

Scotland's Census 2021 Income Topic Report

Table of Contents

1. Main Points	3
2. Introduction	4
3. Background	5
4. Understanding user need	5
5. Alternative sources	6
5.1 Family Resources Survey	6
5.2 Population surveys in Scotland	7
5.3 Synthetic income estimates	8
5.4 Scottish Index of Multiple Deprivation (SIMD)	8
5.5 Income estimates from administrative data sets	8
6. Question testing.....	9
6.1 Cognitive testing	9
6.2 Quantitative testing	12
7. Next Steps	14
Annex A: Results of cognitive testing	15
Annex B: Quantitative testing results.....	24

1. Main Points

- Information about income has not previously been collected in the census, in Scotland.
- The Topic Consultation identified considerable user need for information on income. It noted further work was needed to understand whether the census was the most appropriate source for this information.
- For the household income question, views on acceptability were mixed which impacted on non-response and data quality.
- Research and analysis does not support taking a question on income further at this stage.

2. Introduction

This topic review sets out the evidence gathered in developing an income question for Scotland's Census 2021.

Question development for the 2021 Census began in 2015. An iterative and comprehensive process of user consultation, evaluation and prioritisation of user requirements, and qualitative and quantitative question testing has been carried out to inform decisions on the questions to be recommended for inclusion in the 2021 Census. More information about [research and preparation](#) and [question development](#) for Scotland's Census 2021 can be found online.

The 2021 Census will be digital first. The Census 2021 questionnaire must gather high quality data that meets user needs. More information about [key elements of the design](#) for 2021 can be found online.

Two frameworks have been published by National Records of Scotland (NRS) to evaluate the effectiveness of [question design for existing, alternative and new questions](#) (PDF) and to evaluate the effectiveness of [question design of tick box response options](#) (PDF).

Questions and their response options are evaluated against five main themes:

Strength of user need

- ✓ Data collected by the census must meet a user need for equality monitoring, policy development, resource allocation and/or service planning and delivery.

Suitability of alternative sources

- ✓ Data collected by the census must meet a user need that cannot be met elsewhere.

Acceptability, clarity and data quality

- ✓ Questions asked in the census must be acceptable to the majority of the public, clear and be designed with minimal respondent burden in order to obtain good data quality that meets user needs.

Comparability

- ✓ Data collected by the census should be comparable over time where possible, and harmonised across the UK where reasonable.

Operational considerations

- ✓ Census questions must be considered as part of the census as a whole, where effective digital and paper design, space and financial constraints must be considered. Additionally, some questions may be required for operational purposes in the process of conducting the census.

The final decision on the content of Scotland's Census 2021 questionnaire will ultimately be made by the Scottish Parliament.

As in previous years, there will be separate censuses conducted by the Office for National Statistics (ONS) in England and Wales, and the Northern Ireland Statistics and Research Agency (NISRA) in Northern Ireland. The three census offices work together to develop a set of questions that, wherever possible and necessary, will deliver harmonised outputs across the UK.

3. Background

Information about income has not previously been collected in the census in Scotland. Income is a variable that users repeatedly ask to be included on the census. An income question was considered for inclusion in the 2011 census.

The General Register Office for Scotland (GROS)¹ 2006 Test noted 12% of respondents did not respond to the income question, with 2% of responses to the income question being invalid.

While 17% of respondents to the 2006 test indicated they were 'unhappy' with the inclusion of an income question, there was no difference in the completeness ratios – the inclusion of an income question made little or no difference to whether or not the rest of the questionnaire was completed.

The GROS follow-up survey noted 29% of respondents said they would be 'unhappy' about answering an income question, predominantly (72%) because it was felt to be too intrusive or personal. Only 6% responded it would be difficult to answer.

Research prior to the 2006 test showed more accurate data is obtained from an individual income question than a household income question, and that respondents were unhappy about answering a household income question on behalf of others (and therefore response rates may be a little lower for a household income question). However, a household income question takes less physical space on the questionnaires than an individual question.

Respondent burden testing for the 2011 census found, consistent with findings from testing of the income question in 2008, respondents living in unrelated households found this question very difficult to answer as they did not know what each household member earned. The report noted the data collected on income may be unreliable for these households.

[Scotland's Census 2011 Government Statement](#) included a proposal to include a household income question in Scotland's Census 2011, on the condition that further testing demonstrated that inclusion did not have a negative impact on response levels in the 2009 rehearsal.

The household income question was not included in the 2011 census.

4. Understanding user need

NRS invited views on Scotland's Census 2021 in the form of a [Topic Consultation](#) (PDF) between 08 October 2015 and 15 January 2016. The consultation was a key step towards understanding what information users will need from the census in 2021, and helped to build strong cases to justify the inclusion of topics. The focus of the consultation was on information required at topic-level, not the detail of the questions that should be asked on the questionnaire.

Following the consultation, NRS worked closely with stakeholders through follow-up events, meetings, focus groups and online surveys to gather more detailed

¹ General Register Office for Scotland (GROS) amalgamated with National Archives of Scotland to form National Records of Scotland (NRS) in 2011

information about data requirements to ensure user needs were understood. Information about these events can be found on our [Get Involved pages](#) online.

Considerable user need was identified through the consultation for the collection of information on income in 2021.

Information on income is required by central government, local government, public and private organisations and researchers for a multitude of purposes including deprivation analysis, area profiling, policy development and monitoring, service planning, and resource allocation.

Many respondents to the Topic Consultation noted that information on income is fundamental to understanding poverty and inequality and the only data currently available are from modelled data or data from sample surveys, which do not meet their requirement for data at small area level.

Users noted that a question on personal income would be preferable, in order for analysis to be undertaken at an individual level, but that a question on household income would be acceptable if that was not possible.

A follow-up meeting with Scottish Government Housing and Regeneration, and Scottish Index of Multiple Deprivation (SIMD) colleagues in March 2017, identified that the Scottish Government does not require income data from the census, as they currently use, and expect to continue to use, alternative sources.

