

# Economic Data Inquiry

## Professor Richard Murphy

This submission seeks to address these issues and then suggest ways in which better data might be prepared and ways in which any available data might be better presented to assist its usefulness.

### 1. Summary

- a. This report suggests that GERS data:
  - i. Has limited accuracy or reliability at best and with regard to the Scottish deficit is potentially misleading and inaccurate;
  - ii. Has limited usefulness as a result;
  - iii. Is not worth analysing in great detail because by design the information it presents does not make sense;
  - iv. Does not encourage effective scrutiny;
  - v. Needs to be redesigned if it is to be fit for purpose. Proposals for this redesign are made.

The reasons are noted in the following paragraphs.

- b. GERS produces an estimate of varying reliability of the tax paid resulting from economic activity in Scotland but that it does not:
  - i. Attempt to estimate the tax owing as a result of economic activity for Scotland undertaken outside Scotland but which is charged to the country in the GERS account, which tax would be credited to the Scottish government if it was undertaken in Scotland;
  - ii. Attempt to estimate the tax owing on the economic activity generated as a result of the multiplier effect on the economic activity undertaken for Scotland outside the country recorded in GERS, which tax would largely be due in Scotland if that economic activity undertaken for Scotland was undertaken within it;
  - iii. As such GERS does not appropriately suggest the total tax generated as a result of the expenditure recorded in GERS. The consequence is that it is likely that GERS materially under-reports the revenue that should be credited to Scotland as a result of government and other economic activity undertaken within or for the country.
- c. GERS provides an estimate of expenditure in and for Scotland but does not do so in a way that assists understanding of that data or enhance the ability of anyone to make decisions with regard to it. This is because the data reported does not:
  - i. Adequately disclose by expenditure type the expenditure in and the expenditure for Scotland;

- ii. Disclose who is responsible for the decision making on expenditure in and for Scotland in each category of expense;
- iii. Reveal the comparison of outcome with expectation (budget) for each authority responsible for expenditure of each type;
- iv. Suggest the parameters in which decisions on the expenditure in question arise, and who might make them.

As a result, GERS has limited usefulness in this area.

- d. What GERS does not do is provide a reliable indication of the net government income or expenditure arising in Scotland. Its design guarantees that cannot be the case. This is because:
  - i. The accruals concept adopted for use in GERS is incomplete. Whilst both income and expenditure are accounted for on an accruals basis (i.e. they are recognised as they arise and not when settled in cash) the accruals concept is inappropriately applied in GERS as a whole since no attempt is made to ensure consistency in the methods used to record income and expenditure. Expenditure (which, macroeconomic theory makes clear, is a driver of government income) as recorded in GERS includes spending for Scotland not actually expended in the country but the income recorded in GERS does not include the tax due on that spending for Scotland and as such the bases of accounting for the two are fundamentally different. This is contrary to any accepted basis for accruals accounting and the resulting suggestion within GERS that it is prepared on the basis of this accounting concept is misleading. The approach used by GERS does not reflect acceptable accounting standards.
  - ii. GERS implies that it records whether or not there is a surplus or deficit arising on government revenue and expenditure in Scotland. For this to be meaningful in accounting terms would, however, require there to be an explicit statement of the capital maintenance concept used to determine this estimate and that would then be supported by the presentation of a balance sheet prepared on the basis of that capital maintenance concept to reconcile the movement in the surplus or deficit with the associated changes in net assets or liabilities, but no such statement is presented for Scotland as a part of GERS. This failure to indicate what capital there might be in Scotland, how it is measured and the consequence of the movement in its net worth, all reconciled with and by GERS, has permitted the misleading nature of the statement to be hidden from view.
- e. There is at least one other major conceptual difficulty with GERS. The statement implies that Scotland is running a substantial deficit significantly out of proportion to that of the UK as a whole, a characteristic it shares in common with Northern Ireland and Wales, who might also suffer from similarly mis-stated deficits due to what may also be inappropriate application of the accruals concept in the recording of their affairs. In all cases these deficits imply that they might have considerably liabilities owing and yet it is apparent that, to return to the case of Scotland, that this is not true: Scotland does not have and appears unable to accept any liability for the deficit supposedly attributable to it. In that case it has to be asked what meaning this concept might have and for what, and for whose, benefit this sum is calculated and in what meaningful sense there is a deficit

when Scotland has no responsibility for it and has no useful purpose it can make of this information, most of which relates to decisions taken for it but not by it.

