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How To Make Data Count: Improving The Quality And Coverage Of Our Economic Statistics



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Economy, Jobs and Fair Work Committee

To consider and report on matters falling within the responsibility of the Cabinet Secretary for Economy, Jobs and Fair Work.



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Executive Summary

The need for economic statistics that are trustworthy, high quality and of public value is essential if we are to measure the performance of our economy. The credibility of Scotland's economic statistics is even more crucial given the Parliament's new fiscal powers and continuing discussion around constitutional reform. Research commissioned by the Scottish Parliament's Information and Research Centre (SPICe) found the pace of devolution was beginning to "expose cracks" in the UK's system of producing economic statistics, a system designed to produce data for the whole of the UK rather than anything more tailored to the devolved administrations.

That said, significant progress has been made in the quality and coverage of economic statistics in recent years. Scotland is now much better served than Wales, Northern Ireland and the English regions yet still lacks many of the statistical measures produced routinely at a UK level and in other countries.

The production of high quality economic statistics must be a continuing priority for the Scottish Government. The Committee recommends the Scottish Government and the Office for National Statistics (ONS) focus on improving the coverage and quality of four key areas: earnings; trade (exports and imports); Scottish prices; and regional (as well as sub-regional) economic statistics.

The Digital Economy Act 2017 (DEA 2017) allows ONS better access to a wider range of data from government and business, including company statistics that Her Majesty's Revenue and Customs (HMRC) collects on workers, wages, profits and exports. It is imperative that the Scottish Government fully benefits from this easier access to administrative data. The Scottish Government should continue to work in collaboration with ONS, HMRC and others to establish what is achievable, by whom and at what cost, and to develop a detailed plan of how the gaps can be filled.

As well as collaboration between the Scottish Government and ONS, there needs to be closer working between the Scottish Government and local authorities, the Scottish Government and enterprise agencies, the Scottish Government and chambers of commerce, and the public and private sectors. Organisations are encouraged to foster a culture in which a collaborative ethos is expected and supported. The aim is for improved data-linkage as well as more use of existing figures, identifying and filling where there are gaps.

The Committee welcomes the willingness of ONS to make more of its engagement with the Scottish Parliament and will explore further how that engagement – and accountability via the UK Statistics Authority (UKSA) – can be made stronger, more systematic and meaningful in the interests of Scotland's statistical needs. We also seek assurances from ONS and HMRC that Scotland's statistical needs are guaranteed to be given full consideration and factored into their decision making and allocation of resources for current and future work, particularly in terms of the enhanced data access made possible by the DEA 2017.

The most immediate barriers to improving Scottish economic data are cost, not having the power to compel business survey responses, and disaggregation (in terms of what can be small or unrepresentative sample sizes of Scottish individuals, households and businesses in UK surveys). There are no easy solutions but the Scottish Government should explore with ONS and HMRC how to overcome the disaggregation barrier. They could consider regional allocation methodology or even the viability of a Scottish-specific reporting unit which – combined with the provisions of the 2017 Act – might address the matter by looking at a select number of firms with significant cross-border operations.

The Bean Review called for a fundamental review of UK economic statistics. It encouraged facing up to current limitations, showing agility in response to the changing economy, focusing on better meeting user needs, making the most of existing and new sources and technologies, improving how we understand and interrogate data, and strengthening governance to support the production of high-quality economic statistics. Such strategic aims should be at the heart of Scotland's approach but the Committee draws particular attention to: the importance of agility (in the face of a changing economy and Scotland's new fiscal powers); making the most of existing and new data sources (including administrative data); and the strengthening of the governance framework (covering the Scottish Government being both a producer and consumer of economic statistics and also the question of pre-release access (PRA)).

It is clear that were we starting from scratch with a plan to configure Scottish economic statistics we would not seek to replicate the current statistical framework and scale of operation at the UK level. What would be helpful is a robust and independent analysis of Scotland's particular data needs in order to identify both what is essential from what is desirable and what is useful from what we may be doing out of habit. The Committee proposes that the Enterprise and Skills Strategic Board would be best placed to consider such an undertaking. Linked to that, we believe the never easy question of resources and capacity merits further consideration and recommend the Scottish Government outlines its current and planned allocation of resources for economic data provision and analysis and keeps us informed of the progress and work of the recently established Data Analytical Unit.

The Scottish Government plays a dual role data-wise, producing economic statistics but also using them to scrutinise and develop public policy. The Committee examined the question of independence of the production of economic statistics and found no evidence of a problem, but – recognising the importance of perception when it comes to public trust – believes there would be merit in a review. A feasibility study undertaken by the Scottish Government could assess the practicalities and costs and consider the pros and cons of greater independence for the production of economic statistics in Scotland, including – though not limited to – consideration of the three options outlined below—

1) establishing a non-ministerial department – a new office/commission/agency – as with the recent creation of the Scottish Fiscal Commission;

2) embedding further capacity within an existing non-ministerial department, or

3) reviewing the role of Scotland's Chief Statistician.

The matter of greater independence is connected to a further issue, that of PRA. The practice of making official statistics available before their publication to those not involved in their production (usually ministers and their advisers) is justified on the basis of enabling ministers to be briefed and therefore better able to make informed comments. The other side of the argument is that removing ministerial privilege and giving everybody the same access to official statistics at the same time is a fundamental principle of statistical good practice, one consistent with the position adopted by ONS since 1 July 2017 and subsequently by the Bank of England. The UK Government is currently reviewing PRA.

The Committee believes PRA to economic statistics which are market sensitive – including Scottish GDP, the Retail Sales Index for Scotland (RSIS), Quarterly National Accounts Scotland (QNAS) and Government Expenditure and Revenues (GERS) – should end; and the Scottish Government is invited to set out how it will do so.[1]

In the interests of encouraging balanced and accurate coverage of labour market figures in the Scottish media, we recommend when publishing the UK-level data that the ONS issues a separate statistical release providing the key numbers for Scotland. If the Scottish dimension is included with the information at the time of issue then it could help reduce the likelihood of any misinterpretation.

The statistical needs of the Scottish Fiscal Commission (SFC) – given its responsibility for economic and fiscal forecasting – should be a top priority. SFC highlighted four areas of current priority in its work: price data and deflators for Scotland; GDP by component of expenditure in constant prices; better and more timeous data on Scottish wages; and a more comprehensive breakdown of public sector expenditure in Scotland. The Committee recommends the Scottish Government prioritises these needs where it can collect the data and works with ONS/HMRC/others where it cannot.

Another issue concerning SFC was the payment for data from other public agencies, e.g. prices and transactions figures from the Registers of Scotland, when it may be the case other bodies are being charged for the same information. While recognising

[1] There was a division over the issue of pre-release access, the prevailing view set out above and in paragraph 230; the minority view having proposed: "*The Committee considers there should be a presumption against pre-release access and invites the Scottish Government to put forward arguments why pre-release access should be continued for specific statistics*." See Annexe B, Minute of the Meeting of 30 January 2018, and note on 'Record of division in private' for more detail.

there will be a transactional cost for providing such information, we wonder whether the cost might be shared between those public sector bodies acquiring the data and protocols put in place for distribution. The Committee asks that the Scottish Government look into the matter.

The importance of the culture in which UK statistics operate was underlined by the Bean Review. It challenged ONS and others in the field to be more intellectually curious, open and self-critical in their approach; not a factory approach, focused on getting the numbers out. The Committee encourages the Scottish Government to consider how its own culture matches up to this call for a more agile, imaginative and ambitious approach, one better focused on and in tune with user needs.

A number of written submissions to the inquiry pointed to the absence of a single website or portal. They suggested bringing together the most up-to-date economic data for Scotland in one place, along the lines of the approach taken by ONS on labour market data via the Nomis site. We recommend the Scottish Government reflects on this.

Another user need, as highlighted by Women's Enterprise Scotland, was the poor availability of gender-disaggregated data at both Scottish and the UK level. In our preceding inquiry, *No Small Change: The Economic Potential Of Closing The Gender Pay Gap*, the Committee recommended the development of a suite of indicators to measure the underlying causes of the gap. Following initial responses from the Scottish Government, we ask to be kept updated on the progress of its Gender Index work.

Data ought to serve the common good and be more tailored towards the making or scrutinising of policy. The Royal Statistical Society (RSS) called for official statistics to be at the heart of policy making. The Office for Statistics Regulation (OSR) judged the success of applying statistics to performance measurements and targets to have been mixed but suggested the role of statisticians is crucial in putting figures into context and informing the democratic debate. In line with such thinking, we recommend Scottish Government statisticians undertake to engage with the Committee on an annual basis in advance of publication of the Scottish Economics Statistics Plan.

We also see merit in having clearly defined measures set out alongside each policy initiative or bill from the outset. Such an approach may not be appropriate in the case of every policy intervention, but the onus should be on publishing key indicators, a timetable and the expected cost of evaluation alongside the policy; and, if not, setting out the reasons why. The Scottish Government is asked to examine the means by which it could embed monitoring and evaluation into its bills and other policy interventions; and to provide a recent example (or examples) of how and to what extent it has taken a statistical approach in the development of performance measures and targets pertaining to its economic policy.

The Committee was encouraged to hear of work undertaken by the Scottish Government with the Organisation for Economic Co-operation and Development

(OECD) on inclusive growth, specifically on the better life index and its consideration of the World Economic Forum's inclusive growth index. That work needs to progress. A renewed impetus is needed and – in the interests of being curious, open and focused on user-needs – consideration of alternative ways of assessing our socio-economic standing (e.g. time-use) would be entirely credible lines of inquiry. We recommend the Scottish Government develop such work within a more consistent statistical framework for capturing inclusive growth and that this be set out in a regular quarterly or bi-annual publication.

There is a range of organisations in Scotland producing, analysing or presenting statistics – covering the likes of enterprise agencies, think tanks, universities, the third sector and business membership organisations. There may be potential to augment or complement the data produced by the Scottish Government and ONS but the question arises of how to ensure quality, consistency and credibility. A model worth highlighting is that adhered to by the SFC, which voluntarily seeks to comply with UKSA's Code of Practice. The Committee would encourage all bodies providing economic statistics in Scotland to consider such an approach, specifying the extent to which they adhere to the Code of Practice and, if not, what other measures they have in place.

RSS's 2016 Data Manifesto called for "skilling up the nation" in preparation for the digital economy; urging the UK Government to recognise the value of data and importance of being data-literate for our education, democratic engagement and day-to-day decision-making at work and at home. The growth of data means it now plays a huge part in the economy and in our personal lives. Little goes unrecorded in the digital sphere. OSR said there will be things the public is interested in that experts are not and vice versa but both ought to be catered for. We ask the Scottish Government to consider how it could further encourage or even champion a better awareness of economic statistics among policy makers and the media and to look at ways of improving public understanding.

Introduction

> *Data! Data! Data!* he cried impatiently. *I can't make bricks without clay.*
>
> Arthur Conan Doyle, *The Adventures Of The Copper Beeches*

1. The remit of the inquiry was—

> 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.

2. Some would claim data is the new currency, the new oil, the new gold. Its reach is far and wide; informing policy making, framing political debate, influencing business decisions, even affecting our pay and pensions. An underlying aim of the inquiry was therefore to encourage a debate about the quality and coverage of our data while highlighting the value of the quantitative approach – one based on the provision of credible, timely, useful statistics – both for decision making and accountability.

3. The last two decades have witnessed an acceleration of the digital revolution, the exponential growth of big data, and the unfolding process of devolution; "quite a journey"[2] as the Director General of the Office for National Statistics (ONS) put it. ONS is now accountable – through the UK Statistics Authority (UKSA) – not only to the UK Parliament but also to the Scottish Parliament and national assemblies of Wales and Northern Ireland. Could that accountability be made more meaningful in the interests of Scotland's statistical needs? We believe it could.

4. The current set-up of UK statistics has its roots in the Statistics and Registration Service Act 2007, the impetus for which came from the call for greater trust and transparency in government statistics. A more recent UK statute, the Digital Economy Act 2017, arose from the findings of an inquiry to examine future data needs, ONS's effectiveness, and strengthening support for the production of high-quality, independent economic statistics.

5. The chair of that inquiry, Professor Sir Charles Bean of the London School of Economics, told us—

> The key is to define the question carefully at the beginning. We should not start with the statistic and then ask "Now, what question can we throw at

[2] Economy, Jobs and Fair Work Committee, Official Report, 7 November 2017, Col 3.

> it?" We need to think about and try to define precisely the question that we want to answer and then look for the statistic.[3]

6. The Committee has sought to ask careful questions. We make no claim to have all the answers. The report explores what works and maps out what does not, signposting where we can see a way forward. The Committee wishes to thank Graeme Roy – Director of the Fraser of Allander Institute (FAI) and the Committee's adviser for this piece of work – for his expertise, insights and encouragement. Materials that matter. There can be no bricks without clay

[3] EJFW Committee, OR, 7 November 2017, Col 28.

Background

> *A judicious man uses statistics not to get knowledge, but to save himself from having ignorance foisted upon him.*
>
> Thomas Carlyle

Scottish context and the fiscal framework

7. The need for appropriate, robust and timely economic statistics is well recognised. It is crucial for understanding how our economy is performing and for evaluating public policy. Such data is equally important for effective decision making in the private sector. The production of economic statistics in Scotland is all the more important given the Parliament's new fiscal powers and ongoing debates around constitutional reform.

8. Through the fiscal framework, Scotland's public finances are for the first time directly tied to Scottish economic performance (*relative* to the rest of the UK) via the relative performance of the taxes covered in the Scotland Act 2012 and the Scotland Act 2016 – i.e. the Land and Buildings Transaction Tax (LBTT), Landfill Tax and income tax on earnings – and demand-led social security devolved in the 2016 Act.

9. Significant progress has been made in recent years to improve the coverage and quality of our economic statistics. Scotland is much better served than the other devolved nations (and English regions). That said, there is a lack of many of the statistics that are routinely published at the national level in the UK and other countries. There are areas where methodologies could be improved (although this is often easier said than done), and where investment is lacking.

10. As highlighted by recent debate[4] over the usefulness of Gross Domestic Product (GDP) as a measure of progress, traditional economic statistical measures can struggle to inform debates on crucial matters such as how best to tackle inequality or boost environmental sustainability.

The role of ONS

11. Formed in 1996 from the merger of the Central Statistical Office and the Office for Population Censuses and Surveys, the Office for National Statistics (ONS) is the UK's national statistical institute (and the executive office of UKSA), a non-ministerial department with the statutory objective of promoting and safeguarding production and publication of official statistics that "serve the public good". ONS

[4] http://www.bbc.com/future/story/20180111-how-can-you-measure-what-makes-a-country-great

produces the key metrics for the UK economy, including GDP, the labour market, trade and the public finances.

12. It also publishes a range of economic statistics for Scotland (as part of their suite of "regional" statistics for the UK). This includes—

- Regional gross value added (GVA);
- Regional gross disposable household income;
- The Labour Force Survey (the official source of headline employment and unemployment data);
- The Annual Population Survey (the official source of regional and youth labour market data);
- Workforce Jobs, and
- Experimental international trade statistics.

13. Section 20 of the Statistics and Registration Service Act 2007 states that ONS cannot produce and publish Scottish devolved statistics without the consent of Scottish Ministers. In general, the Scottish Government collects, analyses and publishes data on devolved issues. However, ONS runs UK-wide surveys (e.g. Labour Force Survey) which collect information on reserved and devolved matters.

14. Most economic, business and labour market statistics produced by the Scottish Government are derived from data collected by ONS as part of UK-wide work. These include—

- Scottish Annual Business Statistics – compiled from the UK Annual Business Survey;
- Businesses in Scotland – compiled from the UK Inter-Departmental Business Register, and
- Scottish Business Enterprise Research & Development statistics – compiled from the UK Business Enterprise Research and Development statistics.

15. A number of witnesses suggested to the Committee that ONS could produce more statistics for Scotland – for example, key gaps in regional prices, international investment flows, capital investment and trade.

Limitations of economic success

> *Facts are stubborn things, but statistics are pliable.*
>
> Mark Twain

16. Economic statistics will always be imprecise. Reasons for this include—

- Limits on the level of resource that government can direct toward their collection and publication;
- Collecting data typically relies upon engaging directly with businesses and households. Care has to be taken not to impose an unnecessary burden;
- The Scottish Government faces constraints – both formally and informally – when compiling economic statistics. For example, it cannot legally compel businesses to respond to its requests for information (something ONS can do with its business surveys);
- Statistics are a necessary aggregation and estimate of underlying real-world data. Different methods have to be applied. Data and methodologies change in the light of new information, while methodologies can always be improved upon. Statistics are therefore subject to revision;[5]
- Being aggregations of a variety of pieces of information means the key headline measures – such as GDP or levels of employment – do not provide a comprehensive account of things like environmental sustainability and wellbeing. For instance, John Mclaren published an Index of Social and Economic Well-being across 32 OECD countries - 2006 to 2016 (including England, Scotland, Wales and Northern Ireland) in September 2017 incorporating four elements of wellbeing: income, education, life expectancy and inclusivity, and
- At the same time, with the global economy going through a rapid transformation in the light of technological change, many indicators are no longer able to provide the same robust measures that they did in the past.

Gaps in coverage

17. Written evidence received by the Committee highlighted a number of important gaps for Scotland—

[5] For example, the Great Recession was initially estimated to have taken around 6% out of Scotland's GDP between 2008 and 2009. The latest estimates suggest a shallower recession of around 4%. Around 1/3 less.

- Gross National Income (GNI) – which is arguably a preferable measure of economic prosperity than GDP;[6]

- Foreign Direct Investment (FDI) – data on financial flows in and out of Scotland is largely unknown;

- Prices – there are no separate price indices for Scotland. This makes measuring things like real-terms changes in earnings, poverty or changes in government budgets difficult;

- Trade – it is very difficult to estimate trade flows given firms do not record data in a way that allows analysis of flows between Scotland and other countries. It is also a challenge to measure exports, and even more so with imports, between Scotland and the rest of the UK;

- Capital investment – there is little in the way of direct estimates of investment for Scotland either in the aggregate or by sector, and

- Longitudinal data – there is very limited data on a longitudinal basis of Scottish households – particularly in terms of issues like income, wealth and spending.

18. There are also a number of areas where statistics are – in principle – available, but the sample size is so small as to compromise the robustness of analysis drawn from them, such as the Annual Business Survey (in spite of a Scottish boost[7]). This is particularly the case for business and labour market data at a regional or local authority level where small variations in business performance can dramatically impact on the figures over time.

19. The quarterly Labour Force Survey sample for Scotland contains over 17,000 individual responses. However, once the data is cut by age, sex, occupation, reason for inactivity etc., the number of individuals being surveyed for each cell falls considerably.

Governance

20. The Scottish Government, unlike ONS, is both a producer and consumer of economic statistics, with Scottish Ministers also commenting, interpreting and making policy based upon the data. This can cause confusion between the production of independent statistics and subsequent commentary – as recent debates over GERS have shown.

21. The 2013 White Paper *Scotland's Future*[8] included plans to establish a National Statistics Institute post-independence. It is a requirement for membership of the

[6] See SPICe Briefing 13/48 What is GDP? for further information.
[7] http://www.gov.scot/Topics/Statistics/Browse/Business/SourcesandSuitability/SABS
[8] http://www.gov.scot/resource/0043/00439021.pdf

EU to have a statistical agency separate from government. As Scotland continues to grow and develop its economic and fiscal institutions, the question of how appropriate it is for the Scottish Government to have the dual role of producer and consumer is likely to recur, whatever the nature of our relationship with Europe.

22. The production of economic statistics by the Scottish Government and all other UK bodies that produce official statistics is governed by UKSA's Office for Statistics Regulation Code of Practice. This sets out the necessary principles and practices to produce statistics that are trustworthy, high quality and of public value. There is also a set of experts, the Scottish Economic Statistics Consultants Groups (SESCG), which the Scottish Government consult on new developments.

UKSA, the Concordat, and official & national statistics

23. An independent statutory body that operates as a non-Ministerial department of the UK Government, UKSA is directly accountable to the UK Parliament, the Scottish Parliament, the National Assembly for Wales, and the Northern Ireland Assembly. UKSA's role is to promote and safeguard the production and publication of official statistics that "serve the public good" in terms of—

- informing the public about social and economic matters;
- assisting in the development and evaluation of public policy, and
- regulating quality and publicly challenging the misuse of statistics.

24. UKSA's remit includes oversight of the Code of Practice for Official Statistics. All Official Statistics published by the Scottish Government fall under its oversight. For example, it is the authority that classifies Scottish Quarterly GDP as "National Statistics". Any complaints about the misuse of Official Statistics published by the Scottish Government are dealt with by UKSA.

25. The Inter-Administration Committee (IAC) promotes coherence across the administrations of the UK and resolves inter-administration issues. IAC works within the context of the Concordat on Statistics[9] between the UK Government (including UKSA and ONS) and each of the devolved administrations. The Concordat outlines the ways in which the four nations work together in relation to the production of statistics, for and within the UK, statistical standards and the statistics profession.

26. Powers under section 1 of the Statistics of Trade Act 1947 allow ONS to obtain information necessary for the estimation of economic trends and the discharge of their functions. Most ONS business surveys are conducted under this statute.

