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Financial Scrutiny Unit Briefing

Tax revenue estimates: a comparison of GERS and HMRC

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This briefing looks at two different sources of information on tax revenue estimates:

- The Government Expenditure and Revenue Scotland (GERS) annual publication by the Scottish Government
- Disaggregated tax and NIC receipts published by HM Revenue & Customs (HMRC) on 2nd October 2013

In goes on to highlight the key issues in comparing these estimates.

A spreadsheet containing both GERS and HMRC estimates for 2011-12 is available here. It also provides an adjustment of HMRC estimates for income tax and VAT to improve comparability with GERS.

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EXECUTIVE SUMMARY

The Government Expenditure and Revenue Scotland (GERS) report is a National Statistics publication released annually by the Scottish Government. On 2nd October 2013 HM Revenue & Customs (HMRC) released data apportioning total UK tax receipts, tax credits and benefit payments, administered by HMRC, to England, Wales, Scotland and Northern Ireland as an experimental statistics series. In most cases GERS and HMRC present the same or very similar estimates of tax revenues. There are a number of key areas where the estimates differ:

- Income tax – the HMRC estimates differ from those in GERS as they treat tax credits differently.

- VAT – the HMRC estimates differ from those in GERS as they treat VAT refunds differently.

- Corporation tax – HMRC uses the same definition of onshore corporation tax but uses a different method of allocating revenues to Scotland, this results in a lower allocation to Scotland.

- North Sea revenues: geographic share – HMRC and the Scottish Government use different models to allocate activity. The HMRC model gives a lower allocation to Scotland.

Because of these differences, and a number of other smaller differences, HMRC estimates Scottish revenues to be around £2.7 billion lower than GERS does for 2011-12.

However, some of the difference is due to a different definition of revenues (income tax and VAT) and it is possible to make adjustments to improve comparability for some of the taxes. When this is done the differences in the estimates for income tax and VAT between the two publications reduces substantially. Including these adjustments, HMRC estimates of Scottish revenues are still around £2.1 billion lower than GERS estimates for 2011-12.

This is largely explained by different Scottish estimates of corporation tax (HMRC estimates are £438 million lower) and North Sea revenues - geographic share (HMRC estimates are £1,275 million lower) due to different methods of allocating revenues to Scotland by HMRC and GERS.

BACKGROUND TO THE ESTIMATES

While actual Scottish tax revenue data are available for taxes such as council tax and non-domestic rates, they are often not available for taxes administered by the UK Government. As a result, Scottish tax revenues are estimated by allocating a Scottish proportion of UK tax revenues. A key challenge in doing this is that a number of key elements of underlying data, while available at the UK level, are not available at the UK country or regional level. For some taxes, there are different ways in which UK revenues can be apportioned to Scotland, and the Scottish Government and HM Revenue & Customs (HMRC) have both published their own estimates of Scottish tax revenues.

Note that the revenue estimates are based on the current taxation framework and do not represent an estimate of the revenues that would be raised if each tax was set at the devolved level.

SCOTTISH GOVERNMENT: GOVERNMENT AND EXPENDITURE REVENUE STATISTICS (GERS)

The Government Expenditure and Revenue Scotland (GERS) report has been published annually by the Scottish Government since the early 1990's. It is a National Statistics publication, produced to standards set out in the National Statistics Code of Practice Protocol, and aims to enhance public understanding of fiscal issues in Scotland under different scenarios. The primary objective of GERS is to estimate a set of public sector accounts for Scotland.

HM REVENUE & CUSTOMS: DISAGGREGATED TAX AND NIC RECEIPTS

On 2nd October 2013 HM Revenue & Customs (HMRC) released data apportioning total UK tax receipts, tax credits and benefit payments, administered by HMRC, to England, Wales, Scotland and Northern Ireland. The dataset attempts to measure the true economic incidence of taxation, based on the underlying activity, which can often differ from how or where the tax receipts are collected. This is the first time that this dataset has been published by HMRC and they have published the country level tax data as an experimental statistics series. HMRC advises that users should take appropriate caution when using their data.

