

## **Economy, Jobs and Fair Work Committee**

### **Economic Data Inquiry**

#### **Summary of written evidence**

##### **Note by SPICe**

This paper summarises the submissions to the Economy, Jobs and Fair Work Committee's inquiry into Scottish economic data. The call for written evidence ran from 12 June 2017 to 1 September 2017. The remit of the inquiry is:

“To examine the accuracy, utility and comprehensibility of Scottish economic statistics; to consider what data is required for effective delivery and scrutiny of policy; and to recommend where any improvements might be made.”

The Committee seeks to address four themes in this inquiry: accuracy (how reliable is the data, utility (how useful is it), interpretation (how to make sense of it) and scrutiny (what are we measuring and does it encourage effective scrutiny). The call for views included the following questions:

- Accuracy:
  - How reliable is the economic data currently available at the Scottish level?
  - What are the areas of strength and of weakness of provision within Scotland and at UK level?
  - What could be done by Scottish Government and/or others to improve the quality of data? How would this be funded?
  - Do you have any views on how data is collected, specifically the role of businesses and households in providing economic data?
- Utility:
  - How are economic statistics used by local, regional and national policy-makers to deliver and scrutinise policy?
  - Where are the gaps in provision?
  - Can you identify examples of international good practice and case studies?
  - Are there barriers preventing the Scottish or UK Governments from improving statistical provision?
- Interpretation:
  - What are the key issues in making sense of the data?
  - What are the barriers to better understanding and how might they be overcome?
- Scrutiny:
  - What are we measuring and what should we be measuring?
  - What data is necessary for effective parliamentary scrutiny by the Economy, Jobs and Fair Work Committee (our remit also covering energy)?
  - Are the current National Performance Framework indicators the best way of measuring innovation, internationalisation, investment and inclusive growth in the Scottish economy?

23 witnesses submitted a response:

1. Aberdeen & Grampian Chamber of Commerce in partnership with Scottish Chambers of Commerce (AGCC & SCC)
2. North Ayrshire Council (NAC)
3. Dr. J.R Cuthbert (Dr. Cuthbert)
4. Homes for Scotland (HFS)
5. Scottish Environment LINK
6. Registers of Scotland (RoS)
7. David Hume Institute (DHI)
8. Scottish Local Authorities Economic Development Group (SLAED)
9. Dr Craig Dalzell, Common Weal (Common Weal)
10. Highlands and Islands Enterprise (HIE)
11. Reform Scotland
12. Common Weal
13. Professor Richard Murphy
14. Scottish Enterprise
15. Richard Marsh, 4-consulting (Richard Marsh)
16. Fraser of Allander Institute (FAI)
17. Skills Development Scotland (SDS)
18. Hervey Gibson
19. Scottish Public Health Observatory (SPHO)
20. North Lanarkshire Council (NLC)
21. Margaret Cuthbert
22. Professor Catia Montagna and Dr Daniel Kopasker
23. Office of Statistics Regulation (OSR)
24. Ayrshire Growth Deal, South Ayrshire Council (AGD)

## **1. Quality of economic data**

### **1.1. Views on the overall quality of Scottish economic data**

A number of respondents such as 4-consulting, Scottish Fiscal Commission (SFC), Scottish Enterprise (SE), John McLaren and the Fraser of Allander Institute (FAI) pointed out that in many regards Scotland has reliable economic data. The David Hume Institute (DHI) argued that “Scotland enjoys a rich set of economic data which allows debate on most policy questions to be informed” and Ayrshire Growth Deal, South Ayrshire Council (AGD) noted: “On the whole (...) Economic data at the Scottish level tends to be fairly reliable.” SE stated that “Scottish economic data are reliable as far as we are aware, and, if there are any inaccuracies, they are likely to be small” and specified there is good coverage of the main economic indicators (GDP, productivity, exports, Research and Development [R&D] expenditure, innovation, labour market and business demography). SFC stated that Scottish national accounts constitute “a single, comprehensive and consistent source of data on the Scottish economy and form the core of any macroeconomic forecasting model.”

Some respondents also stated that Scotland is better served than other parts of the UK. 4-consulting highlighted that Scotland is the only UK devolved administration to produce quarterly Gross Domestic Product (GDP) figures. Margaret Cuthbert acknowledged that over the years, considerable effort has been made in Scotland to improve economic statistics and FAI observed that “significant progress has been made since devolution to improve the coverage and quality of economic statistics in

Scotland.” Hervey Gibson noted in addition that the most significant errors recently detected in Scottish statistics “have come from UK-level datasets.”

John McLaren however pointed out that the economic data available to Scotland, while it is above average on a regional level, remains below what a *country* would normally have, and Common Weal wrote:

“Across Scotland, the quality of data provision is decidedly mixed, with better data than elsewhere in the UK in some areas, and unreliable data at a regional or local level in others.”

Professor Murphy argued that overall there is “relatively limited Scottish economic data.”

The Office of Statistics Regulation (OSR) explained the Scottish Government relies to a large degree on economic data about Scotland from other bodies – the Office for National Statistics (ONS), HMRC and HM Treasury. FAI explained that Scottish economic statistics can be based on figures derived from apportioning UK data.

## **1.2 Strengths of economic data**

The main areas of strength in economic data according to respondents include:

- Labour market statistics
- Demographic and employment rate data

SFC explained the labour market is “reasonably well surveyed via the labour force survey (LFS) and annual population survey (APS) while Scottish Local Authorities Economic Development Group (SLAED) also noted the APS and Annual Survey of Hours and Earnings (ASHE) provide detailed information at local authority level. Scottish Public Health Observatory (SPHO) further stated the APS, Family Resource Survey (FRS), Wealth and Assets Survey (WAS) and Understanding Society are “essential in providing high quality information” on economic growth.

North Lanarkshire Council explained that it uses the Scottish Index of Multiple Deprivation (SIMD) which it described as “a key strength in relation to identifying poverty, unemployment and income deprivation at a small geographical level.” It also draws on the Census Travel to Work which is noted as “helpful and accurate in relation to identifying commuting populations and the catchment area of jobs.”

