

**2007 Census Test  
Northern Ireland  
Income Question Evaluation Report**

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Statistical Development A  
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# ***Executive Summary***

## **Background**

Throughout the initial public Consultation phase in the run up to the 2007 Census Test, some users indicated a wish to have an income question included in the 2011 Census as a proxy indicator of deprivation. As such, an individual banded income question was developed for the Census Test in conjunction with the Office for National Statistics for England and Wales.<sup>1</sup> The General Registrars Office for Scotland opted to pilot a banded household income question for the Scottish Census Test in 2006.

The final decision on the inclusion, or otherwise, of an income question will be dependent on the results of this evaluation, the relative strength of user requirements when compared with other topics, the availability of space available on the questionnaire and other associated questionnaire design constraints.

## **Terms of Reference**

The evaluation objectives are outlined below:

- To assess the impact of inclusion of an income question on response rates.
- To assess whether the level of completion of key variables differed by inclusion of an income question.
- To assess whether the level of questionnaire completion differed by inclusion of an income question.
- To review alternative data sources.

## **Methodology**

The methodology for collating the information and data required to inform this evaluation included the following:

- Statistical Analysis of questionnaire return rates by design variables,
- Analysis of item non response,
- Review of Scottish 2006 Test Evaluation,
- Analysis of calls to Contact Centre,
- Review of Census Test Evaluation Survey Findings, and;
- Review of Alternative Data Sources.

## **Findings**

- The average response rate to questionnaires including an income question was 42.6%, compared to 45.2% for questionnaires without an income question, but the difference was not statistically significant. The Test involved samples across 12 balanced socio-economic strata, and there was no consistent pattern of the income questionnaire version affecting response rates. Significant ( $p < 0.05$ ) effects were observed in a few strata, but these included both apparently significant reductions and increases induced by the inclusion of an income question.

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<sup>1</sup> See Appendix C for example of the Income question included in the 2007 Census Test in Northern Ireland.

- The inclusion of an income question increased the percentage of other responses that were left blank by 2.8 percentage points. However, this was not statistically significant.
- The non-response rate to the income questions themselves were 10.2% (income) and 6.4% (sources of income). These non-response rates were higher than for key demographic variables such as sex and date of birth, but well within the range of non-response for other variables.
- Whilst the level of agreement between the CTES and the Census Test was high, the level of agreement on the amount of income across both conditions was much lower (36.4% lower than the mean).
- CTES respondents did not find the income questions particularly difficult to answer (relative to other questions). However, they reported that they were more unhappy answering questions relating to income than any other question.

## **Conclusions**

- Overall, the inclusion of an income question did not have a statistically significant effect on the response rate to the Census Test.
- The response rates to the income questions were acceptable and there was no evidence that inclusion of the income questions led to householders completing their questionnaires less comprehensively.
- The data obtained from the income questions in the Census Test generate plausible distributions relative to existing data sources.
- The inclusion of a question or questions in the 2011 Census is not likely to have any major impact on the overall success of the exercise. However, any decision to include a question or questions on Income must be taken within the context of limited space available in the proposed questionnaire.
- Alternative income data sources may also be more appropriate than a Census question due to difficulties in defining income sufficiently clearly within the context of a Census, and difficulties in obtaining accurate information.

## **Recommendations**

- Census Office should continue to work closely with colleagues in ONS and GROS to further assess the level of user need for a question or questions on income within the context of the findings of the 2007 Census Test Evaluations in Northern Ireland and England & Wales, and the GROS 2006 Census Test Evaluation in Scotland.
- Census Office should continue to work closely with colleagues in ONS and GROS to further assess the impact of the inclusion of a question or questions on income on the length of the 2011 Census Questionnaire and the impact that further lengthening the questionnaire would have on response rates, data quality and costs.
- Census Office should seek to initiate further research/small scale testing to ascertain whether non-response rates to the income question vary between households of different income levels and demographic characteristics, particularly those households in rural or deprived areas.
- If a decision is taken to include an Income question in the 2011 Census, the question should be included in the individual section rather than the household section of the questionnaire (based on the finding that more 'I' questionnaires were requested in 'Income' areas than in 'No Income' areas for privacy purposes).

