UK COVID-19 INQUIRY

WITNESS STATEMENT OF SARAH CUMBERS, CHIEF EXECUTIVE OF THE ROYAL STATISTICAL SOCIETY

I, Sarah Cumbers, will say as follows: -

1   Introduction

1.1.1   The RSS is a membership organisation and charity, advocating for the importance of statistics and data. The Society was founded in 1834 and is a learned society and professional body for statisticians and other data professionals in the UK and internationally. The Society has over 11,000 members in the UK and across the world. Around three quarters of the membership are UK based. As a charity, we champion the key role of statistics and data in society, and work to ensure that policy formulation and decision making are informed by evidence for the public good. Our work is both UK-wide and international.

1.1.2   The RSS is interested in areas where statistics and data can be used to inform and improve decision making in government, businesses and in everyday life. Our work is guided by our members, who identify topics where statistical thinking and data can have the most impact. These are currently: AI, education and public

1

statistics (how statistics can be produced to meet a range of user needs, including enabling users to hold governments to account).

1.1.3   The RSS is an independent organisation and is not directly funded by government. Some of our members are government statisticians or data analysts, for whom we are their professional body and a provider of continuing professional development. We seek to engage with the government to improve the way that statistics and data are used to inform decisions. There are a variety of ways in which we do this: organise roundtables with government departments to help them hear a range of views from our members; arrange for individual members to provide support or advice; and synthesise the views of our members and present that in writing or in meetings. As we have indicated in our response to Module 7 of the inquiry, the main change that we noticed during the pandemic was that – due to the pressures and constraints of managing the pandemic response – there were fewer clear pathways to engage directly with government in this manner and, as a result, we increased our engagement with the media with the aim of influencing decisions through that route.

1.1.4   During the pandemic, our work related to Covid-19 was led by the our Covid-19 Task Force. The RSS Covid-19 Task Force was proposed at a meeting of the RSS's Council on 24th March 2020, by our then-President-Elect, Sylvia Richardson. It was led by a steering group of senior members of the RSS, supported by a network of volunteers and dedicated RSS staff.[1] While the terms of reference for the task force initially included an intention to improve public understanding of the economic impact of the pandemic, the nature of the pandemic and the experience of the steering group meant that the task force's focus was squarely on epidemiological statistics. The task force was successful in building some relationships with government (in the context of a partnership with the Joint Biosecurity Centre to establish the Turing-RSS Health Data Lab and an agreement with Number 10 to enable two members to support with

---

[1] The steering group comprised: Sylvia Richardson (co-chair); David Spiegelhalter (co-chair); Sheila Bird; Simon Briscoe; Daniela de Angelis; Jon Deeks; Peter Diggle; Christl Donnelly; Scott Heald; Chris Holmes; Nicholas Jewell; Guy Nason (joined October 2020); Jennifer Rogers. Except for Guy Nason all joined the task force at its inception in April 2020 and served as members throughout the pandemic

2

communication of statistics at daily briefings) and in raising awareness of statistical issues through the media.

1.1.5 The RSS's work on government statistics (including economic statistics) is led by our Public Statistics Advisory Group[2] (PSAG) – this group's remit covers the full range of government statistics, including economic statistics. The group is chaired by our Honorary Officer for Public Statistics (currently ⟨NR⟩ whose term started in January 2021 and will run until the end of 2025; in 2020 the post was held by ⟨NR⟩. It is important that government statistics in general are well-functioning and ready to inform decisions in the context of crises such as pandemics. This is especially true of economic statistics – both because government ought to be able to make decisions informed by evidence of economic impact and also because some economic indicators can shed light on behaviour during a pandemic.

1.1.6 The RSS advocates a public statistics approach to government statistics. This means a more ambitious focus on user needs, ensuring that the public, as well as government, have access to relevant and reliable statistics. These two sets of needs often coincide, but not always – for example, when the performance of government is under scrutiny. The official statistics system has an understandable tendency to prioritise government users of statistics (ministers, their teams, other civil servants, the Bank of England) over users from outside government. This is – again, understandably – exacerbated during a period of intense crisis. It is why, in our view, the statistical system should move towards a different model of producing statistics. We set out our vision for public statistics in (SC/01 - INQ000590580) The key elements of this approach are:

- A more open and ambitious focus on user need, increasing the public good secured from statistics, including producers and users working together to better capture the value that is delivered through use of statistics.