A number of respondents pointed to developments currently underway on both the private and public sector to improve the production and use of economic data. Registers of Scotland (RoS) noted for example it was involved in collaborative work with the ONS, HM Land Registry, Land & Property Services Northern Ireland to develop a UK-level House Price Index and that it started publishing data for the Scottish component of the UK House Price Index (HPI) in June 2016.

## 1.3 Weaknesses of economic data

### Unreliable/unrepresentative small-level data (area and sector)

One of the main weaknesses identified by respondents (e.g. FAI, Ayrshire Growth Deal, North Ayrshire Council [NAC], SLAED, SE, Highlands and Islands Enterprise [HIE]) is the lack of robust sub-Scotland and sectoral economic data.

OSR highlighted however: “The range of ONS’s economic data that breaks down to quite low levels of geography increases by the year.”

Reasons for poor data at a smaller level include:

- Small sample size (according to SE, HIE and SLAED for instance)
- The use of real and modelled data to estimate values at a local level e.g. labour market data (FAI)

While HIE observed that “[there] is good coverage of the main economic indicators at the Scottish level with adequate sample sizes for UK surveys”, it cautioned that the reliability and representativeness of statistics decreases at a sub-Scotland level.

SE explained that to some extent this is inevitable given the small corporate base of some Scottish regions, even with survey boosting.<sup>1</sup> SE also argued that Scotland-level statistics were unhelpful in explaining trends in small areas that differed significantly from the national picture.

FAI pointed out that a further complication in improving the provision of data is that the Scottish Government does not have the power to compel businesses to respond to surveys.

### Lack of trade data

Many respondents commented on the poor quality of data on trade in and out Scotland and between regions in the UK (e.g. FAI, SE, Hervey Gibson, 4-consulting). NAC and FAI pointed out the lack of Scottish data on imports from overseas and/or rUK. Respondents further noted the lack of data on imports to the UK as a whole.

Professor Catia Montagna and Dr Daniel Kopasker for example explained:

“International trade data only covers exports. Import data are not available either from overseas or from the rest of the UK. At the aggregate level, they are obtained as residual component within GDP (essentially as a measure of excess demand).”

One reason for the lack of trade data, highlighted by OSR, is that “firms do not record data in a way that would allow analysis of flows between Scotland and other countries.” OSR explained that because of this, it was planning to review trade statistics including Scotland’s Export Statistics Scotland.

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<sup>1</sup> FAI explained that the Scottish Government boost key datasets such as the APS, FRS, ABS, Business Register, Employment Survey and the Living Costs and Food Survey by paying the ONS for additional samples.

SLAED, NAC, SE and Common Weal all specifically mentioned the lack of reliable export data at a *local* level in Scotland. NAC highlighted that without this, local authorities cannot assess internationalisation, one of the Scottish Government's four priorities.

Common Weal noted:

“... the trade data for Scotland and the rest of the UK is generally weak due to the lack of a statutory requirement to collect such data and the difficulty of measuring such trade over an open border and a single market. This may be entirely understandable for a UK measuring itself as a unitary state – the trade between Scotland and rUK would be no more relevant to policy than the trade between the North East of England and the South East – but in a time where such data plays into the ongoing constitutional debate it becomes important to avoid misconstruing or misinterpreting that data which is available.”

### **Gaps in labour market data**

Respondents explained there are gaps and weaknesses in labour market data at a sub-Scotland data, for instance around payment of the living wage,<sup>2</sup> joblessness, underemployment, self-employment (e.g. OSR), unemployment, stability of the labour market and pay and income distribution across different sectors. HIE and North Lanarkshire Council (NLC) mentioned a lack of (regional) underemployment and unemployment data, as well as the number of people with more than one job, the frequency of joblessness, etc. NLC stated for example that Job Centre Plus is unable to provide the number of people who are signing on/off in a year.

SFC noted that while the labour market is “reasonably well surveyed through the LFS and APS”, there is less information available on wages and income – for example there “Gross Weekly Earnings” from the LFS is less reliable than ASHE or Average Weekly Earnings (AWE) as it underestimates earnings and is only available for full-time employees; AWE on the other hand is only available at a UK level. SFC stated that it relies instead on QNAS estimates of Compensation of Employees (COE) for its forecasting, adding:

“The Commission regards this as the best source of information on income in Scotland available at the moment. However, it is highly aggregated, and does not, for example, allow for analysis by different types of income or types of individual.”

FAI also explained that local labour data is “a mixture of actual and modelled data.” SLAED criticised the modelling undertaken to produce some of regional breakdowns, stating for instance that the Scottish Government's Scottish Annual Business Statistics (SABS):

“... is originally sourced from the Annual Business Survey (ABS) which is published to a regional level; the Scottish Government then produce local authority statistics from this, but do not release the methodology in terms of how this is broken down to the sub regional level.”

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<sup>2</sup> While NLC stated there is good data on payment of the living wage in the public sector, private sector data is less reliable.

Respondents also pointed out the lack of data linking education and training to labour markets outcomes. Margaret Cuthbert highlighted for example the lack of data on employment prospects for graduates and modern apprenticeships, and R&D expenditure in the higher education sector.

### **Gaps in micro-data on businesses**

Margaret Cuthbert highlighted that there is a lack of data on businesses births and deaths including at a local level as well as ownership of businesses in Scotland. OSR identified a lack of economic data on the financial services and insurance industry, while SE pointed to a lack of data on innovating businesses at a sub-Scotland level. SLAED added there is no estimate of the number of unregistered businesses at a local authority level.

### **Data is not always timely**

Margaret Cuthbert explained that SABS is two years out of date, with the most recent figures published in August 2017 and covering the period 2008 to 2015.

HIE highlighted that regional Gross Value Added (GVA) is two years old before it is published, reducing its value as a tool to inform policy interventions. SE added that Scottish GDP figures are reported one quarter behind the UK.

HFS also pointed out in relation to housing statistics that because the data relating to private housing is derived from local authority returns (based on their building control activity), figures on private completions are a quarter behind social housing and at least 6 months out of date by the time they are published.

### **Classifications are not always appropriate**

SE noted the use of SIC codes to measure the performance of Growth Sectors potentially limited understanding of these sectors' performance as some of them are not fully defined by Standard Industrial Classification (SIC) - for instance "Energy" is wider than companies categorised under SICs as oil and gas.