- f. As a result of these weaknesses this report suggests that the steps must be taken now to address the deficiencies in Scottish economic data. These include:
- i. There must be debate on the data Scotland needs and how it is to be used;
  - ii. Resource must be allocated to collecting Scottish data or the whole process of devolution is undermined: no government can be asked to make decision on the basis of inadequate information;
  - iii. Cooperation with the UK government and HM Revenue & Customs to collect data on a cost effective basis is essential;
  - iv. GERS must be redesigned to indicate with regard to each element of data:
    - What it is;
    - Who has responsibility for it;
    - How accurate it is;
    - How it compares with budget, if at all;
    - How it compares with previous periods;
    - How it compares with comparable locations;
    - What it implies;
    - What scope for change there might be.

Suggestions are made as to how this might be done.

- v. GERS must be expanded so that it either includes a balance sheet for Scotland or it must supply statements on movements in net investment in Scottish assets (whether government owned or not) as a result of government spending in Scotland, and in the funding required for them, so that the implications of decisions made can be fully appraised.

## 2. Scottish economic data

There is relatively limited Scottish economic data. The two main reports available are:

- a. GERS – Government Expenditure and Revenue Scotland<sup>i</sup>, published annually in retrospect for the preceding financial year;
- b. QNAS - Quarterly National Accounts Scotland<sup>ii</sup>.

The focus of this submission is on GERS for three reasons:

- The political significance attached to GERS;
- The focus on GERS in public debate;
- It being the issue to which I have paid most attention in my work.

## 3. An overview of GERS

GERS was the first major economic data to be published for Scotland. First published<sup>iii</sup> by the Conservative government in 1992, with data extending back to

1986, it has been published annually since then. It was subject to major methodological revision in 2007 and minor changes annually since then<sup>iv</sup>. GERS says that addresses three questions about Scotland's public sector accounts for a given year<sup>v</sup>:

- a. *What revenues were raised in Scotland?*
- b. *How much did the country pay for the public services that were consumed?*
- c. *To what extent did the revenues raised cover the costs of these public services?*

In the process GERS says that<sup>vi</sup>:

*Public sector revenue is estimated where a financial burden is imposed on residents and enterprises in Scotland.*

And that<sup>vii</sup>:

*Public sector expenditure is estimated on the basis of spending incurred for the benefit of residents of Scotland. That is, a particular public sector expenditure is apportioned to a region if the benefit of the expenditure is thought to accrue to residents of that region.*

It is suggested as a result that<sup>viii</sup>:

*GERS provides two measures of Scotland's fiscal position, the current budget balance and the net fiscal balance.*

These are defined as<sup>ix</sup>:

*Current Budget Balance: the difference between current revenues (including capital taxes) and current expenditure (including capital consumption).*

And<sup>x</sup>:

*Net Fiscal Balance: the difference between estimated total public sector spending for Scottish residents and estimated total public sector revenue raised in Scotland.*

It should be noted that the definitions of the component elements of the Current Budget Balance are<sup>xi</sup>:

*Current Expenditure: the sum of the current expenditure of general government and interest and dividends payable by public corporations to the private sector and abroad. Public sector current expenditure is net of certain revenue items, such as some sales of goods and services by general government. As it is defined at the public sector level, any transactions and transfers between parts of the public sector are also excluded. It includes items such as public sector wages and salaries and transfer payments.*

And<sup>xii</sup>

*Current Revenue: all revenue raised by the public sector from tax and non-tax revenues except the sale of assets or interest received.*

It is said as a result that<sup>xiii</sup>:

*The current budget balance shows the difference between revenue and current expenditure. It therefore excludes public sector capital investment. It measures the degree to which taxpayers meet the cost of paying for day-to-day public services, excluding capital investment.*

And that<sup>xiv</sup>:

*The net fiscal balance measures the difference between total public sector expenditure and public sector revenue. It therefore includes public sector capital investment, such as the construction of roads, hospitals, and schools, which yields benefits not just to current taxpayers but also to future taxpayers.*

In other words, it is suggested that the same data can produce the same figures for GERS purposes by the simple addition of capital spending into the data to adjust from one to the other.