# **Chapter 1: Introduction**

## **1.1 Introduction to NISRA**

The Northern Ireland Statistics and Research Agency (NISRA) is an Executive Agency within the Department of Finance and Personnel (DFP) and has been in existence for over ten years. Its core purpose is:

- To provide a high quality, cost effective registration, statistics and research service that informs the policy process and the democratic process; and
- To provide a window on Northern Ireland's society and its economy by providing evidence to inform and question decision making.

As NISRA is the principle source of official information on Northern Ireland's population and socio-economic conditions, the statistics produced by the Agency not only inform the policy process within Government, but also augment academic research and contribute to debate in the wider community. Additionally, NISRA's statistics and research services are afforded to a wide range of government Departments and Agencies to assist with the delivery of their objectives and actions.

### **The corporate aims of NISRA are:**

- To provide a statistical and research service to support decision making by Northern Ireland Ministers and Departments and to inform elected representatives and the wider community through the dissemination of reliable official statistics; and
- To administer the marriage laws and to provide a system for the registration of births, marriages, civil partnerships, adoptions and deaths in Northern Ireland.

The Agency's Corporate and Strategic Plan sets out the Agency's Vision and details the high level Strategic Aims for 2007 - 2010. This document was developed using the Balanced Score Card approach and provided the focus for the development of the Agency's Business Plan for 2007 / 2008 using four strategic themes, namely, Financial Performance, Processes, Customers and Learning & Growth.

The Agency's Business Plan for 2007 / 2008 details a number of specific Ministerial and Chief Executive Targets under each of the four strategic themes, which reflect the Agency's commitment to provide both a high quality statistical and research service and a modern registration service to users in a cost effective, efficient and timely manner.<sup>2</sup>

Whilst the majority of these targets, along with their high level associated objectives and measures of success are relevant to the work of Census Office, there are two specific Ministerial Targets that are directly pertinent to Census Office – i.e.

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<sup>2</sup> Northern Ireland Statistics and Research Agency: Corporate Plan 2007 – 2010 and Business Plan 2007 -2008

*“To advance preparations for the 2011 Census by completing and evaluating the 2007 Census Test by end of March 2008.”*

*“To advance preparations for the 2011 Census by signing a procurement contract for the provision of printing, processing, call centres and operational intelligence services for the 2011 Census by end March 2008.”*

## **1.2 Introduction to Census**

Census Office is one of the core DFP branches and is responsible for planning, undertaking and reporting the decennial Census of Population and Housing in Northern Ireland, the next one of which is planned for 2011. The branch works closely with NISRA's Demography and Methodology Branch and with the Census Offices in England and Wales (Office for National Statistics – ONS) and Scotland (General Register Office for Scotland – GROS), in order to exploit the efficiencies that arise through joint working and ensure that Northern Ireland's interests are represented at the UK level. ONS takes the lead role in working with Eurostat, the United Nations Economic Commission for Europe and the United Nations on international census principles, recommendations and legislation.

## **Chapter 2: Background & Context**

### **2.1 Context**

The Census of Population and Housing is the largest and most complex statistical exercise undertaken in Northern Ireland, which provides a fundamental role in the provision of comprehensive and robust demographic statistics. It is imperative that detailed testing precedes the Census operation. Accordingly, three major phases are planned during the 2011 Census cycle, namely:

- Census Test in May 2007,
- Systems Integration Test in 2008; and,
- Dress Rehearsal in 2009.

### **2.2 Census Test**

In May 2007 a Census Test was undertaken within 5 District Councils (DCs) in Northern Ireland (Belfast, Coleraine, Craigavon, Magherafelt, and Fermanagh).<sup>3</sup> It incorporated an operational test of proposed procedures, processes, and associated systems in addition to statistical testing of the effect that delivery method<sup>4</sup> and questionnaire content have on the level of response.