### **Further weaknesses/gaps in data provision**

Respondents such as FAI and SFC highlighted that the absence of a Scottish deflator limits the compilation of real-terms series and poses difficulties for forecasting the economy. OSR explained:

"Without good inflation data, analysts cannot be sure whether the degree of economic output change is real or caused primarily by inflation (or occasionally deflation)."

John McLaren highlighted that UK inflation, measures of which are currently used to estimate real terms measures in Scotland, may be inappropriate if Scottish and UK inflation start to differ, noting that "in recent years UK inflation was added to by the big jumps in tuition fees applying in England, although clearly this would have had very little impact on Scottish inflation."

Table 1 presents some specific gaps in data provision identified by respondents as well as the respondent(s) who discussed them in their submissions.

**Table 1: Gaps in data provision and suggestions for improvement**

<b>Problem</b>	<b>Why this is important</b>	<b>Recommendation</b>
Lack of economic data on what households buy (OSR)		
Growth sector statistics of limited value as some sectoral data (e.g. life sciences) is excluded for confidentiality reasons at local authority level (NAC)	Lack of supporting sector data and value for smaller local authorities to secure inward investment (NAC)	Present growth sector statistics in interval (band form) or with a broader sector definition (NAC)
Lack of reliable local income data (NAC)		<ul style="list-style-type: none"> <li>• Regularly producing small area income data e.g. local level synthetic modelling such as that prepared for the Scottish Government by Heriot Watt University on household income estimates in 2014 to update the Government’s Housing Need and Demand Assessment Tool (NAC, AGD)</li> <li>• Sample stratification at a more granular level (HIE)</li> </ul>
Capital investment data for Scotland is limited (FAI) and “inadequate” (4-consulting); it is not produced at a local level (NAC), or by sector and type of investment (SE)	<ul style="list-style-type: none"> <li>• Capital investment and R&amp;D an important feature of local economies</li> <li>• Gaps in data compromise development of appropriate policy responses</li> <li>• This would help improve estimates of potential output and productivity</li> </ul>	Apportion capital investment to local authority areas based on workplace headcounts (NAC)
Areas with high outflows of commuters having artificially low GVA per head (NAC)	This can compromise the ability of a local area to secure investment	Make GVA per head that takes into account commuting flows available
Lack of data on underemployment (SDS)	This information would help understand how people are affected by it and its effects depending on sector, age and gender	

<b>Problem</b>	<b>Why this is important</b>	<b>Recommendation</b>
Unreliable unemployment <sup>3</sup> and claimant data due to ongoing changes in welfare system administration (NAC, AGD, SPHO)		Explore ways to improve quality of unemployment and claimant data (NAC)
Data on personal and household income and household expenditure is not available or of poor quality due to sample size and/or modelling (Common Weal)	This data is not appropriate to inform policy-making	
Lack of good timely data on Scottish wages (SFC)	<ul style="list-style-type: none"> <li>• Analysis of earnings is essential to forecasting</li> <li>• Better data would allow SG to produce Scottish AWE</li> </ul>	Explore what needs to be done for ONS to produce Scottish AWE (e.g. boost Scottish sample Monthly Wages and Salaries Survey)
QNAS does not provide consumption/investment by SG/UKG and local governments	Only source of this information is currently GERS which calculates spend <i>for</i> Scotland, not <i>in</i> Scotland	
Private housing completions data published 6 months out of date and a quarter behind social housing (HFS)	Accurate and reliable housing market data important to monitor key trends and inform housing policy (HFS)	SG could use additional datasets e.g. from Scottish Water (connections data) and Energy Performance Certificates (EPCs) (HFS); make Registers of Scotland data accessible for free and at a more granular level.

Margaret Cuthbert also pointed to gaps in fisheries and agriculture in Scotland, despite the fact that the Scottish Government is responsible, for instance, for the implementation of fisheries regulations. She further identified weaknesses in the provision of data on tourism and called for Visit Scotland to produce more statistics covering attractions and problems in cities, small villages and islands. Finally, she pointed to a lack of data linking R&D to education/training and stated:

“There is no centrally collected and analysed data on R&D spend in our higher education institutions and on its return to Scotland.”

OSR also identified gaps in tourism data, explaining that estimates of tourism expenditure in Scotland are based on a small sample from the International Passenger Survey and that assumptions are made on the value of tourism from the rest of the UK. It concluded: “Given the importance of this industry to the Scottish economy, Scottish Government should be prepared to devote greater resources on collecting good economic data for this vital sector.”

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<sup>3</sup> FAI noted for instance the confidence interval around the unemployment rate in Scotland is 0.8 percentage points

Some respondents further pointed to gaps in public revenue and expenditure data, while others noted the absence of Whole Government Accounts for Scotland (e.g. Margaret Cuthbert, John McLaren, Professor Murphy). John McLaren for example stated that a full set of National Accounts and a balance sheet on a Whole of Government basis (including assets and liabilities of all public sector organisations) would allow a higher standard of economic statistics and analysis to be reached, as well as a “proper model of the Scottish economy.”

Common Weal further identified gaps in “overarching” statistics such as those relating to wellbeing. SE also noted that although there is a range of data available for measures of “inclusive growth”, there was a lack of data on measures related to “fair work” e.g. employee engagement, job security and job satisfaction. It suggested that work by the Fair Work Convention may address this in future. FAI also pointed out there is a lack of longitudinal data on Scottish households.

#### **1.4 Inconsistencies in data provision**

Respondents noted inconsistencies on a number of levels between different datasets. Common Weal highlighted for example that different sources use different classifications for expenditure, for instance GERS reports on expenditure for a particular function (e.g. recreation), CRA reports on expenditure for a government department grouping (e.g. defence) while PESA provides expenditure for department groupings in functions across the UK (e.g. how much the defence department spent on recreation, culture and religion).

SE explained that some sub-Scotland statistics are produced at different geographic levels, for example:

- Most economic statistics are available at a local authority level
- Regional GVA and productivity are published at NUTS3 level

It also noted that Scottish and ONS figures were at times inconsistent e.g. different reporting periods for productivity (GVA per hour) measures, which can result in two different figures being available for the same timeframe. One respondent noted that different surveys that do contain business data are completely separate surveys and that Business in Scotland for instance uses a different source and different timescales than BRES and SABS.

