Nuffield College
UNIVERSITY OF OXFORD

‘POOLING AND SHARING’

The United Kingdom as a Fiscal Union

Prof Jim D Gallagher

20 August 2019

Working Paper 2019-04

A Gwilym Gibbon
Centre for Public Policy
Working Paper

"Pooling and Sharing"
The United Kingdom as a Fiscal Union

Prof JD Gallagher CB FRSE
Gwilym Gibbon Policy Unit
Nuffield College, Oxford

20 August 2019

Summary

This paper uses national statistics data to analyse fiscal transfers within the nations and regions of the UK. A companion paper will look more specifically at Scotland and how its public finances would look under the SNP's plans for Scottish independence. Fiscal transfers in the UK are very substantial, with the richest regions of the country pooling and sharing anything up to 10% of their GDP with the rest of the country. For recipient regions transfers are economically very significant, eg 20% of GDP in Northern Ireland. Transfers can be conceived of as making up for a relative shortfall in tax income or funding relatively higher spending. The former "resource equalisation" is by far the more significant, especially within England. Scotland is not the biggest recipient part of the UK but is unusual in getting more of its transfer to support spending. This largely unacknowledged form of sharing results from the UK's centralised tax and spending systems, and while it is not a substitute for a successful regional economic development strategy, it both transfers substantial resources (eg 15% of the GDP of the North East) and ensures at least comparable welfare and public services irrespective of local economic ability to support them.

Introduction

Nationalism is currently in vogue across the British Isles, with Scottish nationalism emboldened by the British, or more precisely English, nationalist project of Brexit. Brexit in its turn is at least in part driven by concerns about the economic centralisation of the UK in London and the South-east, so that parts of England which feel "left behind" were more likely to vote to leave the European Union. Any nationalist project inevitably implies no longer sharing resources with a wider union, as shown by the bus claiming that the UK's gross contribution to the EU could be recycled into the NHS. Similarly, the fiscal position of the putatively independent Scotland has been a consistent topic of debate before and after the 2014 independence referendum. Is Scotland "subsidised" by England, or given the history of oil revenues has it been the other way round, as some claim? As for the regions of England, those left behind by the economic strength of the South and East, how well are they supported? All of this suggests that it is timely to look at the United Kingdom as a fiscal union, that is to say how are tax revenues shared and spending needs addressed across the territory of the country?

Until relatively recently it has been possible to do this only for Scotland, in the long running statistical series Government Expenditure and Revenues in Scotland (GERS). This annual publication, now something of a ritual, has been critical to the Scottish constitutional debate. But more recently detailed tax as well as spending data has become available not only for Scotland, but for Wales, Northern Ireland and the standard regions of England. The Office for National Statistics now regularly publishes data equivalent to GERS for the whole UK[1], as it now makes estimates for regional tax receipts as well as the long-standing data on identifiable public expenditure (Public Expenditure Statistical Analysis[2]). So we can now look at how resources are shared across the UK, and how parts of the country with high tax income and others with high spending needs share resources, and what this tells us about the nature of the UK as a fiscal union. How much sharing is there, what drives it, and what does that tell us about the kind of country the UK is?

Fiscal and Monetary Unions

An entire academic literature, and a great deal of practical government and central bank activity, examines how monetary unions work, and what is needed to make them stable. A key requirement of stability is a degree of fiscal sharing. This is a live problem for the Eurozone, as the experience of Greece testifies. It has never been an issue for the UK itself as a sterling monetary union, but became one in the Scottish independence referendum when the UK government rejected the idea that an independent Scotland could remain in a monetary union with the rest of the UK, largely because independence would break the fiscal

[1] The data “Country and regional public sector finances net fiscal balances” can be found at https://www.ons.gov.uk/economy/governmentpublicsectorandtaxes/publicsectorfinance/datasets/countryandregionalpublicsectorfinancesnetfiscalbalancetables

[2] At https://www.gov.uk/government/collections/public-expenditure-statistical-analyses-pesa

sharing which underlay the monetary union. There is similarly a very large academic literature on territorial finance, usually under the description of fiscal federalism, as federal countries have to manage the distribution of tax and spending across different states and provinces, or local governments. That set of issues has arisen in the UK only in the somewhat arcane territory of local council finance. But times are changing: devolved nations now have not only very substantial spending freedoms but taxing powers too, and the territorial distribution of resources is of increasing political importance within England, especially in the light of the EU referendum result.