Following detailed analysis based on 2001 Census information at OA level, the LGDs listed above were chosen because they exhibit specific socio-economic characteristics that are known to provide difficulties with the enumeration process, such increased incidence of high numbers of students, migrant workers, and holiday homes. The desire to test the design variables across a balanced set of socio-economic strata led to the selection of 96 Output Areas for the Test.<sup>5</sup> In line with arrangements across the rest of the UK, it was agreed that the main design variables were be delivery method (i.e. enumerator delivery versus post-out) and content variation (i.e. include questions on income versus not include questions on income). In order to arrive at the 96 OAs, all of the OAs across the five chosen LGDs were categorised into 12 strata (urban / rural<sup>6</sup>, deprived / non-deprived, Protestant / Roman Catholic / Mixed). OAs were classified as Urban if they fell within any settlement with a population of 4,500 persons or more; and Rural for all other areas. OAs were categorised as deprived / non-deprived using the economic deprivation measure from the Northern Ireland Multiple Deprivation Measure 2005, using the median rank (2,511 out of 5,022 OAs) as the break-point. For community background, OAs were classified (using 2001 Census data) as predominantly Protestant if over 80% of the population were Protestant (or other Christian), predominantly Roman Catholic if over 80% of the population were Roman Catholic and Mixed for all other areas. Eight OAs were then chosen at random from within each of the 12 stratum to give 96 OAs in total.

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3 See Appendix A for 2007 Census Test LGD area maps.

4 An Assessment of Enumeration Options for the 2011 Census In Northern Ireland

5 See Appendix B for Tables illustrating specific design strata.

6 OAs were classified as urban/ rural in accordance with the Statistical Classification and Delineation of Settlements that was produced by NISRA's Inter-Departmental Urban-Rural Definition Group in February 2005.

The 2007 Census Test was designed test innovations to the Census design prior to the 2011 Census.

As such, the proposed aims of this evaluation are:

- To document and evaluate the effects of including an income question in the 2007 Test questionnaire;
- To inform the decision on including such a question in the 2011 Census.

### **2.3 Income Question**

Throughout the initial public Consultation phase in the run up to the 2007 Census Test, some users indicated a desire to have an income question included in the 2011 Census as a proxy indicator of deprivation. As such, an individual banded income question was developed for the Census Test in conjunction with the Office for National Statistics which has responsibility for the Census in England and Wales.<sup>7</sup> The General Registrars Office for Scotland opted to pilot a banded household income question in 2006. (The objective in Scotland was to test the feasibility of including a household income question in the Scotland 2011 Census – households were asked to state their total income rather than asking each usual resident to state their level of income.)

The final decision on the inclusion of an income question will be dependent on the results of this evaluation and the strength of user requirements in comparison to other topics and in relation to the space available on the questionnaire.

### **2.4 Terms of Reference**

The evaluation objectives are outlined below:

- To assess the impact of the inclusion of an income question on response rates.
- To assess whether the level of completion of key variables differed by inclusion of an income question.
- To assess whether the level of questionnaire completion differed by inclusion of an income question.
- To review alternative data sources.

### **2.5 Methodology**

The methodology for collating the information and data required to inform this evaluation incorporated a variety of different strands, namely:

- Statistical Analysis of questionnaire return rates by design variables,
- Analysis of quality of response via Item non response (by content variation and within each of the 12 Design Strata).
- Review of Scottish 2006 Test Evaluation,

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<sup>7</sup> See Appendix C for example of the Income question included in the 2007 Census Test in Northern Ireland.



- Review of Alternative Data Sources.
- Assessment of public acceptability feedback via
  - I. the CTES,
  - II. calls to the Contact Centre,
  - III. comments made at the doorstep during follow up and
  - IV. media coverage.
- Review of Data Collection and Operations Support write up of Enumerator questionnaire analysis and Census Team Leader Debriefing.
- Review of the Data Collection and Operations Support Evaluation findings.

Prior to the Test, it was anticipated that the inclusion of income questions was likely to have a negative impact on return/response rates and hence require more follow-up than would be the case if income questions were not included on the questionnaire. Thus all statistical analysis carried out was testing the alternate hypothesis that 'income questionnaires' would achieve a lower return/response rate against the null hypothesis that there would be no difference in return/response rates. As a result, one-sided t-tests were used to test significance.

## 2.6 Return and Response Rate Definitions

### 2.6.1 Return rate definition

For the purposes of the 2007 Test, the **return rate definition** was

*'the proportion of responding households out of the total number of households where a returned questionnaire could have been expected' (i.e. it therefore excludes addresses that couldn't be found, were demolished or vacant, were returned by Royal Mail as undeliverable, or had their status changed from residential to non-residential).*

Poorly completed and blank returns count towards the return rate. The response rate (below) adjusts the return rate to remove poorly completed and blank returns.