A summary of these responses can be found in the [Topic Consultation Report](#) (PDF). In this report, NRS concluded that further work was required to understand the exact nature of user need so that consideration could be given to whether including a question in the census was the most appropriate way of collecting the information and/or whether alternative methods of meeting the user need existed.

5. Alternative sources

Responses to the topic consultation indicated that currently available alternative sources of information are not regarded as sufficient to meet user need.

A review of the responses to the Topic Consultation indicated a need for multivariate analysis at small geography. This is not available from current sources, however, the future development of income estimates from administrative sources does have the potential to meet need.

5.1 Family Resources Survey

The Family Resources Survey (FRS) is the key source of information for household income in the UK. The Scotland sample allows annual estimates of household income at Scotland level only. Some local authority estimates can be produced using three year pooled data, however the small sample sizes limit the analysis which can be undertaken at anything other than national level.

5.2 Population surveys in Scotland

Since 2012, a set of core questions has been used to provide information on the composition, characteristics and attitudes of Scottish households and adults across a number of topic areas through the three largest surveys in Scotland:

- the [Scottish Household Survey](#) (SHS)
- the [Scottish Health Survey](#) (SHeS)
- the [Scottish Crime and Justice Survey](#) (SCJS)

A set of core and harmonised questions is recommended in order to provide comparable estimates across Scotland. More information can be found on the Scottish Government website ([Core Survey Questions](#)).

Income is not currently included as a core question.

Across the three main population surveys in Scotland, the income question differs, but all ask annual household income (however this is largely limited to the highest earner and spouse, rather than all adults). Comparisons with FRS highlight that this may be the single largest area where coverage differs.

The SHeS and SCJS collect gross income from all sources, while the SHS collects net income from all sources (with showcard prompts for benefit sources).

- [Scottish Household Survey](#): Scottish Government reviewed the income questions to capture improved household income data (for example from all adults, rather than highest earner and spouse only). The SHS has a sample of 31,000 households over a two year period, to produce local authority estimates of net banded household income. Within the SHS, 30% to 44% of income returns are incomplete in some way and require imputation.
- [Scottish Health Survey](#): The SheS (with 31 income bands) estimates around 17% non-response for income questions (8% of adults refused, 9% responded 'did not know').
- [Scottish Crime and Justice Survey](#): The SCJS has a sample of 6,000 adults aged 16 and older, every year with annual results by police division or by demographic variables (age, sex, SIMD).
- [Core questions pool](#): There is a review underway to determine if consistent income questions could be achieved across the main population surveys in Scotland. The core questions have a sample size of 20,000 respondents annually, and gross banded household income estimates would be available annually at local authority and possibly lower geography if income were included as a core question.

5.3 Synthetic income estimates

Following the Topic Consultation, Scottish Government published [Statistics on Local Level Household Income Estimates](#). These household income estimates have been produced for the purposes of updating the Scottish Government Housing Need and Demand Assessment (HNDA) Tool. The estimates will also inform work on housing affordability more generally across different tenures and different geographic areas of Scotland, and will help to support local authorities and their partners in the production of local housing strategies and other planning documents. These are available at data zone, for all areas of Scotland, and provide estimates of gross banded household income, derived from administrative and survey sources.

5.4 Scottish Index of Multiple Deprivation (SIMD)

Presently estimates of the percentage and number of people who are income deprived, at data zone level, are based on Department of Work and Pensions (DWP) and Her Majesties Revenue and Customs (HMRC) administrative data:

- Income Support (IS) and Income-based Employment Support Allowance (ESA) claimants (16-59),
- Job Seekers Allowance (JSA) and Guaranteed Pension Credit Claimants (all ages),
- Universal Credit claimants with no employment marker,
- Number of children in JSA, IS or ESA households, and
- Number of adults and children dependent on an adult in receipt of tax credits.

These sources do not allow for multivariate analysis. The Scottish Government is undertaking work with local authorities to explore how a range of data sources can be used to provide evidence for identifying, understanding, and tackling child poverty.

5.5 Income estimates from administrative data sets

With the aim of building upon the research produced by ONS on [Income from Pay As You Earn \(PAYE\) and benefits for tax year ending 2016](#), NRS has begun work with ONS to gain access to datasets from HMRC and DWP, under the Digital Economy Act 2017. However, data providers are under no obligation to provide this data and NRS is only at the start of negotiations. If NRS is successful in obtaining access to datasets, it will explore the possibility of producing income estimates which are consistent with official estimates from the FRS. The types of income estimates NRS will be able to produce will depend on the datasets provided.

NRS will take forward research on income as a separate data linkage exercise, independently of Scotland's Census 2021.

A review of the responses to the topic consultation indicates a need for multivariate analysis at a small geography level. This is not available from current sources, although the data linkage project has the potential to meet this need.

6. Question testing

This section provides evidence from the question testing process carried out by NRS in the question development process for Scotland's Census 2021.

Both cognitive testing and quantitative testing processes are used in developing census questions. In addition, public acceptability testing was undertaken where relevant.

Cognitive testing is a form of in depth interviewing with a small number of respondents. It aims to provide an insight into the mental processes respondents use when answering questions. This helps us to identify if there are any problems with a question or question design and gain an insight into the source of any difficulty respondents are having.

Quantitative testing is undertaken primarily to identify data quality concerns. NRS included feedback questions in the quantitative testing in order to gather further information on public acceptability and to identify specific difficulties respondents faced if they were unable to answer a question easily.

In 2017 NRS commissioned ScotCen Social Research to conduct cognitive and quantitative testing of selected questions for potential inclusion in Scotland's Census 2021. Information about this testing can be found in the [2017 Cognitive and Quantitative Testing Report](#) (PDF).

6.1 Cognitive testing

Cognitive testing explored two different questions on 'income in the last 12 months' (Figure 1). The first question was on household income. This question, should it be included in Scotland's Census 2021, would only be asked once in the household section of the questionnaire. The second question was on personal income. This question, should it be included, would be asked of each person living in the household.