---

[2] This group was formerly known as the National Statistics Advisory Group, but we recently (March 2025) changed the group's name. We refer to the group by its new name throughout to avoid confusion.

3

- More transparent, user and producer partnership-based approach to building an organisation's formal portfolio of statistics and to ensuring the quality of those statistics, including fitness for purpose.

- A more strategic approach to maximising the value of available data, recognising the radically changing data landscape. This should apply not only to official statistics producers but to the organisations who voluntarily sign up to the Code of Practice for Statistics and thereby contribute public statistics directly.

- Appropriate governance, especially around how the role of a UK statistical council and a full statistical programme can best be integrated into the statistical system, broadly defined.

1.1.7   These lessons are especially important in the context of economic statistics, where focusing on broad-base user need and incorporating statistics from a wide range of sources – should be the model used for improving the system and making it more robust during times of crisis.

1.1.8   There are five areas in economic statistics where we think this is especially important:

- Developing more timely economic indicators

- Addressing challenges in collection of economic statistics to make the process more robust

- Widening the number of data sets that the government statistics system has access to

- Ensuring that the statisticians and data professionals in government have the skills necessary to make use of the data

- Effective engagement to build public understanding and to help design and present economic statistics that are more readily aligned with people's lived experiences.

4

1.1.9   In this statement we make the following recommendations to government and the UK Statistics Authority to improve the economic response to a pandemic.

Recommendation 1:   *Improve and streamline research access to detailed databases and invest in research using the data, including longitudinal studies.*

Recommendation 2:   *Improve and extend user engagement – both improving the understanding of user needs and countering the tendency to be overly influenced by the needs of government.*

Recommendation 3:   *Develop more timely economic statistics by bringing together official and non-official statistics that can together provide a picture of near real-time developments.*

Recommendation 4:   *Address challenges in the production of key economic statistics to make the process more robust.*

Recommendation 5:   *Develop and improve economic statistics so that they better reflect people's actual experience, enabling better monitoring during (and after) any crisis.*

Recommendation 6:   *Initiate a process to identify the key economic questions that are likely to be of interest during a crisis and draw upon data from a wide range of sources to answer them.*

Recommendation 7:   *Ensure that the Office of National Statistics (ONS) and the Government Statistical Serve (GSS) as a whole have the necessary resources to staff themselves adequately and that those staff can develop and maintain the necessary skills and knowledge – including adaptability in the context of technological change and strengthening communication skills.*

Recommendation 8:   *Ensure that the statistical system is able to develop contingency planning where they are using administrative data and resources which they do not control.*

5

Recommendation 9: *Ensure that contingency planning includes the capacity (particularly in the ONS) to produce vital economic statistics, not just those needed by government.*

Recommendation 10: *Run a sustained campaign to increase public understanding of economic statistics that includes upskilling the statistical workforce, engaging with journalists and producing engaging material.*

2   RSS work on economic statistics during the pandemic

2.1.1   During the pandemic, the RSS did not produce any work specifically on economic statistics (with the exception of continuing the Society's long-running campaign on inflation measurement which is discussed in §4). It was also not a topic that we engaged with government in meetings. We produced one piece of work – focusing on the economic recovery from the pandemic – in July 2021, when we submitted evidence to the Treasury Select Committee inquiry into *An Equal Recovery* (SC/02 - INQ000590585).

2.1.2   Here we argued that there was a vital role for data and evidence in delivering a more equal recovery: it can enable a better understanding of the differential economic impact of the pandemic as well as providing a timely assessment of the impact of post-pandemic policy on incomes, education and skills, and wellbeing overall. We were concerned that the data infrastructure at the time was not sufficient to do this because we did not think that post-pandemic inequality can be adequately understood solely using pre-pandemic data. We argued that government needed to rethink what data it was collecting and how it was used.

