments, it may be that there is scope for acceptable compromise around a relatively simple formula. Securing a grant which allocated it 106% of equivalent English spending would make a marked difference to the Scottish budget, whilst costing the UK Government less than the existing Barnett arrangement.

In addition to having somewhat higher spending needs, Scotland also has a lower tax capacity (i.e. ability to raise revenues on a given base at a given rate) than rUK for the taxes that are most likely to be devolved (Table 1). This suggests that the block grant to Scotland should also make some adjustment to equalise revenue capacity, if equality of public services across the Union is a political objective.

Unlike spending needs, equalisation of revenue capacity is undertaken in all federal countries. Such revenue equalisation grants aim to strike a fine balance between securing some notion of comparable public services at a given level of taxation on the one hand, and providing adequate tax incentives to devolved governments on the other (OECD, 2013).

In practice, revenue equalisation varies significantly across federations (Table 2), reflected in differences in marginal equalisation rates – the rate at which a jurisdiction's own revenue is taxed away or cancelled out in the form of lower grant. In Germany, any Länder with a fiscal capacity less than 99.5% of the average has over three quarters of its shortfall corrected. The extent of equalisation implies that every additional euro collected by a state on its own leads to a reduction of receipts from transfers by an almost equal amount, providing little incentive for Länder to generate additional revenue from economic growth or tackling tax fraud (Feld, 2011; Buettner 2008). In Canada the extent of equalisation is relatively less, but this in turn creates tensions as fiscal disparities widen, in turn placing strain on tax harmonisation arrangements (Lecours and Belland, 2010).

Table 2: Marginal equalisation rates of sub-central government in federal countries

Country	Marginal equalisation rates of SCG in federal countries
Austria	88% for Lander below average fiscal capacity, 0% for those above
Canada	70-100% for provinces below average fiscal capacity, 0% for those above
Germany	100% for Lander below 99.5% of average fiscal capacity, 15-85% for those above
Spain	75%
Switzerland	40-60%

Source: OECD (2013)

Allocation of block grant to the Scottish Government through the Barnett Formula has been a source of tension for many years. The demise of Barnett has been forecast repeatedly since 1999, but successive UK Governments have been unwilling to address the issue, even though the formula has no statutory basis. There is a strong case for arguing that the Barnett mechanism is not suited to a more fiscally autonomous style of devolved government in Scotland. Furthermore, if some income tax devolution to Wales is implemented, this will increase pressure for Barnett reform. However, the political economy literature would suggest that it may continue to be in the interests of the UK Government to fund Scotland relatively generously if it wants to mitigate future secession demands. And given the difficulties around the design of a spending needs formula, and issues around the incentive effects of revenue equalisation grants, it remains unclear as to how high a priority replacement of the Barnett formula will be.

5.3 Institutions

A view is sometimes expressed that significant tax devolution to Scotland needs to coincide with institutional reform, and a move to a more symmetric, federal structure of government for the UK as a whole. The Liberal Democrats Home Rule proposals for example envisage a federal UK government – with competency in areas such as foreign and defence affairs, currency, etc. – combined with various home rule governments with equivalent devolved powers, including some form of government for England.

However, the UK is probably closer to being a fiscally federal state than is sometimes recognised, when this is narrowly defined. One such definition of a federal system is where ‘two levels of government rule the same land of people, with each level having at least one area in which it is autonomous, and where there is some constitutional guarantee of the autonomy of each government in its own sphere’ (Riker 1964). Building on this, Sorens (2014) identifies the ‘ideal-type’ of fiscally federal system as being one where sub-central governments: have pragmatic autonomy (i.e. exclusive authority to determine a subset of government policy); face a hard budget constraint and fund expenditure largely from own-source revenues; where there is a common market for goods, labour and capital across borders which the SCG cannot disrupt; and where the system is institutionalised. Federalism so defined does not require the participation of sub-central governments in central government decision-making.

Thus a key difference between devolved government in a unitary system and a federal system is that, in a federation, the jurisdiction of each level of government is constitutionally recognised. The Scottish Government is clearly more than an administrative creature of UK Government, with complete political autonomy (i.e. the UK Government cannot appoint politicians to the Scottish Parliament) but it is not constitutionally entrenched, and the UK Government could theoretically abolish, change or over-rule it, or legislate within devolved spheres. However, all pro-Union parties

now support the constitutional entrenchment of the Scottish Parliament. Once entrenched constitutionally, and with a substantially reduced vertical fiscal imbalance, the Scottish Parliament would, arguably, accord with a minimalist definition of federalism.