Figure 1: 2017 Cognitive Testing questions

Household Income	Personal Income																																								
<p>1 What is your household's total income from all sources over the last 12 months?</p> <ul style="list-style-type: none"> ◆ Count income from every person included in the household ◆ Do not deduct taxes, National Insurance contributions, Health Insurance Payments, Superannuation Payments. <table border="0"> <thead> <tr> <th style="text-align: left;"><i>Per week</i></th> <th style="text-align: left;"><i>Per year</i></th> </tr> </thead> <tbody> <tr><td><input type="checkbox"/> Less than £100</td><td>Less than £5,200</td></tr> <tr><td><input type="checkbox"/> £100 to £199</td><td>£5,200 to £10,399</td></tr> <tr><td><input type="checkbox"/> £200 to £299</td><td>£10,400 to £15,599</td></tr> <tr><td><input type="checkbox"/> £300 to £399</td><td>£15,600 to £20,799</td></tr> <tr><td><input type="checkbox"/> £400 to £499</td><td>£20,800 to £25,999</td></tr> <tr><td><input type="checkbox"/> £500 to £699</td><td>£26,000 to £36,399</td></tr> <tr><td><input type="checkbox"/> £700 to £999</td><td>£36,400 to £51,999</td></tr> <tr><td><input type="checkbox"/> £1,000 to £1,499</td><td>£52,000 to £77,999</td></tr> <tr><td><input type="checkbox"/> £1,500 or more</td><td>£78,000 or more</td></tr> </tbody> </table>	<i>Per week</i>	<i>Per year</i>	<input type="checkbox"/> Less than £100	Less than £5,200	<input type="checkbox"/> £100 to £199	£5,200 to £10,399	<input type="checkbox"/> £200 to £299	£10,400 to £15,599	<input type="checkbox"/> £300 to £399	£15,600 to £20,799	<input type="checkbox"/> £400 to £499	£20,800 to £25,999	<input type="checkbox"/> £500 to £699	£26,000 to £36,399	<input type="checkbox"/> £700 to £999	£36,400 to £51,999	<input type="checkbox"/> £1,000 to £1,499	£52,000 to £77,999	<input type="checkbox"/> £1,500 or more	£78,000 or more	<p>1 What is your personal total income from all sources over the last 12 months?</p> <ul style="list-style-type: none"> ◆ Do not deduct taxes, National Insurance contributions, Health Insurance Payments, Superannuation Payments. <table border="0"> <thead> <tr> <th style="text-align: left;"><i>Per week</i></th> <th style="text-align: left;"><i>Per year</i></th> </tr> </thead> <tbody> <tr><td><input type="checkbox"/> Less than £100</td><td>Less than £5,200</td></tr> <tr><td><input type="checkbox"/> £100 to £199</td><td>£5,200 to £10,399</td></tr> <tr><td><input type="checkbox"/> £200 to £299</td><td>£10,400 to £15,599</td></tr> <tr><td><input type="checkbox"/> £300 to £399</td><td>£15,600 to £20,799</td></tr> <tr><td><input type="checkbox"/> £400 to £499</td><td>£20,800 to £25,999</td></tr> <tr><td><input type="checkbox"/> £500 to £699</td><td>£26,000 to £36,399</td></tr> <tr><td><input type="checkbox"/> £700 to £999</td><td>£36,400 to £51,999</td></tr> <tr><td><input type="checkbox"/> £1,000 to £1,499</td><td>£52,000 to £77,999</td></tr> <tr><td><input type="checkbox"/> £1,500 or more</td><td>£78,000 or more</td></tr> </tbody> </table>	<i>Per week</i>	<i>Per year</i>	<input type="checkbox"/> Less than £100	Less than £5,200	<input type="checkbox"/> £100 to £199	£5,200 to £10,399	<input type="checkbox"/> £200 to £299	£10,400 to £15,599	<input type="checkbox"/> £300 to £399	£15,600 to £20,799	<input type="checkbox"/> £400 to £499	£20,800 to £25,999	<input type="checkbox"/> £500 to £699	£26,000 to £36,399	<input type="checkbox"/> £700 to £999	£36,400 to £51,999	<input type="checkbox"/> £1,000 to £1,499	£52,000 to £77,999	<input type="checkbox"/> £1,500 or more	£78,000 or more
<i>Per week</i>	<i>Per year</i>																																								
<input type="checkbox"/> Less than £100	Less than £5,200																																								
<input type="checkbox"/> £100 to £199	£5,200 to £10,399																																								
<input type="checkbox"/> £200 to £299	£10,400 to £15,599																																								
<input type="checkbox"/> £300 to £399	£15,600 to £20,799																																								
<input type="checkbox"/> £400 to £499	£20,800 to £25,999																																								
<input type="checkbox"/> £500 to £699	£26,000 to £36,399																																								
<input type="checkbox"/> £700 to £999	£36,400 to £51,999																																								
<input type="checkbox"/> £1,000 to £1,499	£52,000 to £77,999																																								
<input type="checkbox"/> £1,500 or more	£78,000 or more																																								
<i>Per week</i>	<i>Per year</i>																																								
<input type="checkbox"/> Less than £100	Less than £5,200																																								
<input type="checkbox"/> £100 to £199	£5,200 to £10,399																																								
<input type="checkbox"/> £200 to £299	£10,400 to £15,599																																								
<input type="checkbox"/> £300 to £399	£15,600 to £20,799																																								
<input type="checkbox"/> £400 to £499	£20,800 to £25,999																																								
<input type="checkbox"/> £500 to £699	£26,000 to £36,399																																								
<input type="checkbox"/> £700 to £999	£36,400 to £51,999																																								
<input type="checkbox"/> £1,000 to £1,499	£52,000 to £77,999																																								
<input type="checkbox"/> £1,500 or more	£78,000 or more																																								

The income bands included in the test questions were aligned with those used in the Scottish population surveys, to ensure possible data linkage in the future were an income question to be included in Scotland's Census 2021.