[9] https://www.statisticsauthority.gov.uk/archive/about-the-authority/uk-statistical-system/history/key-historical-documents/concordat-on-statistics.pdf

27. The Statistics and Registration Service Act 2007 defines "official statistics" as all those outputs produced by ONS, central government departments and agencies, by the devolved administrations in Northern Ireland, Scotland and Wales, and by other Crown bodies (over 200 bodies in total).[10] The Act allows ministers to determine, through secondary legislation, which non-Crown Bodies produce official statistics, so that they too can be subject to scrutiny and assessment by UKSA and be eligible for assessment as "national statistics". This provision is designed to ensure a broad definition of official statistics, as well as flexibility so that the scope of official statistics can be adapted over time to suit changing circumstances.

28. The term "official statistics" thus includes several categories of statistics produced by public bodies—

- "National statistics" – a subset of official statistics – are certified by UKSA as compliant with the Code of Practice for Official Statistics. (Most of the statistics produced and published by the Scottish Government are national statistics);
- Statistics produced by the Government Statistical Service (GSS) that are not "national statistics";
- Statistics produced by Crown Bodies but not under the professional management of the GSS, and
- Statistics produced by non-Crown Bodies included in secondary legislation.

29. Some economic and financial data held elsewhere is not governed by the same processes. Margaret Cuthbert, in the first evidence session of this inquiry, stated that it is often difficult to access or assess the quality of data provided by bodies such as enterprise agencies and the Scottish Futures Trust.[11] Similarly economic data published by business organisations – e.g. through their regular surveys – are also not classified as official statistics.

Pre-release access

30. Pre-release access (PRA) is the practice of making official statistics, and the written commentary that accompanies them, available in advance of their publication to specific individuals not involved in their production. PRA is granted by the "person responsible" (as defined by section 67 of the Statistics and Registration Service Act 2007); for instance, ONS's National Statistician or, in the case of official statistics produced by a government department, the minister in charge of that department. The person responsible may grant pre-release to an

[10] Crown bodies in Scotland include the Scottish Government and the Scottish Administration more broadly (incorporating Non-Ministerial Departments and Officeholders in the Scottish Administration). Non-Crown bodies in Scotland include Audit Scotland and the National Library of Scotland for instance.
[11] EJFW Committee, OR, 19 September 2017, Col 5.

eligible person. In most cases this includes government ministers and officials who advise them.

31. The justification for PRA has typically been that it is preferable for Ministers to be carefully briefed on the statistics in advance of release so that they can make sensible and informed comments at the time the figures are published. In addition, many senior statisticians in government spend only a relatively small part of their time actually working on the production and publication of statistics. They often have a separate responsibility to offer confidential advice to Ministers and officials on the implications of the statistics for policy and decision-making.

32. Against that, others argue that equality of access to official statistics is a fundamental principle of statistical good practice, and the existence of pre-release access leaves ministers in a privileged position and undermines trust in our official statistics system. While there is no evidence of the statistics being subject to "influence" prior to their publication, the greater concern is around the opportunity to "spin" the numbers in a positive way in advance of any other commentator or political party being able to respond.[12]

33. PRA in the UK comes from the Pre-Release Access to Official Statistics Order 2008. This covers all statistics which are not wholly devolved and therefore all UK Government departments and any other public bodies in the UK that produce non-devolved statistics, including ONS. The "eligible people" who may benefit from pre-release under this order include UK Government as well as Scottish Government ministers. The UK Order grants pre-release for a maximum of 24 hours prior to publication. In exceptional circumstances, pre-release may be granted in excess of 24 hours if the person responsible believes the likely benefit to the public would outweigh the detriment to public trust in official statistics likely to result from such an access.

34. On 1 July 2017, ONS ended all 24-hour PRA to its official statistics.[13] This change was welcomed by statistical organisations such as the Royal Statistical Society (RSS). Commenting on the announcement by ONS at the time, RSS's Executive Director Hetan Shah stated: "We hope it will set an example for other government departments to follow and bring forward the day when pre-release access to all official statistics is ended".[14] Though it is not a producer of official statistics and is not covered by the UK Order, the Bank of England followed suit. UK Government

[12] In March 2010, the UK Statistics Authority published a short review of statutory arrangements for pre-release access which included a helpful discussion of the arguments for and against: www.statisticsauthority.gov.uk/archive/reports---correspondence/reports/pre--release-access-to-official-statistics--a-review-of-the-statutory-arrangements.pdf

[13] https://www.statisticsauthority.gov.uk/wp-content/uploads/2017/07/Letter-from-John-Pullinger-to-Sir-David-Norgrove-15-June-2017.pdf

[14] http://www.rss.org.uk/Images/PDF/about/press-releases/2017/PRESS-RELEASE-ON-ONS-DECISION-TO-END-PRE-RELEASE-ACCESS-TO-OFFICIAL-STATISTICS.pdf

departments other than UKSA have not changed their pre-release practice, but the UK Government is currently reviewing this.[15]

35. PRA in Scotland comes under the Pre-Release Access to Official Statistics (Scotland) Order 2008. This Order is made under the authority of section 11 of the Statistics and Registration Service Act 2007 and covers wholly Scottish devolved official statistics. It allows pre-release—

- For market-sensitive statistics, a maximum of one working day before publication. "Market-sensitive" is defined in the Scottish Order as statistics which "when disclosed would, in the opinion of the person responsible, be reasonably likely to have a significant effect on the value or traded volume of any investment", and

- For other official statistics, a maximum period of five working days before publication.

36. This Order also states that pre-release may be increased by the person responsible to an unlimited extent if they deem it necessary to fulfil the reasons justifying the granting of pre-release as set out in the Order e.g. ensuring that ministers are able to comment publicly on the statistics. In doing so, they must take into account the risk of detriment to public trust in the integrity of official statistics. The Order requires that the person responsible must publish the reasons behind their decision as soon as reasonably practicable.

37. For PRA to be changed in Scotland there would need to be a new order (to revoke the 2008 order) introduced by Scottish Ministers and then voted on in Parliament. This would apply equally whether it was an order to completely revoke the existing order; to make minor changes to the existing order; or to revoke the existing order and at the same time replace it with substantially new provisions on PRA.

38. In July 2008, the Scottish Government wrote to the UKSA welcoming views on the draft Pre-Release Access to Official Statistics (Scotland) Order 2008. The letter[16] set out the following uses of pre-release access—

- To ensure Ministers are able to comment on statistics properly at the time of release;

- To ensure the ability to identify errors in the data when compared with statistics being prepared by other official statisticians e.g. health boards or local authorities;

[15] https://www.statisticsauthority.gov.uk/wp-content/uploads/2017/08/Disclosure-of-Home-Office-migration-statistics.pdf
[16] https://www.statisticsauthority.gov.uk/wp-content/uploads/2015/11/jimmathertosirmichaelscholar090708_tcm97-24161.pdf

- To ensure that publications prepared for release at the same time as the statistics (or shortly after) are properly informed by the correct figures, and

- To allow access where necessary in exceptional cases, so long as this did not damage public trust in official statistics.

39. In its response, UKSA emphasised the principles of equal access and earliest possible release, being key features of the Code of Practice as well as the EU and UN Codes. UKSA's letter to the Scottish Government stated: "Enabling the administration of the day to discuss, and prepare statements about, the statistics whilst not allowing the same access to Parliament or the public is not, in our view, good statistical practice. We believe our view on this is shared by statistical offices and other authorities around the world." It further noted that international policies in relation to these principles "are mostly clear and supported by both the EU and United Nations" and observed—

> The Pre-release Order which has been laid before the Westminster Parliament leaves little doubt that its aim is to reduce the amount of early access currently being granted. The Scottish Order appears to take a different stance and to be focused more on the formalisation and endorsement of pre-release access. [17]

40. Addressing each point raised by the Scottish Government, UKSA was of the view the arguments were "less clear-cut than presented", specifically—

- In the normal run of business, statistics should be released without simultaneous accompaniment of ministerial press notices or other statements, as this may "distract attention from the statistical commentary and may encourage public scepticism about the trustworthiness of the statistical product itself";

- "It should normally be possible to correct erroneous data without providing access to the statistics in their final form", and

- The solution to ensuring other publications released at the same time as the statistics (or shortly after) were properly informed would be to publish them when the official statistics become available to all. To issue policy documents at the same time, the UKSA pointed out, "could again be seen by some as distracting attention from, or weakening trust in, the statistics."[18]

[17] https://www.statisticsauthority.gov.uk/wp-content/uploads/2015/11/sirmichaelscholartojim-mather290808_tcm97-24163.pdf
[18] https://www.statisticsauthority.gov.uk/wp-content/uploads/2015/11/sirmichaelscholartojim-mather290808_tcm97-24163.pdf

41. It sought—

> …a commitment both to a progressive reduction in the length of time for which privileged access is granted, as well as in the number of officials and Ministers seeing statistics prior to their publication. We would encourage the Scottish Government to adopt statistical policies that promote equal access, the earliest possible publication, and minimise the opportunity to make policy proposals or comments from advance sight of the unpublished statistics.[19]

42. The Scottish Government responded—

> Your letter flags up the principles of equal access and earliest possible release – we agree with these principles and agree that these are key features of the EU and UN codes. However, the EU Code of Practice also specifically recognises that pre-release access occurs and it requires that it should be limited, controlled and publicised – that is what our Order will do.[20]

43. It stated in further correspondence—

> Your last letter rightly pointed out that there is a fundamental difference between the perspective of the Scottish Government and that of the Statistics Authority when it comes to pre-release access. You are correct that the Scottish Government view pre-release access as necessary and desirable. However, we do very much recognise that there are risks associated with pre-release access that need to be controlled.[21]

Resources and capacity

44. Understandably there is a limited budget on which government departments can invest in economic statistics. But low levels of investment impact on quality and coverage.

45. The core economic statistics team working on national accounts in the Scottish Government consists of 11 officials. This includes all staff associated with compiling, publishing, disseminating, capacity building and briefing Ministers. In comparison, the Scottish Fiscal Commission (SFC) – which requires timely and accurate historical and current data in order to forecast the devolved taxes, onshore GDP and demand-led social security expenditure – has around 20 staff.

[19] https://www.statisticsauthority.gov.uk/wp-content/uploads/2015/11/sirmichaelscholartojim-mather290808_tcm97-24163.pdf
[20] https://www.statisticsauthority.gov.uk/wp-content/uploads/2015/11/jimmathetomichaelscholar300908_tcm97-24165.pdf
[21] https://www.statisticsauthority.gov.uk/wp-content/uploads/2015/11/letterfromjimmathermsptosirmichaelscholarnovember200_tcm97-41106.pdf

46. In addition to staff resource, another issue is the level of investment in data collection. The Scottish Government boosts key datasets by paying for additional samples, allowing greater analysis to be conducted. It does so for the Annual Population Survey (APS), the Family Resource Survey (FRS), the Annual Business Survey (ABS), the Business Register and Employment Survey (BRES) and, more recently the Living Costs and Food Survey.

Constraints on compiling economic statistics for Scotland

47. New investment on its own will not deliver the step-change we might like to see. For this, other reforms – for example around how UK businesses report their activities – would be needed.

48. In the main, Scottish economic statistics draw upon a mix of UK data apportioned to Scotland e.g. by employment share, disaggregated company or household information from UK datasets or voluntary surveys. Where Scottish specific data can be used then this would be preferable. However, the Scottish Government faces three challenges—

- Bespoke Scottish survey data are costly;
- Unlike ONS, the Scottish Government is not empowered to compel businesses to respond to requests for data or information;[22]
- Companies are not required to provide separate reporting units for Scottish activities vis-à-vis the rest of GB.

49. There is precedent for alternative arrangements in a devolved context. The Northern Ireland Executive has statutory powers – via the Statistics of Trade and Employment (Northern Ireland) Order 1988 – to enforce participation in the Northern Ireland Annual Business Inquiry.[23]

50. Giving the Scottish Government greater authority to access unique data for Scotland on business activity would be a major step forward. To do this, however, the first hurdle to overcome would be the need to establish separate reporting units for business activities in Scotland and the rest of Great Britain. Care would be needed to not overburden businesses. Some form of approximation could be used.

51. The second hurdle would be collecting the data. Running a separate business survey – like in Northern Ireland – would be a major undertaking. But as

[22] At the moment most ONS business surveys – which underpin key macroeconomic and microeconomic data – are conducted under Section 1 of the Statistics of Trade Act 1947. This requires businesses by law to provide the information requested.

[23] The Northern Ireland Annual Business Inquiry (NIABI) is conducted by the Northern Ireland Statistics & Research Agency. The results of this survey are sent to ONS twice a year who use it to produce UK-wide estimates as well as producing regional estimates. NISRA separately process the Northern Ireland data to produce their own regional estimates.

statisticians move toward greater use of administrative data – replacing traditional surveys with real data that companies report to HMRC, for example, on a regular basis – collecting additional data without imposing an excessive burden on businesses should be possible, particularly given the potential of HMRC's Making Tax Digital programme (set up in 2015). The roll-out of these plans does not appear to have been preceded by a discussion on how additional administrative data could be collected from taxpayers and used to better inform policy decisions across UK countries and regions.

52. Scottish Government statisticians being able to access this information through data sharing agreements would be preferable. It is perhaps surprising that the SFC, though a statutory body with forecasting responsibilities, has no statutory access to data and needs to negotiate data-sharing agreements on an ad hoc basis.

Improvements to methodologies – hot topics

53. Alongside these strategic issues about how to improve economic statistics in Scotland, there are ongoing areas of topical interest where specific improvements in methodology would be desirable.

Government Expenditure and Revenue Scotland (GERS)

54. The debates on the merits and de-merits of GERS are well rehearsed. GERS estimates the contribution of the people and businesses *in* Scotland (i.e. Scottish taxpayers) toward the level of public spending *for* Scotland (i.e. people both inside and outside of Scotland). It takes the current constitutional settlement as a given.

55. In recent months there has been a focus on the robustness of GERS. Setting aside any political or constitutional questions about what GERS says (or does not say), areas of methodological focus include: the use of estimates for some UK-wide revenues and the apportionment of certain expenditures to Scotland (but which take place outside Scotland). These debates are not new; many of them having been discussed in 2007 by the Scottish Parliament's Finance Committee. Professor Murphy in his written submission to this inquiry argued that GERS does not follow proper accruals accounting practices, compromising (in his view) the use of such figures as Scotland's estimated fiscal balance and deficit.[24]

Trade Statistics

56. Scottish trade statistics are the subject of much scrutiny. There are two key weaknesses—

- There is no complete set of direct estimates of imports to Scotland, and

[24] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-003-Professor_Richard_Murphy.pdf

- Understanding the flow of goods and services and the operation of the UK supply chain, some of which may be onward exported, is exceptionally difficult.

57. This stems from the practical challenge that firms in Scotland are not required to report where they import goods from or where they export to (if inside the UK).

Offshore economy

58. The third "hot topic" concerns the treatment of economic activity of oil and gas in the North Sea. In UK Statistics the continental shelf is formally treated as 'extra-regio' – a 13th region in the UK Regional Accounts. In recent years the Scottish Government – and increasingly ONS and HMRC – has worked to apportion activity in the UKCS into a "Scottish-share" and a "rest of the UK-share". For example, the Scottish Government produces GDP including oil and gas alongside bespoke oil and gas statistical publications (covering output, revenues etc.).

59. Work undertaken on measuring the links between the onshore and offshore Scottish economies is much more limited. For example, in the current statistics, Scottish companies selling goods and services to operators in the Scottish North Sea sector are classified as "exporting" to the rest of the UK.

Future of economic statistics in the UK

60. There is a wider debate on whether the collection and publication of economic statistics in the UK as a whole is fit for purpose. In July 2015 the UK Government commissioned Professor Sir Charles Bean of the London School of Economics to carry out an independent review of UK economic statistics (the Bean Review). The aim was to establish—

- The UK's future statistics needs;
- The effectiveness of ONS in delivering statistics, and
- The most appropriate governance framework to support production of those statistics.

61. The final report of the Bean Review, published in March 2016, made six strategic recommendations calling for the UK statistical system to—

- Address established statistical limitations in measuring the modern UK economy;
- Become more agile in the provision of statistics that properly reflect the UK economy's changing characteristics and structure;
- Refocus the culture of ONS toward better meeting user needs;
- Make the most of existing and new data sources, and the technologies for dealing with them;

- Become better at understanding and interrogating data, and
- Strengthen the governance framework so as to help support the production of high-quality economic statistics.

62. 4-consulting, in a written submission to this inquiry noted—

> The Bean Review invites a fundamental rethink about the way we produce economic statistics, the structure of our economic statistics system and how they are presented … For example, it is plausible that it would be more appropriate to measure Green GDP[25] for Scotland.

63. There are some significant challenges in measuring the modern economy. For example, the traditional definitions of what constitutes a service vis-à-vis manufacturing are becoming more blurred. The expansion of the digital economy is also a challenge.

64. The Bean Review explains that a change in consumer behaviour, such as booking a holiday online rather than through a travel agent, has the potential to lower GDP as "home production activities" are not counted as part of GDP.

65. In addition, there is a wider discussion on whether what we measure represents progress towards our economic aims, and whether and how we should measure non-market activities on which the economy depends, such as unpaid labour, and the cost of negative externalities that could undermine our prosperity, such as ecosystem degradation. Bodies such as OECD and ONS have been engaged in seeking to address these issues.

66. Surveys that take time for companies to complete – and which by definition only ever cover a sample of the population – are increasingly being phased out. Sharing administrative data – particularly with the data collected by HMRC for tax purposes – could provide a much richer source of information. Some bodies, such as Registers of Scotland (ROS), do not use surveys at all, but derive all their statistics from administrative data. However, the David Hume Institute (DHI) – in its submission to this inquiry – pointed out that only a small number of economic statistics draw on administrative sources e.g. benefit claims.

67. Greater sharing and use of administrative data by the Scottish Government, local authorities and economic development and skills agencies was called for by a number of respondents to this inquiry, including the SFC, DHI and North Ayrshire Council (NAC).

[25] https://stats.oecd.org/glossary/detail.asp?ID=1149

The Digital Economy Act 2017

68. Shaped by the findings of the Bean Review, there are provisions in the Digital Economy Act 2017 (DEA 2017) to give government departments better access to databases held by other government departments. According to the explanatory notes—

> The government believed that the previous set of data-sharing powers for public service delivery was complex and inconsistent across public services and organisations. This lack of a clear framework of rules risked hindering the ability of public authorities to offer citizens timely and appropriate interventions and to respond quickly to a changing social and policy environment.

69. These provisions give ONS much more access to a wide range of data from government (and business), including – crucially – the data held by HMRC on employees, wages, profits and exports; considered of a higher quality than that which can be obtained from surveys of businesses. This report makes the case that it is imperative that Scottish economic statistics benefit from the enhanced access to data brought about by the DEA 2017.

National Performance Framework (NPF)

70. The NPF sets out the Scottish Government's over-arching aim for a flourishing Scotland, and the means by which it intends to achieve that end – sustainable economic growth – which it has defined as "building a dynamic and growing economy that will provide prosperity and opportunities for all, while ensuring that future generations can enjoy a better quality of life too".

71. Underlying the NPF's Single Purpose are a set of Purpose Targets: to increase economic growth, income and healthy life expectancy; to attain certain comparisons with other countries in terms of growth, productivity, labour market participation and population growth; and to reduce income inequality, the disparity in regional employment rates and greenhouse gas emissions. Underlying the Purpose Targets are Strategic Objectives, National Outcomes, National Indicators and Performance Measures. The relationship between these lower tiers is meant to be intuitively clear.

72. A number of respondents to the call for written views commented that the current NPF indicators may not allow for adequate measurement of the Scottish Government's economic priorities. North Ayrshire Council (NAC) wrote—

> Some of the indicators do not have a clear fit with any of the four national priorities (innovation, internationalisation, investment and inclusive growth) which makes it difficult to evidence their contribution. Some policy areas encompassed within the four national priorities have too few indicators to enable effective measurement while other policy areas arguably have too

> many. The indicator list is insufficient – for example unemployment and employment rates are not covered.

73. The Scottish Local Authorities Economic Development Group (SLAED) pointed out that the indicators do not have an accurate measure of inward investment, and there is no indicator for important demographic measures such as overall population, the replacement ratio, inward/outward and net migration, births and longevity.

74. These submissions reflect some wider commentary on the NPF. For instance, despite the NPF containing a wide range of economic, social and environmental measures, the Carnegie Trust (2010) criticised the Scottish Government, stating that "too much emphasis is currently placed on the importance of GDP as a measure of progress". It recommended that "Focusing on delivering economic growth as the end rather than the means is inadequate. Our collective purpose should be improving people's well-being, so the time is right for Scotland to shift its emphasis from measuring economic production to measuring people's well-being". It was a critique echoed in evidence submitted by Scottish Environment LINK.

Enterprise and skills review

75. Data was one of the topics covered by phase two of the Scottish Government's enterprise and skills review, published in June 2017, which acknowledged the need for a more joined-up approach—

> We know there is room for improvement in how we measure the performance of the Scottish economy and our enterprise and skills activities. It is vital to know how the agencies are contributing towards growth, employment and productivity. We will create a new analytical unit to better coordinate the analytical resources of each of the agencies and the Scottish Government to help inform the decision making and performance of the Strategic Board.