The data

The data on taxation and spending Is produced by the Office for National Statistics (ONS) statisticians (in the case of GERS Scottish government statisticians), all to national statistical standards. It records public expenditure incurred for the benefit of each region, the majority of which (as in the long running Public Expenditure Statistical Analysis series) is so-called 'identifiable' expenditure, relatively easy to pin down geographically, spent directly on pensions, welfare payments and public services such as health and education. A smaller proportion of UK government expenditure, such as on defence or debt interest, is held to benefit each part of the UK equally, and is simply allocated on a *per capita* basis to arrive at an overall expenditure figure used in the fiscal balance calculation. The geographic source of tax and other revenues is also identified and allocated, though that inevitably involves more approximations. For example, the figures for income tax raised in have been estimated from survey data. (Some inaccuracy in survey-based estimates is not surprising, given the proportion of income tax revenues which come from the relatively small number of high earners. In the most recent GERS, because of the almost complete devolution of income tax in Scotland actual figures, albeit some years in arrears,[3] are now available and give a more accurate picture of income tax revenue.) In Scotland, after nearly 3 decades of development and often aggressive political challenge, the GERS figures are widely regarded as the best available estimates and acknowledged to be the starting point for any discussions of taxation and spending in an independent country. It seems reasonable to accord the ONS data on regional taxation and spending a similar status.

What drives fiscal transfers: resource and needs equalisation

As we will see, the figures show significant differences between tax revenue and spending levels in different parts of the country, and therefore very substantial fiscal flows within it. These flows of funds are driven by different tax yield in different areas, dependent on population composition, economic activity etc; and by different spending levels, dependent on the different allocation mechanisms for different classes of spending. Expenditure on welfare benefits in a given region depends only the circumstances of individuals while expenditure on public services such as health and education depends on the allocation methods used.

[3] For the complexities of estimating future income tax revenues see the work of the Scottish Fiscal Commission at http://www.fiscalcommission.scot/media/1499/scotlands-economic-and-fiscal-forecasts-may-2019.pdf

It is helpful to separate out those two different factors: variability in taxable capacity, and different levels of spending. Fiscal flows which are driven by the former are an example of what is often called "resource equalisation", that is to say making up for a shortfall in taxable capacity, typically per head of population, compared the national average. Fiscal flows to support different levels of spending, at least in principle considered by the decision-makers to represent different levels of spending need, can be referred to as needs or spending equalisation. Different countries have different mixes of these two.

In UK public expenditure allocation mechanisms there is little or no connection between expenditure allocations to a given region and the tax raised there - spending decisions bear almost no relation to the tax yield in the relevant part of the country. Even for Scotland and Wales where there is tax devolution, the fiscal framework for allocating grant under the Barnett formula equalises for the pre-existing tax capacity of each country: only the risks of future relative change in tax take per head are borne by the devolved budgets. A fuller explanation of this fiscal framework and the issues underlying it are set out in our 2016 working paper "*Algebra and the Constitution*[4]*"*. Even for local authority taxes (council tax and non-domestic rates) the local government finance system in England largely or entirely equalises away the effects of different local tax bases. To a very substantial degree indeed, therefore, the UK pools its tax revenue across the population, rather than allowing one country or region to retain an advantage or suffer a disadvantage in public spending terms from its taxable capacity.