To test these questions, respondents who varied in terms of their household composition were targeted to take part. The aims of testing were to:

- Explore the acceptability of including banded income questions in Scotland's Census 2021;
- Explore whether people understand what types of income should be included/excluded when answering, and whether this impacts the accuracy of their answers;
- Explore whether people in different household structures are able to answer questions on household income, and what strategies are used when selecting an answer; and
- Assess whether income questions should be asked at the household level or the individual level (if at all).

The sample composition was designed to cover a mix of sex, age, qualifications, household composition and income band.

6.1.1 Acceptability of asking income in the 2021 Census:

In terms of the household income question, views on acceptability were mixed. Some respondents found the inclusion of banded household income questions in Scotland's Census 2021 acceptable and were comfortable providing an answer.

In contrast, some respondents were less comfortable with the household income question. During the cognitive interviews six respondents declined to provide an answer to the household income question. Reasons for refusal included:

- Not knowing the income of flatmates (and being unwilling or comfortable to ask for this information); and
- Not knowing the income of a partner (and concerns about sharing partner's information).

This was the case for households comprising multiple adults without shared finances (such as flat shares) and for households with shared finances, such as married couples and those living with a partner and families.

Some respondents who did answer the question queried the purpose of the inclusion of an income question in Scotland's Census 2021. In particular, it was pointed out that HMRC and the DWP already collect information on the income of the population.

Some issues with data quality were noted at the household income questions. These included item non-response and respondents estimating income of others in the household. Respondents noted they would be uncomfortable asking the people they live with how much they earn.

In terms of acceptability, the personal income question was viewed as less problematic among respondents. Respondents living in households comprising both multiple adults with separate finances and multiple adults with shared finances discussed how the inclusion of a personal income question precluded the need to ask others in the household how much they have earned over the last 12 months.

6.1.2 Respondent understanding of income:

With both the household and personal income questions, respondents were not always certain which income sources were to be included.

The most common source of income included by respondents was earnings from employment. Some respondents thought that these questions were asking exclusively about earnings from employment, and did not include any other sources of income when calculating their answer.

The most common sources of income to be excluded by respondents were forms of income that they do not receive directly into their bank account, such as housing benefit. However respondents also excluded a range of income sources such as:

- Child Benefit
- Working Tax Credits
- earnings from overtime
- investment income
- Carer's Allowance
- Disability Living Allowance,
- student loans, grants and scholarships.

6.1.3 Other findings:

- For both the household and personal income questions, respondents who were paid on a monthly basis indicated it was not natural for them to think of their income on a 'per week' or 'per year' basis.
- Respondents who were self-employed struggled to answer both the household and personal income questions. The self-employed respondents discussed how they are often unaware how much they have earned or how much profit they have made over the last 12 months until they have completed their tax return at the end of the financial year.
- Overall, respondents found the instruction in the question clear and easy to follow.
- Though respondents were generally clear on what taxes, National Insurance contributions and Health Insurance Payments were, there was more uncertainty over the meaning of 'superannuation payments'.

6.2 Quantitative testing

For the quantitative testing, the household income question was refined based on the cognitive testing results.

A household income question was taken into quantitative testing. Following the cognitive testing, the question was refined based on the previous test results.

Demand for including an income question in the census is high. Based on this and the strong user need identified for other potential questions, it was considered that a household income question had greater potential for inclusion in Scotland's Census 2021 than a personal income question. This decision making was consistent with the position taken forward in the 2011 Census, where a household income question was proposed in the [2011 Government Statement](#) (PDF).

Full details of the results of the quantitative testing are available in Annex B.

The quantitative testing included one household income question. This question is shown in Figure 2.

Figure 2: 2017 Quantitative Test Income Question

Q5. What is your total household income from all sources over the last 12 months?

- Count income from every person included in the household
- Do not deduct taxes, National Insurance contributions, health insurance payments, pension contributions

<i>Per week</i>	<i>Per year</i>
<input type="radio"/> Less than £100	Less than £5,200
<input type="radio"/> £100 to £199	£5,200 to £10,399
<input type="radio"/> £200 to £299	£10,400 to £15,599
<input type="radio"/> £300 to £399	£15,600 to £20,799
<input type="radio"/> £400 to £499	£20,800 to £25,999
<input type="radio"/> £500 to £699	£26,000 to £36,399
<input type="radio"/> £700 to £999	£36,400 to £51,999
<input type="radio"/> £1,000 to £1,499	£52,000 to £77,999
<input type="radio"/> £1,500 or more	£78,000 or more

The aims of testing this question were:

- To look at the distribution of responses, including similarities and differences in distribution by mode, age, sex and household composition;
- To analyse item non-response rates as a measure of data quality; and
- To analyse invalid responses, including routing errors and multi ticks, as a measure of data quality.

6.2.1 Data quality

In total, 90% of respondents provided a valid response to the question on household income. An invalid response was given by 10% of respondents.

Comparison of the test data with the FRS data indicates under reporting of income for those with annual household income between £15,600 and £36,399. These tend to be groups with more than one adult in the household, and therefore multiple sources of income. These are also the groups more likely to have a mix of earnings and benefit income.

2017 quantitative test data also over reported household income for those with annual household incomes greater than £52,000.

6.2.2 Public acceptability

Overall, 35 respondents dropped out of the survey. Of these 43% dropped out at the income question, indicating lower acceptability of the income question than the other questions included.

Almost all invalid responses (around 9.9% of total responses) were item non-response. That is, the respondent did not answer the question.

Overall, 47 cases of invalid response were attributable to the online mode, and 98 cases were attributable to the paper mode. Item non-response did not vary by mode, but did vary by age.

The level of valid responses provided by those living as a couple, either with or without children, was around 95%. The equivalent for single adults', either living alone or as a single parent, and 'other' household types were around 93% and 90%, respectively.

The questionnaire was split into four sections and, at the end of each of the four sections; respondents were asked if they had found any questions in the section difficult to answer. Respondents were asked to select which questions they had found difficult to answer, and to provide verbatim feedback on these in an open text box. A feedback question asked "did you find any of the following questions difficult to answer?" Around 6% of respondents selected that they found the household income question difficult to answer.