View from the EJFW Committee

76. The limitations of economic data was a recurrent theme in the current Parliamentary session (that is, since 2016), featuring in the Committee's work on the gender pay gap, the economic impact of Brexit, and budget scrutiny. As a preliminary step to this inquiry, 4-Consulting was commissioned to carry out a piece of research with the aims of—

- Identifying economic statistics required for effective parliamentary scrutiny;
- Describing how key statistics are collected and presented, and assessing the strengths and weaknesses of current provision within Scotland and the UK;
- Suggesting areas where improvements might be made;

- Suggesting how improvements should be made and resourced;
- Assessing the possible costs and issues of practicality from these suggestions, and
- Identifying examples of international good practice and case studies.

77. The *Limitations and Strengths of Scottish Economic Statistics* report was published on 18 April 2017, its main findings being—

- The UK system of producing statistics was designed to produce economic statistics for the whole of the UK, not for the devolved administrations;
- Scotland is the best served nation of the UK in terms of economic statistics, and the only UK devolved administration to produce quarterly GDP figures;
- More focus is being placed on the use of administrative data (VAT returns, PAYE data) rather than large scale surveys and whilst more cost-effective, administrative data presents challenges in extracting relevant Scottish data;
- Data for capital investment and Scotland's trade balance are inadequate;
- The Scottish Government is different to ONS in that it is both a producer and consumer of official statistics; Scotland has no independent statistics body;
- Trying to reproduce the UK's economic statistics for Scotland may not be the best use of resources. The Bean Review invites a fundamental rethink about the way economic statistics are produced;
- The Bean Review calls for statisticians to turn their attention away from "getting the statistics out" and think more creatively about potentially new series of data more relevant to economic policy;
- Northern Ireland has more flexibility and power to produce economic statistics and produces data such as exports through administrative data rather than bespoke surveys. Other European regions produce impressive economic statistics drawing on administrative data, and
- It is likely that Scottish Government statisticians would describe themselves as more opportunistic, but relatively powerless, statistical scavengers. It is important that Scotland takes up the challenge laid down by the Bean Review and looks at new approaches to develop the next generation of economic statistics.

The gender dimension

78. As part of its gender pay gap inquiry, the Committee asked Women's Enterprise Scotland (WES) about the quality of statistics on pay, earnings and employment for women in Scotland. Lynne Cadenhead said—

> …there is a significant dearth of appropriate statistics. In particular, we have scant information about the gender pay gap in start-up businesses, but there is a general perception that female entrepreneurs and women-led businesses face a gender pay gap that persists at around 20 per cent. I understand that there are quite a lot of gender disaggregated statistics in some areas but, unfortunately, they are not published, and if they are not published, they will remain unrecognised.[26]

79. WES's written submission to that inquiry stated: "It is difficult to find data on the gender pay gap for self-employed and business owners". It recommended—

> …improvements in the gathering and analysis of gender-disaggregated data across all areas of the enterprise agencies and Scottish Government departments. Business advice agencies and the enterprise agencies could make a contribution to the investigation and understanding of the gender pay gap in business ownership.[27]

This inquiry

80. The Committee issued a call for written views that ran from 12 June to 1 September 2017 and received 29 submissions, four late submissions and several pieces of supplementary evidence.

81. The inquiry was based around four headline themes—

- Accuracy (how reliable is the data)
- Utility (its usefulness)
- Interpretation (making sense of it)
- Scrutiny (does it encourage effective scrutiny)

82. For the purposes of structuring this report, the interpretation and scrutiny themes are addressed under a joint heading. The inquiry was planned on the basis of segueing into another piece of work, a connected inquiry examining Scotland's economic performance. This report, however, can be read on a stand-alone basis.

[26] http://www.scottish.parliament.uk/parliamentarybusiness/CurrentCommittees/105452.aspx
[27] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/GPG017-WES.pdf

Key themes

> *Why speculate when you can calculate?*
>
> John Baez

83. The themes of this inquiry were intended as a loose framework and inevitably there is a degree of crossover with some issues, such as competence (in terms of power to compel others to provide data), collaboration and governance; hence these feature in more than one section.

Accuracy

> *Errors using inadequate data are much less than those using no data at all.*
>
> Charles Babbage

Quality and strengths

84. Professor David Bell told us Scotland was "not too badly served" in data provision terms.[28] Dr Stuart McIntyre was positive about quality "but also as far as timeliness is concerned".[29] STUC recognised what was produced by the Scottish Government and ONS as "robust".[30] DHI suggested Scotland has "a rich set of economic data which allows debate on most policy questions to be informed"[31] and the Fraser of Allander Institute (FAI) thought "significant progress has been made since devolution to improve the coverage and quality of economic statistics in Scotland".[32] A view that was shared by the SFC.[33] The RSS told the Committee that Scotland was "well provided for" as a region but in nation-state terms its provision of statistics was "rather thin".[34] IPPRS described "big gaps at the macro level"[35] and HIE said the "current suite of data certainly has its limitations".[36]

85. Some correspondents set out the broad principles economic data should adhere to. OSR referred to the "three foundation pillars" of its Code of Practice: trustworthiness, quality and value.[37] HIE wanted them to be "robust, timely,

[28] EJFW Committee, OR, 3 October 2017, Col 2.
[29] EJFW Committee, OR, 3 October 2017, Col 6.
[30] EJFW Committee, OR, 24 October 2017, Col 6.
[31] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-013-David_Hume_Institute.pdf
[32] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-017-Fraser_of_Allander_Institute.pdf
[33] EJFW Committee, OR, 31 October 2017, Col 11.
[34] EJFW Committee, OR, 26 September 2017, Col 2.
[35] EJFW Committee, OR, 26 September 2017, Col 25.
[36] EJFW Committee, OR, 3 October 2017, Col 24.
[37] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/UK_Statistics_Authority_-_Office_of_Statistics_Regulation.pdf

coherent and accessible in order to inform local evidence-based policy"[38] and Professor Richard Murphy looked for data to be relevant, reliable, consistent, comparable to other data, comprehensive and comprehensible.[39]

86. Most witnesses welcomed efforts made to improve the coverage of economic statistics in Scotland. However, the same gaps and weaknesses tended to be identified, particularly around export data and the reliance in some areas on apportioning UK data to Scotland rather than Scottish-specific estimates. Richard Marsh of 4-Consulting described Scotland's national accounts team of statisticians as "scavengers…trying to pick the bones of what are UK data sets".[40] UKSA said "the base is good, but there is clearly an appetite for improvement".[41]

87. Craig Dalzell of Common Weal gave an overview, describing Scotland as having a "fairly hybrid system" with a more decentralised network of its own "pulling in stats from different bodies" but "quite reliant" on a more centralised UK system.[42] Whatever the views around the quality of our data, he advised not losing sight of the fundamentals—

> We need to consider why we are looking at data and we need to ask what its purpose is."[43]

88. Main areas of strength were seen to be labour market statistics and employment rate data. The Scottish Index of Multiple Deprivation (SIMD) was described by NLC as "a key strength in relation to identifying poverty, unemployment and income deprivation at a small geographical level". It also highlighted the usefulness of the Census Travel to Work data.[44] Professor Bell commended the Scottish Government's *Growing Up In Scotland* survey[45] and added that the UK was the "best country in the world for such longitudinal studies"[46] Professor Murphy highlighted expenditure as being "probably better recorded … than any other part of the existing data".[47] Reform Scotland saw strength in structure—

[38] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-020-Highlands_and_Islands_Enterprise.pdf
[39] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-003-Professor_Richard_Murphy.pdf
[40] EJFW Committee, OR, 19 September 2017, Col 6.
[41] EJFW Committee, OR, 7 November 2017, Col 5.
[42] EJFW Committee, OR, 26 September 2017, Col 30.
[43] EJFW Committee, OR, 26 September 2017, Col 25.
[44] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-024-North_Lanarkshire_Council.pdf
[45] https://growingupinscotland.org.uk/
[46] EJFW Committee, OR, 3 October 2017, Col 5.
[47] EJFW Committee, OR, 19 September 2017, Col 8.

> A strength that I see that I probably had not realised is that the objectives are in place. Scotland has an economic strategy, purpose targets, national indicators and the four i-s.[48]

Weaknesses and barriers

89. One of the main weaknesses identified was the lack of robust sub-Scotland and sectoral economic data. The reasons for this were thought to be small sample size and use of modelled data to estimate values at a local level. FAI indicated a further complication with the Scottish Government not having power to compel businesses to respond to surveys.[49]

90. Many submissions highlighted the lack of Scottish data on imports from overseas and/or the rest of the UK. OSR wrote that "firms do not record data in a way that would allow analysis of flows between Scotland and other countries" and stated they were planning to review trade statistics including Scotland's Export Statistics Scotland.[50]

91. NAC pointed out that without reliable export data at the local level then local authorities were not able to assess internationalisation – one of the Scottish Government's four economic priorities.[51] Common Weal described the lack of a statutory approach to collecting such data as "entirely understandable for a UK measuring itself as a unitary state ... but at a time where such data plays into the ongoing constitutional debate it becomes important to avoid misconstruing or misinterpreting that data which is available".[52] Professor Bell said the matter was "pretty difficult" but told the Committee there was "probably a case for enhancing the trade data".[53] ONS described understanding Scottish exports and imports as "conceptually challenging".[54] Dr McIntyre said a better understanding of foreign direct investment was missing, with the headline measure showing number of projects (on which Scotland scored highly) but not the number of jobs created (on which it did not). He referred to this as "a very obvious gap in the landscape".[55]

92. Regarding gaps in the labour market data, SLAED focused on the Annual Business Survey and modelling undertaken to produce some of the regional breakdowns, criticising the Scottish Government for not releasing the methodology.[56] Economist Margaret Cuthbert pointed to the lack of data on

[48] EJFW Committee, OR, 26 September 2017, Col 26.
[49] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-017-Fraser_of_Allander_Institute.pdf
[50] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/UK_Statistics_Authority_-_Office_of_Statistics_Regulation.pdf
[51] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-010-North_Ayrshire_Council.pdf
[52] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-005-Common_Weal.pdf
[53] EJFW Committee, OR, 3 October 2017, Col 4.
[54] EJFW Committee, OR, 7 November 2017, Col 17.
[55] EJFW Committee, OR, 3 October 2017, Col 7.
[56] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-008-SLAED.pdf

business births and deaths.[57] OSR identified another lacuna when it came to financial services and the insurance industry.[58] Scottish Enterprise (SE) could find nothing on innovating businesses at a sub-Scottish level.[59] Professor Catia Montagna suggested ownership was "a big issue"[60] and Professor Murphy told the Committee—

> To be blunt, we are living in the wild west – or the wild north, if you like – when it comes to company registration and data from Companies House.[61]

93. In terms of timeliness, Ms Cuthbert stated that the Scottish Annual Business Statistics were published two years out of date;[62] Highlands and Islands Enterprise (HIE) found the same delay was true of Gross Value Added (GVA);[63] and SE reported that Scottish GDP figures appeared one quarter behind the UK.[64] STUC also remarked on delays in the "more complex data".[65]

94. John McLaren highlighted that measures of UK inflation were used to estimate the figure in Scotland, a problem if rates north and south begin to diverge. He wrote—

> 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.[66]

95. STUC's Helen Martin said it was more difficult to see what is happening with wages at the Scottish level, "a real miss" in light of increased fiscal powers and the link between earnings and tax.[67] SFC's David Wilson described the data gaps as imports and exports, trade, investment, and earnings and inequalities.[68] There were gaps in the figures for fisheries and agriculture, according to Ms Cuthbert, also for tourism, and "no centrally collected and analysed data on R and D spend in our higher education institutions and on its return to Scotland".[69]

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[57] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/_EDI-002-Margaret-Cuthbert.pdf
[58] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/UK_Statistics_Authority_-_Office_of_Statistics_Regulation.pdf
[59] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-014-Scottish_Enterprise.pdf
[60] EJFW Committee, OR, 19 September 2017, Col 10.
[61] EJFW Committee, OR, 19 September 2017, Col 13.
[62] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/_EDI-002-Margaret-Cuthbert.pdf
[63] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-020-Highlands_and_Islands_Enterprise.pdf
[64] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-014-Scottish_Enterprise.pdf
[65] EJFW Committee, OR, 24 October 2017, Col 6.
[66] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-018-John_McLaren.pdf
[67] EJFW Committee, OR, 24 October 2017, Col 7.
[68] EJFW Committee, OR, 31 October 2017, Col 12.
[69] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/_EDI-002-Margaret-Cuthbert.pdf

96. Flaws in the approach to tourism were also identified by OSR, explaining that estimates of tourism expenditure in Scotland were based on a small sample from the International Passenger Survey and assumptions made based on figures for the rest of the UK. It suggested the "Scottish Government should be prepared to devote greater resources on collecting good economic data for this vital sector".[70]

97. Common Weal identified gaps in "overarching" statistics such as those relating to wellbeing.[71] SE noted a lack of data on measures related to fair work e.g. employer engagement, job security and work satisfaction.[72] FAI pointed out a lack of longitudinal data on Scottish households.[73]

98. Respondents noted inconsistencies on a number of levels between data sets. Common Weal highlighted that different sources use different classifications for expenditure.[74] SE explained that some sub-Scotland statistics are produced at different geographic levels, whether local authority or what is known as the NUTS3 level.[75] Also Scottish and ONS figures were at times inconsistent – with, for example, different reporting periods for productivity that could result in two different figures being available for the same timeframe.[76] Reform Scotland referred to compatibility issues between local authority finance statistics and Scottish economic data. They further observed that GERS does not report on Customer and Client Receipts published in local authority statistics even though this accounts for more than Air Passenger Duty, Landfill Tax and LBTT combined.[77]

99. Professor Montagna flagged up "a huge duplication of effort" of individual researchers trying to link statistics and faced with inconsistency—

> There is a difference between accessibility and ease of use. We can access datasets but find when we try to put them together that they do not match in terms of definitions, sample sizes, time coverage and so on.[78]

[70] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/UK_Statistics_Authority_-_Office_of_Statistics_Regulation.pdf
[71] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-005-Common_Weal.pdf
[72] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-014-Scottish_Enterprise.pdf
[73] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-017-Fraser_of_Allander_Institute.pdf
[74] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-005-Common_Weal.pdf
[75] NUTS is the Nomenclature of Territorial Units for Statistics for the UK, of which there are three levels.
[76] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-014-Scottish_Enterprise.pdf
[77] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-001Reform_Scotland.pdf
[78] EJFW Committee, OR, 19 September 2017, Col 11.

100. GERS dominated much of the discussion at the roundtable session on 19 September, but Mr McLaren was unimpressed, telling the Committee—

> GERS is a bit of a dead-end these days in that we know what it is going to say…Much of the discussion is to do with finance rather than the economy…[79]

101. Jonathan Athow said the gaps identified during the inquiry would be "very useful" for informing ONS's work programme and its discussions with the Scottish Government.[80] He said—

> The next stage is to decide which of those requests are the most prominent in terms of crunchy statistical needs.[81]

102. In terms of barriers to improving the quality of economic data, Homes for Scotland (HFS) challenged the perception that big budgets or expensive IT systems were required. It suggested "a more sophisticated and collaborative approach" coupled with "some specialist data skills and experience".[82] According to Common Weal, the main barrier to improving statistical provision was "political will" and the reluctance to "increase red tape" for businesses and households.[83]

103. Funding-wise, a number of respondents believed that better co-operation and use of existing data could help towards improvements in quality without incurring an excessive cost. HIE stated that collaboration and creative thinking "could overcome many perceived barriers, including the cost of improving statistical provision".[84] RSS suggested you get what you pay for, Martin Weale saying he was "not aware of things that could be done costlessly".[85] The Institute of Director Scotland's (IODS) David Watt said—

> There will be a cost to getting more accurate information, but it is part of our investment for the future.[86]

104. Reform Scotland suggested we were missing a "Scottish IFS" and that "relative to the UK, we are completely underfunded".[87] IPPRS's Russell Gunson agreed with

[79] EJFW Committee, OR, 19 September 2017, Col 27.
[80] EJFW Committee, OR, 7 November 2017, Col 4.
[81] EJFW Committee, OR, 7 November 2017, Col 21.
[82] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-006-Homes_for_Scotland.pdf
[83] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-005-Common_Weal.pdf
[84] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-020-Highlands_and_Islands_Enterprise.pdf
[85] EJFW Committee, OR, 26 September 2017, Col 2.
[86] EJFW Committee, OR, 24 October 2017, Col 15.
[87] EJFW Committee, OR, 26 September 2017, Col 34.

that Institute for Fiscal Studies (IFS) reference, advising not copying everything in the rest of the UK but figuring out "what we need and what is missing".[88]

105. On the subject of staffing, Richard Marsh suggested there were 11 staff working on Scotland's national accounts (our GDP figures) while the Bean Review had shown New Zealand employed 60 and the UK has "around 170".[89] He also contrasted the staffing of the SFC with that of the national accounts team, describing the latter as "by far the most important" because—

> Without it producing that core economics data, we could not forecast because we would have nothing to work from. One of those teams is independent and well resourced; the other is not. We have to think carefully about whether we have our priorities right.[90]

106. In its written submission, OSR observed that experienced statisticians were "in short supply and are expensive" and—

> As ONS ramps up its capability in processing the vast data resources that it now has access to, it has also had to recruit new data scientists, economists and other analysts. Scottish Government and other related public bodies should do the same.[91]

107. Professor Bell said the talk was of "moving into an era of big data" but questioned if Scotland had enough people with the skills for that. He said the ESRC had been working on making social scientists "more quantitatively able" but—

> …more probably needs to be done to get skilled people in front of the data, because the amount of available data is increasing exponentially.[92]

108. Dr McIntyre mentioned the matter of anonymization and said ONS was "very concerned" when it came to the risks of identifying people and activities through more localised data. Professor Bell concurred, gave a hint of the complexity involved, and said revealing the identity of a firm or individual was "the last thing that they want".[93] He also described "huge sensitivities" around access to data, especially after a "disastrous initiative" in England after GP data was shared without patients' consent.[94] Dr McIntyre said a "series of protocols" were being developed across the UK and that ONS, HMRC and other data providers were

[88] EJFW Committee, OR, 26 September 2017, Col 34.
[89] EJFW Committee, OR, 19 September 2017, Col 6.
[90] EJFW Committee, OR, 19 September 2017, Col 18.
[91] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/UK_Statistics_Authority_-_Office_of_Statistics_Regulation.pdf
[92] EJFW Committee, OR, 3 October 2017, Col 17.
[93] EJFW Committee, OR, 3 October 2017, Col 10.
[94] EJFW Committee, OR, 3 October 2017, Col 16.

looking at training for researchers on "safe use".[95] ONS said "we would have to be very careful that the data did not become disclosive".[96]

109. Richard Marsh made a colourful point about the general difficulty in getting detail out of companies, which could be "messy" creatures—

> Just like my toddler when I get her ready for nursery in the morning, businesses can make it difficult. They do not stay in place, they move about, they change and they occasionally go out of their way to make life difficult.[97]

110. While Professor Bell gave some context to the trend of shrinking sample sizes—

> Collecting data from households or businesses is becoming more difficult partly because individuals' time is more precious to them and party because they are being bombarded with requests for information. Why should they treat a request for information from the government differently from one from Tesco or Facebook?[98]

Ways to improve quality

111. Scottish Council for Development and Industry (SCDI) recommended the Scottish Government consider what data it would need to reflect the "broader social, economic and environmental outcomes".[99] Many of the submissions welcomed the emphasis placed on improving date by phase two of the enterprise and skills review. NAC suggested the new Data Analytical Unit might serve as a "repository for regional data to track progress of Regional Partnerships and inform regional strategies".[100] NLC agreed the unit should support the work of the City Deals/Regional Partnerships in partnership with the proposed regional data hubs.[101] SE called for an improvement plan for trade data and national accounts, as was also recommended by the review.[102]

112. The Bean Review's encouragement to make the most of existing and new data sources and technologies was highlighted by OSR; noting that the Scottish

[95] EJFW Committee, OR, 3 October 2017, Col 16.
[96] EJFW Committee, OR, 7 November 2017, Col 26.
[97] EJFW Committee, OR, 19 September 2017, Col 15.
[98] EJFW Committee, OR, 3 October 2017, Col 3.
[99] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-016-SCDI.pdf
[100] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-010-North_Ayrshire_Council.pdf
[101] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-024-North_Lanarkshire_Council.pdf
[102] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-014-Scottish_Enterprise.pdf

Government will soon have access through ONS to more detailed HMRC data, including that on VAT.[103]

113. Aberdeen and Grampian Chamber of Commerce and Scottish Chambers of Commerce (AGCC & SCC) proposed in their joint submission that data triangulation could improve interpretation and forecasting. To assess the market they themselves drew on a combination of car sales, housing, occupancy levels, airport use, and announced redundancies.[104] Both SE[105] and FAI[106] also recommended combining data with, for example, evaluation evidence. However, Ms Cuthbert pointed out difficulties in checking the source and accuracy of the business data produced by bodies such as SE and the hubs, particularly, she felt, given the hubs were not covered by FOI legislation. She also felt enough more could have been done in terms of "collecting the type of data that is needed to run an economy" since devolution.[107]

114. Many respondents – NAC[108], SFC[109], SCDI[110], HIE[111], Scottish Public Health Observatory (SPHO)[112] and the DHI[113] – recommended greater use of administrative data, such as that held by HMRC, and of data linkage techniques. NAC highlighted that NHS Scotland's Information Services Division (ISD) already "routinely" took such an approach in order to better connect data.[114] OSR wrote that the Digital Economy Act 2017—