2.1.3   There were three areas where we saw particular challenges:

- Data sharing. The pandemic showed the importance of being able to consider health data alongside other indicators – there were artificial barriers (caused by health data being governed by different legislation than other types of data) that prevented this and they need to be addressed. We argued that central government also needed to do more to share data with regional and local

6

authorities: giving local and regionally-based policy-makers information that they can act on in a more timely manner.

- Collecting the right data. There were societal changes as a result of the pandemic that we did not then have data about (and, for the most part, we still do not) – this prevents us understanding the extent of issues and being able to assess the impact of policy interventions to address them. The increase in homeworking and the impact of the pandemic on young people, ethnic minority groups and disabled people are all areas where more information was (and still is) required.

- Reassessing economic measures. While reassessing the types of data that are needed to assess the post-pandemic recovery, there was also an opportunity to think more broadly about how we measure the recovery: namely, rather than thinking about the recovery using GDP as the single indicator of growth there is an opportunity to move towards wider measures of sustainable wellbeing using data from a diversity of sources. Since this time, the ONS has started publishing a suite of wellbeing measures (Beyond GDP) – but there remains scope for them to be more effectively used in policy making.

2.1.4   We made five recommendations to address these challenges: First that legislation should be introduced to ensure that research access to deidentified unit record, survey and administrative data on health and all other data are governed by a single set of rules and standards. Second, that further data sharing between central government and regional and local authorities should be encouraged – particularly where controlled access is required, so that problems can be proactively identified and tackled at a local level. Third, that the UKSA – working with the Treasury – should conduct a rapid review of the data that is needed to assess how equal the recovery from the pandemic is and the Treasury should invest in the new data sources required. This should be part of a comprehensive data gaps exercise, which also considers a review of classifications. Fourth that government should invest in new longitudinal studies of the young people who have been affected most by the pandemic to assess how their education and transition to work has been impacted. Fifth that when

7

assessing the equality of the recovery, measures should be identified that go beyond purely economic measures such as GDP and incorporate wider measures of wellbeing.

2.1.5   The Society was also involved in the production of *Public Understanding of Economics and Economic Statistics After the COVID-19 Pandemic* (SC/03 - INQ000590576) – a report from the Economic Statistics Centre of Excellence looking at levels of economic literacy and how economic statistics can be most effectively communicated. The RSS's contribution to this was led by Mike Hughes who was, at the time, a member of RSS's PSAG. This research showed that economic terms used during the pandemic, such as "economic inactivity", a "tight labour market", "a fall in the inflation rate", GDP, and "recession" are not widely or well understood by the public. Challenges remain in communicating economic and labour market statistics to the wider public, but there are potential solutions – we will discuss these in more detail in §7.

2.1.6   Some of the work conducted by the RSS's Covid-19 Task Force is transferable to economic statistics – particularly the work on communication of statistics and the importance of transparency. This is most effectively summarised in the evidence submitted to module one of the Inquiry (SC/04 - INQ000183421, §4.5). We emphasised the importance of the communication of statistics and data during a pandemic – highlighting that, when referring to data, transparency and clarity in government communication is vital for maintaining public confidence. Being prepared to communicate data effectively should be a core part of preparedness plans. Data and evidence underpinning policymaking must be published when decisions are announced and communication of data must be politically neutral.

Recommendation 1:   Improve and streamline research access to detailed databases and invest in research using the data, including longitudinal studies.

3   Timely economic indicators

3.1.1   A major challenge with developing economic statistics to help inform a pandemic response is that economic statistics are fundamentally retrospective. The data

8

used reflects past economic activity: indicators such as GDP, inflation, and employment figures are compiled from administrative records, surveys, and other data sources that give a good picture for a certain date in the past. This backward-looking nature makes it difficult to capture the state of the economy in real time – understanding the economy in the present requires statisticians and economists to make more use of 'near-real-time' indicators, such as energy production and traffic flows, as well as a series of assumptions based on past trends and to model the future based on past data plus certain assumptions. This means that in situations like a pandemic, when policy makers require reliable timely insights for decision-making, economic statistics naturally give a more uncertain picture of the present than other statistics – such as counts of cases or occupied hospital beds – do.

