Research and Library Service
Research Paper

June 2011

Gareth Brown

The Scotland Bill: a consideration of key issues relating to the devolution of income tax varying powers

NIAR 298/2011

This paper considers the economic debate regarding the proposals to devolve income tax varying powers to Scotland as proposed in the Scotland Bill 2010-11.

Paper 65/11 **3 June 2011**

Research and Library Service briefings are compiled for the benefit of MLAs and their support staff. Authors are available to discuss the contents of these papers with Members and their staff but cannot advise members of the general public. We do, however, welcome written evidence that relate to our papers and these should be sent to the Research & Library Service, Northern Ireland Assembly, Room 139, Parliament Buildings, Belfast BT4 3XX or e-mailed to RLS@niassembly.gov.uk

Contents

1. Introduction 4

2. The Proposals 5

3. The Issues 7

3.1 Revenue Sharing 7

3.2 Estimates & Borrowing 10

3.3 Reduction of the Block Grant 11

3.4 Redistribution & the Progressivity of the Tax System 11

3.5 Administrative & Compliance Costs 13

4. Conclusion 14

Annex 1: Additional Background to the Proposals 15

Annex 2: Block Grant Deduction 17

Bibliography 21

1. Introduction

In 2009, the Commission on Scottish Devolution (later known as the Calman Commission) was established as a result of opinion that the Holyrood Parliament lacked accountability due to its lack of revenue raising powers. The final report by the Calman Commission made a number of recommendations to rectify this issue, including, principally, that further income tax varying powers ought to be devolved to Scotland. Notably, the Commission specifically ruled out exploring the option of full fiscal autonomy for Scotland and instead concentrated on a proposal to strengthen the devolution settlement.

The Calman Commission's recommendations have resulted in the Scotland Bill, which is currently on course through the Westminster Parliament. There has been significant political controversy with the Commission's proposals and, as a result, the Scotland Bill has faced strong opposition from the governing and now majority Scottish Nationalist Party. Perhaps most problematically however, strong political opinions on both sides have made it difficult to conduct a balanced debate on the economics behind the proposals.

In Wales, a similar Commission (more commonly known as the Holtham Commission) has also produced a number of reports with recommendations on the future funding of the Welsh Assembly. This paper will identify some of the recommendations made by the Holtham Commission, which are at variance with the Scotland Bill.

The aim of this paper is to explore the economic debate regarding the devolution of income tax varying powers, as proposed in the Scotland Bill and its purpose is to provide MLAs with an objective resource, should similar issues also become topical in the future for Northern Ireland.

2. The Proposals

The Scottish Parliament established the following remit for the Calman Commission:

> To review the provisions of the Scotland Act 1998 in the light of experience and to recommend any changes to the present constitutional arrangements that would enable the Scottish Parliament to serve the people of Scotland better, improve the financial accountability of the Scottish Parliament, and continue to secure the position of Scotland within the United Kingdom.
>
> (Commission on Scottish Devolution, 2009 p. 3)

In their report, the Commission identified the need to strike a balance between three main principles. See **Annex 1** for further details.

The Scotland Bill institutes the recommendations on personal income tax that were made by the Calman Commission almost in their entirety.[1] The Command Paper, "Strengthening Scotland's Future" (2010) provides additional details and a summary can also be found in the House of Commons Library Scotland Bill briefing paper (2010).

The taxation proposals in the Bill are as follows:

- UK rates of income tax will be reduced by 10p for all individuals defined as Scottish taxpayers. Based on the current rates of income tax, this will result in the reduction in the basic rate from 20% to 10%, in the higher rate from 40% to 30%, and in the additional rate from 50% to 40%;

- The Scottish Administration will decide on a rate of income tax, which will be levied in addition to the reduced UK rate;

- The new Scottish tax rate will apply equally to all tax bands. This means that the power to alter the progressivity of the tax system will not be devolved;

- The power to alter the tax structure, such as thresholds and allowances will remain the responsibility of the UK Government;

- The income tax revenue raised in Scotland will be shared between the Scottish Administration and Westminster. Scotland will receive 50% of all revenue raised in the basic rate tax band, 25% of all revenue raised in the higher tax band and 20% of all revenue raised in the highest tax band; and

- Taxation on income and savings will remain the responsibility of the Westminster Government.

[1] Details of the latest Bill can be found at: http://www.publications.parliament.uk/pa/bills/cbill/2010-2011/0164/cbill_2010-20110164_en_1.htm

The plan for estimates and borrowing is as follows:

- An estimate of the revenue raised from the new income tax will be provided each year to the Scottish Administration by the newly created Office of Budget Responsibility;
- In subsequent years, tax estimates will then be reconciled with the actual outturns;
- In the event that there is more tax raised than the forecast amount, the additional revenue will pay off any government debt and the remainder will be transferred into a reserve bank of funds. This will be used to offset the difference during the years when actual revenue is less than forecast;
- In the event that there is less revenue than the forecast level, the parliament will be allowed to borrow;
- Borrowing will be permitted for a period of up to four years and if the shortfall is more than 0.5% of the Scottish resource budget and there is no funding in the reserve bank;
- If the shortfall is less than 0.5% of the budget, it will be absorbed by the budget in that year;
- Borrowing will be permitted up to a total of £500m to fund current spending, with a limit of £200m in any one year; and
- The Scottish Government will be permitted to borrow a maximum of 10% of the total capital budget in one year up to a maximum of £2.2bn.