> …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 to private sector data is ground-breaking. The Act therefore represents a significant opportunity to improve economic data.[115]

[103] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/UK_Statistics_Authority_-_Office_of_Statistics_Regulation.pdf
[104] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-004-AGCC.pdf
[105] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-014-Scottish_Enterprise.pdf
[106] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-017-Fraser_of_Allander_Institute.pdf
[107] EJFW Committee, OR, 19 September 2017, Col 3.
[108] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-010-North_Ayrshire_Council.pdf
[109] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-007-Scottish_Fiscal_Commission.pdf
[110] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-016-SCDI.pdf
[111] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-020-Highlands_and_Islands_Enterprise.pdf
[112] http://www.scottish.parliament.uk/S5_Education/Inquiries/EDI-023-ScotPHO.pdf
[113] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-013-David_Hume_Institute.pdf
[114] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-010-North_Ayrshire_Council.pdf
[115] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/UK_Statistics_Authority_-_Office_of_Statistics_Regulation.pdf

115. The potential of VAT data was highlighted by NAC[116] and OSR[117] (for exports at a local level), NAC[118] (longitudinal analysis following businesses year to year), and SCDI [119] (size and financial contribution of businesses locally). RSS's Martin Weale referred to the positive experience of Sweden and Norway when it came to administrative data and told the Committee—

> ONS wants to make more use of VAT returns as a high-frequency clue to what is going on in the economy.[120]

116. Mairi Spowage of the SFC suggested access to VAT record had the "potential to transform data", particularly regarding information about small businesses – not available in every survey. She predicted, if ONS was enabled by the 2017 Act "to onward transmit the Scottish slice of that information", that will benefit us "with better quality national accounts".[121] ONS's Jonathan Athow told us they would be using VAT to help compile UK GDP for the first time in December 2017 and were currently developing protocols for onward sharing of such data.[122] He said VAT yielded "30 or 40 times" as much data as surveys, an "astounding" level of detail and even though there were "difficulties with how it is interpreted", this would provide "much greater understanding of local performance".[123]

117. Sir Charles Bean told the Committee about the potential of administrative data, "an important step forward", citing Canada as positive example in this field; but he pointed out it would "not solve everything". He said statisticians were "levering off" information that was collected "as a by-product of collecting taxes or …what is being sold".[124]

118. Jonathan Athow suggested a blend of administrative data and survey was sometimes the preferred approach, particularly the "very complex companies". He said ONS would talk to the Scottish Government to find out its data needs and "whether that is done with administrative data, survey data or a blend of the two".[125]

119. Rebecca Riley of the Economic Statistics Centre of Excellence (ESCOE) pointed out the issue of "apportionment" and working out how to break down a company's activity if it operates across the UK when there is no obligation for it to show the

[116] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-010-North_Ayrshire_Council.pdf
[117] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/UK_Statistics_Authority_-_Office_of_Statistics_Regulation.pdf
[118] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-010-North_Ayrshire_Council.pdf
[119] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-016-SCDI.pdf
[120] EJFW Committee, OR, 26 September 2017, Col 4.
[121] EJFW Committee, OR, 31 October 2017, Col 30.
[122] EJFW Committee, OR, 7 November 2017, Col 4.
[123] EJFW Committee, OR, 7 November 2017, Col 26.
[124] EJFW Committee, OR, 7 November 2017, Col 6.
[125] EJFW Committee, OR, 7 November 2017, Col 8.

extent of its business in Scotland. She said there were still "very significant benefits" is using the data and that ONS were working on developing regional statistics with "different apportionment rules".[126] Professor Bell thought there were "opportunities but also challenges".[127]

120. SLAED underlined the greater reliability of administrative data over self-reporting,[128] as did Professor Montagna and Dr Kopasker, who suggested that SMEs often report no exports in FAME[129] while the contrary was revealed by HMRC data.[130] However, SPHO cautioned that the quality of administrative data may diminish over time due to reductions in staff and capacity in HMRC and DWP.[131] SCDI encouraged more use of "unconventional data" to complement existing sources and repeated an earlier call for the creation of a "Digital Leader" in order to "support public acceptance of data sharing".[132]

121. Greater collaboration as a means to improve data quality was proposed by a number of respondents, including: SLAED [133] (between government and agencies); Common Weal[134] (between UK and Scottish departments); OSR[135] (between the devolved nations and ONS; HIE[136] and SLAED (between Scottish Government and local authorities); SDS[137] (between Scottish Government and the skills agencies); AGCC & SCC [138] (between Scottish Government and the chambers of commerce); and NLC[139] (between the public and private sectors). AGCC & SCC also recommended the Scottish Government make greater use of the Oil and Gas Survey as well as SCC's Quarterly Economic Indicator, described as "the longest running survey of its kind in Scotland."[140]

122. A suggestion from Sir Charles Bean, in the interest of Scottish Government/ONS collaboration, was the model of the "annual process of interaction" between ONS with "key users" such as the Treasury and the Bank of England. It was an

[126] EJFW Committee, OR, 26 September 2017, Col 5.
[127] EJFW Committee, OR, 3 October 2017, Col 12.
[128] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-008-SLAED.pdf
[129] a widely used private financial reporting database
[130] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-026-Catia_Montagna.pdf
[131] http://www.scottish.parliament.uk/S5_Education/Inquiries/EDI-023-ScotPHO.pdf
[132] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-016-SCDI.pdf
[133] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-008-SLAED.pdf
[134] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-005-Common_Weal.pdf
[135] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/UK_Statistics_Authority_-_Office_of_Statistics_Regulation.pdf
[136] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-020-Highlands_and_Islands_Enterprise.pdf
[137] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-025-Skills_Development_Scotland.pdf
[138] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-004-AGCC.pdf
[139] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-024-North_Lanarkshire_Council.pdf
[140] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-004-AGCC.pdf

opportunity to consider the year gone and "signal priorities for future development – basically what we would like to see".[141]

123. David Watt of IODS suggested a "strong independent think tank" would be of benefit to Scotland data-wise. He praised the work of Reform Scotland, the Parliament's research centre (SPICe) and FAI.[142] Mr Watt said he was against regulation—

> …but business has to shape up. We cannot ask other people to forecast the future if we are not, for example, speaking to the education sector and saying what sort of employees we will be looking for in three to five years. Without a doubt, we have a part to play in that.[143]

124. He also made a suggestion about how to encourage businesses to respond to surveys, by linking the support they received from the enterprise agencies with an "expectation" that they provide data. But he was blunt about the return rate his own organisation received from its membership. This was "just not what directors do. They do not fill in forms, they run businesses".[144] Nevertheless, he stated that HIE "must demand that information comes in alongside the support that it gives".[145]

125. In terms of presentation, a number of submissions observed how the lack of a single website or portal for 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".[146] NAC and Ayrshire Growth Deal (AGD) cited Nomis[147] as a good example, presenting data in "an easy to read local authority profile with a thorough reference section".[148] Professor Bell was critical of ONS's presentation of data though he pointed out it was trying to improve its data visualisation. He also pointed out ONS was "not a monopoly provider of statistics" and suggested the Economic and Social Research Council (ESRC) did a "very good job" with data sets.[149] The UK Data Service site was also praised.[150] Ms Cuthbert relayed the difficulty "from many hours' experience" of trying to "get beyond the glossy figures" to find the detail of surveys produced by non-departmental public bodies.[151]

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[141] EJFW Committee, OR, 7 November 2017, Col 18.
[142] EJFW Committee, OR, 24 October 2017, Col 10.
[143] EJFW Committee, OR, 24 October 2017, Col 16.
[144] EJFW Committee, OR, 24 October 2017, Col 17.
[145] EJFW Committee, OR, 24 October 2017, Col 19.
[146] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-010-North_Ayrshire_Council.pdf
[147] A service provided by ONS to give access to the most up to date labour market statistics.
[148] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-021-Ayrshire_Growth_Deal.pdf
[149] EJFW Committee, OR, 3 October 2017, Col 13.
[150] EJFW Committee, OR, 3 October 2017, Col 16.
[151] EJFW Committee, OR, 19 September 2017, Col 5.

126. Time lag was an issue raised by a number of respondents. SLAED wanted a quicker turn-around than the two years it can take for information on new businesses to appear.[152] DHI preferred to look forward, stating "it is more important to understand long-term and structural developments than to devote additional resources to understanding the recent past".[153] SFC, on the other hand, supported efforts to produce GDP and a national account series going back further in time, for the purposes of forecasting; observing there was "always a trade-off between the timeliness of publication and the stability of the estimates".[154]

127. OSR observed that work done by the new ESCOE research facility was intended to improve the quality of data on a UK-wide level.[155] HIE held that the Scottish Economics Statistics Consultation Group (SESCG)[156] and Scotstat[157] were "useful vehicles" for improving Scottish statistics.[158] The Royal Economic Society's (RES) Professor Leith focused on the assessment of quality and the role of UKSA, suggesting it could "strengthen that role and give more of a quality assessment".[159] SCDI said the more data that was "ratified and consistent, the better commentary we will get on the actual economic data".[160] WES's Carolyn Currie said "standardisation or a quality mark" across the public sector agencies would be a welcome development, saving a lot of time and enabling users to better understand the figures.[161]

128. Richard Marsh wondered how we would approach the provision of data if given a blank page rather than having had 20 years of asking how existing figures can be "supplemented, amended or improved". He told the Committee—

> I suggest that we would need to have a more independent team of statisticians based in Scotland who could be innovative and create the next generation of statistics that is needed.[162]

129. The call for "greater autonomy" was echoed by Professor Montagna. She described such an approach "important strategically" for improving Scotland's

[152] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-008-SLAED.pdf
[153] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-013-David_Hume_Institute.pdf
[154] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-007-Scottish_Fiscal_Commission.pdf
[155] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/UK_Statistics_Authority_-_Office_of_Statistics_Regulation.pdf
[156] http://www.gov.scot/Topics/Statistics/Browse/Economy/ScotStat/Meetings
[157] http://www.gov.scot/Topics/Statistics/scotstat
[158] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-020-Highlands_and_Islands_Enterprise.pdf
[159] EJFW Committee, OR, 26 September 2017, Col 8.
[160] EJFW Committee, OR, 24 October 2017, Col 12.
[161] EJFW Committee, OR, 24 October 2017, Col 22.
[162] EJFW Committee, OR, 19 September 2017, Col 4.

data, but saw the shorter term priority as accessing "the enormous wealth" of existing data at the microeconomic level.[163]

130. RSS wanted Scottish statisticians to be "active partners with ONS in generating data for Scotland" and to "piggy-back" on its surveys to "improve the quality or scope" in Scottish terms.[164]

131. Dr McIntyre suggested the Scottish Government having the same power as ONS to compel returns to business surveys "seems infinitely sensible", as a means of widening coverage, increasing sample size and enhancing the quality of the data.[165] He told the Committee that a "programme of continuous improvement" was running with ONS and Scottish Government in the interests of "better quality, more timely data".[166] ONS had heeded the Bean Review and shown a "real change" in the way it was willing to listen to data users, he said, but the onus remained on users, the devolved administrations and parliaments to apply "a bit of pressure" if necessary.[167] Dr McIntyre was reassured that the DEA 2017 had removed the need for "clear access protocols".[168]

132. ONS highlighted the issue of falling response rates for business surveys, "a real challenge", leading to a "non-response bias" i.e. that a lot of information is missing from non-returns.[169] Jonathan Athow said "behavioural insights or nudge techniques" were being considered, along with ways to "provide incentives".[170] He also spoke of the need for field researchers "to tell the wider story" of why surveys are important, in terms of informing government policy.[171]

133. The analysis unit born out of the enterprise and skills review was viewed in positive terms by SCDI, Matt Lancashire describing it as a means to "create credibility among that data and support thinking on the economy".[172] He also told the Committee that SCDI was exploring the idea of forming its own data lab, based on collaboration with various institutions—

> There are some bright young minds, and we them together to be supported by some senior economists in some of our members' businesses to focus on economic trends and issues and build robust evidence and research.[173]

[163] EJFW Committee, OR, 19 September 2017, Cols 4-5.
[164] EJFW Committee, OR, 26 September 2017, Col 21.
[165] EJFW Committee, OR, 3 October 2017, Col 5.
[166] EJFW Committee, OR, 3 October 2017, Col 6.
[167] EJFW Committee, OR, 3 October 2017, Col 12.
[168] EJFW Committee, OR, 3 October 2017, Col 13.
[169] EJFW Committee, OR, 7 November 2017, Col 10.
[170] EJFW Committee, OR, 7 November 2017, Col 9.
[171] EJFW Committee, OR, 7 November 2017, Col 11.
[172] EJFW Committee, OR, 24 October 2017, Col 9.
[173] EJFW Committee, OR, 24 October 2017, Col 16.

134. IODS's David Watt was upbeat about the future of Scottish data, telling the Committee information gathering would "definitely get easier" and highlighting the work of SCDI and of the data labs already operating in the capital—

> The good news for all of us is that we are moving to a world of data – especially in Edinburgh … Data science is probably going to be the science of the next 10 years.[174]

135. SFC was also positive about what lay ahead, David Wilson suggesting a knock on effect of SFC's forecasting would be an "on-going process of increased demand for statistics and increased scrutiny and attention, which will in itself lead to further improvements".[175]

136. On the matter of its accountability to the Parliament, ONS had been "thinking about how we make that real" and took an "open minded" approach to making the connection stronger. Jonathan Athow told the Committee—

> We lay our annual report before the Scottish Parliament, but could we do something more systematic that would talk about what we had done to meet Scottish user needs and use that to elicit further feedback?[176]

Scottish Government position

137. The Cabinet Secretary for Economy, Jobs and Fair Work (the Cabinet Secretary) set out the importance of data—

> Given the impact of Brexit, the establishment of the Scottish Fiscal Commission and the new powers being devolved to the Scottish Parliament, the need for comprehensive statistics has never been greater.[177]

138. He described Scotland's economic statistics as "more comprehensive and timely than for any part of the UK".[178] Gary Gillespie, alongside Mr Brown, said the National Institute of Economic and Social Research global econometric model[179] enabled production of "macro simulations of Scotland within the UK linked to the wider global network". The Scottish Government carried out "nowcasting internally" with the latest data and a "reasonable suite of modelling capacity". Mr Gillespie judged they were "as well equipped as we have ever been in micro capacity terms".[180]

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[174] EJFW Committee, OR, 24 October 2017, Col 30.
[175] EJFW Committee, OR, 31 October 2017, Col 12.
[176] EJFW Committee, OR, 7 November 2017, Col 19.
[177] EJFW Committee, OR, 14 November 2017, Col 2.
[178] EJFW Committee, OR, 14 November 2017, Col 2.
[179] https://www.niesr.ac.uk/publications/overview-nigem-s-model-scottish-version-national-institute-global-econometric-model
[180] EJFW Committee, OR, 14 November 2017, Col 17.

139. The Cabinet Secretary said "considerable resources" were allocated to statistical production – with 27 statisticians employed in the office of the Chief Economic Adviser and 200 working across the Scottish Government – and all publications were official statistics and most were national statistics. He described "strong user consultation arrangements" and publication of an annual Economic Statistics Plan.[181] He was "positive … but we cannot be complacent", citing the need for "better trade figures" and making "better use of the administrative data" held by HMRC. Discussion with HMRC and ONS were ongoing and Mr Brown anticipated a "successful outcome".[182]

140. Providing a potted history, Mr Gillespie suggested Scotland had been "well served" from the 1970s through to the 90s with input-output tables allowing a "snapshot of the economy". Quarterly GDP figures were introduced in 2002 and there was the first global connections survey and 2008 saw the introduction of the national accounts project. He said—

> There will always be gaps because the economy evolves … The challenge is how to keep moving things on.[183]

141. His colleague Sandy Stewart talked about the "lack of Scotland-specific data" for businesses that worked across the UK and "problems with prices" making it difficult to know if consumer or producer prices for the UK were "suitable" for Scotland. He wanted to see "more regular earnings data" to help with modelling and estimates, and spoke positively about the potential of VAT figures to "fill in some gaps" for GDP.[184] Mr Brown said a "more accurate estimation of inflation in Scotland" would be welcome and the Enterprise and Skills Strategic Board[185] might pursue that.[186]

142. Mr Gillespie said the response rate of the Export Statistics Scotland survey[187] was 27% but with administrative data from other sources (such as the Scotch Whisky Association) factored in, coverage was "about 80% of the value of rest-of-world exports". He said the figures for "intra-UK trade flow" had been a "weakness in the UK for a long time" but improvement was sought through the DEA 2017 and access to HMRC data. Mr Brown said both Scottish Government and ONS "acknowledge that there is a gap".[188] He looked forward to the "outcome of the inquiry" to see if the Committee's "settled will" was that more work was required.[189] He also sought a better understanding of "links between the North Sea and Scotland's on-shore economy" to be a priority and improved timelines for "key

[181] http://www.gov.scot/Topics/Statistics/Browse/Economy/ScotStat/Planning/SESP-2017-18
[182] EJFW Committee, OR, 14 November 2017, Cols 3-4.
[183] EJFW Committee, OR, 14 November 2017, Col 8.
[184] EJFW Committee, OR, 14 November 2017, Cols 8-9.
[185] https://beta.gov.scot/groups/enterprise-and-skills-strategic-board/
[186] EJFW Committee, OR, 14 November 2017, Col 9.
[187] http://www.gov.scot/Topics/Statistics/Browse/Economy/Exports/ESSPublication
[188] EJFW Committee, OR, 14 November 2017, Cols 13-14.
[189] EJFW Committee, OR, 14 November 2017, Col 14.

economic statistics" like GDP along with disaggregation of existing data to "allow a sub-Scotland analysis".[190]

143. On relations between the Scottish Government and ONS, Chief Statistician Roger Halliday described ONS as an "important contributor and collaborator". He said there was a devolved economic statistics group for work across the UK to "work out how we can move together and develop new statistics". He said this group had an input to the DEA 2017, a piece of legislation that meant we were "in quite a different place" now. He said—

> We worked on the details of the Digital Economy Act 2017 in a collaborative way with the ONS and the other devolved administrations to ensure that it would work not only for the ONS but for each of the devolved administrations. We are now working with the ONS and HMRC to get best value from that.[191]

144. He added—

> For me, it is not necessarily about buying new data. The challenge for us is how we make the most of existing HMRC and ONS data and the new and different kinds of commercial data. That will require our statisticians to work with statistical methods people in the ONS, HMRC and academia.[192]

145. Sandy Stewart said the Scottish Government was "heavily involved" in work with ONS and it a "very good working relationship". Involvement in the devolved economic statistics committee gave them a "seat at the table" and made sure devolved issues fed into the development of UK statistics. He said there was a "service-level agreement that is refreshed each year with new data items".[193] Devolution was "high on the agenda" for ONS, he said, citing the examples of its regional accounts team working on "gross value added and gross disposable household income figures at the local authority level" (figures for which were published for the first time in 2016) and a new piece of work on "flexible geography" which would allow users to "define our own geographies".[194]

146. Mr Halliday said a concordat with ONS "governs the way in which we work with them", the basis of which was sharing data and working collaboratively. The relationship was "very constructive on a working level" and though he did not necessarily always agree with them (citing the example of differing views on pre-release access), he said "on a daily basis we are progressing well".[195] Mr Stewart described work on the survey side as "very good" but with administrative data "it gets a little more complicated", referring to data that came largely from other UK

[190] EJFW Committee, OR, 14 November 2017, Col 4.
[191] EJFW Committee, OR, 14 November 2017, Col 10.
[192] EJFW Committee, OR, 14 November 2017, Col 10.
[193] EJFW Committee, OR, 14 November 2017, Col 11.
[194] EJFW Committee, OR, 14 November 2017, Col 16.
[195] EJFW Committee, OR, 14 November 2017, Col 26.

Government departments and were "routed through the ONS". There was still a decision to be made about whether the Scottish Government received information directly from HMRC, for example, or whether it will be processed by ONS before it passes on the Scottish element. He said there were "some big discussions to be had there".[196]

147. The Cabinet Secretary said the relationship with ONS was "very useful" and it mattered because it was important to have somebody external "affirming and confirming the independence and integrity of our statistics".[197]

148. Regarding the power to compel, which ONS has and the Scottish Government does not, Mr Brown suggested keeping an "open mind" on the matter. Mr Halliday set out the issues to be considered if pursuing the ONS or Northern Ireland model (with the Northern Ireland Statistics and Research Agency – NISRA – also having power to compel responses to business surveys): burden on business, compliance cost and the cost of producing the statistics themselves. He told the Committee—

> There is much for us to explore in the use of administrative and commercial data, which might replace significantly parts of business surveys. That might mean that it would be less important to have that power to compel. The real power is in accessing and using those new sources of data.[198]

Discussion and recommendations

149. The need for economic statistics that are trustworthy, high quality and of public value is essential if we are to measure the performance of our economy and evaluate policy; to understand what works and identify what does not, prioritising our resources accordingly. The credibility of Scotland's economic statistics is even more crucial given the Parliament's new fiscal powers and the continuing discussion around constitutional reform.

150. 4-Consulting's report *Limitations and Strengths of Scottish Economic Statistics* suggested the pace of devolution was beginning to "expose cracks" in the UK's system of producing economic statistics. That system was designed to produce data for the whole of the UK rather than anything more tailored to the devolved administrations.