3.1.2 The process of estimating current economic conditions using past data combined with more up-to-date information is known as nowcasting. There are a few features of economic statistics that make this especially challenging:

- Data lags and revisions: Key economic indicators are often published with a lag. For instance, quarterly GDP figures may only be released weeks or months after the quarter ends, and they may be subject to revisions as more data become available. Initial estimates frequently rely on incomplete data, leading to potential inaccuracies in real-time assessments. A recent example can be seen from October 2024, when the Office of National Statistics (ONS) released its GDP revisions (SC/05 - INQ000590577): previously estimated annual volume GDP growth for 2022 had been estimated at 4.3%, but in its 2024 revisions the ONS revised this to 4.8%. This was due to a change in weightings given to healthcare and energy sectors. This is not intended to imply that there were any particular errors made in this case – rather, to highlight that this type of retrospective revision is a natural consequence of the levels of uncertainty involved and the modelling that is used. And given here that it took at least two years to get the best possible estimate for the measurement of growth in 2022, one can see the challenge with trying to make an accurate estimate at the time. Nevertheless, the ONS currently releases an estimate of the change in GDP in a month approximately six weeks after that month has ended (so estimated GDP change

9

for January 2025 was released in mid-March 2025) – this is a significant and challenging task and by-and-large the estimates are reasonable given the almost inevitable trade-off between timelines and accuracy. Provided these first monthly estimates are understood as provisional and awaiting further data - a proviso that is often ignored - they appear to be useful to policy makers.

- Reliance on proxy indicators: Because of this lag in official statistics, nowcasting requires economists and statisticians to use alternative sources such as financial market data, business surveys, and other indicators like card transactions, mobility data, satellite imagery. However, the relationship between these proxies and underlying economic activity is complicated and difficult to interpret. The challenge is to find proxy indicators that provide more insight on the present than by simply projecting the trend in the published statistics.

- Structural breaks and economic shocks: Nowcasting models are most reliable when the economy is relatively stable and historical relationships between variables are more likely to hold. When there is a pandemic people's behaviour changes (consider, for example, the difference in mobility data for 2020 compared to the previous decade), making it much harder to model the relationships between variables. It is possible that advanced techniques can be used to mitigate these issues – but the uncertainties in these projections will be hard to quantify and communicate to policy makers and the public.

- Sectoral and regional variations: The UK's economy is not monolithic: even in a more normal situation, different sectors and regions will experience varied trends that are not immediately reflected in aggregate data. This was even more true during the pandemic when sectors that relied on in-person contact slowed dramatically and other sectors were able to carry on to some extent. Proxy economic indicators often provide partial views, leading to potential misinterpretations of broader economic conditions.

3.1.3 The RSS's view is that a public statistics approach to the generation of economic statistics has the potential to tackle some of these problems. Key to improving the official statistics system's ability to nowcast is expanding the use of high frequency proxy indicators such as real-time transactions, social media

10

sentiment, and mobility tracking. Data from these sources can supplement official statistics and provide more immediate insights.

3.1.4 There is also an important role here for user engagement. We would like to see the statistics system work more closely with economists, statisticians, and data scientists to refine nowcasting techniques, drawing on interdisciplinary expertise to improve modelling. Regular engagement with users of economic statistics could also help identify gaps and weaknesses in nowcasting approaches, helping to make improvements. There is also an opportunity to encourage businesses and individuals to participate in real-time surveys or share anonymised data which could enhance the quality of input data. There are well-known challenges with economic surveys at the moment – but narrower, shorter surveys to increase intelligence about key indicators could still be effective.

3.1.5 It is encouraging to see that the ONS is publishing weekly releases of experimental statistics that are near real-time indicators of economic activity and social change (SC/06 - INQ000590575), to address the requirements for more timely data. It will be important that they continue to effectively engage with users to help develop these indicators further to improve economic nowcasting.

Recommendation 2: *Improve and extend user engagement – both improving the understanding of user needs and countering the tendency to be overly influenced by the needs of government.*

Recommendation 3: *Develop more timely economic statistics by bringing together official and non-official statistics that can together provide a picture of near real-time developments.*

4 Challenges in economic statistics

4.1.1 As suggested in the previous section, the work of measuring aspects of the economy at any given time is complicated – and it can be especially challenging in the context of a pandemic. In this section we look at particular areas of economic statistics and highlight some of the challenges posed by the pandemic.