This largely implicit resource equalisation is the inheritance of the UK's highly centralised system of public finance, under which virtually all tax revenue has been collected at the centre, and geographically distributed through decisions made by central government. Resource equalisation is largely taken for granted, but was controversial in relation to North Sea oil revenues, leading to the SNP's slogan "It's Scotland's oil". (Oil revenues are now much less significant, but in the analysis that follows the data used attributes them geographically.) Resource equalisation across the UK is, as we shall see, responsible for larger fiscal flows than differential levels of public spending: 70% of the flows from one region or nation of the UK to another are due to resource equalisation, and 30% to spending allocations.

How spending falls across the different nations and regions of the UK is not so easy to explain from first principles as there is no single or simple allocation rule. A relatively small proportion, like defence, foreign relations or debt interest spending is simply assigned *per capita* to each nation or region in these calculations, on the basis that it benefits the whole UK equally. The majority, identifiable expenditure, has a clear geographical location – it is easily seen to benefit individuals in a given nation or region – but the way in which decisions to allocate it are taken differs according to the kind of expenditure and whether it goes to one of the of the devolved nations or to an English region. Spending on pensions and welfare benefits and how its regional or national pattern has emerged is easy to understand[5]. Expenditure on Social Security in the different parts of the UK is not the subject of deliberate geographical decisions by government: no one chooses, say, to spend a given amount on

[4] To be found here https://www.nuffield.ox.ac.uk/media/1752/gallagher-wp-algebra-and-the-constitution.pdf.
[5]Some UK old age pensioners live abroad: relatively small cost can be allocated *pro rata* to population in the overall fiscal calculations.

social security in, say, the North East region. There is no regional variation in benefit entitlement, apart from benefits supporting housing costs. Entitlement to an old age pension or benefits such as universal credit depends on the circumstances of the individual, and hence expenditure in a particular part of the country depends simply on the population characteristics of the area.

Expenditure on public services, such as health and education, however, is different. It is easy to see where it falls geographically, but how allocation decisions are made is more complex. Inside England, the budgets of local authorities, health boards and educational institutions are determined by various distribution formulae and other decisions of government departments. The allocation of expenditure to public services in Scotland, Wales and Northern Ireland is done differently, under the Barnett formula. Overall it is not easy to see a single factor which drives spending allocations, although, broadly speaking (and subject to some notable outliers) poorer regions of the UK have higher levels of expenditure on public services. These allocation mechanisms are obviously highly political between the nations of the UK and indeed within England, and are responsible for substantial fiscal flows within the UK.

Fiscal transfers across the Nations and Regions of the UK

Table 1 gives the basic data the data for each of the regions of England, and for England, Wales, Scotland and Northern Ireland, from year 2017/18, the most recent for which data across the whole UK is available. For each or nation or region it shows the basic facts of the size of the local economy and population. Column 3 is the estimated tax revenue in each area and column 4 is public spending for the benefit of that area. The fifth column shows the net fiscal balance for each country and region, where a negative number represents a deficit, and positive surplus. So for example, North East of England spends about £9.7 billion more than it raises in tax revenue.

The final column merits a little more explanation. The UK as a whole in the year in question ran an overall deficit of about £42 billion (relatively small, by comparison with previous years, at something over £600 per head of population). To calculate net fiscal transfers within the UK, this amount is deducted from the total fiscal balance and applied proportionately to population to each of the nations and regions. This is consistent with the way in which debt servicing costs are allocated in the spending numbers. So the North East, for example, is allocated a *per capita* share of the UK's borrowing in this calculation, so that its deficit of £9.7 billion is seen to be partly financed by its share of UK borrowing (roughly £1 .6 billion) and fiscal transfers from other regions inside the UK of about £7 .9 billion.