In this submission I suggest that the claims made for GERS are not true. GERS is reported to be prepared in accordance with the accruals concept. This it defines as<sup>xv</sup>:

*Accruals: the accounting convention whereby an expenditure or revenue is recorded at the time when it has been incurred or earned rather than when the money is paid or received.*

This is, however, a very incomplete view of what accruals accounting is. Investopedia provides a perfectly reasonable definition of what the concept really is, saying<sup>xvi</sup>:

*Accrual accounting is an accounting method that measures the performance and position of a company by recognizing economic events regardless of when cash transactions occur. **The general idea is that economic events are recognized by matching revenues to expenses (the matching principle) at the time in which the transaction occurs rather than when payment is made (or received).** This method allows the current cash inflows/outflows to be combined with future expected cash inflows/outflows to give a more accurate picture of a company's current financial condition.*

*(Note: **Emphasis** added)*

GERS uses the accruals concept as noted before the section highlighted in bold, but it then ignores the critical element within accruals accounting that requires that revenues and costs be matched so that what be termed a true and fair is shown. As a result GERS does not, despite the suggestion made within it, comply with the accruals concept. Nor does it, despite its suggestion, provide a measure of the Current Budget Balance for Scotland. In addition, it provides a wholly unreliable measure of the Net Fiscal Balance.

Firstly this is because if GERS was to provide an estimate of the Current Budget Balance for Scotland it would be necessary that it reflect **all** revenue raised by the public sector from tax and non-tax revenues except the sale of assets or interest received as a result of economic activity for Scotland. To ensure that the matching principle, which is a necessary part of the accruals concept was applied properly, 'all' would require that the revenues in question were **all** those that related to the expenditure recorded in GERS. However, they are not. As the GERS methodology notes<sup>xvii</sup>:

*Public sector revenue is estimated for taxes where a financial burden is imposed on residents and enterprises in Scotland*

In other words, tax revenue is only recognised when due by a Scottish taxpayer.

On the other hand, the GERS methodology notes that<sup>xviii</sup>:

*Public sector expenditure is estimated on the basis of spending incurred for the benefit of residents and enterprises in Scotland*

This is a fundamentally different basis of accounting. As GERS notes<sup>xix</sup>:

*Public sector expenditure is estimated on the basis of spending incurred for the benefit of residents of Scotland. That is, a particular public*

*sector expenditure is apportioned to a region if the benefit of the expenditure is thought to accrue to residents of that region.*

*This is a different measure from total public expenditure in Scotland. For most expenditure, spending for or in Scotland will be similar. For example, the vast majority of health expenditure by NHS Scotland occurs in Scotland and is for patients resident in Scotland. Therefore, the in and for approaches should yield virtually identical assessments of expenditure. However, for expenditure where the final impact is more widespread, such as defence, an assessment of 'who benefits' depends upon the nature of the benefit being assessed. Where there are differences between the for and in approaches, GERS estimates Scottish expenditure using a set of apportionment methodologies, refined over a number of years following consultation with and feedback from users.*

In other words, whilst the revenue recorded in GERS is restricted to that recorded in Scotland the expenditure reflected in it may well have been incurred outside Scotland. As such revenue collected **for** Scotland is excluded from consideration and as such GERS does not estimate the current budget balance or net fiscal balance **for** Scotland but because expenditure for Scotland is included in GERS nor does it provide and estimate of the current budget balance or net fiscal balance **in** Scotland. It is neither one thing, nor the other.

What can be safely said is that the accruals concept is not in operation in GERS. The income and expenditure that it is claimed are matched in GERS are not similarly computed meaning that the analysis offered is akin to the proverbial comparison between an apple and an orange: there might be some vague relationship between the entities being compared (in the case of GERS this being because they are both accounting data relating to Scotland) but they are also so fundamentally unlike that any comparison is meaningless.

As a result GERS does not provide a reliable measure of the current budget balance. It must then follow that the net fiscal balance is also wrong.