Reform Scotland further explained there are compatibility issues between local authority finance statistics and Scottish economic data. It noted that GERS does not report on Customer and Client Receipts published in local authority finance statistics even though this accounts for more than APD, Landfill Tax and LBTT combined, thereby leaving an important source of government revenue out of the total figures.

#### **1.5 Government Expenditure and Revenue Scotland (GERS)**

Reform Scotland highlighted that GERS is a National Statistics publication and that it provides an important contribution to the debate although “that does mean we cannot do better.” The SFC notes that it provides number of “helpful breakdowns” not available in the Scottish Government Quarterly National Accounts

(QNAS) such as the breakdown of public sector spending by Scottish/UK Government.

However, Professor Murphy stressed that GERS “does not reflect acceptable accounting standards” because it records revenue collected from people *in* Scotland and compares this to expenditure spent *for* the people of Scotland. While the estimated tax paid in Scotland is of “varying reliability”, he explained that GERS fails to take into account the tax owing as a result of the direct activity for Scotland undertaken outside Scotland, or the tax on the indirect activity generated by this, thereby failing the accruals accounting principle. He argued that GERS did not encourage effective scrutiny and recommended it be redesigned and that identification of taxes arising from activity in Scotland be improved. This would require cooperation with HMRC to:

- Identify Scottish taxpayers
- Identify businesses trading in Scotland
- Apportion the income of these taxpayers to Scotland across different taxes
- Apportion tax reliefs and allowances to Scotland

He also suggested that expenditure be recorded in a more detailed manner, with each element including a description of:

- What it is
- Who has responsibility for it (UK/SG, Central/local/other government based in/outside of Scotland)
- How accurate it is
- How it compares with budget (or if it was uncontrolled and if so why)
- How it compares with previous periods
- How it compares with comparable locations
- What it implies
- What scope for change there might be

## **2. Ways to improve the quality of economic data in Scotland**

### **2.1 Overview**

Some respondents explained the broad principles economic data should adhere to. HIE stated that data needs to be “robust, timely, coherent and accessible in order to inform local evidence-based policy” and Professor Murphy highlighted data needs to be:

- relevant (it must meet user’s needs)
- reliable (the provenance of data must be clear)
- consistent over time
- comparable to data in other parts prepared for the same purpose
- comprehensive
- comprehensible

Margaret Cuthbert highlighted that the need for improvement in a number of statistics was “already well recognised by the Scottish Civil Service statisticians” and OSR stated:

“To improve economic data about Scotland we have required enhancements be made not just to Scottish economic statistics produced by Scottish Government but by these other producers also to improve the range and quality of data about Scotland’s economy. Scottish Government has responded positively to requirements we have made to them to improve their economic statistics.”

A number of respondents (e.g. 4-consulting, FAI, SCDI, OSR) discussed the recommendations of Bean Review. Drawing on it, OSR stated:

“Government (both centrally and in the Devolved Nations including Scotland) can and should do better in regard to their economic statistics.”

Also drawing on the review’s reports, SCDI recommended that the Scottish Government consider what data it would need to reflect its “broader social, economic and environmental outcomes.”

Many respondents welcomed the proposals in the Enterprise and Skills review phase 2 (e.g. AGCC & SCC, NAC, HIE, NLC and SE) which identified the need to improve the quality of skills data and evidence available. SDS explained:

“The improvement plan for data as part of the Review includes improving the range and quality of Scotland’s National Accounts statistics (alternative data sources and improved extrapolation methods to allow for the production of quarterly real-term GDP estimates earlier, as well as extending the range of economic data available for Scotland, including producing quarterly Gross National Income figures to complement the GDP nominal estimates) and working closely with Local Authority partners in any future work to improve data quality in, and access to regional or Local Authority management information.”

HIE commended the establishment of a new Data Analytical Unit recommended by the Review and suggested this Unit could help identify quality issues in the provision of local statistics.

NAC further suggested the Hub could serve as a “repository for regional data to track progress of Regional Partnerships and inform regional strategies” and NLC agreed that it should support the work of City Deals/Regional Partnership, in partnership with the proposed regional data hubs.

SE stated the unit could help improve the use and sharing of data across the four enterprise and skills agencies and government. SE also called for the Scottish Government to produce an improvement plan for trade data and national accounts as recommended by Enterprise and Skills Review.

## 2.2 Greater use of existing data

OSR highlighted that one of the recommendations of the Bean Review is to make the most of existing and new data sources and technologies and it noted that the Scottish Government will soon have access through ONS to more-detailed HMRC data, including Value Added Tax (VAT) data.

AGCC & SCC suggested that better data triangulation could improve data interpretation and forecasting. The two chambers noted that to assess the market, they use a combination of data on car sales, housing, occupancy levels, airport use and announced redundancies.

Both SE and FAI also recommended that statistical data be combined with other data such as evaluation evidence, whilst recognising that these are not official statistics but are useful in better understanding business trends. FAI stated that “we have little information about what drives businesses to invest, export, etc.” but added that other agencies such as SE, Skills Development Scotland and HMRC hold information that could be useful to assess this. Margaret Cuthbert cautioned however that it was difficult to check the source and accuracy of the business data produced by bodies such as SE and the Hubs, highlighting that the Hubs are not covered by FOI legislation.

SDS specifically pointed to work carried out by the Centre for Work-Based Learning on the importance of linking datasets to track long-term outcomes of apprenticeships in Scotland. SPHO also recommended the Government consider tracking the outcomes of those participating in employment programmes, on Universal Credit, etc.

SFC stated that the Scottish Government should encourage ONS to publish more statistics based on existing surveys, and SPHO recommended the Scottish Government and others consider what action could be taken to address the decline in response rates in major surveys. It also suggested that surveys such as the LFS ask new questions – relating to health for instance.