11

These case studies help provide some insight into how the system could be better prepared for future crises.

4.2 Household Costs Indices

4.2.1 The RSS's vision for public statistics (SC/01 - INQ000590580, p.7) highlights the importance of achieving economic measures that reflect the public's experience. Currently there is a disconnect that it is important to address. This was particularly apparent during the cost of living crisis, when the dominant measure of inflation was the Consumer Prices Index (CPI). CPI is a macroeconomic measure that is designed to give a view of the change in prices across the economy as a whole – as a result it is weighted to give more emphasis to the spending of the wealthiest groups. This is entirely appropriate for CPI – given its use as a target by the Bank of England. But, in a situation where the poorest households are impacted by soaring costs, we cannot rely on CPI as a measure of how their costs have changed. This is why we were pleased when the ONS introduced quarterly figures for a new inflation measure – the household costs indices (HCIs).

4.2.2 There is a more detailed discussion of prices in the next section – here we want to emphasise the importance of having economic measures that reflect people's experience. As the inquiry makes recommendations for any changes to economic statistics – it is important that the principle that statistics should aim to reflect people's experience is front of mind.

4.3 Prices case study

4.3.1 The pressures ONS was under during the pandemic were substantial and the impacts of lockdown affected their work on economic statistics in many ways. Our first case study looks at the more traditional consumer price indices and describes a situation where ONS was largely successful in continuing to produce needed data despite many problems and at the reasons the organisation was able to do this.

12

4.3.2   Consumer price indices (particularly the Consumer Prices Index, or CPI, and the Retail Prices Index or RPI) are among the most important economic statistics. They are not just important for economic policy but their use in uprating directly affects people's incomes (eg their use in uprating pensions and benefits) and expenditure (eg uprating of rail fares, student loan repayments). They are also used for uprating in business contracts. Thus maintaining them is crucially important to the functioning of the economy and the maintenance of general welfare as well as economic policy.

4.3.3   The onset of Covid and lockdowns inevitably affected the compilation of consumer prices in ways that were both obvious and less obvious. Fortunately, ONS staff were able to rise to the challenge both in finding ways to deal with the issues and in communicating those issues, the work-arounds used and the potential impact on accuracy to users. Issues included:

- The absence of certain activities and thus price information (e.g. in- house restaurant meals, hairdressing) during lock-down so that means of imputing them had to be found

- The inability of carrying out price collection through visits to shops during lock-down so visits had to be replaced by emails, phone calls and, where possible, by on-line searching, although on-line prices can differ from in-shop prices

- Absence of certain products, and thus their price information, at times in shops due to supply issues or panic buying so that prices had to be imputed

- The knock-on effect of the temporary absence of statistics that feed into price indices. For example, the house price index, which feeds into RPI, was temporarily suspended when transactions effectively dried up early in the pandemic.

4.3.4   Distortions and gaps in information used which was not within the direct control of ONS. At the time this accounted for only a small proportion of the information

13

needed in price indices but this will not be the case in the future as more administrative data will be used in the calculation of the indices.

4.3.5   Sweeping changes in the levels and pattern of consumer expenditure raised questions over the weights used in combining items together. Normally patterns of consumer spending change only slowly, and seasonal patterns, where relevant, are well understood. But there were obvious changes during the pandemic. For example, in April 2020 the proportion of consumer spending on food was almost double the assumed weight for the year. ONS carried out additional analysis to illustrate the impact that the changes may have had on price indices.

4.3.6   The second period of movement restrictions included January 2021. This was particularly problematic as January is the base month for each year - that is the month to which prices during the next 12 months are compared.

4.3.7   Thus the pandemic caused a substantial amount of additional work and required much innovative thinking in ONS; initially this was when staff were adjusting to new ways of working themselves. Nevertheless, the organisation succeeded in producing timely estimates of the relevant price indices. It also published frequent articles to explain the impact of the pandemic and how it was dealt with and the potential impact on the data. And, finally, it compiled and published additional information to, for example, demonstrate the effects of changing patterns of consumer expenditure.