3. The Issues

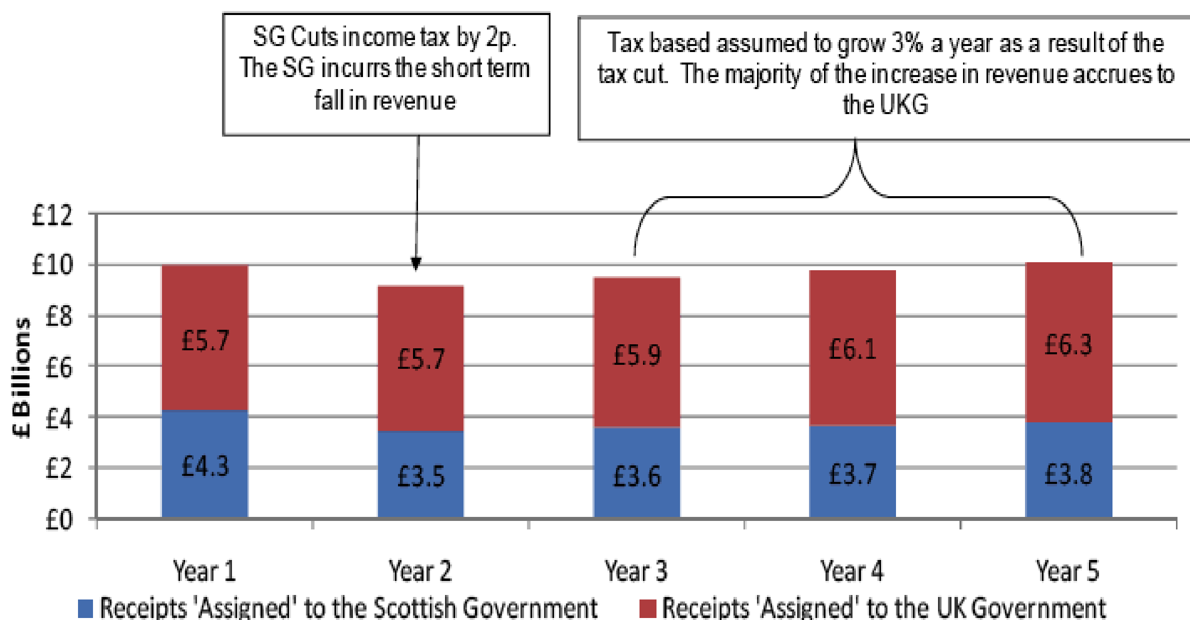
This section explains the key concerns that have been raised in the personal income tax debate.

3.1 Revenue Sharing

It was deemed necessary to allocate proportionally less revenue to Scotland from the higher rate tax band. This is because, even with the devolution of additional taxation powers, the revenue raising capability of the Scottish Administration would remain too limited to cope with the exposure of this more volatile source of revenue (Gauke in The Scottish Parliament Scotland Bill Committee, 2011). Nevertheless, this aspect of the tax design has faced strong criticism from a number of economists and the Scottish Government who have raised three main concerns:

1. Growth in Income Tax Revenue

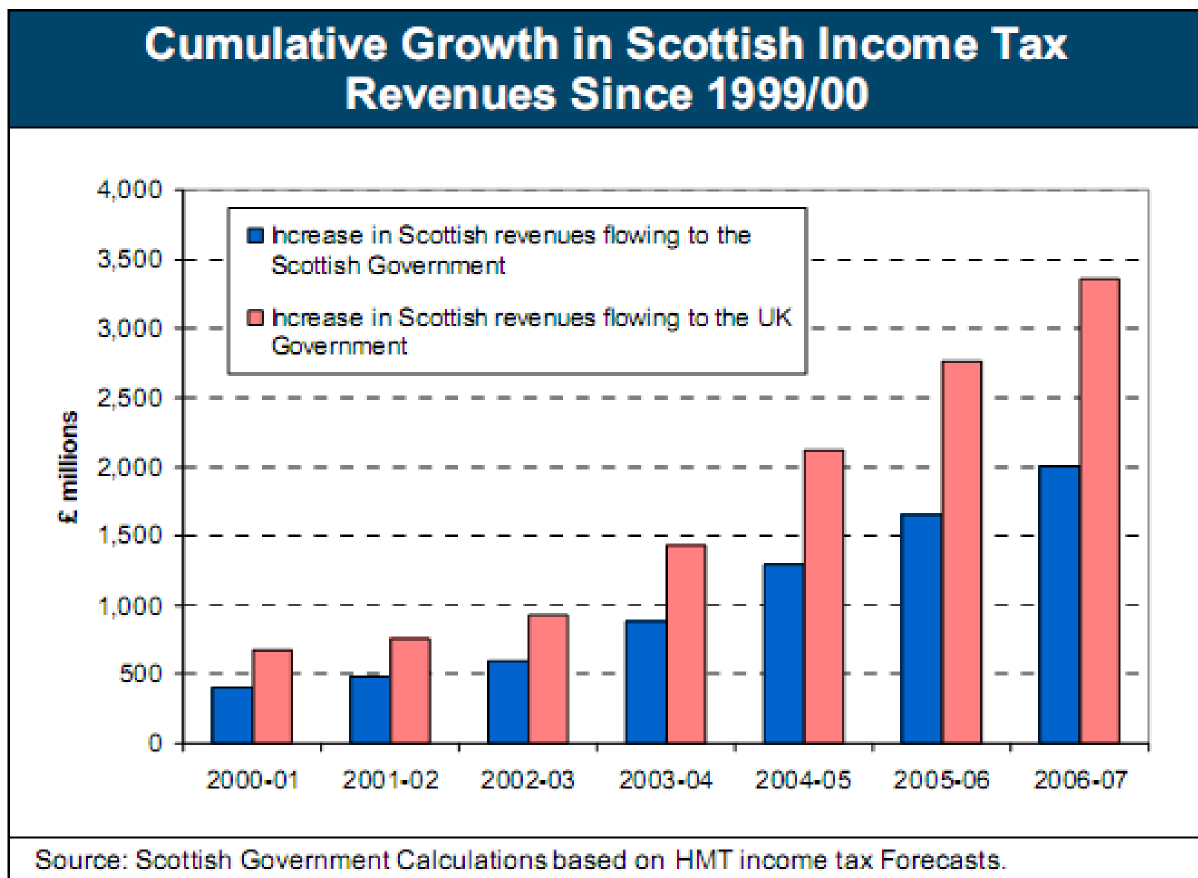
Governments often attempt to stimulate growth in the tax revenue by implementing policies (such as cutting taxation) to encourage economic activity. Yet, the Scottish Government (2009 p. 31) has detailed that Scotland could be worse off financially if the tax base were to grow as a result of a change in the tax rate. This scenario is illustrated in the graph below (The Scottish Government, 2009 p. 31):