More pertinently, it could be argued that the Scottish interest is well served by a more specific form of federalism which Lluch (2012) refers to as 'autonomism'. Autonomism, according to Lluch, is based on the general federalist principle that multiple levels of government can lead to better governance in multinational states and is by definition asymmetric. But whereas federalism flourishes where there is trust and reciprocity between federal and subcentral governments, autonomists tend to be wary of federalism because they believe it has homogenizing and uniforming tendencies. Instead, autonomism is 'the search for gradually expanding spheres of self-government within existing state structures'.

Thus symmetry of fiscal decentralisation is not a prerequisite for federalism, and nor does federalism require the participation of regional governments in central government decision-making. But federalism does require that the devolved government is not subordinate to the centre, that it is constitutionally entrenched, that it has pragmatic policy autonomy, and that it has reasonable fiscal autonomy.

This is not to say that, beyond the entrenchment of the Scottish Parliament, no further constitutional reform is necessary. In particular, there seems likely to be a need for reconsideration of the institutional machinery within which constructive intergovernmental relations can be managed (particularly given the fractious nature of the debate leading to the independence referendum). But there is no reason to believe that fiscal devolution to the Scottish Parliament requires major reform to the UK's institutional structures. Scotland is on its way to becoming an autonomous territory within a federal UK. Like Spain, Canada and Belgium, the UK is likely to evolve towards a 'holding together federalism', fulfilling the main requisites of federalism through unique means and structures, rather than seeing a 'federal moment' (Sala, 2014).

6. Conclusions

The No vote in the referendum signals the start of negotiations around which taxes might reasonably be devolved to the Scottish Parliament. There is a general consensus that many of the theoretical benefits of decentralisation are conditional on the institutional form of fiscal federalism conforming much more closely to the 'ideal type', implying much greater reliance on own-source taxation and the constitutional entrenchment of the Scottish Parliament.

The proposals for tax devolution currently on the table from Unionist parties vary significantly in terms of which taxes should be devolved, and the extent to which they address the Scottish Parliament's vertical fiscal deficit. There is perhaps a danger that Unionist parties are raising expectations beyond what is feasible for political reasons. There is however consensus that income tax is the most appropriate for devolution initially, and even the most modest proposals envisage the Scottish Parliament taking responsibility for over half of income tax revenue. The most ambitious of the tax proposals would see Scotland become one of the most fiscally autonomous regions in OECD countries, on a par with the Basque Country and Navarre in Spain, or Quebec in Canada.

The post-referendum negotiations will also consider the scope for devolution of aspects of welfare spending. This is potentially a more difficult and contentious area, given the practical challenges in disentangling the UK welfare system and differences in views as to how the desire for autonomy or self rule should be balanced by considerations of UK-wide social union and solidarity.

What is clear is that all Unionist parties support the constitutional entrenchment of the Scottish Parliament. On becoming constitutionally entrenched, and with a greater degree of fiscal autonomy, Scotland will thus evolve into a semi-autonomous state within a 'holding together' type of federal UK.

It has often been hypothesised that the Scottish Government's relatively generous grant from Westminster is implicitly intended to assuage demands for independence. It remains to be seen whether greater tax autonomy might mitigate future independence demands. Bolton and Roland (1997) frame the secession decision as a trade-off between the efficiency benefits of Union (risk-sharing, no efficiency losses from tax competition) against the benefits of having a government 'closer to the people' (i.e. one that better reflects local preferences). The evidence from the campaign and, in particular, the closeness of the vote suggests that there is a strong appetite for the latter within Scotland.

The implicit assumption of the Unionist proposals is that fiscal devolution can realise both of these benefits, minimising the trade-off. Studies of strategic tax setting between governments in a federal setting suggest that the relatively high mobility of capital and labour between Scotland and rUK may mitigate the extent to which the Scottish Government feels able to exercise its powers; it is likely to face a relatively high marginal cost of public funds. Whether tax devolution mitigates the independence threat will thus depend on the extent to which the fiscal constraints for Scotland within the Union are perceived to be greater than those if it were an independent country.