Many respondents (e.g. NAC, SFC, SCDI, SDS, HIE, SPHO and DHI) recommended greater use of administrative data, such as that held by HMRC, and greater use of data linkage techniques to connect the data. NAC highlighted the use of administrative data and data linking is already “routinely” done by ISD (NHS). SPHO recommended further data linkage between DWP, HMRC, NRS and NHS datasets – which could be facilitated by the Digital Economy Act 2017. OSR noted the Act:

“... gives statisticians the power to use new sources of data to build a much more up-to-date picture of the economy and society. In particular, the right of access for ONS to private sector data is ground-breaking. The Act therefore represents a significant opportunity to improve economic data.”

NAC, OSR and SCDI noted that extending the use of HMRC VAT data could provide a more detailed picture of businesses at a small-area level over time. Professor Catia Montagna and Dr Daniel Kopasker highlighted that following the Bean Review, the ONS already plans to start using data from VAT returns to improve on its business surveys. Respondents explained VAT data could provide information on:

- Exports at a local level (NAC, OSR)
- Longitudinal analysis (by following businesses from year to year), providing change over time (e.g. percentage of businesses whose turnover increased rather than simply the total turnover change for a given sector) (NAC)
- Information on the size and financial contribution of businesses at a local level (SCDI).

SLAED pointed out that self-reporting is less reliable than administrative data and Professor Catia Montagna and Dr Daniel Kopasker stated that self-reporting is particularly prone to reliability issues at the firm reporting level as SMEs often report no exports in FAME (a widely used private financial reporting dataset),<sup>4</sup> when they appear to have exported according to HMRC data.

SPHO cautioned however that the quality of administrative data may decrease over time due to welfare reform and reductions in staff and capacity in DWP and HMRC.

SCDI encouraged greater use of “unconventional data” to complement existing sources and noted it had previously called for the creation of a “Digital Leader” to “support public acceptance of data sharing.”

It also stated that public bodies and local authorities could audit their data to identify where that can offer signals on the performance for instance to explore the link between council tax non-payment and the financial health of citizens in order to offer “early warning” signs of economic difficulty. Reform Scotland further identified a need for local government finance statistics to fit better in with Scottish economic data.

FAI highlighted that it was important that data sharing and access arrangements are established to enable to the Scottish Government to benefit from ONS’s greater use of administrative data (FAI).

Some respondents also requested greater direct access to currently unavailable existing data. HIE stated that it would welcome the opportunity to scrutinise IDBR data for the Highlands and Islands to determine how accurate and representative it is of the local business base.

NAC’s response to the SBS/SLAED consultation on Regional Skills Assessments (RSAs) is also informative as it requests that RSAs be supported by Excel master data sheets for the full datasets of *all* the local authorities as this facilitates benchmarking and regional comparisons. This indicates a demand for primary economic data from the Scottish Government as well as analysis.

### **2.3 Greater communication and collaboration across producers and users**

The vast majority of respondents emphasised that better links between the different bodies that produce economic statistics would help improve the quality of data, but also better communication between producers and users of statistics. This includes:

- Between government agencies (SLAED)

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<sup>4</sup> Professor Catia Montagna and Dr Daniel Kopasker specified this was widely used instead of official sources since UK customs data were not accessible until recently and the ABS did not contain information on exports until 2011 and now only has a crude indicator for exports.

- Between UK and Scottish data departments (Common Weal)
- Between the Devolved Nations and the ONS to help identify where the ONS can in future provide economic data that previously had been provided exclusively by Scottish Government (OSR)
- Between Scottish Government and local authorities (HIE, SLAED) which could help identify gaps in provision
- Between the Scottish Government and the skills agencies, “to facilitate wider access to key economic data through the development of formal data sharing agreements” (SDS)
- Between the Scottish Government and the Chambers of Commerce; AGCC & SCC recommended that the Government make greater use of the Oil & Gas Survey, as well as the Scottish Chambers of Commerce Quarterly Economic Indicator - which it stated is “the longest running survey of its kind in Scotland”
- Between the public and private sector (NLC).

#### **2.4 Better presentation/availability of data**

A number of respondents noted that the lack of a single website/portal collating all Scottish economic data hindered the capacity of users to access and interpret it. NAC for instance pointed out that using economic data requires “detailed knowledge of a wide variety of sources.”

Many respondents called for all economic statistics, such as NAC and AGD, in Scotland to be presented on a single website, and specifically pointed to Nomis as a good example. NLC explained that Nomis presents data in “an easy to read local authority profile with a thorough reference section.”

A number of respondents noted that the lack of a single website/portal collating all Scottish economic data hindered the capacity of users to access and interpret it. NAC pointed out that using economic data requires “detailed knowledge of a wide variety of sources.”

HIE noted the use of this kind of “big” and “open” data are useful to improve understanding of local economies and AGD called for the range of economic data available on it to be developed, stating:

“A catalogue of data with links published on the Scottish Government’s Statistics web page would be a good first step and also assist in identifying the gaps.”

At a more detailed level, SE highlighted that there is no single dataset capturing business.

HFS called for the Scottish Government to collate local authority housing land audits (currently published at different times of the year) in a single resource.

Some respondents pointed to [www.statistics.gov.scot](http://www.statistics.gov.scot) as a good start to collating economic data. However, NLC cautioned that changes to IT systems are not always user friendly and specifically pointed to the move from Scottish Neighbourhood Statistics to [www.statistics.gov.scot](http://www.statistics.gov.scot).

While SDS noted that it was also looking to move towards a web-based tool making data on provision, demand and supply easily accessible, RoS explained it was already undergoing a digital transformation process and in late 2017 would launch ScotLIS, Scotland's Land Information Service, allowing online access to RoS data for the first time.

## **2.5 Areas of specific improvement**

SPHO argued that both Scottish and UK Government and agencies should work towards standardising definitions across different datasets.

SFC prioritised the publication of the following measures:

- A Scottish price index
- GDP by component of expenditure published in constant prices

It also called for better and timelier data on Scottish wages.

Some respondents called for the production of a Scottish GNI. NAC for instance explained this would be a useful measure to have, including at a sub-Scotland level. FAI noted that GNI is arguably a better measure of the economy than GDP but that the Scottish Government has produced it only once, on an experimental basis.