Cuthbert et al. (2011) provide further analysis; “if the effect of a one unit **decrease** in the income tax rate in Scotland is to **increase** the overall income tax revenues in the basic rate, but by less than 5%, then the revenue coming to the Scottish Government from the basic rate band will decrease”. Indeed, within the higher rate bands the same scenario applies if a one unit decrease in the tax rate increases the revenue by less than 7.5% for the 40% tax band and 8% for the 50% tax band (Cuthbert, et al., 2011). Cuthbert et. al. (2010) contend that, “since a one pence reduction in the Scottish rate is very unlikely to stimulate revenue by more than these percentages, the implication is that a Scottish Government operating under

the proposals would be unable to use the powers to stimulate the economy without suffering a drop in its own tax revenues". Supporters of more flexible taxation powers also assert that because changes to the level of economic activity to different rates of income tax will not be uniform, it is unreasonable to compel the Government to always change everyone's marginal tax rate by the same amount (Holtham, 2011).

In addition, the Scottish Government (2010) has argued that according to its analysis, revenue from higher rate tax bands has been growing at a faster rate than the revenue collected from the lower rate tax bands. Holtham (2011) labelled the issue, "fiscal drag" and outlined the problem: income tax brackets tend to be indexed to inflation rather than nominal income growth and as a result of income growth (which is usually faster than inflation) people drift into the higher income tax brackets. As the Scotland Bill will allocate a lower proportion of revenue to Scotland from the higher rate revenues, Scotland will face a budget squeeze as its revenue will consist of a declining share of total income tax receipts. The table below provides an illustration (The Scottish Government, 2010):



One further issue was identified by Huges-Hallet et al. (2011) who recognised that since 1965, the growth in overall income tax receipts has been slower in pace than the rate of growth of the Barnett consequential, which determines the block grant. As a result of these three factors combined they and the Scottish Government (2010) assert that the plans have the potential to, "embed a long term deflationary bias into within the budget". According to Cuthbert et. al (2010) these combined technical failings outlined above are likely to place the Scottish Government under, "almost irresistible pressure to progressively increase the

Scottish rate of tax," which would, "condemn the Scottish economy to an increasing lack of competitiveness".

In their report, the Scottish Parliament's Scotland Bill Committee (2011) rejected this analysis. On the first issue, the Committee cited evidence from Ian McLean who claimed that unless proper modelling was conducted, it would be impossible to establish to what extent the movement of people into the basic rate tax band (and therefore adding 50% of their tax revenue to the Scottish parliament) would balance against those who were moving into the higher tax bands (and therefore contributing proportionally less). The Committee report also asserted that a balance had to be struck between protecting the devolved parliament from fluctuating revenues and greater flexibility.[2] In addition, the Committee contested the claim that there was an inbuilt deflationary bias with the plans. Citing the same IMF data, the Committee's report explains that during the 1970s there was a significant shift from direct to indirect taxation as a result of the UK's decision to join the EU and the need to harmonise VAT rates. As a result of this shift, more expenditure is indeed funded from indirect taxation when 1965 is compared with today. However, the report contends that the movement into indirect tax has not continued in recent decades (The Scottish Parliament Scotland Bill Committee, 2011). The Committee also quoted Holtham who declared that there was no evidence to suggest that this trend would continue in the future. Holtham (2011) also stressed that if the UK Government did continue to switch money from direct to indirect taxes, any additional expenditure would be reflected in the allocation via the Barnett formula. Moreover, the report highlights that analysis by the UK Government, "predicts the relationship between taxation and Barnett consequential to be broadly neutral over time" (The Scottish Parliament Scotland Bill Committee, 2011).