Nation/Region	GVA £bn	Pop m	Revenue £m	Spend £m	Fiscal Balance £m	Intra UK transfer £m
North East	53	2.6	23,584	33,258	-9,673	-7,994
North West	175	7.2	68,362	89,221	-20,858	-16,255
Yorkshire and Humberside	117	5.4	51,141	62,895	-11,753	-8,296
East Midlands	104	4.7	46,814	52,797	-5,982	-2,968
West Midlands	133	5.8	54,203	67,446	-13,242	-9,536
East of England	153	6.2	73,273	67,343	5,930	9,836
London	431	8.9	150,106	115,808	34,299	39,888
South East	267	9.0	121,415	100,997	20,418	26,172
South West	130	5.5	59,060	63,858	-4,797	-1,280
England	*1,562*	*55.4*	*647,921*	*653,623*	*-5,701*	*29,525*
Wales	62	3.1	27,083	40,776	-13,692	-11,709
Scotland	138	5.4	60,750	74,015	-13,264	-9,821
Northern Ireland	39	1.9	17,253	26,463	-9,209	-8,022
United Kingdom	*1,819*	*65.7*	*753,034*	*794,876*	*-41,839*	*0*

So it is therefore easy to see the very substantial fiscal transfers one part of the UK to another. London, the South East, and the East of England are substantial net contributors to the country as a whole, whereas most other nations and regions are net recipients. This is hardly surprising: these three regions together comprise 47% of the UK's economic activity[6],and London's GVA per head is more than twice the average for the rest of the UK[7].

In absolute terms, the North West was the biggest recipient of support from the rest of the country, an intra-UK transfer of over £16 billion; followed by Wales which had a net inflow of funds of something under £12 billion; then Scotland and the East Midlands approaching £10 billion each and Northern Ireland of £8 billion. These are by any standard large fiscal flows.

They prompt a number of obvious questions. Not all of the regions have the same population, and how do the transfers look in *per capita* terms? Are the driven mainly by tax shortfalls or by spending allocations? Finally, how economically significant are they for both donor and recipient regions? The next table addresses the first two of those questions. It looks at the fiscal balance and intra-UK transfers per head of population, and whether they are driven by tax equalisation or spending allocation.

Nation/Region	Fiscal balance 2017/8 £bn	Of which internal fiscal transfer £bn	Fiscal balance £ per head	Internal fiscal transfer £ per head	*Of which Resource equalisation £ per head*	*Of which spending £ per head*
North East	-9,675	-7,995	-3,666	-3,030	*-2,516*	*-514*
North West	-20,860	-16,259	-2,884	-2,248	*-2,002*	*-246*
Yorks & the Humber	-11,752	-8,299	-2,163	-1,528	*-2,038*	*510*
East Midlands	-5,983	-2,970	-1,263	-627	*-1,571*	*995*
West Midlands	-13,243	-9,538	-2,274	-1,638	*-2,146*	*508*
East England	5,930	9,834	966	1,602	*482*	*1,120*
London	34,302	39,885	3,905	4,541	*5,636*	*-1,095*
South East	20,421	26,169	2,258	2,894	*1,973*	*921*
South West	-4796	-1,282	-868	-232	*-769*	*537*
England Total	*-5,656*	*29,503*	*-102*	*533*	*251*	*282*
Wales	-13,695	-11,711	-4,395	-3,578	*-2,763*	*-995*
Scotland	-13,265	-9,824	-2,452	-1,816	*-224*	*-1592*
Northern Ireland	-9,208	-8,024	-4,939	-4,304	*-2,199*	*-2,105*
United Kingdom Total	*-41,823*	*0*	*- 636*	*0*	*0*	*0*

On this basis it remains clear that London, as expected, is far and away the biggest contributor the common pot (at over £4500 her head). The order of recipient regions changes. Northern Ireland and Wales head the list, followed closely by the North-East, then the North West. Scotland, Yorkshire and Humberside and the East Midlands received broadly similar amounts per head.