There is a further complication and that is that the noted problems cannot simply be put right by adding back into consideration the tax paid on the spend that is incurred outside Scotland for the benefit of the country. This is because to make a simple adjustment for this alone would ignore the additional economic impact that activity has in the place where it is incurred over and beyond the simple additional sum of tax paid that is credited to the account of a constituent country member of the UK other than Scotland. These additional impacts can be significant because when an economy is operating at less than full capacity (as the UK has been for at least a decade) it is likely that the multiplier effect<sup>xx</sup> from the government spend incurred outside Scotland but for its benefit will add much more value, and so tax revenue generated, to the locality where such sums are spent than the initial spend might be itself imply. It should be noted that the reverse adjustment i.e. the exclusion of expenditure in Scotland not for its benefit, appears to be wholly immaterial, meaning that it is only possible to conclude at this moment that the net benefit flow is very heavily from Scotland to the rest of the UK. The likely understatement of Scottish revenue resulting from this flawed approach to national income accounting is likely to be very significant although unlikely to be capable of accurate estimation at present based on the published GERS data, including the available database.

The impact of this is seen from the data that is available. For example, the ONS report on 'Country and regional public sector finances: Financial year ending March 2016'<sup>xxi</sup>, which is broadly consistent with GERS (reporting a deficit for Scotland of £15.2 billion as opposed to the GERS estimate of £14.5 billion, including North Sea

Revenue) suggested that the deficit for the UK as a whole was split between the constituent countries as follows:

Country	Proportion of total UK deficit accounted for
England	45.39%
Wales	19.53%
Scotland	21.12%
Northern Ireland	13.96%
	100.00%

This was despite population being split as follows:

Country	Proportion of UK population
England	84.2%
Wales	4.8%
Scotland	8.3%
Northern Ireland	2.8%
United Kingdom	100.0%

Translating this to date per head of population (by extrapolation from published data):

	Income per head	Spend per head	Deficit per head
	£	£	£
England	10,699	11,297	598
Wales	7,984	12,531	4,547
Scotland	10,219	13,054	2,835
Northern Ireland	8,580	14,018	5,438
United Kingdom	10,471	11,579	1,108

It is stressed that this is not GERS data, but is ONS data broadly similar to GERS and that the ONS certify GERS.

Despite their source these results are implausible: there is no rational basis on which it can be assumed that fifty four per cent of the UK deficit as generated by sixteen per cent of its population.

Nor is it in any way plausible that the level of claimed spend for Scotland can generate so limited revenue within Scotland when government spending is a key component of GDP that in turn drives tax revenues. Whilst it is accepted that Scotland may have a deficit proportionately larger than that of the UK (although evidence to prove this is not available, given how unreliable GERS is) the scale of disparity this data and GERS implies can only result from inappropriate revenue accounting and not from the underlying economic data.

In the context of the questions asked by this review several conclusions follow. First, GERS is not reliable.

Second, GERS is not useful.

Third, interpreting GERS is nigh on impossible when the data as presented is so flawed that meaningful interpretation is not possible.

Fourth, scrutiny of GERS should not focus on the minutiae of the data within it but on how to replace it.

Fifth, the ONS endorsement of GERS does not change these conclusions. ONS accreditation is meant to mean that data is methodologically sound and free from political manipulation. It is very hard to agree with this conclusion in the case of GERS where the basis of preparation is unsound.

Sixth, claims that the GERS data is sound within the rules that it uses is not a useful claim when those rules are not sound.

In practice there are two observations that suggest discussion of this data is, in any case, of little value. One comes from GERS, and relates to the revenue noted within it<sup>xxii</sup>:

*The majority of public sector revenue payable by Scottish residents and enterprises is collected at the UK level. Generally it is not possible to identify separately the proportion of revenue receivable from Scotland. GERS therefore uses a number of different methodologies to apportion revenue to Scotland.*

Estimation is always necessary in economics, national income accounting and national statistics. This point is accepted. But the above noted point about GERS was elaborated upon by Graeme Roy, Director of the Fraser of Allander Institute, in March 2017 in a blog in which he noted<sup>xxiii</sup>:

*In short, GERS estimates the contribution of public sector revenue raised in Scotland toward the public sector goods and services provided for the benefit of the people of Scotland.*

*It's important to remember that GERS does this taking Scotland as a mini-UK, and the constraints and protections that the current constitutional arrangements bring.*

To put that another way, what is said is that this data may be useful to decision making on the allocation of resources within the UK (although that is questionable) but it is not useful to anyone who wants to consider Scottish economic activity, because that is not what it is intended to deliver.

In that case instead of analysing further the quality of the information in GERS the remainder of this report consider how meaningful information for Scotland might be prepared.

