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Towards a ‘Scandinavian model’ for Scotland

Tobias Emonts-Holley, Alastair Greig, Patrizio Lecca, Katerina Lisenkova, Peter G McGregor, J Kim Swales

1. Introduction and background

The fiscal powers of the Scottish Government have recently been significantly enhanced as a consequence of the implementation of the Scotland Act 2012, which required the Parliament to set a Scottish Rate of Income Tax (SRIT) from April 2016. The SRIT can vary from that in the rest of the UK by up to 10p in the pound. More extensive powers over income tax will come into effect in April 2017 as a consequence of the Scotland Act 2016, which sought to implement the proposals of the Smith Commission (2014). The Scottish Government will then gain the power to set income tax rates and thresholds (but not personal allowances). All income tax receipts on wage income collected in Scotland will be received by the Scottish Government, with a corresponding adjustment in the block grant, as detailed in the new Fiscal Framework (2016). These changes will make Scotland one of the most powerful devolved governments in the world in terms of the proportion of public spending and tax revenues under its control, although there of course remains a debate about how effective these new powers are and whether or not they go far enough.

While there has been considerable debate about which tax powers should be devolved, there has been much less discussion on what should be done with the powers once they are devolved. Differences in income tax policy among Scottish political parties did emerge during the recent Scottish Parliament elections. The Scottish Government has, for example, decided not to fully emulate the UK Government’s recent decision to increase the threshold for higher rate tax payers, which will create the first income tax differential between Scotland and the rest of the UK (RUK).

The recent increase in the degree of fiscal autonomy is of a scale that could allow for more radical change in the structure of the Scottish economy and the nature of Scottish society if so desired. The current Scottish Government seems likely to continue with gradual changes in tax policy at least in the short-run. However, a number of prominent SNP members have argued for a bolder approach¹. It seems likely that over time there will be growing pressure on future Scottish administrations to consider more distinct income tax policies, although they will remain nervous about the possible reaction of Scottish taxpayers.

The “Scandinavian model” has often been held up as one that Scotland, if it had the necessary fiscal powers, might wish to emulate, although the emphasis has typically been on the high level (and quality) of public services rather than the associated high level of taxation that characterizes the Scandinavian economies. In fact, even the income tax powers devolved in April 2016, as a consequence of the Scotland Act 2012, would allow the Scottish Government to raise average income tax rates to Scandinavian levels and use the

¹ For example MacAskill (2016) argues that “Rather than running away from this, the Scottish Government should embrace it. There’s a better way to run a society: pay in collectively for greater efficiency and availability for all; show the sort of society we could really be. It’s the price of being Scottish.”

revenues to implement a substantial increase in public spending. This paper explores the likely consequences of such a shift as a contribution to our understanding of the likely impact of Scotland pursuing a differentiated income tax policy from that in RUK. It will be critical for any future Scottish Government that might contemplate the use of significant differential income taxes to carefully assess the likely implications for the Scottish economy and society.

The next section begins by identifying some key characteristics of the Scandinavian economies, and how income tax in Scotland would need to adjust in order to move toward a more Scandinavian taxation regime. This is followed by a discussion of the results simulating the impact of a substantial increase in income taxation using the Fraser of Allander Institute's Computational General Equilibrium (CGE) model.

2. The "Scandinavian model"

Keating and Harvey (2014) identify two ideal-type contrasting strategies for dealing with globalization and other changes: market liberalism, associated inter alia with the Baltic States, and the "social investment state, in which public expenditure is seen as a contribution to the productive economy rather than a drain on it" (op. cit. p12), something associated with the Scandinavian economies. In this model, the role of the state is much more prominent and instrumental than in other Western economies.

Apart from the higher tax and spend dimension of the Scandinavian economies, there are also important institutional differences from the UK, which are crucial to the way that these states operate. For example, the "tripartite bargaining" system in the Scandinavian economies is characterised by national wage negotiations which include trade unions, employers' associations and the government. Further, this system is subject to an annual bargaining cycle, which is believed to reduce tensions in the negotiations that are commonly observed in other European economies, for example in Germany (Keating & Harvey, 2014; Financial Times, 2015). A second institutional difference is reflected in the principle of "universalism". This concept embraces all citizens such that the middle-class is included in the benefit system. Through the inclusion of most of society in the social system, solidarity is better ensured, and provides political support for the system to thrive (Keating & Harvey, 2014).