John McLaren further listed a number of anomalies in Scottish GDP, explaining that construction appeared to have grown by 25% between 2014 Q2 and 2015 Q2 without any associated increase in employment. He explained that for economies with significant foreign ownership such as Ireland, Luxembourg - and arguably Scotland, GNI may be more relevant than GDP, and added that Ireland introduced a further measure, the "modified GNI" to try and improve the quality of economic measures.

### **Sectoral data**

A number of respondents, such as Common Weal and the OSR called for improvements in the provision of data across industrial sectors.

### **Microdata**

According to FAI, "from a policy perspective improving the coverage of microeconomic data in Scotland should be a key area of focus" while SE called for work to eliminate the gap between "macro" and company-level data. Professor Catia Montagna and Dr Daniel Kopasker added specifically that firm-level microeconomic data is important in assessing competitiveness of firms alongside aggregate data.

### **More local data**

A number of respondents (e.g. SLAED, OSR, Common Weal, Reform Scotland, NLC HIE) called for more data at a sub-Scotland level (country/regional/local authority, NUTS III). NLC explained that data is used locally regionally to set economic investment plans and support cases for funding, while AGD observed that there is a greater demand for local area statistics due to locality planning and the inclusive growth agenda. SPHO also pointed out that quality requirements on local data were increasing in light on the statutory duties on local institutions (e.g. child poverty).

SLAED called for the publication of an estimate of number of unregistered businesses at a local authority level.

NAC suggested that the following variables could be produced at a local level:

- Equalities analyses e.g. employment rate/economic activity for ethnic groups, disabled and those with long-term health conditions on a per capita basis
- Median pay (weekly and per hour)
- Mean and median hours worked
- Job density
- Work destination of graduates from each local authority
- Qualifications on a NVQ-based analysis
- R&D

NLC stated that forecasts such as those produced by SE and SDS need to be broken down, “to at least LA level.” NLC also called for more business data at a ward level e.g. number of businesses by sector, by size and by turnover.

SPHO noted that further boosting the Scottish sample of the FRS, the WAS and Understanding Society would be helpful to improve the quality of local statistics.

### **Reduce time lag in data publication**

Pointing out that information relating to new businesses can be up to 2 years out of date, SLAED called for a smaller time lag in the publication of this data.

However, DHI argued that the current economic powers available to the Scottish Parliament “are likely most to influence economic performance over the long-term and data developments should reflect that: it is more important to understand long-term and structural developments than to devote additional resources to understanding the recent past.” Equally, SFC stated it supported efforts to produce GDP and national account series going back farther in time as this is necessary for forecasting.

SFC noted:

“There will always be a trade-off between the timeliness of publication and the stability of the estimates, that is, the amount they are likely to be revised between one publication and the next. Where exactly to draw the line in terms of the trade-off is challenging to know and depends on the profile of data releases and modelling time (...) The Scottish Government must continue to consult with users on the planned changes to the GDP timetable, and how the UK level changes and changes to data sources may impact on the quality of the estimates at different times.”

Hervey Gibson observed that “[systematic] financial data is almost absent” other than GERS and some respondents such as John McLaren called for a balance of payments to be produced for Scotland (measuring funds flowing in and out of Scotland of goods, services, overseas earnings and dividends), which Scotland currently does not have, arguing this is “a crucial variable when evaluating the underlying health of an economy.”

In addition, SDS called for better data on Scottish migration.

Both NAC and SDI called for annual Growth Indicators available at a local authority level.

See Table 1 for other areas of specific improvement.

## **2.6 Governance/surveillance**

OSR noted:

“In Scotland, Scottish Government is the main publisher of economic data. Where a Ministerial-led department produces statistics, it is easier for perceptions of inappropriate influence to arise.”

Pointing out that the Scottish Government is both a producer and consumer of official statistics and that Scotland lacks an independent statistics body, 4-consulting explained:

“It is important to review the independence of economic statistics in Scotland. The Scottish Fiscal Commission was constituted as a Non-Ministerial Department. A similar approach could be considered with statistics in Scotland to establish either a Scottish Statistics Office, embed further statistics capacity within an existing non-departmental department or review the role of Scotland’s Chief Statistician.”

Common Weal called for the creation of a Scottish Statistics Agency, explaining this could take two forms:

- A highly centralised agency
- A decentralised model (which Common Weal stated Scotland seems to be tending towards) with multiple departments collecting specific data but with a central agency to:
  - Collect and publish data in a single location
  - Set standards and regulations e.g. a “kite-mark” stamp
  - Connect the data
  - Identify gaps in provision
  - Identify where studies are obsolete and can be discontinued through a periodic review of scope of data collection and data requirements

However, SPHO cautioned that:

“While it is crucial that there is good governance in place, it doesn’t seem to be proportionate at the moment. It would be helpful for the Committee to encourage a wider discussion on these issues.”

OSR observed that work done by the new ONS Economic Statistics Centre of Excellence research facility is intended to improve the quality of economic statistics and data on a UK-wide level.

HIE stated that Scottish Statistics Consultancy Group (SESCG) and Scotstat are “useful vehicles” to improve Scottish economic statistics.

Finally, OSR explained that the Scottish Government has a different pre-release access (PRA) regulatory regime to the rest of the UK – a practice that stopped at a UK-wide level on 1 July 2017 while the timescale is 5 days in Scotland. OSR added that there is no requirement for the Scottish Government “to publish the lists of those who have such privileged access (although Scottish Government is required to keep such lists and make them available on request). It concluded:

“we recommend that the Committee should advocate the repeal of the provisions of the Pre-Release Access to Official Statistics (Scotland) 2008 Order.”

## **2.7 Barriers preventing the Scottish and other bodies from improving statistical provision**

HFS observed:

“The variety and complexity of the socio-economic data becoming available is increasing dramatically (...) Making sense of all this disparate information is not straightforward and the particular skill sets required to do this are not necessarily within a single organisation. This suggests a more sophisticated and collaborative approach to exploring and dissemination of economic data might be appropriate (...) One big barrier is the perception that this requires *big* budgets or *big* IT systems: in all probability, it does not. What it does require is some specialist data skills and experience coupled with a commitment to collaborative approaches between the disparate organisations which are sitting on much of this data.”