4.3.8   We can ascribe this success to, primarily, the extent and depth of knowledge within the prices division of ONS. Had the pandemic occurred a decade earlier, when the organisation was adapting to the loss of 85 to 90 percent of its formerly London-based staff following the move to Newport, the outcome might have been very different. Second, to the flexibility the organisation showed at a time when it also had to focus on providing information needed for the direct management of the pandemic. The ability to access outside technical expertise and international guidance also helped.

14

4.3.9 Inevitably there was some collateral damage. The development of Household Costs Indices (HCIs), which aim to measure inflation as households actually experience it, rather than according to economic principles, had to be put on hold. This meant that HCIs were not available during the subsequent cost of living crisis as quarterly publication only started in December 2023.

Lessons for the future

4.3.10 The ONS and the Government Statistical Service need to have the resources and staff required to respond flexibly and innovatively to any future crisis (not just another pandemic) so that essential information continues to be compiled and published

4.3.11 The ONS needs to ensure the correct balance between staff who move posts and develop broad expertise and those who wish to specialise in, and thus develop a deep knowledge of, a particular area.

4.3.12 The replacement of survey data by administrative data outside the direct control of ONS will bring dangers since ONS will not have the control to make needed changes – and the changes needed by ONS could potentially conflict with other aims the data concerned needs to meet. Good relations with the owners of the particular dataset, and a wide appreciation generally of the importance of key statistics, are the only way to mitigate this potential danger.

4.4 Rethinking the economy case study

4.4.1 A revision to the UN System of National Accounts (SNA), in which GDP and other macro-economic statistics are defined, has been under consideration internationally within the national accounts community for a number of years. Although there has been some consultation by the UN, this appears to have been largely limited to the established community of interest. To recognise the wider interest in having and using measures of economic growth and societal progress, the RSS was pleased to work with ONS on a series of 'Beyond GDP' events during 2023. These attracted a lot of interest. However, apart from occasional

15

blogs on specific developments, subsequent user and potential user engagement on revising the SNA was not sustained by the ONS..

4.4.2   Then, in a speech made in the Summer of 2024, reported on the UKSA website, Sir Robert Chote welcomed the 2025 version of SNA, and we know this is now proceeding through the UN Statistics Commission towards publication later in 2025. This seems to us to be missing the opportunity for people, communities, and businesses to be engaged in a wider discussion of economic growth and societal progress, especially as Net Domestic Product (including taking account of resource depletion) is now being mooted as one of a suite of headline measures from SNA 2025.

Recommendation 4:   Address challenges in the production of key economic statistics to make the process more robust.

Recommendation 5:   Develop and improve economic statistics so that they better reflect people's actual experience, enabling better monitoring during (and after) any crisis.

5   Widening data

5.1.1   As we have indicated in §3, in economics there is a specific challenge in developing near real-time forecasting. Part of the answer to that challenge must involve the identification of new data sources that can help shed light on the key economic questions where timely information is required. We would advocate a process that begins by identifying the economic questions that it would be helpful for the statistical system to be able to provide timely answers to – both in normal time and in times of crisis.

5.1.2   When these questions have been identified, the statistical system should be tasked with identifying the data that is needed in order to answer them. There is a range of different types of data that could be drawn upon: official data (that is data generated by government departments) that is not currently used in the production of economic statistics, market research, commercial data generated by the private sector and academic research studies. This approach would build

16

on the success of the recent Statistical Assembly and provide a process that would widen the types of data used in economic statistics and ensure that they are prepared for times of crisis.

5.1.3   Accessing any additional datasets could be challenging. Efforts in this respect could be linked to the development of a National Data Library (NDL), which could bring with it a greater sense of national data stewardship. We would hope that work on the NDL would also lead to improved pipelines for easier but still secure access to data for statistical analysis and research. It may also be necessary in the longer-term to review the statutory basis for ONS to acquire and use data.

Recommendation 6:   Initiate a process to identify the key economic questions that are likely to be of interest during a crisis and draw upon data from a wide range of sources to answer them.

6   Skills

6.1.1   The changes that we have set out so far, require us to think about the statistical workforce and the skills that a modern statistical system need to be developing. The RSS has recently been working with the Government Statistical System to think about this and to build a shared understanding of the skills needed for future statisticians. In this section we summarise a report from a roundtable that we organised with the GSS to discuss this topic (SC/07 - INQ000590586).