Acemoglu *et al* (2012) argue that the success of the Scandinavian model is attributable to "cuddly capitalism", which free rides on a "cutthroat capitalism" (such as that experienced in the US) and helps to push out the world's technology frontier. Barth *et al* (2014) argue that the success of the Scandinavian economies in terms of economic growth, high productivity, low wage dispersion/inequality and a big welfare state reflects what is, in effect, a two-level bargaining system. A local system supplements the national system described above and strong trade unions both suppress wage dispersion and enhance local productivity. The latter is generated through inducing greater worker effort and higher capital investment. Furthermore, the wage compression and productivity enhancement encourage political support for welfare spending.

It is clear that simply raising income taxes to Scandinavian levels and using the resultant revenues to increase current government spending is insufficient to emulate the "Scandinavian model"; institutional differences are also central. The analysis that follows here focusses solely on the valuation of government expenditures by workers in the Scottish labour market and the effect that has on Scotland's macroeconomic performance.

3. Towards a Scandinavian model through an income tax adjustment

So what would be the likely consequences of a Scottish Government moving towards the Scandinavian model by significantly raising the income tax rate and recycling the revenues to expand current government expenditure? For simplicity, it is assumed that the increase in government expenditure is entirely a demand-side stimulus in current expenditure, with no significant changes to the welfare system or any immediate supply-side impact beyond the creation of a local amenity. In principle, only allowing Scotland to move toward a “Scandinavian model” through adjustments in the Scottish income tax rate, rather than spreading the burden across a range of taxes, is problematic. However, Kleven (2014) does suggest that the tax burden in Denmark, Sweden and Norway disproportionately falls on personal income taxes. This implies that the Scottish Government would likely have to significantly increase labour taxes, including income tax, to emulate the Scandinavian case. Table 1 provides 2013 OECD statistics on the total tax wedge² as a proportion of total labour costs for an average, unmarried Scandinavian and British worker with no children.

Table 1: Average personal income taxes as a proportion of labour costs, 2013

	% of average labour costs
Denmark	36.4%
Finland	43.1%
Iceland	34.1%
Norway	37.3%
Sweden	43.0%
United Kingdom	31.4%
Scandinavian Average	38.8%

Source: OECD

We now consider the likely impact of a fiscal expansion in Scotland, where only changes in income tax revenues are recycled to augment current government expenditure. In conceptually similar balanced budget fiscal expansions, two countervailing forces are generated (Lecca et al, 2014).

There will be a net stimulus to demand: a balanced budget expansion essentially shifts spending from private to public consumption. However, the negative impact of the fall in private consumption due to the rise in income taxation, is more than offset by the positive stimulus generated by the expansion in government expenditure, since the latter is less import-intensive.

The second is a negative competitiveness effect: if taxes rise workers feel worse off and attempt to restore their real consumption wages through increased wage claims. The nature and scale of the competitiveness effect depends critically on migration and wage bargaining behaviour.

² The OECD defines the total tax wedge as “The combined central and sub-central government income tax plus employee and employer social security contribution taxes, as a percentage of labour costs defined as gross wage earnings plus employer social security contributions. The tax wedge includes cash transfers.”
http://stats.oecd.org/Index.aspx?DataSetCode=TABLE_I5

We consider three alternative wage bargaining regimes. In the **Conventional Macro** case, neither local residents nor potential migrants place any value on the increase in public consumption following the fiscal expansion and standard specifications of the migration function and bargained real wage curves apply, with after tax real consumption wages governing both migration and bargaining decisions. This means that at any given employment rate, the nominal wage will have to rise by the amount required to offset the rise in the tax rate and the increase in the CPI to ensure zero net migration.

Also in this case, workers bargain for a net of tax real wage, and there is upward pressure on wages and prices that creates an adverse competitiveness effect, as workers seek to restore their real take home pay. The more open the economy, in terms of share of imports and responsiveness to relative price changes, the greater the adverse demand effects associated with the loss of competitiveness. Given that migration is assumed to respond only to the net of tax real wage and unemployment differentials in this case, a predominant adverse competitiveness effect means that, real post tax wages initially fall, unemployment rises and net out-migration occurs until the real wage and unemployment rates are restored (at lower levels of population and employment).