Whether a particular region is a net recipient of fiscal transfers depends on both whether it is above or below the national average in tax take and in spending terms, as shown in the final two columns in the table. As you might expect, all but the three richest regions (London, the South East and East England) receive fiscal transfers which in effect top up their tax take to the national average. This resource equalisation is the largest reason for fiscal transfers, and 70% of the money which flows from one region to another of UK is to equalise tax take up to the average level. The remainder is driven by different spending patterns, which are is less easy to explain simply. For the regions of England, broadly speaking, higher spending is correlated with lower tax take. One might expect this, not because public spending is a substitute for a weak private sector, but because poorer regions will have more economically inactive people, such as pensioners, who receive welfare payments and need greater access to public services. The young and economically active are more easily able to move to where the jobs are.

The relationship between lower economic activity and public spending is not however a strong one, and does not hold across the whole UK. Some regions of England, like the North East or North West, have both low tax take and relatively high spending. So does Wales, whose tax yield is very low indeed; but Yorkshire and Humberside and the West Midlands have low tax take and low spending as well.

There are three significant outliers. Northern Ireland's tax take is the second lowest (after Wales), but its spending is by some margin the highest in the UK. Scotland's tax take is in the middle of the range but its spending is second highest. The third is London: public spending in this, the richest part of the UK, is higher than in higher than Wales, the poorest part. There is no obvious economic logic to these exceptions. It might be argued that London and Scotland face the cost pressures of congestion and (some) population sparsity respectively. Certainly very high levels of spending on public transport in London evidence congestion costs, and the cost pressure of higher London salaries and real estate cannot be ignored. Scottish politicians have for their part long referred to the higher costs of providing public services in highland or island areas. But the different allocation mechanisms, notably the Barnett formula, and the differing political pressures on government from devolved administrations and others have clearly had a significant impact on spending levels. It might not be wrong to conclude that London, Northern Ireland and Scotland have each, in their different way, exercised political leverage over the allocation of funds.

What about North Sea oil?

North Sea oil revenues for many years featured prominently in debates about Scotland's fiscal position. In these calculations they are allocated geographically, though they make little difference to the overall picture. In some years of the 1980s they reduced the government's deficit by several percentage points of GDP, and would have put Scotland into surplus. But they are finite and volatile, and are now very much smaller than in the past. In 2016-17 oil revenues were effectively zero, and in recent years have been running at between £1-2 billion annually. One reason is that the costs of decommissioning North Sea platforms can be offset against tax. The Office of Budget Responsibility[8] expects these low levels to continue. While this is of course highly controversial for Scottish Nationalists, it is absolutely consistent with the UK as a fiscal union which aims to get very close to complete resource equalisation. As a result, now that Scotland no longer benefits from North Sea oil revenues, it receives resource equalisation payments, as well as the benefits of the Barnett funding formula, from the rest of the UK.

The economic significance of fiscal transfers

As noted earlier, fiscal transfers in the UK are from the three richest regions, which comprise together something approaching one half of the economic activity in country, to the less well-off ones. It is instructive to look at these transfers relate to the size of the economy of each nation and region, as in the following table.

Nation/Region	Fiscal transfer as % of GVA (to nearest % point)	*Of which resource equalisation*	*Of which spending*
North East	-15	-12.5	-2.5
North West	-9	-8.3	-0.9
Yorkshire and the Humber	-7	-9.5	2.4
East Midlands	-3	-7.1	4.3
West Midlands	-7	-9.3	2.2
East of England	6	1.9	4.5
London	9	11.5	-2.2
South East	10	6.7	3.1
South West	-1	-3.2	2.2
England	*2*	*0.9*	*1.0*
Wales	-18	-14	-5
Scotland	-7	-0.9	-6.2
Northern Ireland	-20	-10.3	-9.9
United Kingdom[2]	*0*		

Note: figures may not sum due to rounding; negative number represents recipient of fiscal transfer.