2. Policy Spill-over

The Scottish Government (2010) has raised concerns about the potential effect that UK Government decisions to make changes to the size of personal allowances or the tax bands would have on Scotland's budget. Such changes, they assert, would have spill-over effects and could result in a loss of revenue for Scotland. Nevertheless, proposed in the Scotland Bill is a policy of, "no detriment". This means that any negative impact on Scotland as resulting from changes to the UK tax system by the UK Government would result in compensatory changes to the level of the block grant (The Scotland Office, 2010 p. 26). Critics have argued that no additional explanation of this policy has been presented and that the lack of a transparent system could result in disputes between the nations.

3. Accountability & Allocative Efficiency

The Calman Commission asserted that the Scottish parliament should be, "sufficiently financially accountable for its decisions" and, in particular, for the choice of taxation and spending decisions, "at the margin" (Commission on Scottish Devolution, 2009 p. 66). In addition, it is hoped that devolution will lead to an increase in allocative efficiency as local

[2] The Holtham Commission proposed that half of the revenue from each tax band should be devolved and allocated to Wales (Independent Commission on Funding & Finance for Wales, 2010 p. 133).

policy makers will be better at determining the local demand for public services.[3] Nevertheless, both accountability and efficiency rests on the premise that policy makers are able to assess the actual cost and benefits of their decisions. In normal circumstances, the cost of additional public services would equal the cost of additional taxation. However, as a result of the revenue sharing mechanism increasing the taxation in Scotland by £1 more will raise less than £0.50 for the Scottish Government. In effect, this means that increasing public service provision by £1 in Scotland will cost the Scottish taxpayer more than £2. Similarly, the Scottish Government will only lose just over £0.50 when taxation is decreased by £1. This will make allocative efficiency difficult to achieve.

3.2 Estimates & Borrowing

Many commentators have expressed concern that the proposed borrowing limits proposed are too low. Indeed, Keating described them as, “too cautious” and Trench as, “very tight” (Keating in The House of Commons Scottish Affairs Committee, 2011; Trench, 2011). Analysis by Trench (2011) reveals that the £500m borrowing limit for current spending would have amounted to only 2 ½ per cent of government spending in the year 2008-9, while capital borrowing would only amount to the cost of one or two large scale infrastructure projects.

Scott also expressed concern regarding the unreliability of forecasts and the difficulties that this would create:

> We have real concerns because of the £200 million limit—£200 million is about 5% of the Scottish tax take. If the forecasts are more than 5% over, in the sense that it needs to claw back after 12 months, £200 million won’t be enough. The Office of Budget Responsibility’s evidence from the nine years from 2001 to 2009 suggests that in three of those nine years it over-forecast by 5% or more. The average forecasting error was 2% over— we’re back into the use of history here—and that implies that Scotland will always be borrowing to repay an excess forecast, which is a problem. We call it a dynamic instability, because eventually you will come to the limit of your borrowing, which is £500 million, and you can’t do anything else now except cut spending or raise taxes.
>
> *(Scott in The House of Commons Scottish Affairs Committee, 2011)*

It is also worth noting that no estimates of costs associated with borrowing as a result of taxation shortfalls have been provided in the proposals.

The Scottish Government has criticised the borrowing proposals due to the fact that no borrowing power is permitted if the loss in revenue is due to anticipated negative economic shocks rather than incorrect forecasts (The Scottish Government, 2009 p. 32). They argue that an economic slowdown would leave the Government with little choice but to cut public spending or raise taxes, thereby amplifying the downturn. Commentators such as McLean

[3] Maximum allocative efficiency is achieved when the optimal level of public services are provided for the optimal level of taxation.

(2011) and Trench (2011) have also questioned the decision not to grant the Scottish parliament freedom to issue bonds on the capital markets. Indeed, the House of Commons Committee on the Scotland Bill (2011) also stated that it was odd that this power would be available to some local authorities in Scotland but not to the regional government.

Nevertheless, public finance literature supports the assessment that macroeconomic control of the economy ought to remain the remit of the central government and it is recognised that devolving extensive borrowing powers to a regional administration would decrease central government control (Further details of the rationale in the literature can be found in **Annex 2**). This is particularly the case if the Scottish administration were given access to the capital markets. Indeed, HM Treasury (2011) has also highlighted that that if bonds were issued by the Scottish Government they would incur an interest premium, due to a perceived increase in risk and a lower level of liquidity. In addition, it would also be necessary to question if the UK Government would implicitly guarantee Scottish debt and, if it did, to what extent such a guarantee would result in poor debt management and moral hazard (Trench, 2011).[4]

3.3 Reduction of the Block Grant

The proposals for reducing the block grant were set out in the Command Paper, “Strengthening Scotland’s Future” (2010). According to this paper, the UK Government intends to calculate the total Scottish income tax receipts over a given transitional period as a percentage of the block grant. The paper details that during the transition period account will be taken of any changes made by the UK Government which alters the structure of the tax base and changes to the rate of taxation by the Scottish Government. Following this period, a permanent percentage reduction will then be made to the block grant. There are two important points to note:

- The paper does not propose when the transitional period ought to begin or how long it will last; and
- There is no definitive proposal to periodically review this figure in the event that Scottish tax revenues are significantly at variance with the anticipated totals.