### 2.6.2 Response Rate definition

Similarly, the **response rate definition** was

*'the proportion of valid responding households out of the total number of households where a returned questionnaire could have been expected' (i.e. it therefore excludes addresses that couldn't be found, were demolished or vacant, had their questionnaire returned by Royal Mail as undeliverable, or had their status changed from residential to non-residential). A valid response refers to a returned questionnaire where at least two of four basic items of data (name, gender, date of birth, marital status) are completed for at least one household member.*

The main difference between the return and response rate is the exclusion of poorly completed and blank returns from the response rate. In practise, of 5,777 returned questionnaires, only 102 (1.8%) were either poorly completed or blank.

## 2.7 Data Sources

The analysis of content variation makes use of a number of data sources detailed below.

### 2.7.1 Field Management Information System (FMIS)

The Field Management Information system was a computer system set up by staff within Census Office to keep an electronic copy of the actions relating to Census Test Questionnaires i.e.

- Questionnaire delivery (success, date and time)

- Questionnaire receipting (completion and date)
- Follow up information (date, time and replacement questionnaire(s))

In addition the system held additional Household information i.e.

- Contact name
- Placeholder information (Accommodation type, number of adults, number of children etc.).

It used a combination of SQL Server and MS Access software and held the unique 16 digit id for all pre-addressed questionnaires and any additional questionnaires.

### **2.7.2 Data collected from returned questionnaires**

As part of the operations associated with the 2007 Census Test, 6,061 returned household questionnaires were scanned and corresponding data captured. The data relating to NI was provided to Census Office and loaded into SPSS. In addition the scanned questionnaire images were also provided.

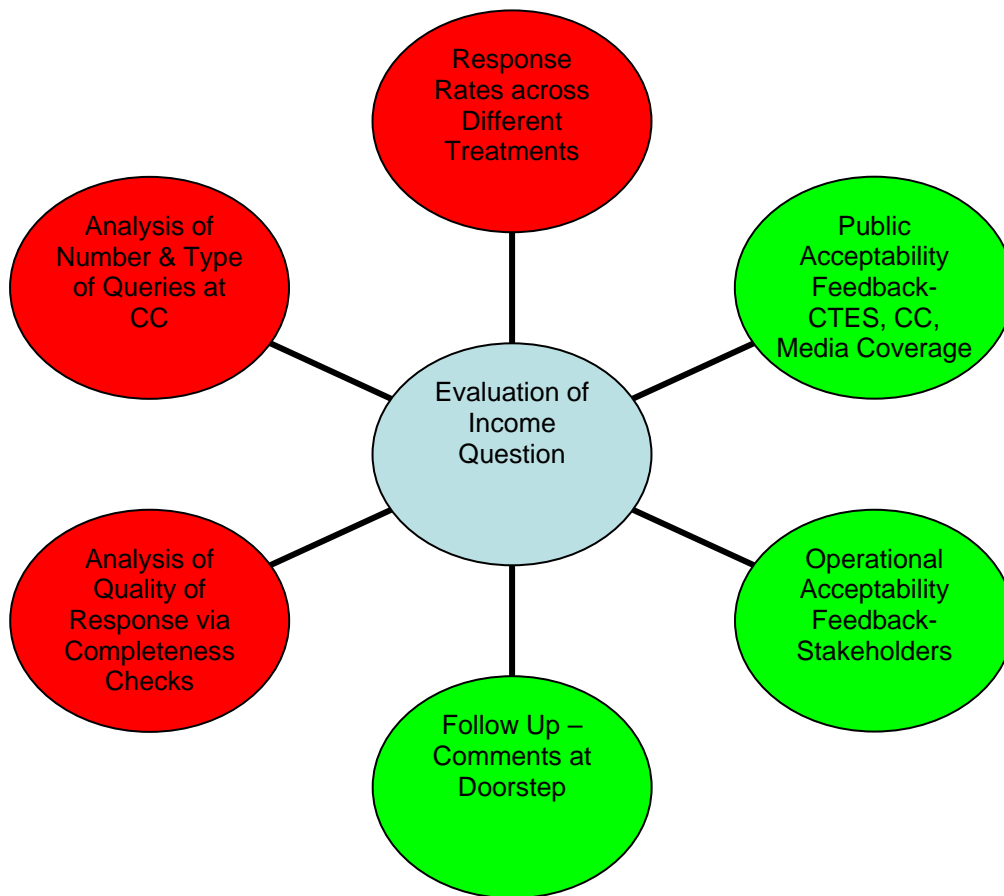
### **2.7.3 Census Test Evaluation Survey**