HMRC state that actual tax revenue data are available for capital gains tax, inheritance tax and stamp duty land tax; for the others, the revenue estimates are arrived at using best available data and statistical techniques, including assumptions and adjustments where necessary. The methodology underpinning the HMRC data and an excel workbook containing the relevant figures are available online.

Note that HMRC have not provided analyses for the English Regions, which may be useful, e.g., in allowing comparisons between Scotland and the North of England, or between Scotland and England excluding London and the South East.

KEY ISSUES COMPARING THE ESTIMATES

It is reasonable to suggest that the recently released HMRC administrative data may help address some revenue areas of GERS currently based on estimates. However, the HMRC data do not provide an alternative estimate of the fiscal position of Scotland's economy. It cannot do this as is that it only covers taxes administered by HMRC whilst GERS covers all public sector revenues raised in Scotland and public sector expenditure for the benefit of Scotland. The taxes included in each publication are highlighted in Annex 1.

It is important to note that each publication is also presented on a different accounting basis. The HMRC data are largely based on administrative data and are not presented within an economic accounting framework whilst GERS is consistent with the UK Public Sector Finances report published by the UK Office for National Statistics (ONS). Note that there is no formally agreed set of accounting concepts and definitions for the formulation of UK country or regional fiscal accounts.

In most cases GERS and HMRC present the same or very similar estimates of tax revenues (see Annex 2 for a comparison of methodologies). However, there are a number of key areas where the estimates differ:

Income tax

Scottish income tax revenues in 2011-12 are estimated as £10,790 million in GERS, but as £11,076 million by HMRC (a difference of £286 million). Both figures are based on the same data sources but produce different estimates, largely due to the different treatment of tax credits. Income tax revenues in GERS are shown net of tax credits (tax credits have been deducted), whereas HMRC data are not adjusted for tax credits.

Although the tax base differs in each publication, the share of UK revenues apportioned to Scotland is very similar (7.36% and 7.34% in 2011-12). Applying the HMRC estimate of 7.34% to the GERS UK income tax figure net of tax credits provides an income tax revenue estimate of £10,756 million for 2011-12 (£34 million less than the figure shown in GERS). Thus, the bulk of the difference is due to the different treatment of tax credits.

VAT

Scottish VAT revenues are estimated as £9,554 million in GERS, but as £8,355 million by HMRC (a difference of £1,199 million). It has since been quoted in the media that Scottish business paid £1.2 billion less VAT than was estimated by the Scottish Government. However, the GERS and HMRC figures are not comparable due to the different treatment of VAT refunds to central and local Government. The GERS figure includes VAT refunds and as a result is higher than the HMRC data which shows only VAT income.

The OBR economic and fiscal outlook report (March 2013) shows VAT income and VAT refunds separately (the OBR shows UK VAT is comprised 87.51% of VAT income, VAT refunds are 12.49%). Applying the HMRC estimate of the Scottish share of VAT income (7.5% in 2011-12) to the GERS figure for VAT in 2011-12 provides a VAT revenue estimate of £9,334 million (£193 million less than the figure in GERS).

If the above data is used to estimate a new fiscal balance for Scotland then the difference between the new VAT figure and GERS needs further adjustment as the VAT refund component is fiscally neutral (an equal figure appears in the GERS expenditure figure). The VAT refund component (12.49% of the difference) is therefore removed when estimating a new fiscal balance.

Thus, applying the HMRC estimate of the Scottish share to a consistent measure of VAT suggests that VAT receipts may be around £200 million lower in Scotland in 2011-12 (rather than £1.2 billion) by using the HMRC share instead of the GERS share. These figures demonstrate that with areas such as VAT receipts the overall amount of revenue is large (GERS shows UK VAT at £109.8 billion) so even small differences in estimates of the Scottish share can have significant financial impacts.