The Command Paper provides few further details of how the block grant will be reduced, and indeed the lack of detail was described by Trench as, “one of the most glaring failings of the bill” (Trench in House of Commons Library, 2011, p. 35). Further explaination and analys on the proposed block grant deduction mechanism is provided in **Annex 3.**

3.4 Redistribution & the Progressivity of the Tax System

Some commentators such as the Church of Scotland have expressed the opinion that the Scotland Bill should provide powers for the Scottish parliament to enable it to take an active role in vertical income redistribution and, indeed, for many people the redistribution of wealth is seen as being one of the central goals of taxation (2011). Yet, the Scotland Bill does not propose to devolve to Scotland the power to alter the progressivity of the tax system. Indeed,

[4] Moral hazard describes behaviour when agents do not bear the full cost of their actions and are thus more likely to take such actions (OECD, 2001).

public finance literature also supports the view that control of redistribution is most effectively exercised by central governments (Heald, et al., 2010 p. 19).

One of the main reasons for this is due to mobility of the tax base and the ability of poor, but particularly, the rich to move to the locality which delivers the most benefits and lowest taxes respectively (i.e. 'voting with your feet') (Boadway, et al., 2009 p. 126). This can lead to competitive reductions in the level of taxation and result in a self-defeating, beggar-thy-neighbour and race to the bottom tax competition policies.[5] Indeed, the final report by the Holtham Commission (2010, p. 67) outlines the potential likelihood of a migratory response to higher marginal taxation in Wales. As a result of personal allowances the report claims that:

- High earning individuals are the most likely to move or alter their behaviour in response to a change in tax rates;
- The loss of a small number of high earning individuals could have an appreciable effect on the tax base;
- Increasing the higher rate would at best raise little additional revenue and would be likely to reduce the overall income tax revenue paid by Welsh residents;
- Decreasing the higher rate could potentially raise significant sums as high earning individuals in England would have an incentive to have a Welsh residence for tax purposes; and
- Variations in the higher rate would have to be limited if a serious degree of tax avoidance is to be prevented.

There is debate between commentators as to whether the use of the proposed tax varying powers would result in a more progressive or regressive tax system in Scotland. Hallett et. al (2011) argue that the levying an additional 1p on all tax bands will result in a disproportionate burden of the tax increase being paid by low income earners and therefore an element of regressivity has been built into the system. The Scottish Parliament's Scotland Bill Committee Report (2011) countered this analysis and asserted that the existence of personal allowances makes the system progressive. As a result they claim that:

- For any given tax rate, those on higher incomes pay a higher percentage of their income tax than those on lower incomes; and
- If the tax rate is increased, those on higher incomes will face a larger percentage increase in tax than those on lower incomes.[6]

Holtham (2011) contends that there were various definitions of progressivity but that if one were to define it as, "the ratio of marginal tax rates at different income levels", increasing the tax rate in Scotland would result in a more regressive tax structure. This is because a 1p

[5] It is for these reasons that, "proponents of decentralisation are often identified with those who wish to constrain the government's ability to redistribute" (Boadway, et al., 2009 p. 130).

[6] Nevertheless, the Committee's report omitted the fact that this analysis does not hold for every income level is dependent on the relative levels of income being compared.

increase for those on low incomes deducts a higher percentage away from their taxable income when compared to a 1p increase for those with the higher incomes. Similarly, lowering the tax rate in Scotland would result in a more progressive tax structure.

In terms of horizontal equity (otherwise understood as the equity between the regions within the UK), critics argue assert that the Barnett formula is unfit for purpose and should be replaced by a needs based assessment. Indeed, this was also one of the recommendations made by Holtham Commission and Holtham (2011) asserts that a grant formula which is transparent, fair and robust is required to ensure that any exercise of devolved income tax powers does not call the block grant into question.

3.5 Administrative & Compliance Costs

Commentators have raised the following administrative issues with the income tax proposals in the Scotland Bill:

1. The Definition of a Scottish Taxpayer – The Scotland Bill defines a Scottish taxpayer as someone who has a close connection with Scotland for a given year and if they do not have a close connection as someone who spends more days that year in Scotland than any other part of the UK (House of Commons Library, 2011 p. 29). Indeed, a clear definition of a Scottish taxpayer is necessary to prevent tax evasion and to ensure clarity for business. Nevertheless, the definition according to the Bill raises a number of questions. For example, will an English worker, who commutes to work on the Scottish oil rigs but has no other close connection to Scotland, be defined as a Scottish taxpayer? (The Chartered Institute of Taxation, 2011)

2. The Cost and Burden on Employers – At present the scale of the cost to employers is, "unknown", but the legislation will undoubtedly lead to some IT, admin, legal and training costs for businesses (The House of Commons Scottish Affairs Committee, 2011 p. 25). For example, with the introduction of a new S prefixed tax code for Scottish taxpayers, the Chartered Institute of Taxation (2011) highlights that UK businesses located outside will also have to modify their systems if they have one employee who is located in Scotland or indeed, if halfway through the year they recruit an individual who for that tax year remains a Scottish taxpayer.

3. Implementation Costs – The UK Government estimates the cost of establishing the proposals in the Scotland Bill to be £45m in addition to an annual cost of £4.2m to operate (The House of Commons Scottish Affairs Committee, 2011 p. 25). Nevertheless, the Secretary of State for Scotland emphasised that these figures were, "provisional estimates", and indeed, some organisations such as the Institute for Chartered Accountants have suggested they are underestimates (The House of Commons Scottish Affairs Committee, 2011 p. 25; Allen, 2011).