With regard to the production of regional statistics, SLAED stated the major barriers to improvement were:

- Data confidentiality
- Sample size issues – Common Weal explained this was because data often comes from subsets of UK data; SFC stated Scottish samples could be boosted
- Lack of resources

According to Common Weal, the main barrier to improving statistical provision was “political will” as well as the reluctance to “increase red tape” for business and households.

In terms of funding the improvement of data provision, a number of respondents stated that greater communication and use of existing data could help improve statistics with incurring an excessive cost. HIE stated that cross-agency collaboration and creative thinking “could overcome many perceived barriers, including the cost of improving statistical provision.”

### 3. Utility of economic data

#### 3.1 Use of economic statistics by local, regional and national policy-makers

SFC explained that it uses economic statistics from a range of sources (ONS, Scottish Government's QNAS and GERS, local government finances data)<sup>5</sup> to forecast the economy in both real (constant)/nominal (current) terms.

AGCC & SCC use data to drive their policy positions. The research and policy team in AGCC specifically uses data to provide real-time market analysis and customer insight for individual businesses and undertakes research on behalf of the region e.g. the Oil & Gas Survey produced by AGCC.

NAC explained it uses data to “gauge progress towards our strategic objectives”, while SLAED produces the “SLAED Indicators Framework” which it stated is used “by local authority economic development services to provide data on economic development inputs, activities, outputs and outcomes.” The Indicators draw mainly on data from Nomis, Business Gateway, SE/HIE and the Supplier Development Programme.<sup>6</sup> SLAED pointed out specifically that long-term statistics are useful to evaluate policy by allowing for the observation of trends. NLC added that it uses local profiles based on economic statistics to obtain funding.

HIE explained it uses “a range of national statistics to help understand the workings of the regional economy and constituent sub-economies” including:

- BRES data to monitor changes in employment
- BERD data to understand R&D spend by local authority, though HIE notes survey findings are often not published due to confidentiality issues at a small level

SDS uses a range of data from the APS, SIMD, the Business Register and employment survey to inform its work, including producing RSAs for use in Skills Planning. It also produces forecasts for instance on growth, occupational change, broad industry and Scotland key sectoral change, employment and gender status and demand for qualifications.

Scottish Enterprise uses data to “inform its analysis of the drivers of economic growth and identifying performance gaps relative to comparator countries” using OECD and Eurostat data.

HFS explained that it monitors and analyses economic and other data to “better understand the current economic environment for housing.”

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<sup>5</sup> For a full list, see the SFC's [submission](#).

<sup>6</sup> <https://www.sdpscotland.co.uk/>

## **3.2 Examples of good practice and case studies**

DHI pointed to the “diagnostic tool developed for Ayrshire Pathfinder” which it stated allows for “a detailed assessment of economic conditions and of the various constraints to growth.”

SLAED pointed to the SLAED Indicators Report as providing examples of good practice from local authorities in Scotland.

Margaret Cuthbert explained that business data in Northern Ireland is more timely than in Scotland, with results in 11 months (contrary to the two years necessary to produce SABS).

Common Weal cited Denmark, Sweden and New Zealand as similarly-sized countries with important economic datasets, as well as Estonia, which:

“... with its highly developed digital infrastructure, can also offer instances where data collection is already fully integrated into normal everyday transaction processing – obviating the need for separate surveys”.

## **3.3 Key issues around interpretation**

John McLaren noted that there is a lack of analysis and interpretation of economic data, noting for instance that there was little understanding of the driving forces behind the Scottish employment rate. He also argued that the biggest challenge to good quality data is “bringing a greater awareness [to politicians, the media and the public] and understanding of the importance and relevance of existing and new sources of economic data.”

AGD highlighted that due to a reduced analytical capacity within local authorities,” it would be useful if sub-Scotland briefs and profiles could be published on [www.statistics.gov.scot](http://www.statistics.gov.scot). NLC also explained that in many cases the statistical data intelligence and analysis posts can be viewed as an “add on” within the key functions of an organisation whereas they should be seen as much more central.

## **4. Scrutiny**

### **4.1 The fiscal framework**

A number of respondents (e.g. OSR, SCDI, John McLaren, 4-consulting and Dr Cuthbert) questioned whether current economic data was still appropriate given the new fiscal arrangements between Scotland and the UK.

OSR for instance explained that measures explaining how the fiscal framework works in practice, as suggested in the Scottish Parliament’s Devolution Committee 3rd Report 2016 (Session 4): New Powers for Scotland: Final Report on the Scotland Bill, could include comparative expenditure per capita on devolved services for Scotland and the rest of the UK, which should include the total comparable

expenditure used in the calculation of the Barnett formula, and how it compares to expenditure in Scotland.

SCDI explained:

“Given the fiscal framework within which the Scottish economy now sits and how crucial it is to be able to understand the performance of the Scottish economy in relation to the rest of the UK”. It argued that this made a strong case for further investment in statistical collection and provision.

4-consulting stated:

“The pace of devolution is beginning to expose cracks in the UK’s system of producing economic statistics. The UK system was designed to produce economic statistics for the whole of the UK, not for the devolved administrations.”

Dr Cuthbert noted that the fiscal framework made the Scottish budget dependent on Scottish economic performance relative to the rest of the UK, in particular the change in devolved tax revenue per head. He noted that good policy should be:

“... underpinned by as full an understanding as possible of what factors underly the difference in growth rates of per capita devolved taxes between Scotland and rUK.”

## **4.2 What we should be measuring**

DHI argued that “the priority for future developments should align with Parliament’s current economic policy powers, although with an eye to possible further devolution.”

It cautioned however:

“it is unusual for analysts to declare that there is enough or even too much data” and emphasised there should be a cost-benefit analysis when considering whether to expand economic statistics, namely: “how much would it cost to produce the numbers and what would we be able to do differently if we had them?”

Common Weal highlighted that GDP did not fully capture developments such as digital innovations, which for instance “reduce GDP without reducing output such as by consumers booking holidays themselves rather than relying on travel agents.”

Professor Catia Montagna and Dr Daniel Kopasker focused their submission on the measures required to assess competitiveness. These include:

- Productivity (labour and total factor productivity, TFP)
- International activities (number of export destinations, values, volumes of exports and imports, etc.)
- Firms’ dynamics (growth rates, entry and exit)
- Other (ownership, R&D expenditure, management practices, etc.).