151. The Committee recognises there is invariably a degree of imprecision with economic statistics, the reasons for which can include: finite resources; the desire not to impose an unnecessary burden on businesses; not having ONS's power to compel firms to respond to business surveys; the nature of aggregation, estimation and changing methodologies meaning revision is part of the process;

[196] EJFW Committee, OR, 14 November 2017, Col 26.
[197] EJFW Committee, OR, 14 November 2017, Col 27.
[198] EJFW Committee, OR, 14 November 2017, Col 27.

difficulty in headline measures giving a comprehensive account of wider social or environmental issues; and rapid technological changes rendering once robust indicators less relevant.

152. That said, the Committee welcomes the significant progress made in the quality and coverage of economic statistics in recent years and post-devolution. Scotland is now much better served than Wales, Northern Ireland and the English regions. Our economic statistics are now "*more comprehensive and timely than for any part of the UK*", as the Cabinet Secretary observed. Yet Scotland still lacks many of the statistical measures produced at UK level and in other countries as routine. One of the main weaknesses identified from our inquiry was the lack of robust sub-Scotland and sectoral economic data. There are other areas where methodologies could be improved and investment is lacking. As shown in the ongoing debate over the use of GDP as a measure of progress, traditional approaches can be found wanting when it comes to tackling inequality or environmental concerns. The challenges of measuring inclusive growth are covered in the final section.

153. The Committee welcomes the progress made by the Scottish Government and ONS in recent years regarding the range and robustness of economic statistics for Scotland. Against the backdrop of Brexit and with our new fiscal powers, the need for comprehensive Scottish figures has never been greater – as the Cabinet Secretary acknowledged. The production of high quality economic statistics must be a continuing priority for the Scottish Government. The Cabinet Secretary also referred to "*strong user consultation arrangements*" being in place and publication of the annual Scottish Economic Statistics Plan. Parliamentarians being users and consumers of data – and in the interests of enhancing awareness and consultation – we recommend Scottish Government statisticians undertake to engage with the Committee on an annual basis in advance of publication of the Scottish Economics Statistics Plan.

154. There are also some major gaps in Scotland's economic statistics. The Cabinet Secretary told us he would find it useful if this inquiry proposed areas for consideration – particularly pertaining to trade data – and the Committee welcomes that openness. Those areas with gaps we came across during the course of this inquiry include: Gross National Income (GNI); Foreign Direct Investment; earnings; a Scottish Price Index; trade statistics; capital investment; longitudinal data for Scottish households (in terms of issues such as income, wealth and spending); tourism; financial services; fisheries and agriculture; R&D; regional economic performance; and outcomes by gender.

155. All of these matter, of course, but the Committee recommends the Scottish Government and ONS prioritise improving the coverage and quality of four

key areas: earnings; trade (exports and imports); Scottish prices; and regional (as well as sub-regional) economic statistics.

156. The Committee also recommends the Scottish Government continues the work to improve the timeliness of key indicators e.g. accelerating the publication of GDP.

157. The Digital Economy Act 2017 allows ONS better access to a wider range of data from government and business, including the company statistics HMRC collect on workers, wages, profits and export. It is imperative that the Scottish Government explores how it can fully benefit from the easier access to administrative data. The Committee would encourage the Scottish Government to continue to work in collaboration with ONS, HMRC and other relevant bodies to establish what is achievable, by whom and at what cost, and to develop a detailed plan of how the gaps can be filled.

158. The importance of collaboration in improving data quality was underscored by many organisations, including local authorities, chambers of commerce, enterprise agencies and think tanks. They impressed the need not only for closer working between the Scottish Government and ONS, but between the Scottish Government and local authorities, between the Scottish Government and enterprise agencies, between the Scottish Government and chambers of commerce, and between the public and private sectors. Collaboration is as important to making more of the data we already have – but may be underutilised or not used at all outside the organisations collecting it – as it is to accessing new sources of statistical information. We cannot make people work more closely together but can encourage organisations to foster a culture in which a collaborative ethos is expected and supported.

159. The Committee welcomes the willingness of ONS to make more of its engagement with the Scottish Parliament than simply the laying of an annual report. We will explore further with the organisation how that engagement and accountability to the Scottish Parliament (through the UK Statistics Authority – ONS being the Executive Office of the Authority) can be made stronger, more systematic and meaningful in the interests of Scotland's statistical needs.

160. We found the most immediate barriers to improving Scottish economic data were three-fold: cost (bespoke Scottish survey data is expensive); power (not being able to compel survey responses); and disaggregation (one example being that companies operating across the UK do not have to provide separate reporting units for Scottish activities). There are no easy solutions here. But the Committee recommends on the last point at least that the Scottish Government explores with ONS and HMRC how to overcome the disaggregation barrier. For example, they could look at regional allocation methodology or even the viability of a Scottish-specific

reporting unit which – combined with the provisions of the 2017 Act – might help address the matter of UK-wide companies not having to report specifically on their activities in Scotland by looking at a select number of firms with significant cross-border operations.

161. We recognise the potential of initiatives such as HMRC's Making Tax Digital programme, the roll-out of which appears not to have been preceded by any discussion of how additional administrative data could be collected and used to better inform policy decisions in Scotland and elsewhere in the UK. "*Collect once, use often"* was the advice from one witness. The Committee encourages the Scottish Government to explore all such possibilities through data sharing agreements with ONS.

162. The Committee also seeks assurances from ONS and HMRC that Scotland's statistical needs are guaranteed to be given full consideration and factored into their decision making and allocation of resources for current and future work. It is imperative, to repeat an earlier point, that Scottish statistics benefit from the enhanced data access made possible by the DEA 2017.

163. The Bean Review, very much the prelude to the data sharing provisions in the 2017 Act, called on the UK statistical system to up its game in six specific ways: to address existing limitations in measuring the modern UK economy; to be more agile in providing statistics that properly reflect its changing characteristics and structure; to refocus the culture of ONS to better meet user needs; to make the most of existing and new data sources and technologies; to work better at understanding and interrogating data; and to strengthen the governance framework to support the production of high-quality economic statistics.

164. The Committee endorses all of these, but draws particular attention to: the importance of agility (in the face of both a changing economy and Scotland's new fiscal powers); making the most of existing and new data sources (with Scottish Government statisticians being described in the research that preceded this inquiry as "opportunistic but relatively powerless, statistical scavengers" picking out relevant data from UK-wide surveys and administrative data); and the strengthening of the governance framework (we return to the matter of governance in the following section).

165. In terms of better meeting user needs, a number of written submissions pointed to the absence of a single website or portal. They suggested bringing together the most up-to-date economic data for Scotland in one place, along the lines of the approach taken by ONS on labour market data via the Nomis site. The Committee recommends the Scottish Government reflects on this.

166. On the connected question of resources, several of our witnesses challenged the perception that big budgets or expensive IT systems were necessary. A more sophisticated and collaborative approach coupled with specialist data skills was encouraged by others. We note that the Scottish Government's core statistics team is 27 strong, with some 200 statisticians working across Scottish Government. We also note – by way of a crude comparison – that ONS employs around 170 people to work specifically on the national accounts, while New Zealand has 60 for the same purpose, and the Scottish Government count is 11.

167. We would be ill-advised to try and replicate everything done at the UK level in terms of what is collected and the necessary scale of that operation; far better that we focus on what we want to measure and identify Scotland-specific priorities, then use the full weight of statistical support from across the UK – ONS, HMRC and the Scottish Government – to deliver these improvements in the most cost efficient and effective way possible. However, with a shifting economic landscape and new fiscal powers, the importance of reliable, relevant and timely data has never been greater.

168. On that basis, we believe the never easy matter of resources and capacity merits further consideration. The question here may be less *can we afford to* than *can we afford not to*? The Committee therefore recommends that the Scottish Government outlines its current and planned allocation of resources for data provision and statistical analysis and keeps us informed of the progress and work of the new Data Analytical Unit (something we return to later in the report).

Utility

> *The goal is to turn data into information and information into insight.*
>
> Carly Fiorina, Hewlett-Packard

Use by policy makers

169. Using data to inform their policy positions, AGCC & SCC were able to provide real time analysis and customer insight for businesses and to undertake regional research e.g. the Oil and Gas Survey produced by AGCC.[199]

170. Data was used by NAC to "gauge progress towards our strategic objectives"[200] while SLAED produced their Indicators Framework to provide data for "economic

[199] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-004-AGCC.pdf
[200] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-010-North_Ayrshire_Council.pdf

development inputs, activities, outputs and outcomes". It pointed out that long-term statistics were useful for observing trends and evaluating policy.[201] NLC used local profiles based on economic statistics to obtain funding.[202]

171. HIE drew on "a range of national statistics to help understand the workings of the regional economy and constituent sub-economies". This included data on changes in employment, that on R&D spend, and their own survey findings.[203] SDS used a range of data from the APS, SIMD and BRES to inform their skills planning, also producing forecasts on growth, occupational change, broad industry and key sectoral change, employment and gender status and demand for qualifications.[204]

172. Scottish Enterprise outlined how they use data to inform their "analysis of the drivers of economic growth" and identify "performance gaps relative to comparator countries" using OECD and Eurostat data.[205]

Scottish Fiscal Commission (SFC)

173. SFC drew on economic statistics from a range of sources – ONS, Scottish Government's Quarterly National Accounts Scotland (QNAS) and GERS, and local government finance data – for their forecasting.[206]

174. While Scotland is better served than other parts of the UK for economic statistics, SFC told the Committee there were gaps and weaknesses. The discussion focussed on practical areas where the SFC believed modest improvements could help improve their economic and fiscal forecasts. Four areas were highlighted—

- Developing price data and deflators for Scotland;
- Publishing GDP by component of expenditure in constant prices (i.e. adjusted for inflation);
- Better and more timely data on Scottish wages, for example developing a Scottish boost to the Monthly Wages and Salaries Survey to create a Scottish Average Weekly Earnings; and,
- A more comprehensive breakdown of public sector expenditure in Scotland by different levels of government and type of expenditure.

[201] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-008-SLAED.pdf
[202] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-024-North_Lanarkshire_Council.pdf
[203] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-020-Highlands_and_Islands_Enterprise.pdf
[204] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-025-Skills_Development_Scotland.pdf
[205] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-014-Scottish_Enterprise.pdf
[206] SFC gave evidence to the EJFW Committee on 31 October 2017.

175. The Commission welcomed steps to improve economic statistics in Scotland, such as the Scottish Government boosting the Living Costs and Food Survey (a survey of household spending patterns)[207] as well as improvements made by ONS for UK regional statistics e.g. GVA and Gross Disposable Household Income (GDHI)[208] (in which Scotland is included).

176. However, SFC cautioned that some data is still based on GB-data apportionments, also noting that the quality of the statistics will always be impacted by the relatively smaller size of the Scottish economy.

177. There were a number of suggestions as to how things could be improved relatively quickly. SFC recommended the Scottish Government explored with ONS whether it was possible to use existing methods for compiling UK-wide price indices – perhaps with a Scottish sample boost – to obtain a price index for Scotland. While appreciating it might not be possible to do this every month or quarter, it was suggested an annual series would still be a significant step forward.

178. SFC supported a more timely publication of Scottish GDP (subject to quality assurances). But its most pressing need was for better data on earnings, including the provision of an Average Weekly Earnings measure (AWE) for Scotland similar to the UK figure provided by ONS.

179. The Commission also outlined issues in accessing data. For example, it had recently acquired "researcher" status allowing them to explore the Survey of Personal Incomes (an HMRC survey of 1% to 2% of UK taxpayers) at a more detailed level, but that this required travelling to London. It also had to pay for some of the data – often from public agencies. For example—

- Registers of Scotland house prices and transactions; and,
- Civil Aviation Authority air passenger numbers (though it stated it did not pay for the full dataset as this was too expensive).

180. It was noted that other organisations, such as Revenue Scotland, were likely to be paying for this same data.

181. Ed Humpherson, UKSA's Director of Regulation, said the evidence from SFC about their data requirements "really stood out for me" and "it would be very sensible for the Scottish Government to address in partnership with the ONS".[209]

Good practice and case studies

182. In terms of examples of good practice and case studies: DHI[210] pointed to the diagnostic tool developed for Ayrshire Pathfinder, suggesting it enabled "a detailed

[207] https://www.ons.gov.uk/peoplepopulationandcommunity/personalandhouseholdfinances/incomeandwealth/methodologies/livingcostsandfoodsurvey
[208] https://www.ons.gov.uk/economy/regionalaccounts/grossdisposablehouseholdincome
[209] EJFW Committee, OR, 7 November 2017, Col 5.

assessment of economic conditions and of the various constraints to growth"; SLAED[211] said their Indicator Report gave good examples from local authorities; Ms Cuthbert[212] indicated more timely business data in Northern Ireland; and Common Weal cited Denmark, Sweden and New Zealand as similar sized countries with impressive economic data sets, 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.[213]

183. New Zealand was highlighted in the Bean Review for its presentation of economic statistics. Statistics New Zealand has a dedicated website showing not only past and current projects and the datasets behind them, but also case studies (in which research project outcomes used by government departments and academia are showcased). This is something the review felt ONS should be doing in terms of promoting knowledge sharing within the organisation and wider, while also improving the methodology of what was produced.[214]

OECD view

184. The Committee spoke to Paul Shreyer, Deputy Chief Statistician at OECD, by video link and the following points were discussed.[215]

185. First, he said there was increasing demand in countries for better economic data at a more local and/or regional level. Scotland was seen to rank in the 'middle' in terms of coverage.

186. Secondly, there was no single method adopted by countries for publishing economic statistics at a regional level. Some countries, such as Canada monitored and published data at a regional/state/province level via a national statistics body. They tended to adopt a top-down approach with data collected nationally. Others, such as Germany, relied more on a bottom-up approach, with individual regions and provinces publishing their own statistics.

187. Thirdly, he said there was an increasing trend toward making better use of administrative data. However, the pace of adopting the use of administrative data varied across countries. Denmark, the Netherlands and Estonia were cited as

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[210] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-013-David_Hume_Institute.pdf
[211] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-008-SLAED.pdf
[212] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/_EDI-002-Margaret-Cuthbert.pdf
[213] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-005-Common_Weal.pdf
[214] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/507081/2904936_Bean_Review_Web_Accessible.pdf
[215] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/Note_of_OECD_Video_Conference.pdf

countries making extensive use of administrative data. Providing reassurance around privacy and appropriate use of administrative data was something that needs to be borne in mind.

Independence of statistical bodies

188. In governance terms, the Scottish Government being both a producer and consumer of official statistics, 4-Consulting wanted "to review the independence of economic statistics in Scotland". Pointing to the status of the SFC, it argued a similar approach could be considered in the realm of statistics, whether that was by a new Scottish Statistics Office or to "embed further statistics capacity within an existing non-ministerial department" or reviewing the role of Scotland's Chief Statistician.[216] OSR stated that with the current set-up "it is easier for perceptions of inappropriate influence to arise".[217] Common Weal called for a Scottish Statistics Agency in the form of either a centralised agency or a decentralised model of multiple departments collecting data but with a central agency to collect and publish, regulate, identify gaps or obsoletion, and connect the data.[218]

189. Professor Bell suggested, whatever the arrangements, that "the organisation that is responsible for collecting and publishing data should be at arm's length from the government".[219] Craig Dalzell said—

> A Scottish statistics agency would definitely have to be at arm's length…We saw the benefits of being able to speak truth to power the other week when the ONS made some comments to Boris Johnson.[220]

190. OECD emphasised that the most important element was professional independence – that is, the ability to have full control over the methodologies used to generate statistics. They acknowledged, however, that perception was vitally important. This was why many countries chose to have an independent statistical body outside of direct ministerial control.[221]

191. Both IODS and STUC suggested the presentation of statistics from bodies such as OECD, OBR and ONS tended to be greeted with less cynicism than those from government departments.[222]

192. SPHO emphasised the importance of good governance but were in favour of a "proportionate" approach, suggesting it would be "helpful for the committee to encourage a wider discussion on these issues".[223]

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[216] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-015-4-Consulting.pdf
[217] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/UK_Statistics_Authority_-_Office_of_Statistics_Regulation.pdf
[218] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-005-Common_Weal.pdf
[219] EJFW Committee, OR, 3 October 2017, Col 15.
[220] EJFW Committee, OR, 26 September 2017, Col 33.
[221] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/Note_of_OECD_Video_Conference.pdf
[222] EJFW Committee, OR, 24 October, Col 23.

193. GERS was highlighted as one area where political interpretation of the report could spill-over into questions around the integrity of the numbers themselves. Richard Marsh spoke about the publication of the official GERS figures in 2016 and the appearance of a competing and unofficial paper the day before. A broadcast journalist asked whether this was politics or arithmetic. Mr Marsh told the Committee—

> …the guy who was filling role of the Chief Statistician and the regulator at the same time was, in effect, the BBC's Brian Taylor. He has a lot on his plate, so we should not really leave it to the media to police and point the role of the statistics.[224]

194. RSS suggested "the guarantee has to be the independence of the statistical civil servants, rather than having a separate body".[225]

195. Ed Humpherson suggested "good statistics can emerge from a whole range of institutional arrangements". He described Northern Ireland's NISRA as a "hub-and-spoke" model – a central NISRA but with a lot of its statisticians "embedded" in government departments. England had its ministerially-led departments – another model – were "very effective producers of high-quality statistics". And here—

> In Scotland, you have what you might call a three peaks model. You have a strong statistical hub in the Scottish Government, but there is also the National Records of Scotland and ISD Scotland, which produces the NHS statistics.[226]

196. He had "no presumption" about whether any of these was better than the others and stressed "what really matters" was the code of practice, enabling "statisticians to operate independently across all of those institutional settings". Mr Humpherson declared himself "agnostic" on the matter of where production takes place.[227]

197. Sir Charles Bean stressed the value of "very clear protocols" to ensure the producers of statistics could carry out their work "without interference". He said his review had found the process to be working "by and large" but—

> …it was clear that on some occasions producers were being put under inappropriate pressure by their minister or senior civil servants. You must have a robust framework in place…[228]

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[223] http://www.scottish.parliament.uk/S5_Education/Inquiries/EDI-023-ScotPHO.pdf
[224] EJFW Committee, OR, 19 September 2017, Col 19.
[225] EJFW Committee, OR, 26 September 2017, Col 11.
[226] EJFW Committee, OR, 7 November 2017, Col 24.
[227] EJFW Committee, OR, 7 November 2017, Cols 23-24.
[228] EJFW Committee, OR, 7 November 2017, Cols 24-25.

Pre-release

198. Neither ONS nor the Bank of England now provides ministers with 24 hour advanced sight of economic statistics. UKSA suggested this enhances the integrity of the statistics.[229]

199. That a different PRA regulatory regime exists in Scotland from the rest of the UK was highlighted by OSR; the Scottish Government working to a timescale of five days. There was also no requirement to publish the lists of those who have privileged access. OSR recommended—

> …the Committee should advocate the repeal of the provisions of the Pre-Release Access to Official Statistics (Scotland) 2008 Order.[230]

200. Dr McIntyre described "the anomaly" that not only did pre-release access remain "but it is much more generous with timescales than was previously the case elsewhere".[231] OSR stated the five days duration along with there being no requirement for the Scottish Government to publish lists of those given "such privileged access" remained "in stark contrast" to arrangements for the rest of the UK".[232] RSS's Martin Weale similarly considered the five days that some users receive "sticks out"—

> I think that in that regard Scotland is very much an anomaly relative to almost the whole developed world.[233]

201. Professor Bell said—

> …politicians should not necessarily be in a better position than others when it comes to the release of data.[234]

202. The argument that pre-release access was required so that ministers could be "informed rather than ill-informed" was understood by Sir Charles Bean, who said he had been "on the other side of the fence" when a member of the Monetary Policy Committee but—

> Nevertheless, I think that the balance of arguments supports pretty strict limitations on pre-release access.[235]

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[229] EJFW Committee, OR, 7 November 2017, Col 23.
[230] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/UK_Statistics_Authority_-_Office_of_Statistics_Regulation.pdf
[231] EJFW Committee, OR, 3 October 2017, Col 15.
[232] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/UK_Statistics_Authority_-_Office_of_Statistics_Regulation.pdf
[233] EJFW Committee, OR, 26 September 2017, Col 9.
[234] EJFW Committee, OR, 3 October 2017, Col 18.
[235] EJFW Committee, OR, 7 November 2017, Col 22.