Moreover, none of the Unionist party proposals envisage devolution of North Sea oil and gas revenues; given the symbolic nature of these revenues within the independence debate, this is likely to remain a source of friction in the future. Nor do any of the proposals envisage full devolution of welfare spending functions, an area in which the Scottish Government is keen to stress dissatisfaction with Westminster policy. Furthermore, if tax devolution is accompanied by reform of the mechanism for determining Scotland's block grant – either as part of a quid pro quo for more powers, or in order to operationalise tax devolution in Wales – the Scottish Government's budget may face a decline in its spending power relative to rUK.

On the other hand, globalisation arguably strengthens the case for fiscal autonomy within the Union as opposed to independence, given that globalisation both increases the importance of macro-economic stability functions of a federal government, and increases fiscal harmonisation pressures between countries (Garrett and Rodden, 2003). Thus whether tax devolution strengthens or mitigates the independence threat is likely to depend on the interaction of factors including the long-term trend in North Sea revenues, the extent to which the Scottish Government feels able to exercise its tax powers in line with its preferences, and the extent to which Scotland feels that the notion of a 'social union' is reflected in future funding arrangements.

References

- All Party Parliamentary Group on Taxation (2013) *Achieving autonomy: what the independence referendum means for Scotland's Fiscal Future*. House of Commons, Westminster.
- Ashcroft B. (2013) *Has Scotland already spent its oil fund?* URL: <http://www.scottisheconomywatch.com/brian-ashcrofts-scottish/2013/07/has-scotland-already-spent-its-oil-fund.html>.
- Bahl R. and Cyan M. (2011) Tax assignment: does the practice match the theory?, *Environment and Planning C: Government and Policy* **29**, 264-80.
- Ball R., Eiser D. and King D. (2012) Replacing the Barnett Formula by needs assessment: lessons from school funding formulae in England and Scotland.
- Ball R., Eiser D. and King D. (Forthcoming) Assessing relative spending needs of devolved government: the case of healthcare spending in the UK, *Regional Studies*.
- Bell D.N.F. (2013) The Block Grant Adjustment, *Paper to Finance Committee, Scottish Parliament* Accessed at: http://www.scottish.parliament.uk/S4_FinanceCommittee/Scotland_Act_12.pdf.
- Bell D.N.F. and Eiser D. (2013) Inequality in Scotland: trends, drivers, and implications for the independence debate.
- Bolton P. and Roland G. (1997) The breakup of nations: a political economy analysis, *The Quarterly Journal of Economics* **112**, 1057-90.
- Bosch N. (2009) The reform of regional government finances in Spain, in INSTITUT D'ECONOMIA DE BARCELONA (Ed) *World report on fiscal federalism*, pp. 58. Institut d'Economia de Barcelona, Barcelona.
- Brühlhart M. and Jametti M. (2006) Vertical versus horizontal tax externalities: an empirical test, *Journal of Public Economics* **90**, 2027-62.
- Brühlhart M. and Parchet R. (2014) Alleged Tax Competition: The Mysterious Death of Bequest Taxes in Switzerland, *Journal of Public Economics*.
- Buettner T. (2008) Fiscal equalisation in Germany, in N. BOSCH and J. DURAN (Eds) *Fiscal federalism and political decentralisation: lessons from Germany, Spain and Canada*, pp. 137-147. Edward Elgar, Cheltenham.
- Christie A. and Swales J. K. (2010) The Barnett allocation mechanism: formula plus influence?, *Regional Studies* **44**, 761-75.
- Comerford D. and Eiser D. (Forthcoming) Constitutional change and inequality in Scotland, *Oxford Review of Economic Policy*.
- Commission on devolution in Wales (2012) *Empowerment and responsibility: financial powers to strengthen Wales*. Commission on devolution in Wales, Cardiff.
- Commission on Scottish Devolution. (2009) *Serving Scotland Better: Scotland and the United Kingdom in the 21st Century: Final Report, June 2009*. Commission on Scottish Devolution.
- Dahlby B. and Wilson L. S. (2003) Vertical fiscal externalities in a federation, *Journal of Public Economics* **87**, 917-30.
- Day K. M. and Winer S. L. (2001) Interregional migration and public policy in Canada: an empirical study, *Human Resources Development Canada and Statistics Canada, Ottawa*.