Seventy two respondents provided feedback to the income question. Feedback for the income shows respondents had difficulty in answering the question accurately, or found the question to be less acceptable for inclusion in the census. Over half of respondents who provided feedback noted income is personal and private, so were not accepting of inclusion in the census. Nearly half noted difficulties in reporting income accurately.

7. Next Steps

Research and analysis does not support taking a question on this subject further at this stage.

The final decision on the content of Scotland's Census 2021 questionnaire will ultimately be made by the Scottish Parliament.

More information about preparation for Scotland's Census 2021 and details about upcoming events can be found on the [Scotland's Census website](#), by subscribing to the [Scotland's Census newsletter](#) and following us on Twitter [@NatRecordsScot](#).

Annex A: Results of cognitive testing

In 2017 NRS commissioned ScotCen Social Research to conduct cognitive and quantitative testing of selected questions for potential inclusion in Scotland's Census 2021. Information about this testing can be found in the [2017 Cognitive and Quantitative Testing Report](#) (PDF).

Due to the qualitative nature of cognitive interviews, test samples are purposive and designed to reflect the range and diversity of the population of interest, rather than to be statistically representative.

In total, 26 interviews were conducted in Edinburgh, Glasgow, and Perth and one telephone interview with a respondent living in Aberdeen. Respondents were recruited to ensure diversity in terms of their sex, age, highest education, income, and household composition. Table 1A below shows the composition of those interviewed.

Table 1A: Sample composition achieved for Strand One: General population

Characteristics	Number
Sex	
Male	6
Female	8
Age	
18-34	6
35-64	6
65+	2
Highest qualification	
Further or higher education (degree, masters, PhD, professional quals, SVQ level 5)	7
Upper secondary school qualification (e.g. Highers, A-Levels)	4
Lower secondary school qualification (e.g. Standard Grade, Intermediate 2s, O grades, GSCE, National 4/5) or below/none	3
Income	
A (Annually: £0-£21,599)	6
B (Annually: £21,600-£33,599)	3
C (Annually: £33,600+)	5
Household composition	
Single adult (only respondent living in household)	5
Multiple adults with shared finances (respondent is living with a spouse or partner)	7
Multiple adults with separate finances (such as adults living with their parents, adult sharers, student sharers etc.)	2
Total	14

1. Questions tested and measurement aims

During the interviews two different questions on 'income in the last 12 months' were tested. The first question was on household income. This question would only be asked once in the household section of the questionnaire. The second question was on personal income. This question would be asked of each person living in the household.

The questions tested are shown in Table 2A.

Table 2A: Questions tested on income

Household Income	Personal Income
<p>1 What is your household's total income from all sources over the last 12 months?</p> <ul style="list-style-type: none"> ◆ Count income from every person included in the household ◆ Do not deduct taxes, National Insurance contributions, Health Insurance Payments, Superannuation Payments. <p><i>Per week</i> <i>Per year</i></p> <p><input type="checkbox"/> Less than £100 Less than £5,200</p> <p><input type="checkbox"/> £100 to £199 £5,200 to £10,399</p> <p><input type="checkbox"/> £200 to £299 £10,400 to £15,599</p> <p><input type="checkbox"/> £300 to £399 £15,600 to £20,799</p> <p><input type="checkbox"/> £400 to £499 £20,800 to £25,999</p> <p><input type="checkbox"/> £500 to £699 £26,000 to £36,399</p> <p><input type="checkbox"/> £700 to £999 £36,400 to £51,999</p> <p><input type="checkbox"/> £1,000 to £1,499 £52,000 to £77,999</p> <p><input type="checkbox"/> £1,500 or more £78,000 or more</p>	<p>1 What is your personal total income from all sources over the last 12 months?</p> <ul style="list-style-type: none"> ◆ Do not deduct taxes, National Insurance contributions, Health Insurance Payments, Superannuation Payments. <p><i>Per week</i> <i>Per year</i></p> <p><input type="checkbox"/> Less than £100 Less than £5,200</p> <p><input type="checkbox"/> £100 to £199 £5,200 to £10,399</p> <p><input type="checkbox"/> £200 to £299 £10,400 to £15,599</p> <p><input type="checkbox"/> £300 to £399 £15,600 to £20,799</p> <p><input type="checkbox"/> £400 to £499 £20,800 to £25,999</p> <p><input type="checkbox"/> £500 to £699 £26,000 to £36,399</p> <p><input type="checkbox"/> £700 to £999 £36,400 to £51,999</p> <p><input type="checkbox"/> £1,000 to £1,499 £52,000 to £77,999</p> <p><input type="checkbox"/> £1,500 or more £78,000 or more</p>

To test these questions, respondents who varied in terms of their household composition were targeted to take part. The aims of testing were to:

- Explore the acceptability of including banded income questions in Scotland's Census 2021;
- Explore whether people understand what types of income should be included/excluded when answering, and whether this impacts the accuracy of their answers;
- Explore whether people in different household structures are able to answer questions on household income, and what strategies are used when selecting an answer; and
- Assess whether income questions should be asked at the household level or the individual level (if at all).

2. Household income

This section discusses the acceptability of the household income question and data quality issues noted for this question.

2.1. Acceptability

Asking questions on income can be considered intrusive for a respondent, and are often associated with high non-response.² Therefore cognitive interviews looked at the acceptability of asking income questions in the census.

In terms of the household income, question views on acceptability were mixed. Some respondents found the inclusion of banded household income questions in Scotland's Census 2021 acceptable and were comfortable providing an answer. These respondents perceived the census to be an important method of gathering information about the population in order to help the government direct funding and deliver services, and viewed its completion as part of active citizenship. Accordingly, they discussed how, although they may be uncomfortable disclosing their income for standard social surveys, they are happy to provide this information for the purposes of the census. Additionally, they commented that the proposed income bands are wide enough that they do not feel that the information being disclosed is too intrusive.