John McLaren also described multi-factor productivity or total factor productivity as a key element when measuring productivity as it allows for an estimation of the

contribution of economic growth to factors such as technical and management practices; he stated that “more study of this topic is vital.”<sup>7</sup> SDS called for more data linking skills to productivity on a granular level, by sector, occupation age and qualification.

SCDI called for a greater focus on happiness, wellbeing and inequality.

4-consulting and SCDI also both mentioned that the Scottish Government may want to produce supplementary performance measures such as Green budgets or Green GDP. John McLaren pointed out that the data required to measure alternatives to GDP is potentially already available e.g. in health and education but was generally available only after a lengthy time-lag, and that changes to this data tended to be gradual and thus it took time to identify problems or successes. He concluded that any new indices should thus be complementary to GDP.

### **4.3 Economic data should meet user needs and inform policy**

Professor Murphy explained that data must meet users’ needs and added that in his submission he had presumed “what is required is not information for the sake of satisfying curiosity but that is instead to be useful for decision making purposes.” OSR explained that one of foundation pillars of the Code of Practice is: “[statistics] that serve the common good.”

Many respondents stressed that data collection should be geared towards making or scrutinising policy (e.g. DHI, AGCC & SCC, SCDI and HIE). SCDI explained that there is “a need to put in place data gathering ahead of policy making” and ideally tie data and targets together to ensure transparency over government targets and performance measures.

Data should also be used to evaluate Government interventions according to AGCC & SCC. It pointed to the lack of evaluation of the Small Business Bonus Scheme providing non-domestic rates relief to small businesses and asked: what role did it have in starting up new businesses, in enabling small businesses to be viable, etc.?

HIE stated:

“focusing more on the needs of policy makers and the way in which evidence can help inform priorities and resource allocation in local areas could change the way in which data is collected and lead to more impactful and informed policy choices.”

Margaret Cuthbert explained that beyond providing an accurate picture of the economy, economic statistics are important in monitoring government policies and evaluating their effects.

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<sup>7</sup> Note the Scottish Government does not produce TFP while the ONS has published [experimental statistics on MFP from 1970 to 2015](#) in April 2017.

#### **4.4 Data necessary for effective parliamentary scrutiny by the Economy, Jobs and Fair Work Committee**

DHI stated that a Comprehensive programme of evaluation:

“would allow the Committee and others to assess the extent to which policy is achieving its objectives, whether expenditure offers value for money and whether current resource allocation is optimal or should be changed.”

It stressed that areas such as health, education, transport, housing, planning all affect the economy and that statistics reflecting developments in these should also be taken into account when assessing the economy.

Common Weal also argued that diverse data was required to understand key economic drivers such as:

- investment behaviours
- innovation practice
- market reach
- export patterns
- quality of infrastructure
- skills of employees
- company governance
- external conditions.

SPHO stated that from a health perspective, effective economic scrutiny would require (sub-)national data on employment, income and wealth, and a mixture of cross-sectional and longitudinal data.

#### **4.5 National Performance Framework (NPF) indicators and the four national priorities (innovation, internationalisation, investment and inclusive growth)**

Common Weal described the NPF indicators as “a presentational tool” allowing for public assessment of government progress but without offering a deeper understanding.

NAC made the following comments on the NPF including:

- Some indicators do not have a clear fit with the national priorities making it hard to evidence their contribution
- Some policy areas encompassed in the national priorities have too few indicators to enable effective measurement
- Some policy areas encompassed in the national priorities have too many indicators to enable effective measurement
- The indicators do not include unemployment and employment rates

SLAED noted:

- The indicators do not include accurate measure for inward investment
- The national indicator for digital infrastructure does not differentiate between rural and city localities, or regional differences

- There is no indicator for demographic changes e.g. overall population, replacement ratio, inward/outward and net migration, births and longevity.

Hervey Gibson added that in relation to one of the four priorities, investment, “the base data to construct adequate indicators does not yet exist.”

SPHO, focusing on the growth indicators, stated that “they are sensible and reasonable” but that it may be helpful to provide measures of both absolute and relative inequality.

SLAED stated the indicators are “high level” and that the explanation behind variation could be “complex and could require analysis of sub-indicators”. It called for the publication of sub-indicators, noting:

“For example the number of businesses in Scotland is an overall indicator that could mask trends in birth rates, 1-5 year survival rates and geographic and sector specific trends.”

Common Weal also argued that scrutiny of an indicator was ineffective without assessing the underlying causes of a change.

Though not about NPF indicators *per se*, Scottish Environment LINK stressed that economic activity indicators needed to gauge the economy’s contribution to wellbeing, the impact of the economy on the environment and the sustainability of the economy. Table 2 shows measures that could potentially be used to assess these indicators.

**Table 2: Measuring wellbeing and sustainability (Scottish Environment LINK)**

Wellbeing	Measurement
Household income	Median household income
Income and wealth inequality	<ul style="list-style-type: none"> <li>• GINI coefficient</li> <li>• Palma ratio (ratio of the richest 10% of the population’s share of GNI divided by the poorest 40%’s share)</li> <li>• Wealth inequality measure</li> </ul>
Financial security	Proportion of people: <ul style="list-style-type: none"> <li>• with access to savings of £500/£1000</li> <li>• In debt</li> </ul>
Work quality	<ul style="list-style-type: none"> <li>• Proportion of workers satisfied with their job (available in the Social Attitudes Survey)</li> <li>• Underemployment</li> <li>• Job security/contract length/number in job after 6 months</li> </ul>
Environmental sustainability	
Material footprint	Raw Material Consumption (from ONS)
Water footprint	Water footprint
Carbon footprint	Annual greenhouse gas emissions from consumption
Waste including unrecycled/uncomposted waste	Tonnage of waste (including for landfill/incineration)

Wellbeing	Measurement
Health of assets	
Natural assets	Natural Capital Asset Index (needs refinement)
Levels and type of infrastructure	Total non-financial assets net worth (produce by ONS)
Financial capital	National and individual net debt
Human assets	Levels of knowledge and skills