#### **4. The essential qualities of data**

In this submission it is assumed that to be useful economic data must be:

- a. Relevant i.e. it must meet a user's needs;
- b. Reliable i.e. its provenance must be clear;
- c. Consistent i.e. it must be prepared in a way that allows comparison over time;
- d. Comparable i.e. it must be consistent with data purporting to achieve the same purpose for other entities;
- e. Comprehensive i.e. it must cover all the available information and be selective in its selection;
- f. Comprehensible i.e. it must be capable of being understood by the end user.

These criteria have been used to suggest the qualities that Scottish economic data should have taking also into consideration the Committee's interest in:

- Accuracy, or reliability
- Usefulness
- Ease of interpretation
- Effective scrutiny.

It is also presumed in what follows that what is required is not information for the sake of satisfying curiosity but that is instead to be useful for decision making purposes.

Putting these various factors together suggests that what is required is data that:



- I. Reveals either its source or the body responsible for managing it;
- II. Indicates the degree of control over that issue that any decision make might have as a result;
- III. Suggests the degree of uncertainty in the data in question;
- IV. Provides comparisons between periods;
- V. Provides comparisons with equivalent data sources;
- VI. Is designed to be accessible.

This list could be constructed in a number of ways and is not meant to be definitive: the above is used for example purposes.

## 5. Reporting Scottish government expenditure

With regard to GERS reporting should start with expenditure because:

- Government exists to spend and not to raise revenue and so spending data is of higher priority;
- More spending is under Scottish control than not at present;
- Most scrutiny will be on this issue as a result.

For each category of spend GERS should report:

- a. Who has made the spend i.e.:
  - The Scottish government;
  - A Scottish local authority;
  - Another Scottish agency;
  - The UK government or an agency of it in Scotland;
  - The UK government or an agency outside Scotland;
- b. The spend by each agency;
- c. The budget set by the government or agency making the spend for that item or a note that no budget was set and that the spend in question is uncontrolled;
- d. A comparison between spend and actual by agency unless there is no budget when a note of the uncontrolled spend should be made instead;
- e. A comparison in total for the sum spent, budget and actual spending with the addition of a note on uncontrolled spending in total.
- f. A comparison with the previous year;
- g. Any narrative notes required to explain:
  - Any changes in the basis of calculating sums noted over time and their impact;
  - Any item requiring additional information to ensure property scrutiny can be undertaken;
  - The degree to which the sum expended is based on actual data and the extent to which it is based on estimates and the considered likelihood that the estimates in question are robust, with reasons stated;

- The estimated impact in terms of tax revenue and GDP lost to Scotland as a result of expenditure being incurred outside and not within the country and how this sum has been estimated (the 'multiplier effect' of spending outside Scotland);
- h. If the expenditure is on capital items these should be categorised sufficiently to allow ensure that the nature of the spend can be readily understood by someone subjecting the spend to scrutiny with the following additional information being disclosed:
  - How these sums will be accounted for in the UK's national accounts;
  - The estimated life of the assets in question;
  - Any specific capital funding (such as PFI) associated with the acquisition of these assets; the sum raised as capital funding as a result and the total cost to be incurred over the life of the assets in paying for the items funded during the year;
  - The depreciation to be charged over each of the following five years as a result of the spend incurred in the current year.
- i. If the spend relates to capital sums other than the acquisition of assets:
  - The nature of the spend;
  - The reason why it was incurred;
  - Any associated costs e.g. in terminating financial arrangements.

If this data is presented the design criteria should be met.

## 6. Reporting Scottish government income

With regard to Scottish government income the most important issues to be addressed are:

- Identifying income in Scotland;
- Identifying income for Scotland directly arising on activity undertaken for it outside the country;
- Identifying the revenue lost to Scotland because of the multiplier effect of economic activity for Scotland being undertaken outside the country.

At present of these three only the first is attempted, and, as has already been noted, it is usually done by extrapolation from reports for the UK as a whole. As the consultant to this review noted<sup>xxiv</sup>:

*Compared to ONS statisticians, it's more likely that Scottish Government statisticians would describe themselves as more opportunistic, but relatively powerless, statistical scavengers. The economic statistics published by the Scottish Government tend to pick out relevant data from UK wide surveys and administrative data where possible.*

This failure to collect relevant, reliable, complete, comparable and comprehensible data that this represents is the single highest priority issue that the Scottish parliament needs to address with regard to the Scottish economic data. Unless there is a willingness to address this issue no reliable economic data for Scotland will be available.