Following on from the Northern Ireland Census Test a Census Test Evaluation Survey (CTES) was conducted, the aim of which was to examine the quality of the information given in the Census Test form by repeating certain of the Census Test questions with a sample of respondents. A number of questions were also asked to determine the acceptability of the form in terms of its overall appearance and to find out whether there were any questions which had caused particular difficulties or which respondents were unhappy answering. In addition, respondents were asked to provide feedback on whether or not related Census Test materials, such as Information leaflets and follow up cards, were received; and to provide an opinion on how effective they were perceived to be.

The CTES questions asked of the Census Test responding households fell into four categories:

- questions to assess coverage of people within the household;
- questions on attitude to the questionnaire and to sensitive questions and about the burden imposed on householders;
- questions relating to related Census Test material, and;
- questions to provide some insight into the quality of answers and understanding of the other Census Test questions.

**Fig 2.1: Key Factors in Evaluation of Income Question**



## **2. 8 Sequence of the Report**

The remaining chapters of this report will consider each of the evaluation objectives in turn under each of the Chapter headings. The concluding chapter will bring together the evidence and issues identified through the Income Question evaluation process, as informed by the findings. This will produce recommendations on the inclusion of a question or questions on Income in the 2011 Census.

## **CHAPTER 3: Census Test Findings – Response and Return Rates**

The biggest impact on data quality resulting from the content variation would be a reduction in overall response rates leading to more imputed people and households in the Census results and less robust population estimates. As such, the following analyses focus largely on response rates.

There are 2 key points in the Enumeration process where the return/response rate has been measured to provide insight into the impact of delivery method on response:-

- Before the commencement of follow up action, and;
- At the close of Census Test Operations.

On 21<sup>st</sup> April a pre-delivery card was posted out by Royal Mail to all addresses included in the Census Test. In all areas the questionnaire was delivered before Census Test Day (13<sup>th</sup> May 2007) and follow up action in all areas was scheduled to begin on Friday 25<sup>th</sup> May 2007. The return rate calculated at Census Test Day plus 12 (the commencement of Follow up) will hereafter be referred to as the initial return rate. The final return rate was taken at the end of June after all the enumeration processes had been completed.

### **3.1 Pre-addressed questionnaires**

The number of pre addressed questionnaires with and without questions on income varied across the 5 selected District Councils due to the stratified design of the Census Test and the clusters of OAs selected within each DC (sees Table 3.1). In total 7,045 households received 'income questionnaires' and 7,131 households received 'no income questionnaires.'

**Table 3.1 Number of pre-addressed questionnaires by content variation and DC**

<b>District Council</b>	<b>Delivery Method</b>	<b>No of pre-addressed questionnaires</b>	<b>Total</b>
Belfast	Income	2,511	<b>4,671</b>
	No Income	2,160	
Coleraine	Income	968	<b>1,779</b>
	No Income	811	
Craigavon	Income	1,647	<b>2,967</b>
	No Income	1,320	
Fermanagh	Income	1,090	<b>2,712</b>
	No Income	1,622	
Magherafelt	Income	829	<b>2,053</b>
	No Income	1,224	
<b>Total</b>	<b>Income</b>	<b>7,045</b>	<b>14,182</b>
	<b>No Income</b>	<b>7,137</b>	

### 3.2 Assessment of the impact of inclusion of an income question on response rates.

Initial analysis undertaken on the observed response rates in different subgroups was carried out. Table 3.2 below specifically highlights the effect of the inclusion of income questions on observed return and response rates.