In microeconomic models of fiscal federalism (e.g. Tiebout, 1956), potential migrants value the increase in public services provided by the relevant authority and factor that into their migration decisions. This is the basis of the **Conventional Micro** model, in which we assume that *migrants* are motivated by their 'social wage', which we take to be unaffected by the balanced-budget fiscal expansion: migrants value the increased public spending equally to the reduced private wage resulting from the income tax increase. However, this valuation is not reflected in regional wage bargaining. The long-run equilibrium where the nominal wage increases (but not sufficiently to restore the real wage), and the employment (unemployment) rate falls (rises). While the unemployment rate rises in this case, the extent of the adverse supply shock is less than under the Conventional Macroeconomic case, with nominal wages rising less, so that employment and GDP effects are improved and any induced net out-migration reduced.

Finally, consider the **Social Wage** case in which the increase in public consumption is valued equally to the loss in private consumption. In the long-run the nominal wage and employment rate are unaffected. This reflects the fact that workers value the increase in government consumption as much as their foregone private consumption, so that they feel as well-off after the change as they did before. Accordingly, workers do not push to restore their take-home wage following the policy change, and the adverse competitiveness effect is eliminated completely. In this case, therefore, the beneficial net demand stimulus associated with the fiscal expansion predominates, and output and employment expand, in a manner similar to that envisaged in the simple Keynesian balanced budget multiplier. However, the whole of the increase in tax (and induced effects on the CPI) is reflected in a significant reduction in the post-tax wage.

4. Simulation results

We run three simulations using the Fraser of Allander Institute's AMOS (A Macro-micro model Of Scotland) model. This is a regional CGE model (Lecca et al 2014, 2016) calibrated on the 2013 Scottish SAM (Emonts-Holley et al, 2014). We simulate the impact of a balanced budget fiscal expansion that raises the average Scottish income tax rate to bring its tax wedge into line with the Scandinavian average, from UK levels

reported in Table 1. This would require the Scottish Government to implement a 7.4 percentage point increase in the average income tax rate (or a 42% increase). The first column of Table 2 reports results for the Conventional Macro model. In this case, neither potential migrants nor workers value public consumption. Accordingly, migrants respond to the net of tax real wage, as do workers who seek to restore the initial value of their real take home pay (and, in the long-run succeed in doing so). Therefore there is no change in the post-tax real wage or in the unemployment rate in the long run. While public expenditure rises by 11.5%, the long run impact of the fiscal expansion is contractionary, with a fall of 6.5% in Gross Regional Product (GRP) and around 7% in employment. It is clear that, for Scotland, the adverse competitiveness effect of the fiscal stimulus dominates the net stimulus to demand, reflecting the degree of openness of the Scottish economy, with exports to both RUK and ROW falling by over 6%.

Table 2: The long-run impact of a 42% increase in the average income tax rate

	Conventional Macro	Conventional Micro	Social Wage
Change in Income Tax Rate	7.4 pp	7.4 pp	7.4 pp
GRP Income measure	-6.54%	-5.90%	1.93%
Consumer Price Index	3.93%	3.62%	0.00%
Unemployment Rate	0.00%	7.81%	0.00%
Total Employment	-6.86%	-6.13%	2.97%
Nominal Gross Wage	15.87%	14.55%	0.00%
Nominal Wage after Tax	3.93%	2.75%	-10.31%
Real Gross Wage	11.49%	10.55%	0.00%
Real Wage after Tax	0.00%	-0.85%	-10.31%
Labour Income	7.92%	7.53%	2.97%
Capital Income	-2.90%	-2.63%	0.54%
Labour Force	-6.86%	-5.66%	2.97%
Households Consumption	-3.99%	-3.99%	-3.90%
Government Consumption	11.47%	11.87%	16.75%
RUK. Export	-6.04%	-5.59%	0.00%
ROW Export	-6.19%	-5.73%	0.00%

The adverse competitiveness effect is apparent in the substantial rise in the nominal gross wage (of 16%) and the CPI (around 4%), as workers successfully restore the initial value of their real take home pay. Due to the zero net migration condition, which is binding over the long run, the unemployment and real wage rates are ultimately restored to their initial values through a process of net outmigration. The rise in the average rate of income tax naturally lowers household consumption, in this case by 4% in the long-run.