This will, in particular, mean that the Scottish government agree with the UK government and with HM Revenue & Customs that the UK national tax authority be asked to:

- a. Reliably identify those persons tax resident in Scotland, which is a task that is underway but that cannot be said to have been completed as yet;
- b. Reliably identify businesses trading in Scotland, which tax gap data suggests is an incomplete process<sup>xxv</sup>;
- c. Reliably identify those companies that are trading in Scotland, for which there is very little available evidence at present and where there are numerous issues with the management by the Registrar of Companies of the Scottish company register, which along with the register for the UK as a whole sees more than 400,000 companies 'struck off' each year, mainly for failing to comply with their regulatory obligations to file accounts and other data<sup>xxvi</sup>;
- d. Reliably apportion the income of these people and entities to Scotland over the whole range of taxes for which they might be liable, only a few of which are directly administered in Scotland;
- e. Appropriately apportion the cost of tax reliefs and allowances (such as the more straightforward ones for pensions and ISAs, to the much more complicated issues of inheritance tax reliefs for agricultural land) to Scotland so that the cost of these to the Scottish economy can be appraised and decisions can be taken on them.

This requires change in HMRC procedure with regard to tax returns. If the principles of country-by-country reporting as now adopted by the OECD<sup>xxvii</sup> were applied to the apportionment of data between UK constituent countries then a sufficiently reliable apportionment formula for sales and business income could be computed if the following were disclosed on tax returns:

- i. Sales within or from each constituent country of the UK were required to be disclosed on a tax return. For businesses turning over less than, say, £10 million with more than ninety per cent of their activities within one constituent country this disclosure may not be necessary. This data is not onerous data to collect: almost all existing accounting software systems could be easily adapted to supply it;
- ii. Sales to each constituent country of the UK were required to be disclosed on a tax return, with similar points to those made in the previous paragraph being repeated in this case;
- iii. The location by constituent country of the staff employed (on an averaged basis) by the business during the year;
- iv. The location of the tangible assets of the business by constituent country during the year: again, if more than 90% were in one country no further disclosure would be needed.

Using this data:

- v. VAT data could be directly apportioned to constituent countries on a destination basis;
- vi. Income tax and corporation tax revenues from trade could either be directly apportioned in many cases or could be apportioned on a weighted formula basis in others using the principles of unitary taxation<sup>xxviii</sup>. The suggested weighting would be to allocate one third of tax adjusted income weighted on sales by origin, one third by location of employees and one third by location of assets. For large groups the weighting would have to be based on consolidated data;
- vii. Income tax from employment and investment income could be directly attributed, as could most other direct taxes;
- viii. National insurance liabilities could be appropriately apportioned;
- ix. Existing methodologies could be used for devolved taxes;
- x. Other methodologies would need to be reviewed to bring them into line with this new method of working.

The result would be that an internationally accepted method of estimating the location of where economic value arises from tax data would be in use for attributing revenues to Scotland and other UK countries. Simplified data might assist English regional accounting.

This would then only need the estimated tax due on expenditure for Scotland to be calculated, along with its multiplier effect. Detailed methodologies for this would not be difficult to construct.

It should however be noted that the appraisal of Scottish government revenue on this basis should be explicitly adjusted to allow for:

- xi. The tax gap, i.e. the revenue which HMRC is unable to collect for Scotland;
- xii. The cost of allowances and reliefs, especially if decisions upon those allowances and reliefs are not made in Scotland.

This means that both the gross potential and net actual tax revenues for Scotland could also be estimated, resulting in an estimate of the policy and compliance tax gaps for Scotland also being available, allowing functional decision making on the resources to be allocated to tackling such issues to be made within Scotland when at present it has almost no say on such matters.

## 7. Reporting surpluses or deficits

The reporting of surpluses and deficits for Scotland has been undertaken to date by comparing accrued incomes with accrued expenditure, with or without allowance for capital spending depending upon the balance reported. As has been noted there are deficiencies in this approach which space does not allow to be fully addressed. It would however, and in summary, be desirable that any new statement of this type be supported by:

- a. A Scottish balance sheet, but if this could not be prepared, then,
- b. A statement on the movement in the net investment made in government funded infrastructure in Scotland during the period, and
- c. A statement of how the surplus or deficit reported impacts on the liabilities of the Scottish government, Scottish local government, other Scottish

government agencies and other government agencies and the likely impact that these liabilities (if any) might have on the agencies in question.