Corporation tax

Scottish onshore corporation tax revenues are estimated as £2,976 million in GERS, but as £2,538 million by HMRC (a difference of £438 million). The difference is explained largely by the different methodologies used by HMRC and GERS to allocate tax receipts. Both GERS and HMRC allocate Scottish corporation tax revenue based on estimates of the location of profits. However, GERS uses regional accounts data published by the ONS whereas HMRC have used corporation tax paid by enterprises and measured how the activities of those enterprises are distributed across sub-UK areas. Where no information is available, HMRC have allocated tax receipts to the location of the headquarters. As a result, HMRC estimates that Scottish receipts as a share of UK are lower than the share shown in GERS (the HMRC estimate is 7.7% compared with a GERS estimate of 9.0% in 2011-12).

The Institute of Fiscal Studies commented on the different estimates, explaining:

> "Neither of these estimates is clearly superior to the other, and both may be some way off. Profits are not necessarily generated in proportion to the number of employees, or their wages. Some employees may be more instrumental in generating profits than others; and profits also arise from capital assets – both physical (such as buildings and equipment) and intangible (such as intellectual property and brand value) – the location and contribution of which may differ from the location and wages of employees. Calculating how much of a company's profits are attributable to economic activity in different locations is conceptually and practically difficult and is the source of many problems in international corporate taxation" (2013).

North Sea revenues (geographic share)

Scottish North Sea revenues (geographic share) are estimated as £10,573 million in GERS, but as £9,298 million by HMRC (a difference of £1,275 million). Both GERS and HMRC use the same definition of Scotland's "geographic share" but different models are used to allocate activity. HMRC use their own North Sea Oil and Gas model and GERS references the methodology used by Kemp and Stephen (University of Aberdeen).

The Institute of Fiscal Studies commented on the different estimates, explaining:

> "This disparity is not because they divide fields between England and Scotland differently: both use a boundary that was established in the Scottish Adjacent Waters Boundaries Order 1999. Rather, it derives from differences in their models of how much taxable profit arises from different fields" (2013).

Table 1, overleaf, summarises the information presented above:

Table 1: Taxes where key differences exist between GERS and HMRC

Tax	GERS 2011-12 revenue (£m)	HMRC 2011-12 revenue (£m)	Difference (£m)	Reason	HMRC estimate adjusted for different baseline (£m)	New difference (£m)
Income	10,790	11,076	+286	Largely due to different treatment of tax credits	10,756	-34
VAT	9,554	8,355	-1,199	Largely due to different treatment of VAT refunds	9,334	-193
Corporation tax – onshore	2,976	2,538	-438	Different method of allocating receipts to Scotland		
North Sea revenue (geographic share)	10,573	9,298	-1,275	Different models used to allocate receipts to Scotland		

REFERENCES

HM Revenue & Customs (2013). *A disaggregation of HMRC tax receipts between England, Wales, Scotland and Northern Ireland (Experimental statistics).* Available at - http://www.hmrc.gov.uk/statistics/receipts.htm (Accessed 3 October 2013)

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The Institute for Fiscal Studies (2013). *Tax revenue in England, Scotland, Wales and Northern Ireland.* Available at - http://www.ifs.org.uk/publications/6881 (Accessed 4 October 2013)

The Times (2013). *Taxman finds £1.7bn oil revenue shortfall.* Available at - http://www.thetimes.co.uk/tto/news/uk/scotland/article3885329.ece (Accessed 3 October 2013)

ANNEX 1 – TAXES FOR WHICH ESTIMATES ARE PROVIDED IN EACH PUBLICATION

Taxes for which estimates are provided by both GERS and HMRC	**Taxes for which estimates are provided by GERS but not HMRC**
Income tax	Other taxes on income and wealth
Corporation tax (excl North Sea)	Vehicle excise duty
Capital gains tax	Non-domestic rates
National insurance contributions	Council tax
VAT	Other taxes, royalties and adjustments
Fuel duties	Interest and dividends
Stamp duties	Gross operating surplus
Tobacco duties	Rent and other current transfers
Alcohol duties	
Betting and gaming duties	
Air passenger duty	
Insurance premium tax	
Landfill tax	
Climate change levy	
Aggregates levy	
Inheritance tax	
North Sea revenue – per capita share	
North Sea revenue – geographic share	