In contrast, some respondents were less comfortable with the household income questions. During the cognitive interviews six respondents declined to provide an answer to the household income question. Reasons for refusal included:

- Not knowing the income of flatmates (and being unwilling/comfortable to ask for this information).
- Not knowing the income of a partner (and concerns about sharing partners information).
- Not knowing income in weekly/annual bands. This occurred in both a respondent who was self-employed and a respondent who had held two different jobs in the past 12 months and who had also had periods of being signed off on sick pay.

In addition to the above concerns some respondents who did answer the question queried the purpose of the inclusion of an income question in Scotland's Census 2021. In particular, it was pointed out that HMRC and the DWP already collect information on the income of the population. Hence, respondents questioned why there was a need to have a question on income in the census too:

'I don't particularly think it's relevant. I just don't see what relevance the government knowing what my income is, when they technically already have that information available to them through my P60. It seems a pointless question. I can't really understand how the answer of that question would benefit any particular part of society.'

Some issues related to acceptability were evident among respondents living in households comprising multiple adults with separate finances. Although these respondents were relatively comfortable disclosing their own income over the last 12 months, many were unaware how much the people they live with had earned over the same period. As a result, they were unable to answer the question on their household's total income with any considerable degree of certainty. These

² Moore, J., Stinson, L. L., Welniak, E. J. Jr (2000) 'Income Measurement Error in Surveys', *Journal of Official Statistics*, 16(4), pp. 331-61

respondents discussed how, if they were to attempt to provide an accurate answer to this question, they would have to ask the people they live with how much they earn, something that they would be uncomfortable doing. For example, one respondent living in a household comprising multiple adults with separate finances had only lived in their current accommodation for two months. This respondent lives with two other people, neither of whom they know particularly well. They discussed that, although their flatmates are both in paid work, they do not know their income levels, nor if they were receiving income from any other sources except their employment. Moreover, they would not feel comfortable asking their flatmates about their finances:

“It’s impossible to answer because I don’t know what my flatmates earn, and I don’t think I would ask them either, I wouldn’t be comfortable doing that”

Respondents living in households comprising multiple adults with shared finances, such as married couples and those living with a partner and families, also had concerns over the inclusion of a household income question for similar reasons. Although the finances in these households were shared, in many cases respondents were unsure of the precise amount that the people they lived with had earned over the last 12 months. For example, one respondent lives with their partner and four children, two of whom are adults in paid work. Although this respondent was aware of their partner’s income – which is shared among the family – they were unaware what their two children were earning, and would not be comfortable asking them:

‘I’ve got two children who are working and I’d have to ask them how much they’re getting. Sometimes children don’t want their parents to know what their income is. Mine don’t like telling me how much they earn, so it’s quite hard to find out the answer to this question’

Other respondents were also unsure how much their partner had earned over the last 12 months, despite the fact that their finances are shared. For example, one respondent found the household income question difficult due to the fact that their partner had recently returned to university:

‘I find this difficult to answer because I work full time but my partner’s at university, I’m trying to think what he gets student loan-wise...I’d find that difficult to answer. He sometimes gets the hardship loan as well. I’m not sure how often he gets it, how much. It’d be a rough guess.’

Due to their difficulty trying to estimate what income bracket their household fits into, this respondent did not answer the household income question.

2.2. Data quality

As described above some issues with data quality were noted at the household income questions. These included item non-response and respondents estimating income of others in the household. This was of most concern to respondents living in households with multiple adults with separate finances, who were uncomfortable asking the people they live with how much they earn. These issues regarding acceptability are likely to in turn have an impact on the quality of the data.

The majority of respondents stated that instead of broaching this subject with the people they live with, they would instead estimate their income based on, for example, their job types or the type of benefits they receive. One respondent lived in

a flat comprising four international students. Because their flatmates have part-time jobs, they estimated their income based on the fact that they work part-time in retail. However, the respondent was unaware if they were receiving income from any other sources/how much, and would not have asked them if they were for the purposes of the census:

'It's not my business to know the income of my flatmates.'

It can therefore be inferred that the answers that these respondents would provide to a banded household income question may be of poor data quality, as they would not be based on an accurate calculation of all household members' income sources. Moreover, it is possible that there are income sources some members of the household are receiving which the householder is not aware of which would be excluded entirely from their calculation.

The inclusion of a banded household income question was also a concern for respondents living in households with multiple adults with shared finances. Although the finances in these households were shared, respondents were not always certain of the exact amount the people they live with are earning. Although in these households individuals may be more comfortable asking the people they live with for the precise amount that they earn, it is not certain that the person responsible for completing the household section of the census will not just guess. Indeed, respondents living in households comprising multiple adults with shared finances discussed that, for ease and to save time, they would estimate the income of the other people living in their home as opposed to asking each member of the household individually. As a result, the data collected from these households regarding income may also be of poor quality.

Overall, therefore, it is apparent that a banded household income question may have an impact on data quality. Issues with data quality were also raised in terms of the difficulty of reporting income that is highly variable. For example, one respondent who was self-employed described this as an issue at both the household income question and the personal income question, as did a respondent who had held multiple jobs in the past year and who had also had periods receiving sick pay.

3. Personal income

This section discusses the acceptability of the personal income question and data quality issues noted for this question.

3.1. Acceptability

In terms of acceptability, the personal income question was viewed as less problematic among respondents. Respondents living in households comprising both multiple adults with separate finances and multiple adults with shared finances discussed how the inclusion of a personal income question precluded the need to ask others in the household how much they have earned over the last 12 months.

3.2. Data quality

Respondents noted it was easier to provide a more accurate answer to a personal income question than a household income question.

Respondents noted they while they were generally aware of their own income over the last 12 months, they are not always certain of the income sources of other members of the household. In order to provide an accurate answer to a household income question, the householder would have to find out this information from each household member and calculate the total figure. Therefore overall a personal income question is more likely to lead to better data quality than a household income question.