The total number of eligible households was 12,919, as any households whose questionnaires were returned to Census Office as undelivered (by Royal Mail or enumerators) or did not contain a resident household (i.e. were found to be derelict, demolished etc) were excluded from the return rate analysis. The final return rate (Table 3.2 below) shows those households that received a questionnaire containing an income question/s returned fewer questionnaires (a difference of 2.4 percentage points) than households that received a questionnaire without an income question/s.

**Table 3.2 Observed Return and Response Rates**

	Number of eligible households	Total initial returns	Initial return rate	Total final returns	Final return rate	Total response	Response rate
<b>ALL</b>	12,919	3,644	28.2	5,777	44.7	5,675	43.9
<b>Inc</b>	6,376	1,661	26.1	2,772	43.5	2,718	42.6
<b>No Inc</b>	6,543	1,983	30.3	3,005	45.9	2,957	45.2

In addition, Table 3.2 demonstrates that overall, there was a reduction in response rates when householders received an Income questionnaire (2.6 percentage point's difference in favour of No Income Questionnaires). In addition, this difference becomes more pronounced in areas where the Test questionnaires were delivered by hand (7.7 percentage points difference in favour of No Income questionnaires). Conversely, in Post Out areas, the response rate for Income questionnaires was 2.3 percentage points higher than for No Income questionnaires.

The initial analysis detailed above, however, does not account for the number of 'I' questionnaires (meaning 'individual' questionnaires requested via the Contact Centre for privacy reasons) or 'C' questionnaires ('continuation' questionnaires requested via the Census Test Enumerator or via the Contact Centre for large households) requested and returned by members of the public throughout the course of the Census Test Enumerators or via the Contact Centre for large households). Table 3.1 provides a breakdown of 'I' questionnaires returned by content variation.

**Table 3.3 I Questionnaires**

Content Variation	Number of I Questionnaires returned	% of Total
<b>Income</b>	40	58%
<b>No Income</b>	29	42%
<b>Total</b>	69	100%

Whilst the number of 'I' questionnaires requested was very small, Table 3.1 demonstrates that more individual respondents who received an 'income questionnaire' elected to make their Census Test return utilising a facility ('I' questionnaire) that maintained their privacy from other household members than respondents who received a 'no income' questionnaire (a difference of 16 percentage points).

### 3.2.1 Logistic modelling

The Test is designed as an experiment embedded within a survey-type design, with treatments in clusters (District Councils), and stratification by Area Type. The analysis approach uses this survey information to ensure that variances are validly estimated given the complexity of the design, and this approach was agreed with the National Statistics Methodology Advisory Committee (NSMAC).

The survey-based analysis used here has been undertaken in Stata. Since response is a binary variable, it is best analysed using a logistic regression model. Although stratification by area type will have removed some of the variation in the different LGDs' intrinsic response propensities, it was expected that including other LGD-level variables as covariates in a logistic model would explain some of the residual LGD variation, effectively reducing the clustering effect further. This modelling is a way of reducing the variance of the estimated differences - it does not affect their values.

A number of the variables used in constructing Enumeration Target Classification categories in England and Wales were available at the LGD level. These were:

- the proportion of young adults;
- the proportion of ethnic minority groups;
- the proportion of private renters;
- the proportion of social renters, and;
- the proportion receiving income support or unemployment benefit.

It should be noted that although the purpose of including these extra covariates in the model was to reduce the impact of inter-LGD variation on the response rates, making real treatment effects easier to detect, it is possible for this to reduce the size of the treatment effect as measured by the relevant coefficient in the model – indicating that differences in response rates between the treatment groups were smaller than predicted by differences in these other covariates.

In the individual strata, only the two most influential LGD-level covariates were fitted in order to preserve the available degrees of freedom (private renters and young adults). Even so, the low degrees of freedom in individual strata and some of the smaller groups of strata indicate that these results have reduced reliability.

The results from this modelling are shown in Table 3.4, below. Coefficients that infer a statistically significant difference in response rates (i.e. where t values are in excess of 1.65) are shown in bold.