4. Conclusion

It is clear that the main purpose of the income tax proposals in the Scotland Bill is to make the Scottish parliament more accountable to its electorate. This has been achieved in so far as the proposals devolve the responsibility of making a decision at the margin between more or less taxation and government expenditure to locally elected politicians. The Bill also serves to protect Scotland’s place within a social and economic union by ensuring that control of redistributive policies and macroeconomic management remain the responsibility of the Westminster Government.

Nevertheless, the issues that commentators have raised imply that Scotland will suffer financially as a result of the proposals. If this becomes the case, the proposals may weaken the social union, as the country will not be able to afford comparable levels of public service provision. Politically however, such a situation could paradoxically result in the strengthening of the union, as some people may perceive Scotland’s inability to raise sufficient revenue from its devolved taxation powers as evidence that the country remains financially dependent on England.

Commentators have also raised concerns that the proposals fail to devolve sufficient economic powers to locally elected representatives in order to promote economic growth in Scotland. Although the devolution of such powers fell outside of the remit of the Calman Commission, it is necessary to question if the proposals obscure the responsibilities between Westminster and Holyrood for the general public. Indeed, will the Bill now result in MSPs being held more accountable for the performance of the economy, for wealth redistribution and for macroeconomic management? And, indeed, will the devolution of income tax varying powers lead to some MSPs also believing that they have control over these matters? If this becomes the case then perhaps the outcome will be a detrimental reduction in the accountability of Westminster MPs.

The Bill also leaves many questions unanswered such as exactly how the block grant will be reduced and how the policy of ‘no detriment’ will work in practice. Indeed, there will continue to be a lack of transparency in the funding arrangements as, unlike the Holtham Commission, the Calman Commission did not propose any reforms to the Barnett formula.

Due to their opposition to the legislation, the recent election victory of the SNP (which has given them an overall majority in Scottish Parliament) means that it is now highly unlikely that the Scotland Bill, in its present form, will become law. It is therefore likely that the debate will be reignited and the SNP will seek the devolution of additional fiscal powers to those outlined in the Scotland Bill. Questions will no doubt arise as to what extent the devolution of further fiscal powers will weaken horizontal equity in the union and therefore weaken political ties between the nations.

Annex 1: Additional Background to the Proposals

In their recommendations, the Calman Commission (2009 p. 77) attempted to strike a balance three main objectives:

1. **Equity** – "Does the funding system allow levels of spending hence a distribution of public services that are accepted as fair?"

   There are two main equity considerations:

   a) Horizontal Equity - Different regions have different resource endowments and belonging to a union entails the sharing of the benefits of these resources. National equity considerations therefore suggest that the central government has a role in equalising the potential ability of the states to provide comparative for comparable levels of taxes, whether they choose to do so or not. Central government is therefore responsible for some form of fiscal transfers in order to prevent regions drifting apart and maintain the social and economic union (Ambrosanio et al. in Ahmad, et al., 2006).

   b) Vertical Equity – This is essentially the question of redistribution and of which tier of government should take responsibility for redistributive policies (Boadway, et al., 2009 p. 54).

2. **Efficiency** – "In both economic and administrative senses: what are the effects of the funding system on the economy?"

   More specifically, it is necessary to question:

   a) If devolution of taxation improves allocative efficiency through the empowerment of locally elected representative to change the level of taxation and size of the public sector to meet the demands of the locality (Boadway, et al., 2009 p. 124).

   b) If devolution results in distortions in the economy, such competitive taxation policies or result in a regional government overextending tax rates on a shared tax base (Boadway, et al., 2009 p. 169).

   c) If the revenue generated will be stable and predictable.

   d) How complex will it be to administer and explain.

   e) How devolution will impact on the macroeconomic management of the economy.

3. **Accountability**

   Boadway and Shah (2009 p. 157) stress that the notion of accountability is not easy to formulate or verify. Nevertheless there are two main reasons why the devolution of revenue raising functions could increase accountability:

   a) Devolution reduces the size of jurisdiction served by a government and therefore shortens the distances between citizens and government. The electorate are,

therefore, more able to associate local taxation with local service provision (Ahmad et al. in Ahmad & Brosio, 2006, p. 251).

b) Devolution gives local policy makers a bigger stake in the performance of the economy and, as a result, ought to make them more vigilant, cost conscious and incentivise policies to promote economic growth (Boadway, et al., 2009 p. 165).

Annex 2: Macroeconomic Control of the Economy

There are two main reasons why theorists contend that the central government should retain macroeconomic control of the economy:

1. Free Riding - Macroeconomic policies usually exhibit spill-over effects, which would otherwise enable the regions to "free ride" on policies implemented by the central government. For example, if a central government were to make painful cuts to the budget in order to cut a deficit, the outcome of these cuts would benefit these devolved regions. Additionally, the devolution of too much fiscal control to the regions restricts central government's ability to compel the regions to share the cost of implementing such policies (Dafflon in Ahmad, et al., 2006 p. 276).

2. The capacity of the centre to gear stabilisation policies might be challenged - This could occur if the region and the centre had different opinions on a macroeconomic problem and pursued policies which were counterproductive (Dafflon in Ahmad, et al., 2006 p. 276). Indeed, "fundamental questions are not only whether the centre has the legal, institutional and managerial capacity to react rapidly to economic downturns and upturns, but whether its own budget volume is sufficient to act alone" (Dafflon in Ahmad, et al., 2006 p. 277).

Annex 3: Block Grant Deduction

Illustrated below is a table published as part of the Holtham Commission's final report (2010, p. 52), showing how they anticipate the Scottish proposals for the block grant deduction would operate. The Holtham Commission labelled this method, "Proportionate Deduction".