6.1.2   As should be clear from the discussion of nowcasting, a key set of skills needed for modern statisticians are data integration and advanced analysis skills. It is important that statisticians are able to synthesise diverse data sources: professionals must be capable of integrating administrative records, survey data, and high-frequency real-time indicators (such as digital transactions and mobility data) to enrich traditional economic measures.

6.1.3   Advanced analytical techniques will become more important too. This might mean mastery of machine learning, Bayesian nowcasting, and other cutting-edge methods to help process large, heterogeneous datasets. Proficiency in programming languages and modern statistical software is essential. As

17

automation and AI become more prevalent as tools to help improve statistical outputs, statisticians and data scientists must strengthen skills in quality assurance: they will need to implement rigorous quality control measures to ensure the reliability of outputs.

6.1.4   A second key set of skills relate to communication – especially in the context of uncertainty. The ability to translate complex analyses into accessible, policy-relevant insights is critical. This includes articulating inherent uncertainty and explaining what trade-offs were made in reaching conclusions. User engagement is vital -- continuous interaction with policymakers, experts, and the broader public ensures that statistical outputs are aligned with user needs and build trust in data-driven insights. Communication needs to vary depending on the audience: decision-makers need a different type of information to the broader public. We give more detail in the context of public understanding in §7.

6.1.5   A final set of skills relates to ethical, transparent, and collaborative practices. As data is increasingly used to inform decisions in government, it is important that there is an emphasis on upholding the highest ethical standards by ensuring transparency in methodologies and documenting data processes. This – along with clear communication – is fundamental to building public trust. As statistics, data science and policy analysis converge, the capacity to work across disciplines is increasingly vital. Collaborative skills will support innovative solutions and foster integrated approaches to complex challenges.

6.1.6   It is important that there is an emphasis on supporting the workforce to develop these skills. This could be done by modernising existing training curriculums to cover both traditional statistical methods and contemporary data science techniques. This should include hands-on modules in real-time data integration, machine learning, and uncertainty communication, ensuring that the workforce is prepared for rapid technological change. The government should also look to develop robust CPD initiatives to provide ongoing learning opportunities through workshops, seminars, and collaborative projects with academic and industry partners. These programs will help professionals stay abreast of emerging

technologies and methodologies. There is also room to encourage collaboration between government agencies, academic institutions, and private sector experts.

6.1.7   We look at communication in a bit more detail in the next section, but – from the perspective of improving statistician's skills in this area – we would like to see the provision of training that focuses on effective communication skills. Statisticians should learn to clearly present complex findings, articulate uncertainty, and tailor their messages to both technical and non-technical audiences. This is especially important in economic statistics where statistics are routinely revised and there is a lack of understanding of the uncertainties involved.

Recommendation 7:   Ensure that the Office of National Statistics (ONS) and the Government Statistical Serve (GSS) as a whole have the necessary resources to staff themselves adequately and that those staff can develop and maintain the necessary skills and knowledge – including adaptability in the context of technological change and strengthening communication skills.

Recommendation 8:   Ensure that the statistical system is able to develop contingency planning where they are using administrative data and resources which they do not control.

Recommendation 9:   Ensure that contingency planning includes the capacity (particularly in the ONS) to produce vital economic statistics, not just those needed by government.

7   Public understanding and engagement

7.1.1   A key strategic goal for the RSS is to improve public understanding of statistics. With the uptake in AI and prevalence of social media and algorithms, data is becoming an increasingly important part of people's lives and we believe that it is of utmost importance that the wider public to have sufficient statistical and data literacy to act as informed citizens. Part of the RSS's charitable work is directed towards this goal: we seek to improve the teaching of statistics across school curriculums; we produce explainers (SC/08 - INQ000590581; SC/09 -

19

INQ000590582) and guides to official statistics (SC/10 - INQ000590583); we have sought to explain some economic concepts in simple terms (SC/11 - INQ000590584); our William Guy Lecturers provide accessible talks for school age children; and, we engage with key professions to improve levels of statistical literacy (eg, the legal system and journalists).