- Esteller-Moré Á. and Solé-Ollé A. (2001) Vertical income tax externalities and fiscal interdependence: evidence from the US, *Regional Science and Urban Economics* **31**, 247-72.
- Feld L. (2011) Written evidence to the Scottish Parliament.
- Feld L. P. and Kirchgässner G. (2003) The impact of corporate and personal income taxes on the location of firms and on employment: some panel evidence for the Swiss cantons, *Journal of Public Economics* **87**, 129-55.
- Garrett G. and Rodden J. (2003) Globalization and fiscal decentralization, *Governance in a global economy: Political authority in transition*, 87-109.
- C. P. Hallwood and MacDonald R. (2009) *The Political Economy of Financing Scottish Government: Considering a New Constitutional Settlement for Scotland*. Edward Elgar Publishing.
- Hilber C. A. L., Lyytikäinen T. and Vermeulen W. (2011) Capitalization of central government grants into local house prices: Panel data evidence from England, *Regional science and urban economics* **41**, 394-406.
- HM Treasury (2010) *Funding the Scottish Parliament, Welsh Assembly Government, and Northern Ireland Assembly: statement of funding policy*. HM Treasury, London.
- Home Rule and Community Rule Commission (2014) *Cambell II*. Scottish Liberal Democrats, Edinburgh.
- Independent Commission on Funding and Finance for Wales (2010) *Fairness and accountability: a new funding settlement for Wales*. Welsh Government, Cardiff.
- JEFFREY C. (2014) *Devolution Commission reflections: comparisons and contrasts* URL: <http://www.futureukandscotland.ac.uk/blog/devolution-commission-reflections-comparisons-and-contrasts>.
- King D. and Eiser D. Reform of the Barnett Formula with needs assessment: can the challenges be overcome?, *Forthcoming, Regional Studies*.
- Landais C., Kleven H. J. and Saez E. (2013) Taxation and international mobility of superstars: evidence from the European football market, *American economic review*.
- Sir John Laws
- Laws, J. (2008) Constitutional Guarantees, *Statute Law Review* 29 (1): 1-10
- Lecours A. and Béland D. (2010) Federalism and fiscal policy: The politics of equalization in Canada, *Publius: The Journal of Federalism* **40**, 569-96.
- Lluch J. (2012) Autonomism and federalism, *Publius: The Journal of Federalism* **42**, 134-61.
- Local Government Association. (2013) Press Release, 2 July 2013: Ten point plan to revive England's economy and public services
- Mackay R. and Williams J. (2005) Thinking about need: public spending on the regions, *Regional Studies* **39**, 815-28.
- McLaren J. and Armstrong J. (2014) Scotland's Economic Performance and the Fiscal Implications of Moving to Independence, *National Institute Economic Review* **227**, R3-R13.
- McLean, I., Lodge, G. and Schmuecker, K. (2008) *Fair Shares: Barnett and the Politics of Public Expenditure*. IPPR, London.

- McLean I. and McMillan A. (2005) The distribution of public expenditure across the UK regions, *Fiscal Studies* **24**, 45-71.
- Midwinter A. (2002) Territorial resource allocation in the UK: a rejoinder on needs assessment, *Regional Studies* **36**, 563-77.
- Milligan K. and Smart M. (2013) *The Devolution of the Revolution: Taxation of High Incomes in a Federation*.
- National Audit Office (2011) *Landscape Review: Formula Funding of Local Public Services*. Audit Office, .
- OECD (2013) *Fiscal federalism 2014: making federalism work*. OECD, Paris.
- Reform Scotland (2012) *DevoPlus: A stronger Scotland within the UK*. Devo Plus Group, Edinburgh.
- Revelli F. (2005) On spatial public finance empirics, *International Tax and Public Finance* **12**, 475-92.
- Sala G. (2014) Federalism without adjectives in Spain, *Publius: The Journal of Federalism* **44**, 109-34.
- Scottish Labour Devolution Commission (2014) *Powers for a purpose: strengthening accountability and empowering people*. Scottish Labour, .
- Select Committee on the Barnett Formula (2009) *The Barnett Formula*. The Stationary Office, London.
- P. Smith. (2006) *Formula funding of public services*. Routledge, Abingdon.
- Sorens J. (2011) The institutions of fiscal federalism, *Publius: The Journal of Federalism* **41**, 207-31.
- TRENCH A. (2012) *Devo more, devo plus and so on: extending devolution in the UK, and financing it* Presentation for PSA Territorial Politics Group Conference.
- Trench,A. (2013) *Funding Devo More: fiscal options for strengthening the Union*. IPPR, London.
- YOUNG R. (2002) *Economic factors in the secession calculus: A survey* The Conference on Economics of Political Integration and Disintegration, Catholic University of Louvain.