203. Ed Humpherson made "some advocacy comments" as follows—

> First, why do we care so much about this? It is because, at the heart of what statistics are about, they are a public asset. They are there for public consumption as information that enables the public to understand the nature of the world, the nature of policy and nature of the decisions that are being made. Secondly, that vision of a public asset is underpinned by statistics being equally available to all and not partially available to some audiences but not others, and by their being available as soon as they are ready. Pre-release access seems to run against those two principles.[236]

204. He went on—

> There is a perception that one set of actors – ministers – gets privileged access that others do not get. Therefore, for the Scottish Government to establish its trustworthiness – to use that term again – it needs to work that much harder to demonstrate the integrity of its production process, and I think that makes its job harder.[237]

205. He made it clear no judgement or accusation was being made—

> They are genuinely highly professional statisticians and do an excellent job. I just think that pre-release access makes their work harder.[238]

206. In RSS's written submission to the Committee, it made clear its view—

> …the RSS strongly urges the Committee to call for Scotland's current rules on pre-release access to be revised. We believe that such privileged access undermines public trust in official statistics as, for example, it creates opportunities for figures to be 'spun' to the media or 'buried' beneath other announcements.[239]

207. It suggested such a reform "would be warmly welcomed by all those committed to statistical integrity".[240]

Scottish Government position

208. The Cabinet Secretary emphasised that the Scottish Government's economic statistics were produced "independently of the Scottish ministers", similar to the approach taken by the other devolved nations and UK Government. He said any matters relating to "methodology, estimation or production are entirely and

[236] EJFW Committee, OR, 7 November 2017, Col 23.
[237] EJFW Committee, OR, 7 November 2017, Col 23.
[238] EJFW Committee, OR, 7 November 2017, Col 23.
[239] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/Royal_Statistical_Society.pdf
[240] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/Royal_Statistical_Society.pdf

properly the responsibility of Scottish Government statisticians and the "sole preserve of the Chief Statistician" and—

> The important separation of responsibilities is rigorously maintained. I am a key user of economic statistics, which are vital for informing our economic policy, monitoring profess and evaluating our interventions.[241]

209. Mr Brown referred to classification of national and official statistics by UKSA and said the Scottish Government's statistics meeting that assessment were "to high standards, well presented and produced completely independently by Scottish Government statisticians".[242]

210. Chief Statistician Roger Halliday described his role of "deciding the format, content and timing of those statistics [on forecasting], as I do for all official statistics in Scotland". He said UKSA's Code of Practice was "not just nice to have but legally binding" and viewed internationally as "an exemplar in practice of independence and the production of official statistics".[243]

211. On the issue of PRA, the Cabinet Secretary pointed out ONS was "the only part of UK Government" to have removed it, Whitehall departments still allowing 24-hour access. He considered "the current arrangements work well" and there was "no evidence" of misuse. Mr Brown told the Committee—

> …pre-release access to data means that when ministers are called upon to respond quickly to stats at the time of publication, they can do so in an informed way…I think pre-release aids public understanding.[244]

212. Mr Halliday explained the decision on who has PRA was his. He said his view that PRA "is correct" was based on the need for the figure to be "high quality and understandable by the users" and "so that ministers can comment properly on figures when they come out". He echoed the Cabinet Secretary's point that access was "tightly controlled" and there were "no breaches of trust". He told the Committee—

> It is right that the UK National Statistician made the decision on stopping pre-release for the ONS but it is not necessarily straightforward that that approach should apply elsewhere.[245]

213. He gave the example of labour market statistics and how when PRA had applied, there was time to prepare a summary of the Scottish figures to be released at the same time as ONS published the UK figures. The media used that summary. After PRA was removed for ONS figures, and there was no time to produce a Scottish

[241] EJFW Committee, OR, 14 November 2017, Col 2.
[242] EJFW Committee, OR, 14 November 2017, Col 3.
[243] EJFW Committee, OR, 14 November 2017, Col 18.
[244] EJFW Committee, OR, 14 November 2017, Col 32.
[245] EJFW Committee, OR, 14 November 2017, Cols 32-33.

summary, he said "there have been cases in which media organisations have misinterpreted labour market statistics". He said—

> The issue has been overplayed in this debate. There are much more important issues, such as ensuring trust in statistics; data handling to make sure that we treat people's data securely; setting a culture in which statisticians are independent of influence – I have talked about our code of practice and statistical legislation; having high-quality statistics; and being responsible for recruiting and developing statisticians. We have won the Royal Statistical Society prize for the best statistics in the UK today for our Scottish index of multiple deprivation, which shows that we are delivering high-quality statistics here in Scotland.[246]

214. Regarding the difference of opinion on PRA with other witnesses, including UKSA, which had talked about integrity, Mr Halliday suggested trustworthiness was "also about the correct interpretation of statistics". He talked about working with the media to "build up their understanding and ability to use data … in a balanced and correct way". He felt this was "much more significant".[247]

215. Out of a lengthy discussion of PRA – including the difference between statisticians having sight of the data before publication and ministers seeing it, differentiating the factual content from the political interpretation or "slant", and the different materials included in release of figures (for example, a statistical bulletin and a news release factually providing the key data but also featuring a commentary from ministers) – Mr Gillespie made a suggestion—

> A recommendation that the Committee could make to the ONS about the labour market pre-release is that when the ONS publishes the data at 9.30, it could put out a statistical release for Scotland and give the key numbers.[248]

216. Asked about governance in terms of the independence of official statistics, the Cabinet Secretary said European law required each state to have an independent national statistics institute and "ONS is the UK institute". He saw no merit in replicating what that office did—

> I do not deny that we should look to further improve our statistics and make them more comprehensive and relevant where we can, but we should not duplicate them.[249]

[246] EJFW Committee, OR, 14 November 2017, Cols 33-34.
[247] EJFW Committee, OR, 14 November 2017, Col 35.
[248] EJFW Committee, OR, 14 November 2017, Col 37.
[249] EJFW Committee, OR, 14 November 2017, Col 38.

217. Mr Gillespie told the Committee—

> If people accept that the numbers are the numbers, then there can be a debate about the interpretation…The key issue is the quality of the data, interpretation is fair game.[250]

218. Mr Halliday said—

> An independent statistical service for Scotland would detract from what we do. We have to balance the perception of independence and the relevance of what we do…It is always a challenge for national statistics institutes that operate outside of that environment [alongside economists who specialise in the Scottish economy] to make sure that they are responsive and relevant, and moving with the times.[251]

219. Asked about SFC's data requirements, the Cabinet Secretary said he was "aware of the issue…and we want to improve in such areas". On the question of SFC being charged for data, from ROS for example, Mr Brown said it was a non-ministerial department "run on a commercial basis" and the charges were a "key source of income".[252]

Discussion and recommendations

220. With statistics, with politics, with most things in the public realm, perception matters. The Scottish Government plays a dual role, producing economic statistics but also using them to scrutinise and develop public policy. It is an EU requirement for member states to have a statistical agency separate from government and the 2013 *Scotland's Future* White Paper set out plans for a post-independence National Statistics Institute. As policy makers get to grips with Scotland's new fiscal powers and policy levers – whatever the nature of our future relationship with Europe – the question over the Scottish Government being both producer and consumer is likely to recur.

221. The Committee examined the question of independence of the production of economic statistics and most contributors to the inquiry were content with things as they are. We found no evidence of a problem, but – recognising the importance of perception when it comes to public trust – believe there would be merit in a review.

222. The Committee therefore recommends a feasibility study be undertaken by the Scottish Government to assess the practicalities and costs and consider the pros and cons of greater independence for the production of economic

[250] EJFW Committee, OR, 14 November 2017, Cols 38-39.
[251] EJFW Committee, OR, 14 November 2017, Col 39.
[252] EJFW Committee, OR, 14 November 2017, Col 41.

statistics in Scotland, including – though not limited to – consideration of the three options outlined below (alongside the status quo):

1) establishing a non-ministerial department – a new office/commission/agency – as with the recent creation of the Scottish Fiscal Commission;

2) embedding further capacity within an existing non-ministerial department, or

3) reviewing the role of Scotland's Chief Statistician.

223. The matter of greater independence is connected to a further issue: pre-release access. The practice of making official statistics available before their publication to those not involved in their production (usually ministers and their advisers) is justified on the basis of enabling ministers to be briefed and therefore better able to make informed comments. The other side of the PRA argument is that removing ministerial privilege and giving everybody the same access to official statistics at the same time is a fundamental principle of statistical good practice; and would be consistent with the position adopted by ONS since 1 July 2017 and subsequently by the Bank of England.

224. It should be said there is no suggestion of statistics being subject to undue influence prior to publication. The concern is around a 'slant' being put on what the numbers mean before other commentators or parties are able to respond. This is regularly seen with economic statistics when the official statistics press release is followed instantaneously by the Ministerial response; something that could be seen as calling into question the credibility of the figures themselves.

225. When asked by the Committee whether PRA should be removed, the UK Statistics Authority, ONS and Professor Sir Charles Bean all agreed with the proposition. The Scottish Government pointed out that the ONS approach is unusual in that no other UK Government departments have followed its example or that of the Bank of England. UKSA has informed us the UK Government is currently reviewing PRA for other departments.

226. The principles of equal access and earliest release possible are integral to the UK Code of Practice, as well as the European Statistics Code of Practice[253] and the United Nations Fundamental Principles of Official Statistics[254]. They are principles with which both the Scottish Government and the UKSA agree.

227. However, UKSA argues that granting PRA falls short of these principles, is not good statistical practice and risks encouraging public scepticism about the

[253] http://ec.europa.eu/eurostat/documents/3859598/5921861/KS-32-11-955-EN.PDF/5fa1ebc6-90bb-43fa-888f-dde032471e15
[254] https://unstats.un.org/unsd/dnss/gp/Implementation_Guidelines_FINAL_without_edit.pdf

credibility of the statistics themselves. The Scottish Government takes another view; highlighting the benefits of pre-release, suggesting that concerns had been overplayed and citing more important factors (such as data security, independence of production, and statistical quality). But if economic data is to be considered a public asset – the view of UKSA and one shared by this Committee – then the arguments for pre-release raise more questions than answers.

228. There was a range of views among committee members as to how best to approach this matter, including: adoption of a default position of no PRA except for exceptional circumstances; removing it for those statistics deemed to be of particular national significance (such as GDP and GERS); and seeking a definitive end to the practice for all Scottish economic statistics.

229. We note the correspondence between the Scottish Government and UKSA during 2008 while the Pre-release Access to Official Statistics (Scotland) Order 2008 was being prepared. At that time, the Scottish Government described PRA as "*necessary and desirable*" though it acknowledged "*we do very much recognise that there are risks associated with pre-release access that need to be controlled*".

230. A decade on from the 2008 Order's introduction, and in light of strong encouragement in favour of ending pre-release from a number of key witnesses to our inquiry, we believe that PRA to economic statistics which are market sensitive – including Scottish GDP, the Retail Sales Index for Scotland (RSIS), Quarterly National Accounts Scotland (QNAS) and Government Expenditure and Revenues (GERS) – should end; and the Scottish Government is invited to set out how it will do so.[255]

231. In the interests of encouraging balanced and accurate coverage of figures in the Scottish media, we would also make a recommendation to ONS. The Committee agrees with the Scottish Government suggestion that when publishing the UK labour market data it could – at the same time – issue a statistical release providing the key numbers for Scotland. If the Scottish dimension is included with the information at the time of issue, this could help reduce the likelihood of any misinterpretation.

232. The Committee believes the statistical needs of the Scottish Fiscal Commission – given its responsibility for economic and fiscal forecasting – should be a top priority. SFC highlighted four areas for current priority in its work: price data and deflators for Scotland; GDP by component of expenditure in constant prices; better and more timeous data on Scottish

[255] There was a division over the issue of pre-release access, the prevailing view recorded in paragraph 230; the minority view having proposed: "*The Committee considers there should be a presumption against pre-release access and invites the Scottish Government to put forward arguments why pre-release access should be continued for specific statistics*." See Annexe A, Minute of the Meeting of 30 January 2018, and note on 'Record of division in private' for more detail.

wages; and a more comprehensive breakdown of public sector expenditure in Scotland.

233. The Committee draws these four areas to the attention of the Scottish Government and recommends that SFC sets out its statistical needs annually and the Scottish Government prioritises these needs where it can collect the data and works with ONS/HMRC/others where it cannot, and sets out what it will do to address any gaps.

234. The Committee was advised that public bodies such as SFC pay for data from other public agencies, for example prices and transactions figures from Registers of Scotland. This appears to be done under the provisions of Section 108 of the Land Registration etc. (Scotland) Act[256]. We appreciate there is a transactional cost for the Registers of Scotland to provide such data but a better approach may be to incorporate such charges into the Registers of Scotland (Fees) Order. The cost might then be shared between those public sector bodies acquiring the data and protocols put in place for distribution. The Committee asks that the Scottish Government look into the matter.

235. Looking at good practice from elsewhere, witnesses made reference to: Northern Ireland (power to compel, independent statistical body, more timely business data); Denmark, Sweden and New Zealand (similar sized countries with a progressive approach to data collection and application); and Estonia (with both an excellent digital infrastructure and data collection factored into everyday transactions). OECD observed a growing demand in many countries for better economic data at the local or regional level and placed Scotland mid-table in terms of our ranking.

236. The organisation also told us there was no single way of dealing with economic statistics at a regional level. Canada, for example, took a top-down approach with data collected nationally; while Germany favoured a bottom-up approach, statistics being published at the provincial level. Another OECD observation was the trend towards administrative data, with Denmark, the Netherlands and Estonia cited. The need to reassure the public around privacy and appropriate use of data was emphasised.

237. The Committee can identify no single model or approach as one that might be replicated or embraced with the certainty of enhancing the quality and coverage of Scottish economic statistics (though of course something can always be learnt from the experience of others). We note, however, the importance of reassuring the public that their privacy will not be compromised and persuading them of the

[256] http://www.legislation.gov.uk/asp/2012/5/contents/enacted

potential of data for effective policy making, improved business planning and the electorate's power to hold decision makers to account.

Interpretation/Scrutiny

> *Statistics are no substitute for judgement.*
>
> Henry Clay

Making sense of data

238. John McLaren noted there was a lack of analysis and interpretation of economic data, giving the example of how little understanding there was of the driving forces behind the Scottish employment rate. He suggested the biggest challenge to improving the quality of statistics was increasing awareness and understanding among the media, the public and politicians of the "importance and relevance of existing and new sources of economic data".[257] A reduced analytical capacity within local authorities was highlighted by AGD, suggesting it would be useful if sub-Scotland briefs and profiles could be published centrally.[258] NLC explained that data intelligence and analysis posts could be viewed as a mere add-on when they should be central to a council's key functions.[259]

239. Craig Dalzell of the Common Weal spoke about how best to communicate data and the different audiences—

> Someone who is a professional statistician will look for one level of depth to the data; a politician trying to form a policy will look for a different depth; and a member of the public who just wants to know what going on will need another degree of depth. We need to be able to speak to all those people. We need to break down what are sometimes very complicated statistics in such a way that they can be easily understood by a layperson.[260]

240. OSR, in its written submission, explored a very similar point—

> Those responsible for producing statistics that serve the public good should focus not only on what experts think but also seek to gain a good grasp of the key issues in the minds of the general public. There will be things that the public are interested in that experts do not think are issues at all, and

[257] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-018-John_McLaren.pdf
[258] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-021-Ayrshire_Growth_Deal.pdf
[259] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-024-North_Lanarkshire_Council.pdf
[260] EJFW Committee, OR, 26 September 2017, Col 46.

> vice versa. Both are important, and it is imperative that both experts and the public have the information they need.[261]

241. A number of correspondents – OSR[262], SCDI[263], John McLaren[264], 4-Consulting[265] and Dr Cuthbert[266] – questioned whether the current set-up was still appropriate given the new fiscal arrangements between Scotland and the UK. SCDI argued it was "crucial" to have a better understanding of how well the Scottish economy was performing in relation to the rest of the UK and suggested this made a strong case for further investment in statistical collection and provision.[267] 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.[268]

242. Dr Cuthbert made a similar point, noting 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 the UK".[269]

243. Richard Marsh described Scottish Government statisticians as sitting on "a vast reservoir of data" that could be helpful for a number of policy areas "but, quite reasonably, the people who could use it do not fully understand what it could do". He said a "meeting of minds" was needed.[270]

244. Rebecca Riley of ESCOE said it was important to have "explanation documentation" so "people can use them [data] in an educated way and do not draw incorrect inference from them".[271]

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[261] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/UK_Statistics_Authority_-_Office_of_Statistics_Regulation.pdf
[262] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/UK_Statistics_Authority_-_Office_of_Statistics_Regulation.pdf
[263] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-016-SCDI.pdf
[264] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-018-John_McLaren.pdf
[265] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-015-4-Consulting.pdf
[266] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-009-Dr.J.R.Cuthbert.pdf
[267] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-016-SCDI.pdf
[268] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-015-4-Consulting.pdf
[269] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-009-Dr.J.R.Cuthbert.pdf
[270] EJFW Committee, OR, 19 September 2017, Col 7.
[271] EJFW Committee, OR, 26 September 2017, Col 22.

What we measure

245. Professor Murphy told us—

> …all data is political. What you choose to measure and how you choose to measure it is a political choice from the beginning to the end.[272]

246. As for what we should be measuring, DHI argued "the priority for future developments" should be to align with Scotland's current economic powers "although with an eye to possible further devolution". Its written submission stated—

> …it is unusual for analysts to declare that there is enough or even too much data.[273]

247. It further suggested any expansion of economic statistics should be informed by a cost-benefit analysis and two fundamental questions—

> …how much would it cost to produce the numbers and what would we be able to do differently if we had them?[274]

248. Common Weal highlighted that GDP did not fully capture developments such as digital innovations which reduce GDP without reducing output;[275] Professor Montagna and Dr Kopasker focused on measures to assess competitiveness, including productivity, international activities, firms' dynamics, ownership, R&D spend and management practices;[276] SCDI called for more attention on happiness, wellbeing and inequality;[277] 4-Consulting[278] and SCDI[279] suggested supplementary performance measures such as Green budgets or Green GDP; and John McLaren believed the data needed to measure alternatives to GDP was potentially already collected – e.g. in health and education – but a lengthy time-lag meant it took time to identify problems or successes.[280]

249. Scepticism of single measures of wellbeing was expressed by Sir Charles Bean. He did not think GDP "sufficient" but nor did he believe getting "a load of indicators together" and applying "some arbitrary weighting system" was the answer. What

[272] EJFW Committee, OR, 19 September 2017, Col 41.
[273] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-013-David_Hume_Institute.pdf
[274] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-013-David_Hume_Institute.pdf
[275] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-005-Common_Weal.pdf
[276] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-026-Catia_Montagna.pdf
[277] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-016-SCDI.pdf
[278] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-015-4-Consulting.pdf
[279] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-016-SCDI.pdf
[280] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-018-John_McLaren.pdf

he favoured was "a scorecard approach" based on fewer and carefully chosen indicators.[281]

250. Graham Maxton of the Club of Rome told the Committee—

> You have an opportunity to lead the world … but only if you choose to measure the right things.[282]

251. UKSA's Ed Humpherson suggested Scotland was "in a space not so much of replication but of innovation" and—

> You have talked a lot about the four i-s. They are a particular emphasis in Scotland's economic strategy and developing a way of getting a good handle on them is something that could be quite innovative.[283]

252. John McLaren talked about the importance of getting behind such big issues as productivity, citing the difference between France and the USA as an example—

> France has quite short working hours whereas the United States has quite long working hours. France is also quite productive partly because there is quite high unemployment, which means that the people who are most productive are in work.[284]

253. Professor Montagna said to get to grips with productivity we needed to "overcome the dichotomy between macro and micro data" and "go into the black box of the firm".[285] She wanted to look at the impact "management practices" had on productivity but could not do so without the data.[286]

254. Reform Scotland's Ghill Donald said—

> Productivity is the great intangible but when you peel that onion back, we get to the magic, which is people – people motivated at work. If people are happy at work, they will produce more.[287]

255. Graham Maxton focused on sectors where productivity did not impact, suggesting we would not increase the figures by "cutting hair faster or looking after an elderly person faster – we cannot improve productivity by playing a Beethoven symphony faster".[288] He said economic growth – "to some extent … an oxymoron"[289] – was not the key—

[281] EJFW Committee, OR, 7 November 2017, Cols 11-12.
[282] EJFW Committee, OR, 26 September 2017, Col 26.
[283] EJFW Committee, OR, 7 November 2017, Col 13.
[284] EJFW Committee, OR, 19 September 2017, Col 34.
[285] EJFW Committee, OR, 19 September 2017, Col 36.
[286] EJFW Committee, OR, 19 September 2017, Col 37.
[287] EJFW Committee, OR, 26 September 2017, Col 40.
[288] EJFW Committee, OR, 26 September 2017, Col 41.

> You need to focus on wellbeing – the overall standard of living for the Scottish population – and how to boost that, which is down to education, health and a bundle of measures of happiness and satisfaction.[290]

256. He asked—

> What is the economy for? It is not about growth. As one famous economist said, the only thing that wants to grow for ever is a cancer cell.[291]

257. Craig Dalzell suggested "quoting a simple number makes a good headline" but it takes time for deeper consideration and to explain a "more comprehensive set of wellbeing factors".[292]

258. OECD said they explored ways to measure wellbeing for a number of years,[293] and had identified 11 dimensions and a set of indicators that fit the following criteria to assess it—

- They were at a household or individual level e.g. household income rather than GDP;
- It was possible to work out the distribution of the measure across different income levels e.g. health, and
- The indicators related to outcomes rather than outputs or inputs e.g. health expenditure per person was seen as an input to the health care system, not an output.[294]

259. Asked about measuring "non-market activities", OECD told the Committee a number of countries have attempted to do this using "time-use" surveys when people were asked to record the time that they spend each day on activities such as cleaning, looking after children, cooking etc. This information was then combined with a 'price' for such activity – either in terms of the opportunity cost to that particular individual or the cost of hiring someone to do that work for them – to obtain an overall 'value added' measure of such activity. The evidence has shown that this can boost GDP by between 25% to 40%.[295]

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[289] EJFW Committee, OR, 26 September 2017, Col 44.
[290] EJFW Committee, OR, 26 September 2017, Col 27.
[291] EJFW Committee, OR, 26 September 2017, Col 37.
[292] EJFW Committee, OR, 26 September 2017, Col 38.
[293] It produces subnational estimates including for Scotland available here: http://www.oecd-ilibrary.org/urban-rural-and-regional-development/data/oecd-regional-statistics/regional-well-being-edition-2016_d147c81c-en
[294] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/Note_of_OECD_Video_Conference.pdf
[295] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/Note_of_OECD_Video_Conference.pdf

260. Jonathan Athow saw the need to "go beyond GDP" and said ONS had used time-use surveys and wanted to think about how to make them "more sophisticated". He was also keen to ensure "a wider picture" was being provided by ONS's wellbeing statistics. He said—

> An area where the UK leads is environmental accounts: understanding systematically the benefits that accrue from biodiversity and different sorts of environmental amenity…they are very important to people's quality of life…[296]

261. A number of witnesses talked about the lack of robust information to measure aspects of the inclusive growth agenda – whether non-market activities; regional economic indicators; gender disaggregation of business and labour market statistics; or measures of inequality in earnings, employment opportunities or household incomes.