The second column in Table 2 reports the long-run results for the Conventional Micro model. Here potential migrants value the increase in public consumption, but workers do not moderate their wage claims accordingly. Typically, Conventional Micro models abstract from the presence of imperfect competition in labour markets, so that the improved amenity is an externality from the individual worker's perspective. The fiscal expansion results in a rise in public consumption of nearly 11.5% in the long run, but GRP falls by 6%, and employment by 6%. Given the predominant adverse competitiveness effect observed in the Conventional Macro model, the scale of the resultant contraction in this case is less. As before, in the short-

run real wages fall and the unemployment rate rises, inducing net outmigration. However, the scale of the response is now less than before since migrants are, in effect, motivated by the Social Wage in Scotland, not by the net of tax wage. Accordingly, migration does not continue until real net of tax wages and unemployment rates return to their initial levels. While workers continue to attempt to restore their real wage, this increases the unemployment rate and lowers their bargaining power. A lower real take home wage rate is now compatible with the zero net migration equilibrium, given that potential migrants value the higher Social Wage in Scotland.

Workers are in this case unable to restore fully their net take home pay, although the pressure on wages remains significant, with the nominal gross wage rising by 14.5%. Essentially, labour supply remains higher in this scenario than in the Conventional Macro case because migrants are less willing to move out of Scotland at any given net of tax real wage, and so the upward pressure on the real wage due to outmigration is less in this case. Consequently, the change in the unemployment rate is also positive in the long run (it increases by 8%).

Overall, the aggregate results of the Conventional Macro and Micro models are very similar, reflecting the predominance of adverse competitiveness effects in both cases, although the behaviour of the real wage and unemployment rates differs, reflecting the different models of migration embedded within them. However, the results of the Social Wage model, summarised in the last column of Table 2, are very different from both Conventional models. In this case, workers do not bargain to restore their take-home wage, since the increase in government expenditure compensates them for the reduction in take-home pay and nor do migrants require compensation for lower pay. Ultimately, neither the nominal wage nor the employment (or unemployment) rate change. However, we know that in this case there is no adverse supply effect, and so the (net) stimulus to demand predominates. Here the balanced budget fiscal expansion produces a rise of 17% in government consumption in the long run and generates a rise in GRP of around 2% and in employment of nearly 3%.

Since workers do not seek to restore their net take home pay there is no upward pressure on the nominal wage or the CPI in the long run. The real wage after tax therefore experiences a substantial fall of approximately 10% in the long-run. Due to this fall and the tax hike, household consumption declines by 4% in this case. The shift from private consumption to government demand transfers expenditure to labour intensive sectors, such as education and health, which accounts for the rise in employment exceeding that in GRP). Exports are unchanged in the long-run as the competitiveness of the region is ultimately unaffected.

The social wage model effectively eliminates any adverse supply shock associated with the fiscal stimulus, by preventing any upward pressure on the nominal wage. However, this implies a willingness by workers to accept a substantial cut, of nearly 10%, in their real take home pay. In the long-run this model operates "as if" it is an input-output system, in which the supply side is entirely passive and wages and prices are unaffected. We obtain results very similar to simple Keynesian balanced-budget multipliers, which are positive, although here both population and capital stocks are endogenous.

It is clear that the overall impact of this balanced budget fiscal expansion is crucially dependent on the public's valuation of the amenity associated with the greater public expenditure, and especially to the extent to which this is reflected in workers' wage bargaining behaviour.

5. Conclusions

Scotland is in the process of acquiring very substantial powers over income tax, extending well beyond the ability to change the Standard Variable Rate by plus or minus three pence in the pound, which accompanied the establishment of the Scottish Parliament in 1999. Currently, the Scottish Government has to set a Scottish Rate of Income Tax (SRIT), and its powers are due to be significantly enhanced when the provisions of the Scotland Act (2016) are implemented from 2017. Of course, it would always be possible to set a SRIT to ensure that, overall, income tax rates are equal to those in RUK so as to maintain the status quo, and this was indeed what happened when the rate was first set in 2016. However, differences in tax policies began to emerge in the 2016 Scottish Parliamentary elections; now only the Conservatives remain committed to the maintenance of income tax parity with the rest of the UK.