4. Understanding what types of income should be included

At both the household and personal income questions, respondents were not always certain which income sources were to be included. For example, upon seeing the household income question one respondent commented '*what kind of income?*'.

The most common source of income included by respondents was earnings from employment. Indeed, some respondents thought that these questions were asking exclusively about earnings from employment, and did not include any other sources of income when calculating their answer.

Other sources of income typically included were benefit payments – in particular, Employment Support Allowance (ESA) and Personal Independence Payments (PIP) – and State and non-State pensions.

After respondents had answered both the household and personal income questions, they were shown a show card containing a list of all sources of income that they should have accounted for in their answer. This show card is based on that used in the FRS³ and is shown overleaf.

³ <https://www.gov.uk/government/collections/family-resources-survey--2>

Showcard D - Used when probing on income sources

Earnings from employment

Earnings from full time and part time employment

Earnings from casual / temporary employment

Benefit income

Income Support

Employment and Support Allowance

Working Tax Credit (WTC)

Child Tax Credit (CTC)

Jobseeker's Allowance (JSA) - Income Based

Jobseeker's Allowance (JSA) - Contribution Based

Universal Credit

Housing Benefit

Council Tax Benefit

Guardian's Allowance

Child Benefit

School meals allowance (free school meals)

School clothing allowance

School travel allowance

Statutory Adoption Pay

Maternity Allowance

State Retirement Pension

Pension Credit

Statutory Maternity Pay

Statutory Paternity Pay

Widow's Pension, Bereavement Allowance or

Widowed Parents Allowance

Winter Fuel Payment

Incapacity Benefit (formerly Invalidity Benefit)

Disability Living Allowance Care Component

Disability Living Allowance Mobility Component

Personal Independence Payment

Mobility Component

Personal Independence Payment Daily

Industrial Injury/ Disablement Benefit

Carer's Allowance (formerly Invalid Care Allowance)

Severe Disablement Allowance

Statutory Sick Pay

War Disablement Pension or War Widow's Pension

Disability premium with your Income

Invalid Care Allowance

Attendance allowance

After school care allowance

Grant from the Social Fund for funeral expenses

Grant from the Social Fund for maternity expenses

Community Care Grant from the Social Welfare Fund

Crisis Grant from the Social Welfare Fund

Budgeting Loan from the Social Fund / Budgetin

Advances from Universal Credit

Sure Start Maternity Grant

Social Fund Loans

Extended Payment of Housing Benefit/Council

Tax Benefit

Child Maintenance Bonus

Lone Parent's Benefit Run-on

Return to work credit

Education grants

Healthy Start Scheme

Other income

Occupational / employer (non-State) pension(s)

Benefit from annuity, trust or covenant

Maintenance payments

Rent from property or subletting, including boarders

Dig money from other household members

Benefit from accident / sickness scheme etc.

Investment income e.g. Dividends from shares / interest from savings

Student loan

Grant

Bursary fund

Regular payments received from friends or relatives outside the household

When respondents were shown this show card, it became evident that some were unclear as to all of the sources of income that should be included when answering.

The most common sources of incomes to be excluded by respondents were forms of income that they do not receive directly into their bank account or as '*cash in hand*'. For example, Council Tax Reduction⁴ was often not included in respondents' answers. Among respondents, Council Tax Reduction was viewed as a 'discount' as opposed to a benefit. As a result, respondents did not include this when answering both the household and personal income questions. Many were unaware of the exact amount that their rate of council tax is lowered by, and would be unsure how to incorporate a reduction into a calculation of the sources of income they receive.

Similar concerns were raised regarding Housing Benefit and Pension Credits; one respondent described these as a '*relief from paying out money*' as opposed to sources of income.

Other sources of income which were excluded from respondents' answers included: regular payments received from friends or relatives outside the home; Working Tax Credit; earnings from overtime; investment income; Winter Fuel Payments; school meals allowance; Carer's Allowance; Child Benefit; Disability Living Allowance; and Student loans, grants and scholarships.

Particular concerns were raised over whether 'student loans' encompassed the maintenance loan payment which students receive directly, or whether it also included the tuition fee loan which is paid to their place of study.

A general lack of understanding regarding the sources of income that should be included was evident among respondents, with major sources of income such as Housing Benefit being excluded.

5. Other findings

5.1. Income bands

An additional finding for both the household and personal income questions was that for respondents who were paid on a monthly basis, it was often not natural for them to think of their income on a 'per week' or 'per year' basis. To work out what band they fell into these respondents either had to divide their monthly income by four to get a weekly figure or times it by twelve to get an annual figure. This added an additional level of complexity to the question, as respondents had to do further calculations to work out the income band they came under:

"Multiplying it up to a year or dividing it down to a week isn't the easiest thing."

This was particularly unfavourable at the household income question, where respondents were already required to add together the income sources of every person in their household. These respondents suggested either replacing the weekly band with a monthly band or include a monthly band alongside the weekly and yearly figures.

⁴ On the Showcard this benefit was listed as Council Tax Benefit. However, Council Tax Reduction was introduced from 1 April 2013 to replace Council Tax Benefit, which has been abolished by the UK Government.

5.2. Self-employment

Respondents who were self-employed struggled to answer both the household and personal income questions. The self-employed respondents discussed how they are often unaware how much they have earned or how much profit they have made over the last 12 months until they have completed their tax return at the end of the financial year. Although they were able to provide an estimate based on previous tax returns, they could not guarantee that this figure was an accurate representation of their income in the last 12 months.

A further issue for self-employed respondents was that a 12 month period often was not representative of their typical income. One respondent whose partner was self-employed discussed how the last 12 months had been better than previous years for them financially, so their answer wasn't representative of their 'normal' situation or what their situation may be in the near future.

5.3. Respondents' understanding of the guidance

The guidance included in the question stem was 'do not deduct taxes, National Insurance contributions, Health Insurance Payments, or Superannuation Payments'.