ANNEX 2 – A COMPARISON OF METHODOLOGIES

Tax	Are the HMRC figures estimated using the same tax base as GERS?	Are HMRC tax receipts allocated using a different approach or source of data from GERS?
Income tax	The GERS figure for UK income tax is different compared to HMRC as it deducts tax credits.	Very similar estimates based on the same sources of data.
Corporation tax (excl North Sea)	Similar estimates of UK receipts.	Different methodologies used to allocate tax receipts. GERS uses regional accounts data published by the ONS whereas HMRC have used corporation tax paid by enterprises and measured how the activities are distributed across sub-UK areas. Where no information is available HMRC have allocated tax receipts to the location of the headquarters.
Capital gains tax	Similar estimates of UK receipts.	The GERS data are based on data supplied directly by HMRC and GERS uses a similar approach to HMRC.
National insurance contributions	Similar estimates of UK receipts.	Very similar estimates based on the same sources of data.
VAT	HMRC estimates are slightly lower as they are net of VAT refunds (approx £14 bn).	GERS and HMRC use the same source of data and a similar approach to measure VAT receipts.
Fuel duties	Similar estimates of UK receipts.	Both GERS and HMRC use data based on the Department of Energy and Climate Change (DECC) road consumption transport statistics.
Stamp duties	Similar estimates of UK receipts.	There are two components, Land and Property Stamp Duty (LPSD) and stocks and shares. Both GERS and HMRC used HMRC data to estimate LPSD and calculated the same Scottish share of UK LPSD. HMRC used a significantly different methodology to estimate stocks and shares stamp duty based on the location of the incorporated company, regardless of whether the purchaser of stocks and shares resides in the UK - this methodology significantly reduces the Scottish share of stamp duties.
Tobacco duties	HMRC estimates are slightly lower.	Both GERS and HMRC use the Living Costs and Food Survey (ONS)
Alcohol duties	HMRC estimates are slightly lower.	Both GERS and HMRC use the Living Costs and Food Survey (ONS)
Betting and gaming duties	HMRC estimates are higher.	Both GERS and HMRC use the Living Costs and Food Survey (ONS)
Air passenger duty	Similar estimates of UK receipts.	Both GERS and HMRC use data provided by the Civil Aviation Authority (CAA)
Insurance premium tax	HMRC estimates are slightly lower	GERS allocates a population share of UK revenues and HMRC uses the Living Costs and Food Survey (ONS)
Landfill tax	Similar estimates of UK receipts.	Both GERS and HMRC use data from the Scottish Environment Protection Agency and other UK Environment Agencies.
Climate change levy	Similar estimates of UK receipts.	Both GERS and HMRC use Gas and electricity consumption statistics for England, Scotland and Wales from the Department of Energy and Climate Change (DECC).
Aggregates levy	Similar estimates of UK receipts.	Both GERS and HMRC use the UK Minerals Yearbook (British Geological Survey)
Inheritance tax	Similar estimates of UK receipts.	GERS is based on data supplied directly by HMRC, HMRC use their own administrative data.
North Sea revenue – per capita share	Same estimates of UK receipts.	Same estimates.
North Sea revenue – geographic share	Same estimates of UK receipts.	Both GERS and HMRC use the same definition of Scotland's "geographic share" but different models are used to allocate activity. HMRC use their own North Sea Oil and Gas model and GERS references the methodology used by Kemp and Stephen (University of Aberdeen).

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RELATED BRIEFINGS

SB 13-53 Understanding Corporation Tax Modelling (4 September 2013)

SB 13-39 Land and Buildings Transaction Tax (Scotland) Bill-Stage 3 (20 June 2013)

SB 13-32 Landfill Tax (Scotland) Bill (30 May 2013)