This paper explores the likely impact of a radical shift in the direction of the Scandinavian model, characterised by high taxes and high public spending, a shift made feasible by the enhanced fiscal autonomy that Scotland now enjoys. The main message from our analysis is that the nature of the wage bargaining system will likely have a crucial determining role in the macroeconomic outcome of a significant hike in income taxes and public spending. If the public amenity created by higher public spending is not valued by Scottish workers or migrants to Scotland, and bargaining is not restricted by weak labour market conditions, the openness of the Scottish economy is likely to result in a fiscal expansion having contractionary aggregate effects. If, on the other hand, the higher public spending is valued as much as the forgone private consumption, and this is reflected in workers effectively bargaining over the Social Wage, there is no adverse competitiveness effect, and the result is a modest expansion in economic activity.

The Social Wage outcome is, however, necessarily associated with a significant fall in real take home pay, and the key question is how likely it is that Scottish workers would be willing to accept that in return for the maintenance or enhancement of public services. The current wage bargaining system in Scotland seems unlikely to deliver Social Wage outcomes, at least over the longer term. Accordingly, our results suggest that, if a move towards Scandinavian levels of public services and taxes was judged to be appropriate, it would be essential to seek reform of the bargaining system if adverse macroeconomic consequences were to be avoided. Alternatively, some form of incomes policy linked to the provision of public services might be pursued.

Of course, the case we consider here – of an immediate hike in taxes to Scandinavian levels - is unrealistic in that any move in that direction would likely be much more cautious and gradual. But it seems doubtful that ad hoc agreements linking moderated wage responses to incremental increases in public spending for particular purposes would be feasible within Scotland's labour market. However, it seems likely that trade union / workers' attitudes to increased public spending will depend on the composition of that spending. US evidence suggests that spending on health and education has a positive effect, but spending on welfare has a negative impact on working migrants.

While the Scandinavian model has often been held up as an example that Scotland might wish to emulate, few have advocated the kind of radical change considered in this paper. However, public attitudes may shift toward more radical taxation policies given increasing pressure on the budgets available for public spending. In any event, it will remain important for Scottish governments of whatever hue to understand the likely effects of any deviation from income tax parity with RUK. Without such an understanding there can be no

appreciation of the potential costs and benefits of maintaining the status quo, as against alternative policies. While we have begun to address this issue here, there are a number of aspects that need to be more thoroughly explored in future research, using more realistic scenarios.

We have considered only one, radical, option facing the Scottish Government from April 2016. It would be useful to investigate the use of the new tax powers to move towards the low tax/ low public spending associated with the Baltic economies, although this is a shift that few in Scotland have advocated. Here whether increased competitiveness effects are likely to stimulate the economy will again depend on the valuation of any change in public spending, and the extent to which that is reflected in the wage bargaining system.

There is also a need to explore the valuation of public spending more systematically, in particular its dependence on the composition of government spending, and on the source of that spending, in terms of the level of government. There is requirement for a better understanding of any immediate supply-side consequences of changes in government spending. This is perhaps most obviously relevant when we consider government capital expenditure, but would also apply to those aspects of current government spending, which in fact represent investment in human capital and so would also be expected to have important supply-side impacts (e.g. Hermannsson et al, 2014). The presence of such a stimulus introduces a beneficial supply-side stimulus that tends to counter the negative competitiveness effects, but the former takes time to emerge. Such changes might therefore continue to have adverse macroeconomic consequences even in the medium run in the absence of Social Wage bargaining (Lecca et al, 2015) or sources of nominal wage inflexibility. This timing of effects could lead policy makers to lay undue emphasis on the short-to-medium term outcomes and this may act to inhibit investments in physical and human capital that are worthwhile from a longer term perspective.

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Author details

Tobias Emonts-Holley, Department of Economics, University of Strathclyde tobias.emonts-holley@strath.ac.uk

Alastair Greg, Fraser of Allander Institute, University of Strathclyde alastair.greig@strath.ac.uk

Patrizio Lecca, Patrizio.Lecca@ec.europa.eu

Katerina Lisenkova, Fraser of Allander Institute, University of Strathclyde k.lisenkova@strath.ac.uk

Peter G McGregor, Fraser of Allander Institute, University of Strathclyde p.mcgregor@strath.ac.uk

J Kim Swales Fraser of Allander Institute, University of Strathclyde j.k.swales@strath.ac.uk

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