262. Carolyn Currie encouraged more focus on inclusive growth, and said WES would like to see "greater evidence of non-waged work" e.g. childcare.[297] She told the Committee—

> For the fourth "i", that stands for inclusive growth – however, the inability to measure gender-disaggregated data in economic terms is really an act of self-harm for that agenda.[298]

263. She said—

> …if we cannot measure it, we certainly cannot change it or understand it.[299]

264. She suggested one model being the human development index, which includes factors like life expectancy, literacy, education – factors that all impacted on the economy "but are not always hitched up to our views of economic success". Ms Currie told the Committee—

> Taking a much broader views of economic success and looking at some of those measures, as well as gender equality and the elimination of poverty, gives us a much more rounded view of success as a nation.[300]

265. Rebecca Riley said childcare tended not to be reflected as economic activity despite it having "increasingly moved out of the household and into the market".[301] She also said ESCOE was "producing inclusive growth measures for the UK as a

[296] EJFW Committee, OR, 7 November 2017, Col 11.
[297] EJFW Committee, OR, 24 October 2017, Col 8.
[298] EJFW Committee, OR, 24 October 2017, Col 30.
[299] EJFW Committee, OR, 24 October 2017, Col 8.
[300] EJFW Committee, OR, 24 October 2017, Col 27.
[301] EJFW Committee, OR, 26 September 2017, Col 14.

whole".[302] Russell Gunson reported that the Joseph Rowntree Foundation was also working on a "diagnostic tool" for inclusive growth.[303]

266. STUC's Helen Martin said—

> It is not good enough to have bold economic statistics that look positive, if the reality – what your constituents say to you and my members say to me – is extremely negative. That is not the sort of economy that I want to live in. At the end of the day, that is why we collect such data: to understand people's lives.[304]

User needs

267. OSR explained that one of the foundation pillars of the Code of Practice is statistics "that serve the common good".[305] Professor Murphy stated that data must serve users' needs and "be useful for decision-making purposes".[306] Many respondents – DHI[307], AGCC & SCC[308], SCDI[309] and HIE[310] – stressed that data collection should be geared towards making or scrutinising policy. SCDI stated the need "to put in place data gathering ahead of policy making" and ideally tie data and targets together to ensure transparency when it came to performance and evaluation.[311] Referencing the Small Business Bonus Scheme, AGCC & SCC wanted data to be used to evaluate government interventions. Ms Cuthbert believed that beyond providing an accurate picture of the economy, statistics were important in monitoring policies and evaluating their effect.[312] 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.[313]

268. ONS stressed its work was driven by user needs – "where we start from in thinking about our statistics" we were told by Jonathan Athow – and that it works

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[302] EJFW Committee, OR, 26 September 2017, Col 17.
[303] EJFW Committee, OR, 26 September 2017, Col 43.
[304] EJFW Committee, OR, 24 October 2017, Col 27.
[305] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/UK_Statistics_Authority_-_Office_of_Statistics_Regulation.pdf
[306] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-003-Professor_Richard_Murphy.pdf
[307] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-013-David_Hume_Institute.pdf
[308] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-004-AGCC.pdf
[309] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-016-SCDI.pdf
[310] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-020-Highlands_and_Islands_Enterprise.pdf
[311] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-016-SCDI.pdf
[312] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-004-AGCC.pdf
[313] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-020-Highlands_and_Islands_Enterprise.pdf

closely with the Scottish Government. For example, ONS is exploring the feasibility of producing inflation measures for different parts of the UK.[314]

269. On the question of culture, which was linked to better meeting user needs by the Bean Review, Richard Marsh told the Committee—

> It is difficult to say how can we foster a culture of saying 'I want you to be innovative, to think of new products and to be open and explain what your statistics mean' if the person saying that is not independent of the government of the day.[315]

270. He pointed out that when the question of getting data from the Treasury and HMRC was first raised, it was said to be "impossible"; but "suddenly" in 2014 there was a "beautiful piece of research" which linked the administrative data and tax records with Scottish businesses—

> When there is pressure, there is a need to think of a better way to do things, and methods are often found.[316]

271. Mr Marsh further suggested that with Scottish statistics we were trying "to ape a great deal of what is done for the UK" and we would be better to have a head of statistics "independent of government" and able to refocus our priorities and stop measuring things the usefulness of which might be questionable.[317]

Effective scrutiny

272. DHI contended that areas such as health, education, transport, housing and planning all impact on the economy. 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.[318]

273. Ms Cuthbert was critical of getting behind the bold claims of some public agencies—

> With the information that is given, it is almost impossible to find out why an NDPB has said, let us say, 'We have helped 85% of businesses.' What does that mean? Does it refer to advice, finance or something else? How

[314] EJFW Committee, OR, 7 November 2017, Col 3.
[315] EJFW Committee, OR, 19 September 2017, Col 19.
[316] EJFW Committee, OR, 19 September 2017, Col 15.
[317] EJFW Committee, OR, 19 September 2017, Col 20.
[318] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-013-David_Hume_Institute.pdf

> has it monitored the success of that and how has it evaluated the programme at the end of the day.[319]

274. Diverse data was something raised by Common Weal in order to understand such economic drivers as investment behaviours, innovation practice, market reach, export patterns, quality of infrastructure, employee skills, company governance and external conditions.[320]

275. Audit Scotland emphasised the importance of "consistency of measures and to have measures that we can follow over a long period and that are not subject to changes in definition over time".[321]

276. Some witnesses connected the independence issue to voices other than that of a statistics body. Russell Gunson referred to the "ecosystem around policy making". He said—

> That involves journalists, civic society, stakeholders, thinks tanks and certainly academia. Do we need more think tanks? As a member of a think tank, I believe that the more the merrier.[322]

277. Audit Scotland made a similar point—

> …the importance of making the data as accessible as possible so that there is an ecosystem of researchers, academics and think tanks that have access to the data and can analyse it, make judgements on it and use it to inform decision making.[323]

278. The ecosystem point "surprised" Ed Humpherson on the basis he considered there to be "a strong range of organisations" in Scotland. He wondered what the benchmark was. What "excited" him – a connected point – was the talk of data produced by "a range of other actors", including enterprise and research organisations, and the suggestion of linking them in "a consistent framework". He said that "maps very well" on to the idea that UKSA's code of practice might "be adopted much more widely".[324]

279. SFC produced its first forecasts in December 2017 and stated that it "voluntarily complies as much as possible with the principles of the Code of Practice for Official Statistics". It set out how it sought to work within the framework of the code's three key pillars: Trustworthiness, Quality and Public Value.[325]

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[319] EJFW Committee, OR, 19 September 2017, Col 31.
[320] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-005-Common_Weal.pdf
[321] EJFW Committee, OR, 3 October 2017, Col 31.
[322] EJFW Committee, OR, 26 September 2017, Cols 45-46.
[323] EJFW Committee, OR, 3 October 2017, Col 36.
[324] EJFW Committee, OR, 7 November 2017, Col 21.
[325] Scotland's Economic and Fiscal Forecasts December 2017

280. Helen Martin underlined the value of "good commentary" that was "neutral and genuine". She praised ONS for providing this but discouraged "presentations that said 'This is why our policies are correct'".[326]

281. SCDI concurred, Matt Lancashire saying the commentary was "key"—

> That should be humanised so that people – SMEs and other businesses – can understand what is going on.[327]

282. Dr McIntyre stressed the need to evaluate policy and not just focus on the high level figures—

> We should therefore embed proper robust programme and policy evaluation in each policy initiative, pilot or whatever, so that we can get to the other side and say, 'Here's the impact of this'.[328]

283. RSS's Data Manifesto called on governments "to take evidence more seriously in policy formation and evaluation" and highlighted that "official statistics should be at the heart of policy debate" and "an intrinsic part" of the process.[329]

284. OSR published a review of statistics, performance measurements and targets in May 2015, the findings of which included: the practice of applying statistics to performance and targets was carried out "with mixed success"; the producers of statistics had "a crucial role" in putting performance and targets into context and informing democratic debate; and statisticians and senior policy officials should be working together "to embed statistical thinking in the development of performance measures and targets".[330]

NPF

285. Lack of discussion of the National Performance Framework was something of a gap in the evidence sessions, suggesting perhaps its limited role in informing the debate.

286. In written evidence, Common Weal saw the NPF indicators as a "presentational tool" for assessment of progress rather than a mean of offering any deeper understanding.[331] SLAED stated that the indicators were "high level" but the explanation behind any variation was often "complex and could require analysis of sub-indicators". It called for the publication of sub-indicators.[332] Common Weal

[326] EJFW Committee, OR, 24 October 2017, Col 31.
[327] EJFW Committee, OR, 24 October 2017, Col 32.
[328] EJFW Committee, OR, 3 October 2017, Col 18.
[329] RSS Data Manifesto
[330] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/UK_Statistics_Authority_-_Office_of_Statistics_Regulation.pdf
[331] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-005-Common_Weal.pdf
[332] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-008-SLAED.pdf

also argued that scrutiny of an indicator was ineffective without assessing the underlying cause of a chance.[333]

287. UKSA suggested that economic statistics could be used to better understand the Scottish Government's four key priorities (innovation, investment, inclusive growth and internationalisation).[334]

288. Audit Scotland's Gemma Diamond referred to a 2016 audit of the enterprise agencies[335] and how it had been a challenge to assess progress with the economic strategy (which links to the NPF). She said—

> We found at individual public body level – enterprise agency level – a lot of evaluation work on the impact of their spending and what difference that is making is published. However, we found that it is very difficult to aggregate the information together.[336]

Scottish Government position

289. In terms of making sense of the data, what we measure and user needs, the Cabinet Secretary told the Committee—

> I am pleased to announce that we are creating a Centre for Regional Inclusive Growth that will provide a platform to share local and national data analysis and evaluations with partners and that will help to support our policy initiatives on regional partnerships, city deals and city region deals.[337]

290. He explained the plan was "not to duplicate the wide range of local government data" on businesses and labour market but to put in place a programme "to improve the sub-Scotland statistics such as those on regional GDP and earnings".[338] Mr Brown also saw the new Data Analytical Unit, involving statisticians from the Scottish Government, SDS, Scottish Enterprise et al, as "another way to try to interrogate, improve and perhaps expand on the stats we have".[339]

291. Asked about inclusive growth and how it is understood, measured and monitored, Mr Gillespie said—

> There is no single measure of inclusive growth because it is multidimensional and it challenges you to look beyond GDP at a wider

[333] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Inquiries/EDI-005-Common_Weal.pdf
[334] EJFW Committee, OR, 7 November 2017, Col 13.
[335] http://www.audit-scotland.gov.uk/uploads/docs/report/2016/nr_160714_economic_growth.pdf
[336] EJFW Committee, OR, 3 October 2017, Col 24.
[337] EJFW Committee, OR, 14 November 2017, Col 5.
[338] EJFW Committee, OR, 14 November 2017, Col 14.
[339] EJFW Committee, OR, 14 November 2017, Col 12.

> basket of measures…who benefits from the growth, the type of growth and the access and opportunities that provides.[340]

292. The Cabinet Secretary suggested some indicators, such as the number of zero-hours contracts or percentage of people paid the living wage, can provide an "indication of inclusive growth". But he acknowledged more work was required—

> I do not think that the indicators that we have are complete enough to give us a definite picture of inclusive growth.[341]

293. He said part of that work would be undertaken by the Enterprise and Skills Strategic Board, which would have inclusive economic growth at the top of its agenda. Mr Brown also placed the issue in the context of the NPF, the "basket of indicators" of which measured "societal, environmental and economic progress and wellbeing" and a review of which was underway—

> One element of the review is aligning that set of measures with our measures of inclusive growth. Members will see that as part of the parliamentary scrutiny process in spring next year.[342]

294. The Cabinet Secretary suggested the Scotland Performs website[343] was updated in a way that was "transparent and independently assessed" and he referred to comment from the Carnegie UK Trust that the NPF framework was an "international leader in wellbeing measurement".[344]

295. Mr Gillespie explained part of the early work of the Enterprise and Skills Strategic Board was focused on "benchmarking" to assess the gap between where Scotland is (in OECD's rankings) for competitiveness and inequality and where we want to be. The "ambition" from the enterprise and skills review was to graduate from second quartile to the first.[345]

296. The Cabinet Secretary told the Committee—

> The board's role will be to push Scotland forward to the top quartile of economic performance, and it will be able to seek and to get exactly the data that it requires to support its decisions.[346]

297. He said the Scottish Government would be able to access that information as well and work would be progressed in partnership with the Data Analytical Unit.[347]

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[340] EJFW Committee, OR, 14 November 2017, Col 22.
[341] EJFW Committee, OR, 14 November 2017, Cols 22-23.
[342] EJFW Committee, OR, 14 November 2017, Col 23.
[343] http://www.gov.scot/About/Performance/scotPerforms
[344] EJFW Committee, OR, 14 November 2017, Col 6.
[345] EJFW Committee, OR, 14 November 2017, Col 24.
[346] EJFW Committee, OR, 14 November 2017, Col 7.
[347] EJFW Committee, OR, 14 November 2017, Col 7.

298. On wellbeing, Mr Gillespie reported that the Scottish Government had been working "closely" with OECD for two years and was looking at its "better life index as a potential measure. The World Economic Forum's inclusive growth index was also being considered.[348]

299. Asked about quantifying non-market activity, the Cabinet Secretary said the OECD was examining how to measure the "value of childcare to the economy" and the Scottish Government's own recent inclusive growth conference was "indicative of a growing move to measure those other areas".[349]

300. Regarding time-use surveys, an approach OECD had spoken about, Mr Gillespie said at present that data was "captured at the UK level" and there was nothing specific to Scotland. But he said the Scottish Government had spoken to Women in Scotland's Economy (WISE), based at Glasgow Caledonian University, about revisiting that kind of area "to look at the informal hours of caring".[350]

301. Asked about the links between childcare and productivity, Mr Gillespie referred to work the Scottish Government had published in 2014-15 on the economic impact of improved childcare. Childcare impacted over a range of policies, such as "wellbeing, early years and participation". He said—

> The initial driver for the childcare policy was partly to do with the fall in the participation rate in the labour market of females in Scotland compared with the rate in top quartile countries, but the benefits of such a policy obviously go much wider than that.[351]

Discussion and recommendations

302. The Committee was warned by one witness not to expect the day to come when statisticians and analysts declare they have enough data. The key questions were "*how much will it cost?"* and "*if we had it, what could we do differently*?" A cost-benefit analysis in other words. Another question, put by 4-Consulting's Richard Marsh, was "*if we started from scratch, what would we measure to help us make good decisions about how to grow Scotland's economy"?*

303. The Bean Review called for a fundamental review. It encouraged facing up to current limitations, showing agility in response to the changing economy, refocusing of the culture to better meet user needs, making the most of existing and new sources and technologies, improving how we understand and interrogate data, and strengthening governance to support the production of high-quality economic statistics. Such strategic aims should be at the heart of our approach.

[348] EJFW Committee, OR, 14 November 2017, Cols 24-25.
[349] EJFW Committee, OR, 14 November 2017, Col 29.
[350] EJFW Committee, OR, 14 November 2017, Col 29.
[351] EJFW Committee, OR, 14 November 2017, Col 30.

304. The Committee welcomes the Scottish Government's announcement of a new Data Analytical Unit (an outcome of phase 2 of the enterprise and skills review which reported in June 2017) and ask to be kept informed of its progress in terms of establishing the unit, budget and staffing, work planning and prioritisation etc. We welcome too the Cabinet Secretary's announcement to the Committee on 14 November 2017 that a Centre for Regional Inclusive Growth would be set up. We ask for updates on that initiative as well.

305. The Scottish Government has acknowledged there is room for improving how we measure the performance of the economy and evaluate the impact of the enterprise agencies. The Data Analytical Unit is intended to improve the coordination of analytical resources across the Scottish Government and the agencies, and to inform the decision making of the Enterprise and Skills Strategic Board (established following phase 1 of the enterprise and skills review). The Centre for Regional Inclusive Growth is planned as a data platform for sharing analysis and evaluations for the benefit of those working in support of regional partnerships, City Deals and City Region Deals. The Committee will return to the work of the Strategic Board itself when that body has had a chance to bed in and identify its strategic direction.

306. It is clear that were we starting from scratch with a plan to configure Scottish economic statistics we would not seek to replicate the current statistical framework and scale of operation at the UK level. The level of resources required would simply not be realistic. What would be welcome, though, is a robust and independent analysis of Scotland's particular data needs in order to identify both what is essential from what is desirable and what is useful from what we may be doing out of habit. The Committee proposes that the Enterprise and Skills Strategic Board would be best placed to consider such an undertaking and – if the Board did not consider itself the most appropriate body and nor did it wish to instruct the new Data Analytical Unit to carry it out – to commission that piece of work.

307. Data can be crucial to understanding whether a policy – via legislation or other intervention – has had its intended effect. RSS called for official statistics to be at the heart of policy making, an intrinsic part of that process. OSR judged the success of applying statistics to performance measurements and targets to have been mixed, but maintained the role of statisticians was crucial in putting figures into context and informing the democratic debate.

308. The importance of the culture in which UK statistics operates was underlined by the Bean Review. ONS and others in the field were challenged to be more intellectually curious, open and self-critical in their approach; not a factory approach, focused on getting the numbers out, especially if some of what was being measured may have ceased to be much use. The

Committee encourages the Scottish Government to reflect on the review's recommendation – not to see this as a matter only for ONS and others at the UK level – and to consider how well its own culture matches up to the call for a more agile, imaginative and ambitious approach, one better focused on and in tune with user needs.

309. Data ought to serve the common good. The David Hume Institute, Aberdeen & Grampian Chamber of Commerce and Scottish Chambers of Commerce, SCDI and Highlands and Islands Enterprise – all users and consumers of economic statistics – called for what was measured and presented to be more tailored towards the making or scrutinising of public policy. Addressing the needs of the data user in this way, taking a more bespoke approach, could bring targets and data closer, improve priority setting and allocation of resources, and enhance transparency when it comes to assessing the impact of policy interventions.

310. The Committee was told of the difficulty, for example, in understanding the difference made by the Small Business Bonus Scheme and to what extent it had played a part in new businesses starting up or the survival of existing small businesses. We heard too of the challenges in quantifying the impact of increased the hours of free childcare, perhaps due to that measure being a hybrid of economic and wellbeing policy drivers. Air Departure Tax was also brought into the discussion. The answer, it was suggested, was to have clearly defined measures set out alongside each policy initiative or bill from the outset. This might not be appropriate in the case of every policy intervention, but the Committee believes the onus should be on publishing key indicators, a timetable and the expected cost of evaluation alongside the policy; and, if not, setting out the reasons why.

311. We note that the importance of pre- and post-legislative scrutiny was something highlighted by the Commission on Parliamentary Reform (which reported on 20 June 2017). As part of its proposed five-stage legislative process, the Commission called for accompanying documents published alongside bills to include "key outcome measures which will enable the success of any legislation to be assessed".[352]

312. We ask the Scottish Government to examine the means by which it could embed monitoring and evaluation into its bills and other policy interventions; and to provide the Committee with a summary of a recent example (or examples) of how and to what extent it has taken a statistical approach in the development of performance measures and targets pertaining to its economic policy.

[352] https://test123582.files.wordpress.com/2016/10/commissiononparliamentaryreformreport-june20171.pdf

313. A user need highlighted by Women's Enterprise Scotland was the poor availability of gender-disaggregated data at both Scottish and the UK level. The information was there, we were told; the question was how to access it. In our preceding inquiry, *No Small Change: The Economic Potential Of Closing The Gender Pay Gap*[353], we recommended the development of a suite of indicators to measure the underlying causes of the gap. Following the initial response to that report from the Scottish Government and further information in budget-related correspondence concerning its Gender Index Working Paper – aimed at improving Scotland's evidence base on gender and exploring the development of domains and statistical indicators designed to aid policy making – the Committee asks to be kept updated as that work progresses.

314. Women's Enterprise Scotland also addressed the issue of inclusive growth, one of the "four i-s" of the Scottish Government's Economic Strategy (along with innovation, investment and internationalisation). They said "*if we cannot measure it, we certainly cannot change it".* Other witnesses were similarly sceptical about how we get to grips with the concept – there being no commonly accepted definition – before we can even begin to address the matter of how to measure or pursue it as a priority of the Economic Strategy. They drew attention to the lack of information on such aspects of inclusive growth as non-market activities, regional economic indicators, earnings, employment opportunities and household incomes.