7.1.2   As mentioned in §2, we also had a member involved in producing ESCoE's report looking at levels of economic literacy and how economic statistics can be most effectively communicated (SC/03 - INQ000590576). This report highlighted significant gaps in public comprehension of key economic indicators, and emphasised the need for target.

7.1.3   The research was conducted via surveys and focus groups and it found that many individuals struggle to grasp fundamental economic concepts. A number of reasons for this were identified: the language used to discuss economic concepts is too technical, statistics can be misinterpreted, and there is a lack of accessible explanations in public discourse. There were four areas where particular challenges were identified.

7.1.4   First, there were a number of misconceptions around inflation statistics. While awareness of inflation has increased (and this was research conducted before the cost of living crisis, so awareness may have increased further since), there is widespread misunderstanding about its implications. For example, many people interpret reports of a "fall in the inflation rate" as meaning that prices are decreasing, rather than rising more slowly. This misunderstanding can create distrust in official statistics when personal experiences – such as noticing continued price increases at supermarkets – do not align with their expectations.

7.1.5   Second, labour market concepts such as "economic inactivity" and a "tight labour market" are not widely understood. The public often sees employment status in binary terms – someone is either employed or unemployed – without recognising that many people fall into other categories, such as those who are not actively seeking work due to retirement, education, or long-term illness. As a result, when official unemployment rates appear low, people may not realise that this does not necessarily reflect job security or wage growth for workers. Moreover, the phrase

20

'economic inactivity' does not reflect that people without paid employment, or seeking it, will inevitably be integral to the economy, whether as consumers, investors, or as unpaid carers or volunteers. The conceptual basis of economic statistics has not kept pace with contemporary society.

7.1.6   Public understanding of GDP is limited, with less than half of the population able to accurately define it or explain what constitutes a recession. Many people believe that GDP represents national wealth rather than economic output. Furthermore, there is confusion over what a "technical recession" means and how economic contractions affect their daily lives. This lack of understanding can lead to misperceptions about the state of the economy and the effectiveness of government policy.

7.1.7   Due to misinterpretations and the complexity of economic indicators, many members of the public express scepticism toward economic official statistics. They may perceive economic data as being disconnected from their lived experiences or assume that figures are manipulated for political purposes. This scepticism is compounded by inconsistent reporting in the media, where economic data is sometimes framed in ways that reinforce misconceptions rather than clarifying them.

7.1.8   Bridging these gaps and building public understanding requires sustained public engagement from the government. Part of the answer, as detailed in the previous section, is about building the skills of the statistical workforce and creating a change in culture that sees explanation as a key part of the statistical toolkit. This should lead to an increase in the use of plain language and relatable examples when presenting economic data. For instance, instead of stating that the "inflation rate has fallen," clarify that "prices are still increasing, but at a slower pace". Providing context for key figures, such as what a certain inflation rate means for the average household budget, can also help make statistics more meaningful. This will help, but there is more that could be done.

7.1.9   Government statisticians could work more closely with media outlets to ensure accurate and accessible reporting of economic statistics. Providing journalists

21

with clear guidelines, fact sheets, and training sessions can help them convey complex data more effectively and avoid misleading interpretations.

7.1.10 Engaging materials that explain economic concepts, tailored to different demographics, would also help. This could include interactive online platforms, explainer videos, and school programs that introduce economic literacy early on. Public institutions could also work with community groups to improve financial and economic literacy among adults. The ONS has produced some good and informative online tools in recent years and it would be positive to see this built on.

7.1.11 Our view is that user engagement is critically important and that the statistical system should be ambitious in this regard. We would like to see an increase in the involvement of citizens in discussions about economic policies and statistics through public consultations, town halls, and surveys. Encouraging dialogue on how statistics are collected and used can foster trust and increase engagement with economic data.

Recommendation 10: .Runa sustained campaign to increase public understanding of economic statistics that includes upskilling the statistical workforce, engaging with journalists and producing engaging material.

8   Statement of Truth

I believe that the facts stated in this witness statement are true. I understand that proceedings may be brought against anyone who makes, or causes to be made, a false statement in a document verified by a statement of truth without an honest belief of its truth.

> **Personal Data**

Signed: _____

Dated: _____25/04/25_____

22