£ billion

	Year 1	Year 2	Year 3
Block grant	15.0	15.5	16.0
Devolved tax revenue	1.0	0.5	0.6
Amount that taxes devolved to Wales raise in the rest of the UK	20.0	10.0	10.0
Block grant deduction	1.0 (6.7 per cent of block)	1.03 (6.7 per cent of block)	1.07 (6.7 per cent of block)
Total resources for Wales	**15.0**	**15.0**	**15.53**

The table shows that each year a specific percentage of the block grant is subtracted from the total, leaving the regional economy fully exposed to fluctuations in the revenue from the devolved tax. This is shown in years 2 and 3 when there is a there is a fall in the tax revenue collected by the UK Government from £20bn to £10bn and a fall in the devolved tax revenue from £1bn to £0.5bn, signalling a UK wide economic downturn.

A number of commentators such as Professors Muscatelli and Gallagher, have rejected the proposed Proportionate Deduction method and endorsed an alternative proposal made by Holtham Commission, which involved indexing the reduction in the block grant to the income tax base with the rest of the UK (The House of Commons Scottish Affairs Committee, 2011 p. 37). An example of the alternative "Indexed Deduction" method as proposed by Holtham Commission (2010, p. 51) is illustrated below:

£ billion

	Year 1	Year 2	Year 3
Block grant	15.0	15.5	16.0
Devolved tax revenue	1.0	0.5	0.6
UK equivalent of the taxes devolved to Wales	20.0	10.0	10.0
Block grant deduction	1.0 (6.7 per cent of block)	0.5 (3.2 per cent of block	0.5 (3.1 per cent of block)
Total resources for Wales	**15.0**	**15.5**	**16.1**

Under this model, devolved tax revenues are added to the Welsh budget in year 1, and are offset by a proportionate reduction in the block grant, leaving overall resources unchanged. In subsequent years, the block grant reduction is recalculated based on the growth of the UK equivalent of the tax base that is devolved to Wales.

In year 2, the revenue from devolved taxes in the above example falls sharply as the result of a UK-wide economic shock. The block grant reduction is recalculated based on this reduced UK tax take, shielding the Welsh budget from the volatility of variations in the devolved tax base that impact equally on the UK.

The deduction to the block grant in year 2 is calculated to the following formula:

$$\text{Yr 2 reduction} = \text{yr 1 reduction} * \frac{\text{yr 2 UK equivalent tax}}{\text{yr 1 UK equivalent tax}} = 1.0 * 10/20 = 0.5$$

Although not shown above, if the impact of the economic shock had been different in Wales and the UK, then the Welsh budget would have been exposed to the disproportionate element of the shock.

In year 3, UK equivalent tax revenues remain at year 2 levels, and so the block grant reduction is unchanged. In this year it is assumed that Welsh Ministers decide to increase devolved Welsh taxes by an amount equivalent to £100 million. As a consequence, the devolved tax revenue component of the Welsh budget increases by this amount.

Each method of block grant deduction exposes the devolved region differently and there are two key differences:

- Exposure to UK policy decisions: With a Proportionate Deduction method, Scotland region would be exposed to the effect of central government's policy decisions to alter the thresholds or allowances on shared taxation. However, with an Indexed Deduction method there would be no risk of such exposure. For example, although a rise in tax thresholds would result in less tax revenue being collected by the Scottish administration and by the UK administration, using the index, the fall a fall in centrally collected revenue would result in a smaller block grant deduction.
- Exposure to UK wide cyclical downturns: A proportionate deduction method would leave the Scottish Administration exposed to UK wide cyclical downturns. Under the proportionate deduction method, Scotland's block grant would be reduced by a specific percentage each year. However if the UK economy were to contract, the size of Scottish tax base would decrease as a result. Although the causes of such events would be outside the control of the Scottish Administration, it would face the task of increasing taxation or cutting public services in order to pay for the deficit created by the decrease in its tax base. Under the indexed deduction method however, a UK wide downturn would decrease the size of the UK income tax base which would therein decrease the size of the deduction in the block grant. This would somewhat protect the devolved region from the consequences of a national downturn.

Both the methods of deduction also exhibit similarities:

- Exposure to the Consequences of Scottish Government Policy: For example, with both methods if the Scottish Administration lowered the tax rate which boosted the tax base growth, the Scottish Administration would benefit financially.
- Exposure to Differential Tax Base Growth: Scotland would be exposed to the effect of devolved tax receipts growing at a different rate than tax receipts as a whole.

Bibliography

Ahmad, Ehtisham and Brosio, Giorgio, [ed.]. 2006. *Handbook of Fiscal Federalism.* Cheltenham : Edward Elgar Publishing Limited, 2006.

Allen, Derek. 2011. Scotland Bill Committee Official Report 25 January 2011 . *The Scottish Parliament.* [Online] January 25, 2011. [Cited: May 20, 2011.] http://www.scottish.parliament.uk/s3/committees/scotBill/or-11/sb11-0302.htm.

Boadway, Robin and Shah, Anwar. 2009. *Fiscal Federalism.* Cambridge : Cambridge University Press, 2009.

Commission on Scottish Devolution. 2009. *Serving Scotland Better: Scotland and the United Kingdom in the 21st Centuary.* Edinburgh : Commission on Scottish Devolution, 2009.