315. The question of the validity of trying to gauge economic performance, or other aspects such as inclusive growth, by a single measure was addressed by many of the organisations we heard from. Green budgets and wellbeing were among the alternatives to GDP proposed. OECD told us of its long-term work in measuring wellbeing, having identified 11 dimensions and a set of indicators that covered the household or individual level, different income levels, and outcomes rather than outputs or inputs. The organisation spoke to us about "time-use", a measure whereby people recorded the time that they spend each day on such non-market activities as childcare, cooking, voluntary work etc. The information was then combined with a 'price' in terms of the opportunity cost to that person so as to give a 'value added' measure; an approach that can boost GDP by between 25% and 40%.

316. The Committee was encouraged to hear of the Scottish Government's work on inclusive growth with OECD on the better life index and its consideration of the World Economic Forum's inclusive growth index. That work now needs to progress. A renewed impetus – including perhaps the design of new statistics – is needed and – in the interests of its statisticians heeding

[353] http://www.scottish.parliament.uk/S5_EconomyJobsFairWork/Reports/EJFWS052017R06.pdf

the Bean directive to be curious, open and focused on user-needs – consideration of alternative ways of assessing our socio-economic standing (e.g. time-use) would be entirely credible lines of inquiry. We recommend such work be developed by the Scottish Government within a more consistent statistical framework for capturing inclusive growth and set out in a regular quarterly or bi-annual publication.

317. We reflect on the observation made by various witnesses, including the UK Statistics Authority, as to the range of organisations in Scotland producing, analysing or presenting statistics – covering the likes of enterprise agencies, think tanks, universities, the third sector and business membership organisations (in the case of SCDI). There may be potential here to augment or complement what the Scottish Government and ONS produce data-wise. The question arises, though, of how to ensure quality, consistency and credibility. One model we believe worth highlighting is the one adhered to by SFC, which voluntarily seeks to comply with UKSA's Code of Practice. The Committee would encourage all bodies providing economic statistics in Scotland to consider such an approach, specifying the extent to which they adhere to the Code of Practice – including whether they speak to the Government Statistical Service to help ensure professional standards are met and maintained – and, if not, what other measures they have in place.

318. The National Performance Framework was covered to a degree during the Committee's inquiry, but what came back evidence-wise was limited. One think tank labelled the NPF a "presentational tool" for assessing progress rather than providing any deeper understanding. Another view was that the indicators were high level but made it difficult to understand possible underlying causes. UKSA suggested economic statistics could be used to better assess the Scottsh Government's four key priorities (the four i-s). The Committee will come back to the question of the NPF – a decade on from its introduction – as part of our inquiry into Scotland's economic performance.

319. The level of awareness and understanding of economic data – among journalists, the public and politicians – was a matter raised by John McLaren. In his view the lack of appreciation of the importance and relevance of economic statistics was the biggest impediment to improving their quality. The Royal Statistical Society in its Data Manifesto (republished in 2016) suggested "skilling up the nation" to prepare for the digital economy; calling on the UK Government to recognise the value of data and importance of being data-literate for our education, democratic engagement and day-to-day decision-making at work and at home.

320. The growth of data collected by technology now plays a huge part in the economy and in our personal lives. Little goes unrecorded in the digital sphere. Numbers are everywhere but how much understanding have we of the data swirling around us? The Committee notes the Chief Statistician's

remarks about work undertaken with media organisations to build up their understanding and ability to use data and present it in a balanced and correct way. OSR told us there will be things the public is interested in that experts are not and vice versa but both must be catered for. We ask the Scottish Government to consider how it could further encourage – even champion – a better awareness of economic statistics among policy makers and the media and to look at ways of improving public understanding.

Next steps

> *By a small sample, we may judge the whole piece.*
>
> Cervantes

321. The quest to improve the quality and coverage of Scotland's economic statistics is far from quixotic. This is about calculation over speculation. Not that the imagination is entirely dismissed. The Bean Review impressed on statisticians the need to be more open and creative in order to keep pace with economic developments and respond to the changing needs of data users. A culture of "continual curiosity" was encouraged; one in which you asked questions, collaborated with others, and sought to better understand how your statistics were used.

322. Collaboration was a recurring theme in the Committee's inquiry. We need more of it. Between the Scottish Government and Office for National Statistics. Between central government and local government. Between public sector and private sector. The principle must be put into practice if our statisticians are to be more than just "scavengers" picking over UK-level data.

323. The Bean Review invited a fundamental rethink of how we collect, present and interpret data. This may seem like a niche topic to some people but it shapes decision making in government, in business, in social policy, in the press, and in the public mind.

324. A lot of onus has been put on greater use of administrative data and the potential of the DEA 2017 – in particular access to HMRC data. The role of ONS is absolutely key here and data sharing agreements will be crucial.

325. So how do we improve our data? This report makes 29 recommendations, most of them directed at the Scottish Government, others for SFC, ONS and HMRC.

326. The inquiry took evidence in writing and in person from data producers, users, consumers and regulators, not to mention economists, statisticians, researchers, commentators, auditors, planners, public servants, economic and statistical advisers and a Cabinet Secretary. The Committee thanks all our witnesses for their contributions and for their continual curiosity.

327. Our recommendations are summarised below.

Conclusions

For the Scottish Government—

- Make economic statistical quality a priority;
- Present future annual Scottish Economic Statistics Plans to the Committee;
- Prioritise boosting coverage and quality of four key areas:
    - Earnings
    - Trade (exports and imports)
    - Price index for Scotland
    - Better regional – and even smaller level – economic statistics;
- Continue to improve the timeliness of key indicators e.g. accelerate publication of GDP;
- Explore with ONS, HMRC and others what is achievable, by who and at what cost, and develop a detailed plan of how gaps can be filled;
- Explore how to address the matter of UK-wide companies not having to report specifically on their activities in Scotland;
- Explore all possibilities for improving coverage and quality through data sharing agreements;
- Reflect on the lack of a single website or portal to bring the most up-to-date economic data for Scotland together in one place;
- Outline current and planned allocation of resources for data provision and statistical analysis;
- Keep the Committee informed of the progress and work of the new Data Analytical Unit in terms of establishing the unit, budget and staffing, work planning and prioritisation etc.;
- Likewise the progress of the Centre for Regional Inclusive Growth;
- Undertake a feasibility study to assess the practicalities and costs and consider the pros and cons of greater independence for the production of economic statistics in Scotland;
- End PRA to economic statistics which are market sensitive – including Scottish GDP, the Retail Sales Index for Scotland (RSIS), Quarterly National Accounts Scotland (QNAS) and Government Expenditure and Revenues (GERS) – and set out how it will do so;

- Prioritise the statistical needs of SFC (where it can collect the data and work with ONS/HMRC/others where it cannot) and set out what it will do to address any gaps;

- Look into the matter of public bodies such as SFC paying for data from other public agencies and how the cost might then be shared between those bodies acquiring the data and protocols put in place for distribution;

- Examine the means by which it could embed monitoring and evaluation into bills and other policy interventions and provide the Committee with an example (or examples) of how and to what extent it has taken a statistical approach in the development of performance measures and targets pertaining to its economic policy;

- Reflect on how its own working culture matches up to the requirement of the Bean Review for ONS to be focused on user needs;

- Update the Committee on the recommendation from the EJFW Committee's Gender Pay Gap report to develop a suite of indicators, particularly progress of the equality evidence base;

- Renew impetus in measurement of social inclusion – including consideration of new or alternative statistics;

- Develop these within a statistical framework set out in a regular quarterly or bi-annual publication;

- Consider how it can champion a better awareness and understanding of economic statistics for policy makers, journalists and the public.

For ONS—

- Prioritise boosting coverage and quality of four key areas:
    - Earnings
    - Trade (exports and imports)
    - Price index for Scotland
    - Better regional – and even smaller level – economic statistics;

- Explore further with the EJFW Committee how its engagement with the Scottish Parliament – and accountability via UKSA – can be made stronger, more systematic and meaningful in the interests of Scotland's statistical needs;

- Explore how to address the matter of UK-wide companies not having to report specifically on their activities in Scotland;

- Explore all possibilities for improving coverage and quality through data sharing agreements;

- Provide assurances that Scotland's statistical needs will be guaranteed to be given full consideration and factored into decision making and allocation of resources for current and future work;

- At the same time as publishing UK labour market data, issue a separate statistical release providing the key numbers for Scotland.

For HMRC—

- Explore how to address the matter of UK-wide companies not having to report specifically on their activities in Scotland;

- Explore all possibilities for improving coverage and quality through data sharing agreements;

- Provide assurances that Scotland's statistical needs will be guaranteed to be given full consideration and factored into decision making and allocation of resources for current and future work.

For the SFC—

- Annually set out its statistical needs.

For the Enterprise and Skills Strategic Board (through the Scottish Government)—

- Undertake (or commission) a robust, independent analysis of Scotland's data needs.

For all other bodies providing economic statistics in Scotland (whether enterprise agencies, think tanks, universities, the third sector or business membership organisations)—

- Specify the extent to which they adhere to UKSA's Code of Practice – including whether they speak to GSS to help ensure professional standards are met and maintained – and, if not, other measures they have in place.

Annexe A

GLOSSARY

Acronyms used in the report—

ABS - Annual Business Survey
AGCC - Aberdeen and Grampian Chamber of Commerce
AGD - Ayrshire Growth Deal
APS - Annual Population Survey
AWE - Average Weekly Earnings measure
BRES - Business Register and Employment Survey
DEA 2017 - Digital Economy Act 2017
DHI - David Hume Institute
DWP - Department for Work and Pensions
ESCOE - Economic Statistics Centre of Excellence
ESRC - Economic and Social Research Council
ESS - Export Statistics Scotland
FAI - Fraser of Allander Institute
FDI - Foreign Direct Investment
FRS - Family Resource Survey
GDHI - Gross Disposable Household Income
GDP - Gross Domestic Product
GERS - Government Expenditure and Revenue Scotland
GNI - Gross National Income
GSS - Government Statistical Service
GVA - Gross Value Added
HFS - Homes for Scotland
HIE - Highlands and Islands Enterprise
HMRC - Her Majesty's Revenue and Customs
IAC - Inter-Administration Committee
IFS - Institute of Fiscal Studies
IODS - Institute of Directors Scotland
IPPRS - IPPR Scotland
ISD Scotland - Information Services Division
LBBT - Land and Buildings Transaction Tax

NAC - North Ayrshire Council

NDPB - Non-departmental public body

NISRA - Northern Ireland Statistics and Research Agency

NLC - North Lanarkshire Council

NPF - National Performance Framework

OBR - Office for Budget Responsibility

OECD - Organisation for Economic Co-operation and Development

ONS - Office for National Statistics

OSR - Office for Statistics Regulation

QNAS - Quarterly National Accounts Scotland

RES - Royal Economic Society

ROS - Registers of Scotland

RSIS - Retail Sales Index for Scotland

RSS - Royal Statistical Society

SCC - Scottish Chambers of Commerce

SCDI - Scottish Council for Development & Industry

SDS - Skills Development Scotland

SE - Scottish Enterprise

SESCG - Scottish Economic Statistics Consultation Group

SFC - Scottish Fiscal Commission

SIMD - Scottish Index of Multiple Deprivation

SLAED - Scottish Local Authorities Economic Development Group

SPHO - Scottish Public Health Observatory

SPICe - Scottish Parliament Information Centre

STUC - Scottish Trades Union Congress

UKSA - UK Statistics Authority

WES - Women's Enterprise Scotland

WISE - Women in Scotland's Economy

Annexe B

Extracts from the minutes of the Economy, Jobs and Fair Work Committee and associated written and supplementary evidence

21st Meeting, Tuesday 27 June 2017
Economic Data (in private): The Committee considered a list of candidates and agreed a candidate for appointment.

23rd Meeting, Tuesday 19 September 2017
2. Economic Data: The Committee took evidence from—
Margaret Cuthbert;
John McLaren, Scottish Trends;
Richard Marsh, Director, 4-Consulting;
Professor Catia Montagna, Chair in Economics, University of Aberdeen;
Professor Richard Murphy, Director, Tax Research UK.
3. Economic Data (in private): The Committee considered evidence heard at today's meeting.

Written Evidence

- Margaret Cuthbert
- Catia Montagna
- Professor Richard Murphy
- 4-Consulting
- John McLaren

Supplementary Evidence

- Margaret Cuthbert

24th Meeting, Tuesday 26 September 2017
2. Economic Data: The Committee took evidence from—
Rebecca Riley, Director, Economic Statistics Centre of Excellence (ESCOE);
Martin Weale, Royal Statistical Society;
Professor Campbell Leith, Royal Economic Society;
Russell Gunson, Director, IPPR Scotland;
Ghill Donald, Member of Economic Advisory Group, Reform Scotland;
Craig Dalzell, Head of Research, Common Weal;
Graeme Maxton, Secretary General, Club of Rome.

Ash Denham declared that she had previously worked for Common Weal.
3. Economic Data (in private): The Committee considered the evidence heard at today's meeting.

Written Evidence

- Royal Statistical Society
- Common Weal

26th Meeting, Tuesday 24 October 2017
4. Economic Data: The Committee took evidence from—
Matt Lancashire, Director of Policy, Scottish Council for Development & Industry (SCDI)
David Watt, Executive Director, Institute of Directors Scotland;
Helen Martin, Assistant General Secretary, STUC;
Carolyn Currie, Chief Operating Officer, Women's Enterprise Scotland.
5. Economic Data (in private): The Committee considered the evidence heard at today's meeting.

27th Meeting, Tuesday 31 October 2017
4. Economic Data: The Committee took evidence from—
David Wilson, Commissioner, John Ireland, Chief Executive, and Mairi Spowage, Deputy Chief Executive, Scottish Fiscal Commission.
5. Economic Data (in private): The Committee took evidence by video conference from Paul Schreyer, Deputy Chief Statistician, OECD, and considered the evidence heard at today's meeting.

28th Meeting, Tuesday 07 November 2017
3. Economic Data: The Committee took evidence from—
Sir Charles Bean, Budget Responsibility Committee, Office for Budget Responsibility;
Ed Humpherson, Director General for Regulation, UK Statistics Authority;
Jonathan Athow, Deputy National Statistician and Director General for Economic Statistics, Office for National Statistics.
4. Economic Data (in private): The Committee considered the evidence heard at today's meeting.

Written Evidence

UK Statistics Authority - Office of Statistics Regulation

29th Meeting, Tuesday 14 November 2017
2. Economic Data: The Committee took evidence from—
Keith Brown, Cabinet Secretary for Economy, Jobs and Fair Work, Roger Halliday, Chief Statistician and Head of Performance, Gary Gillespie, Chief Economist, and Sandy Stewart, Senior Statistician, Scottish Government.
3. Economic Data (in private): The Committee considered the evidence heard at today's meeting.

Written Evidence

Letter from the Scottish Government's Chief Statistician

32nd Meeting, Tuesday 12 December 2017
Economic Data (in private): The Committee agreed its approach to a draft report.

33rd Meeting, Tuesday 19 December 2017
Economic Data (in private): The Committee considered a draft report, various changes were agreed to, and the Committee agreed to consider a revised draft in private at a future meeting.

1st Meeting, Tuesday 9 January 2018
Economic Data (in private): The Committee considered a draft report, various changes were agreed to, and the Committee agreed to consider further revisions by email and if necessary in private at a future meeting.

4th Meeting, Tuesday 30 January 2018
Economic Data: The Committee continued consideration of the draft report. One change was proposed and decided upon (by division – see note below) and the Committee agreed its report to the Parliament.

Record of division in private:

Jackie Baillie, with input from Dean Lockhart, proposed the following text for paragraph 230. The proposal was agreed to by division: For 6 (Jackie Baillie, Kezia Dugdale, Jamie Halcro Johnston, Gordon Lindhurst, Dean Lockhart and Andy Wightman); Against 4 (Tom Arthur, Colin Beattie, Gillian Martin and John Mason); Abstentions 0.

A decade on from the Order's introduction, and in light of strong encouragement in favour of ending pre-release from a number of key witnesses to our inquiry, we believe that pre-release access to economic statistics which are market sensitive - including Scottish GDP, Retail Sales index, Quarterly National Accounts Scotland (QNAS) and Government Expenditure and Revenues (GERS) - should end; and the Scottish Government is invited to set out how it will do so.

John Mason proposed the following text for paragraph 230. The proposal was disagreed to by division: For 4 (Tom Arthur, Colin Beattie, Gillian Martin and John Mason); Against 6 (Jackie Baillie, Kezia Dugdale, Jamie Halcro Johnston, Gordon Lindhurst, Dean Lockhart and Andy Wightman); Abstentions 0.

The Committee considers that there should be a presumption against pre-release access and invites the Scottish Government to put forward arguments why pre-release access should be continued for specific statistics.

Annexe C

List of other Written Evidence

- Reform Scotland
- Aberdeen Grampian Chamber of Commerce
- Homes for Scotland
- Scottish Fiscal Commission
- SLAED
- Dr. J. R. Cuthbert
- North Ayrshire Council
- Scottish Environment LINK
- Registers of Scotland
- David Hume Institute
- Scottish Enterprise
- SCDI
- Highlands and Islands Enterprise
- Ayrshire Growth Deal, South Ayrshire Council
- Hervey Gibson
- Scottish Public Health Observatory (ScotPHO)
- North Lanarkshire Council
- Skills Development Scotland

Late Submissions

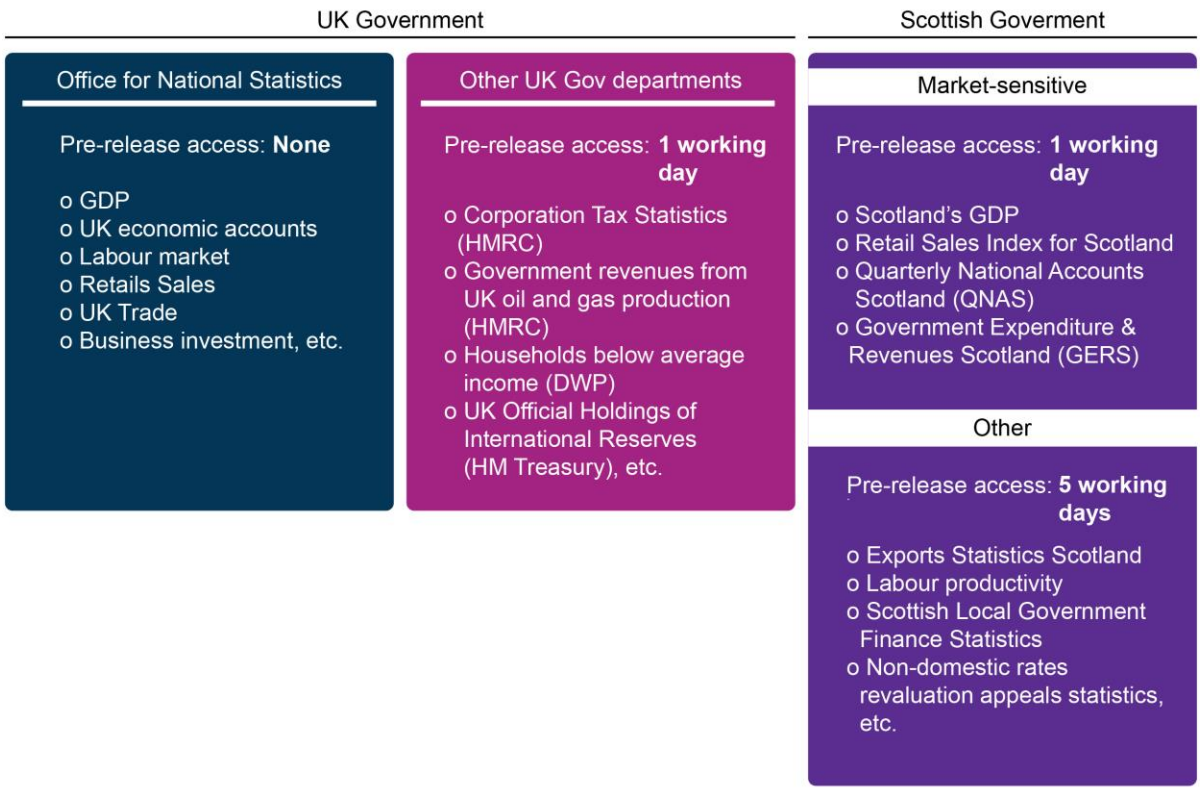
- Northern Ireland Statistics and Research Agency

Supplementary Evidence

- Role of the Office for National Statistics (ONS) in Scotland
- Role of the Bank of England Agency in Scotland
- Summary of Written Evidence
- Note of Video Conference with the Organisation for Economic Co-operation and Development

Annexe D

Pre-release Access to Official Statistics



The figure shows which economic statistics are produced by the UK Government and which by the Scottish Government, and where pre-release access (PRA) applies. Note the Pre-release Access to Official Statistics (Scotland) Order 2008 distinguishes between "market-sensitive statistics" and other "official statistics" and has a different PRA treatment for each (1 v 5 days). "Market-sensitive statistics" are defined in the Scottish order as "official statistics which when disclosed would, in the opinion of the person responsible, be reasonably likely to have a significant effect on the value or traded volume of any investment".[354] This distinction differs from the UK Pre-release Access to Official Statistics Order 2008 practice where standard PRA is a maximum of one day for all official statistics, unless in exceptional circumstances.

[354] http://www.legislation.gov.uk/ssi/2008/399/contents/made