To ensure that this data can be properly appraised the impact of funding accounted for within any GERS statement resulting in any enhanced asset worth in Scotland, whether tangible or intangible, must also be estimated so that the net impact of spending on likely future income streams can be appraised. Only then is appropriate information for genuine economic decision making likely to be available for use by those working on these issues in Scotland.

## Professor Richard Murphy

### 8. About the author

Richard Murphy is a UK chartered accountant and political economist. An economics and business accounting graduate of Southampton University in 1979, Richard trained as a chartered accountant with what is now the London office of KPMG. He went on to become the senior partner of an accounting firm and director of a number of entrepreneurial companies before becoming one of the founders of the Tax Justice Network in 2002. In that role he created the country-by-country reporting concept that is now being adopted by around a hundred countries worldwide to tackle tax abuse by multinational corporations.

Richard Murphy was appointed as Professor of Practice in International Political Economy at City, University of London in September 2015 where his academic research focuses on the political economy of tax, tax gaps and tax abuse. He also directs Tax Research UK and writes, broadcasts and blogs extensively.

During the summer of 2015 he was widely credited with creating 'Corbynomics' and is the creator of the idea now known as People's Quantitative Easing. This was based on his work as a member of the Green New Deal Group.

Richard's latest book is 'Dirty Secrets: how tax havens destroy the economy' (Verso, 2017). Previous books include 'The Joy of Tax' (Bantam, 2015) and The Courageous State (Searching Finance, 2011). He co-authored 'Tax Havens: how globalisation really works' (Cornell University Press, 2010) with Ronen Palan and Christian Chavagneux.

Richard Murphy has been actively involved in debate on tax gaps and tax policy in the UK and Europe, offering measures of tax gaps for both. He also defined the term 'secrecy jurisdictions', now widely used in debates on offshore. He has been involved in many of the stories on corporate tax abuse that have made headlines in recent years.

Richard Murphy developed the idea of the Fair Tax Mark and is technical director of that accreditation scheme.

His work as a tax campaigner has given rise to a number of awards including for economic campaigning from the Sheila McKechnie Foundation, honorary fellowship from the Association of International Accountants and a long running place in the Global Tax Top 50 most influential people in tax nominated by International Tax Review.

### 9. Endnotes

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<sup>i</sup> <https://beta.gov.scot/publications/government-expenditure-revenue-scotland-2016-17-9781788511612/documents/00523700.pdf?inline=true>

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- xv *Ibid*
- xvi <http://www.investopedia.com/terms/a/accrualaccounting.asp#ixzz4r8Hu8453>
- xvii <http://www.gov.scot/Topics/Statistics/Browse/Economy/GERS/Methodology>
- xviii *ibid*
- xix <https://beta.gov.scot/publications/government-expenditure-revenue-scotland-2016-17-9781788511612/pages/2/>
- xx There is not space in this report to discuss multiplier effects in detail. For a good introduction see <http://touchstoneblog.org.uk/2017/07/why-multipliers-matter/>
- xxi <https://www.ons.gov.uk/economy/governmentpublicsectorandtaxes/publicsectorfinance/articles/countryandregionalpublicsectorfinances/2015to2016#quality-and-methodology>
- xxii <http://www.gov.scot/Publications/2017/08/7201/3>
- xxiii <https://fraserofallander.org/2017/03/28/estimating-scotlands-fiscal-position/amp/>
- xxiv [http://www.parliament.scot/S5\\_EconomyJobsFairWork/Inquiries/Economic\\_statistics\\_report.pdf](http://www.parliament.scot/S5_EconomyJobsFairWork/Inquiries/Economic_statistics_report.pdf) page 14
- xxv <https://www.gov.uk/government/collections/measuring-tax-gaps>
- xxvi <http://www.taxresearch.org.uk/Documents/Intheshade.pdf>
- xxvii <http://www.oecd.org/tax/automatic-exchange/about-automatic-exchange/country-by-country-reporting.htm>
- xxviii <https://www.taxjustice.net/2014/01/14/towards-unitary-taxation-transnational-corporations-sol-picciotto/>