Cuthbert, Jim and Cuthbert, Margaret. 2011. The Scotland Bill Committee: Submission Received. *The Scottish Parliament.* [Online] January 2011. [Cited: May 20, 2011.] http://www.scottish.parliament.uk/s3/committees/scotBill/documents/JimandMargaretCuthbertpaper1_000.pdf.

Cuthbert, Jim and Cuthbert, Margaret. 2010. The Scotland Bill Committee: Submissions Received. *The Scottish Parliament.* [Online] November 2010. [Cited: May 20, 2011.]

Hallett, Hughes and Scott, Drew. 2011. The Scotland Bill Committee: Submissions Received. *The Scottish Parliament.* [Online] 2011. [Cited: May 20, 2011.] http://www.scottish.parliament.uk/s3/committees/scotBill/documents/03.SBProfessorsHughesHallettandDrewScott.pdf.

Heald, David and McLeod, Alasdair. 2010. The Taxation and Borrowing Powers of the UK Devolved Administrations. *The Political Studies Association.* [Online] January 8, 2010. [Cited: May 20, 2011.] http://www.psa.ac.uk/spgrp/4/2010/Ppr/BaCTPSGC2_HealdDavid%20_Heald%20and%20McLeod%20-%20taxes%20and%20borrowing%20-%20Oxford%207-8%20Jan%202010.pdf.

HM Treasury. 2011. The Scotland Bill Committee: Submissions Received. *The Scottish Parliament.* [Online] 2011. [Cited: May 20, 2011.] http://www.scottish.parliament.uk/s3/committees/scotBill/documents/96SBHMTreasury.pdf.

Holtham, Gerald. 2011. The Scotland Bill Committee: Submissions Received. *The Scottish Parliament.* [Online] 2011. [Cited: May 20, 2011.] http://www.scottish.parliament.uk/s3/committees/scotBill/documents/21.SBGeraldHoltham_000.pdf.

House of Commons Library. 2011. Briefing Papers. *Parliament.uk.* [Online] January 8, 2011. [Cited: May 20, 2011.] http://www.parliament.uk/briefingpapers/commons/lib/research/rp2011/RP11-006.pdf.

Independent Commission on Funding & Finance for Wales. 2010. *Fairness and Accountability: A New Funding Settlement for Wales.* Cardiff : s.n., 2010. 978 0 7504 5613 5.

McLean, Ian. 2011. The Scotland Bill Committee: Submissions Received. *The Scottish Parliament.* [Online] 2011. [Cited: May 20, 2011.] http://www.scottish.parliament.uk/s3/committees/scotBill/documents/02.SBIainMcLean.pdf.

OECD. 2001. Glossary of Statistical Terms. *OECD.* [Online] November 15, 2001. [Cited: May 20, 2011.] http://stats.oecd.org/glossary/detail.asp?ID=1689.

The Chartered Institute of Taxation. 2011. The Scotland Bill Committee: Submissions Received. *The Scottish Parliament.* [Online] 2011. [Cited: May 20, 2011.] http://www.scottish.parliament.uk/s3/committees/scotBill/documents/102SBCharteredInstitutionofTaxation.pdf.

The Church of Scotland . 2011. The Scotland Bill Committee: Submissions Received. *The Scottish Parliament.* [Online] 2011. [Cited: May 20, 2011.] http://www.scottish.parliament.uk/s3/committees/scotBill/documents/41.SBChurchandSocietyCouncilof theChurchofScotland.pdf.

The House of Commons Scottish Affairs Committee. 2011. Scottish Affairs Committee - Fourth Report. *The House of Commons.* [Online] March 15, 2011. [Cited: May 20, 2011.] http://www.publications.parliament.uk/pa/cm201011/cmselect/cmscotaf/775/77506.htm.

The Scotland Office. 2011. Scotland Bill (HC Bill 164). *Parliament.uk.* [Online] 2011. [Cited: May 27, 2011.] http://www.publications.parliament.uk/pa/bills/cbill/2010-2011/0164/cbill_2010-20110164_en_1.htm.

The Scotland Office. 2010. Strengthening Scotland's Future. *The Scotland Office.* [Online] November 2010. [Cited: May 20, 2011.] http://www.scotlandoffice.gov.uk/scotlandoffice/files/Scotland_Bill_Command_Paper.pdf.

The Scottish Government. 2010. Scotland Bill Financial Provisions. *Scotland.gov.uk.* [Online] 2010. [Cited: May 20, 2011.] http://www.scotland.gov.uk/Resource/Doc/919/0108413.pdf.

The Scottish Government. 2009. The Scottish Government Response to the Reccomendations of the Commission on Scottish Devolution. *Scotland.gov.uk.* [Online] 2009. [Cited: May 20, 2011.] http://www.scotland.gov.uk/Resource/Doc/291162/0089439.pdf.

The Scottish Parliament Scotland Bill Committee. 2011. Scotland Bill Committee Report. *The Scottish Parliament.* [Online] March 3, 2011. [Cited: May 20, 2011.] http://www.scottish.parliament.uk/s3/committees/scotBill/reports-11/sbr11-01.htm.

Trench, Alan. 2011. The Scotland Bill Committee: Submissions Received. *The Scottish parliament.* [Online] 2011. [Cited: May 20, 2010.] http://www.scottish.parliament.uk/s3/committees/scotBill/documents/79.SBAlanTrench.pdf.