Once again, the table shows some striking facts:

- London shares nearly 10% of its GDP with the rest of the UK. It would share rather more than that just to equalise taxes, but gets a little back, as it were, for its high spending. Tax revenue per head in London is very high indeed, but spending is also among the highest.
- Within the regions of England, fiscal transfers are very significant:
    - fiscal transfers to the North-East represent 15% of its economy
    - for the North West the equivalent figure was 7%
- these transfers are mostly about resource equalisation
- England as a whole shares 2% of its GDP with the rest of the UK, half of it to make up for lower tax yield in Scotland, Wales and Northern Ireland, and half to support higher levels of spending there.
- No less than 20% of Northern Ireland's GDP is represented by fiscal transfers from the rest of the UK, driven by very low tax yield and very high spending.
- Wales is similar, with fiscal transfers of 18% of its GDP, principally driven by its extremely low tax yield, and somewhat higher than average spending.
- Scotland receives fiscal transfers of 7% of its economy, but because its tax yield is closer to the UK average, most of this transfer is to support higher spending than average.

Conclusion: What sort of fiscal union is the UK?

Some countries consciously go in for very thoroughgoing equalisation of both resources and needs. Australia would be an example, where the Commonwealth Grants Commission seeks to allocate money to the different states using elaborate formulae intended to ensure that each state is able to provide the same level of response to spending needs irrespective of its revenue raising capacity, provided it is as efficient in delivering public service as the average. Canada, by contrast, concentrates more on resource equalisation, example by providing resources *per capita* to support the Canada Health scheme. The US, at the other extreme, does provide substantial federal resources to each of its states, but does not try to equalise either taxable resources or assessed spending need. As for the UK a few broad conclusions can be drawn from this data:

- The UK's fiscal union is more driven by the historic centralisation of tax income than by choices about spending. The principle of resource equalisation drives most of the intra-UK fiscal transfers, and is particularly important for transfers within England.

- The three richest regions of the country, which are responsible for close to half of the total economic activity the UK, redistribute almost 10% of their GDP to the rest of the country through fiscal transfers.

- These fiscal transfers are extremely important to the economies of the poorest parts of the country. They equate to anything up to 20% of the total economic activity in Northern Ireland and Wales and 15% in the North East of England. While they are not a substitute for private sector economic activity, and locally generated tax revenue, they mean public services are provided at at least a comparable level all across the UK.

- Much of the debate on the regional distribution of wealth and economic activity in the UK takes for granted these redistributions of taxation and spending. That is in part because the UK has long has a centralised Exchequer, but as well as ensuring common standards of welfare and public services, this unstated regional fiscal of UK regional policy does support economic activity across the UK territory, even though it is a mitigant rather than a substitute for a successful regional economic development policy.

- England as a whole redistributes about 2% of its GDP to the rest of the UK, half make up for the lower tax yield there, and also to support higher spending.

- The geographic pattern of spending on welfare is easy to justify by need. Spending on public services broadly speaking correlates with poverty, but spending in Northern Ireland, Scotland and London looks out of line with this, and is driven by other factors, notably the Barnett formula[9] whose operation means that Northern Ireland and Scotland have higher levels of spending than might otherwise be expected. (It does not serve Wales quite so generously.) London too has higher levels of spending than a simple approach to need might suggest, so it retains some of the tax income which might otherwise be equalised away from it to support that spending.

Overall, the UK is indeed a union which pools and shares its resources across both its constituent nations and the regions of England. Taken together, its approach is closest to heavily equalising one of Australia, even though the UK makes little systematic attempt to assess spending need. The most notable spending beneficiaries of this approach are Northern Ireland and Scotland, but perhaps surprisingly London too. As for the regions of England, the scale and significance of fiscal transfers is very striking. Four of the ten standard regions of England receive fiscal transfers of 7% or more of GDP (the same level as Scotland). A regional fiscal policy of this nature and scale is no substitute for a successful regional economic development policy, but it does ensure that across England resources are pooled and shared out to guarantee common standards of welfare and public services.