Respondents were asked if they understood the instruction 'do not deduct taxes, National Insurance contributions, Health Insurance Payments, or Superannuation Payments'. Overall, respondents found this instruction clear and easy to follow, with most understanding it to mean that they were to provide a gross figure rather than net.

Many commented that they would have assumed that this was the figure that they were to provide without the instruction being present. However, respondents who used the weekly figure rather than the yearly figure did discuss how it was unnatural for them to think of their weekly income before any deductions had been taken off. These respondents said that they think of their weekly income in terms of the money that goes into their bank account rather than the gross figure, and would have to check a payslip to find out the amount before any deductions had been made.

Though respondents were generally clear on what taxes, National Insurance contributions and Health Insurance Payments were, there was more uncertainty over the meaning of 'superannuation payments':

"I guess it would be any money your employer gives you before taxes or national insurance contributions, I don't get the superannuation bit, I don't know what they are".

Several questioned what this type of payment refers to, with some presuming that because they did not know what type of payment it was, they must not be paying it. Indeed, one respondent who works in pensions commented that superannuation is an outdated word that a lot of people would not understand:

"I work in pensions and superannuation is a very old fashioned word."

They suggested rephrasing the term to 'pension contributions' for Scotland's Census 2021.

Annex B: Quantitative testing results

In 2017 NRS commissioned ScotCen Social Research to conduct cognitive and quantitative testing of selected questions for potential inclusion in Scotland's Census 2021. Information about this testing can be found in the [2017 Cognitive and Quantitative Testing Report](#) (PDF).

Following the cognitive testing, an amended question was taken forward to the quantitative testing.

1. Question tested and aims of testing:

The following household income question was tested:

Household Income 2017 test (online)

Q5. What is your total household income from all sources over the last 12 months?

- Count income from every person included in the household
- Do not deduct taxes, National Insurance contributions, health insurance payments, pension contributions

<i>Per week</i>	<i>Per year</i>
<input type="radio"/> Less than £100	Less than £5,200
<input type="radio"/> £100 to £199	£5,200 to £10,399
<input type="radio"/> £200 to £299	£10,400 to £15,599
<input type="radio"/> £300 to £399	£15,600 to £20,799
<input type="radio"/> £400 to £499	£20,800 to £25,999
<input type="radio"/> £500 to £699	£26,000 to £36,399
<input type="radio"/> £700 to £999	£36,400 to £51,999
<input type="radio"/> £1,000 to £1,499	£52,000 to £77,999
<input type="radio"/> £1,500 or more	£78,000 or more

The aims of testing this question were:

- To look at the distribution of responses, including similarities and differences in distribution by mode, age, sex and household composition;
- To analyse item non-response rates as a measure of data quality; and
- To analyse invalid responses, including routing errors and multi ticks, as a measure of data quality.

2. Income distribution

In total, 90% of respondents provided a valid response to the question on household income. An invalid response was given by 10% of respondents.

Of those who reported their household income, 3% reported an income of less than £100 per week. The distribution across all other income bands had a fairly even spread of responses, ranging from around 9% to around 15%.

Table 1B: Household income

Per week	Per year	%
Less than £100	Less than £5,200	3
£100 to £199	£5,200 to £10,399	9
£200 to £299	£10,400 to £15,599	15
£300 to £399	£15,600 to £20,799	9
£400 to £499	£20,800 to £25,999	12
£500 to £699	£26,000 to £36,399	14
£700 to £999	£36,400 to £51,999	15
£1,000 to £1,499	£52,000 to £77,999	12
£1,500 or more	£78,000 or more	10
Total valid responses		1,342

Comparison of the test data with the FRS data indicates under reporting of income for those with annual household income between £15,600 and £36,399. These tend to be groups with more than one adult in the household, and therefore multiple sources of income. These are also the groups more likely to have a mix of earnings and benefit income. The census test data also over reported household income for those with annual household incomes greater than £52,000.

3. Household income by mode

When looking at household income distribution by mode, findings showed that there was little difference in validity of responses between paper (88% valid and 12% invalid) and online (93% valid and 7% invalid)⁵.

There does appear to be a relationship between income and mode with around 60% of those on the lower two income brackets more likely to favour paper over online completion.

4. Household income by age and sex

There was no significant variation in response by sex.

⁵ Figures are calculated using unweighted responses.

When looking at validity of response to household income by age, those aged 16-34 and 35-54 were more likely than respondents in the two older age groups to provide a valid response (around 31% and 34% of total valid responses, respectively, compared with around 15% of those aged 55-64 and 21% of those aged 65 or above).

5. Household income by household composition

The level of valid responses provided by those living as a couple, either with or without children, was around 95%. The equivalents for single adults, either living alone or as a single parent, and 'other' household types were around 93% and 90%, respectively.

Rate of valid responses to the household income question did not vary significantly by number of adults living in households, with 94-95% of all households of one adult, two adults or three or more adults providing valid responses.

6. Public Acceptability

Overall, 35 respondents dropped out of the survey. Of these 43% dropped out at the income question, indicating lower acceptability of the income question than the other questions included..

Almost all invalid responses (around 9.9% of total responses) were item non-response. That is, the respondent did not answer the question. Overall, 47 cases of invalid response were attributable to the online mode, and 98 cases were attributable to the paper mode. Item non-response did not vary by mode, but did vary by age.

When collapsing age into three categories, non-response to household income is highest amongst those aged 55 and above - though this finding has not been tested for significance.

The questionnaire was split into four sections and, at the end of each of the four sections respondents were asked if they had found any questions in the section difficult to answer. Respondents were asked to select which questions they had found difficult to answer, and to provide verbatim feedback on these in an open text box. A feedback question asked "did you find any of the following questions difficult to answer?" Around 6% of respondents selected that they found the household income question difficult to answer.

Seventy two respondents provided feedback to the income question. Feedback for the income shows respondents had difficulty in answering the question accurately, or found the question to less acceptable for inclusion in the census. Over half of respondents who provided feedback respondents noted income is personal and private, so were not accepting of inclusion in the census. Nearly half noted difficulties in reporting income accurately.