**Table 3.4: Estimates from the joint logistic model of income on response**

	Income Q Coefficient	t-value	P value	df
<b>All cases</b>	0.14	1.10	0.137	77
Urban EDs	0.01	0.10	0.460	35
Rural EDs	0.09	0.65	0.260	35
<b>Deprived EDs</b>	<b>0.23</b>	<b>2.02</b>	<b>0.026</b>	<b>35</b>
Non-depr. EDs	0.04	0.17	0.433	35

	Income Q Coefficient	t-value	P value	df
Mixed ED	0.12	0.85	0.202	21
Protestant ED	0.26	1.53	0.070	21
Catholic ED	0.18	0.63	0.268	22
Urban/non-depr	-0.01	-0.04	0.516	14
Urban/depr	0.10	0.89	0.194	14
Rural/non-depr	-0.12	-0.63	0.731	15
<b>Rural/depr</b>	<b>0.48</b>	<b>4.17</b>	<b>0.001</b>	<b>14</b>
<b>Urban/mixed</b>	<b>0.24</b>	<b>3.72</b>	<b>0.004</b>	<b>7</b>
Urban/Prot	-0.18	-0.94	0.811	7
Urban/Cath	0.00	0.03	0.488	8
Rural/mixed	-0.02	-0.15	0.558	8
Rural/Prot	0.16	1.21	0.133	7
Rural/Cath	0.33	1.10	0.152	8
Non-depr/mix	-0.05	-0.24	0.591	7
Non-depr/Prot	-0.19	-0.54	0.698	8
<b>Non-depr/Cath</b>	<b>0.65</b>	<b>1.91</b>	<b>0.046</b>	<b>8</b>
<b>Depr/mix</b>	<b>0.27</b>	<b>2.15</b>	<b>0.032</b>	<b>8</b>
<b>Depr/Prot</b>	<b>0.46</b>	<b>3.59</b>	<b>0.004</b>	<b>7</b>
Depr/Cath	0.03	0.18	0.431	8
1 u/n/m	-0.22	-1.51	0.897	4
2 u/n/p	-0.14	-0.45	0.662	4
<b>3 u/n/c</b>	<b>-0.16</b>	<b>-2.80</b>	<b>0.976</b>	<b>4</b>
4 u/d/m	0.25	1.05	0.176	4
<b>5 u/d/p</b>	<b>0.16</b>	<b>2.37</b>	<b>0.038</b>	<b>4</b>
6 u/d/c	0.12	0.42	0.348	4
7 r/n/m	-0.22	-0.84	0.776	4
8 r/n/p	-0.19	-1.74	0.922	4
<b>9 r/n/c</b>	<b>0.96</b>	<b>2.38</b>	<b>0.038</b>	<b>4</b>
10 r/d/m	0.13	0.65	0.276	4
<b>11 r/d/p</b>	<b>0.48</b>	<b>7.99</b>	<b>0.001</b>	<b>4</b>
12 r/d/c	0.08	0.33	0.379	4

These results identify the subgroups showing significant differences in final response rates. They highlight that whilst there a number of statistically significant findings (Strata 3, Strata 5, Strata 9, and Strata 11), there is no emerging pattern in the data. As such, these results do not imply a sustained effect of the inclusion of questions on income on response rates.

### 3.2.2 T-Tests

The Income effect is clearer when a simpler model (t-tests) is applied. This explicitly accounts for the differential sampling rates in the 12 Area Types, and for the clustering caused by both including all households within Census Output Areas (OAs) and giving them all the same treatment. It was expected that hand delivery

and the absence of an income question would lead to higher responses; as such, one-sided t-tests are appropriate and are used throughout. Because of the small number of OAs sampled, a t-statistic was used to test for differences in response rates.

Table 3.5 below presents the effects of the inclusion of the income question on response rates across each of the design strata, both separately and combined.

**Table 3.5: The effect of the income question on response rates**

Group	Income	No income	Difference
All LGD's	44.1%	47.4%	3.3
Urban	35.9%	37.7%	1.7
Rural	49.2%	52.7%	3.5
non-deprived	46.3%	46.0%	-0.2
deprived	42.9%	48.2%	5.3
Mixed	43.8%	46.1%	2.3
Protestant	41.3%	45.3%	4.0
Catholic	50.5%	52.3%	1.7
Urb-nondep	51.7%	44.5%	-7.3
Urb-dep	29.7%	35.2%	5.5
Rur-nondep	43.9%	46.6%	2.6
rur-dep	52.8%	57.4%	4.6
urb-mx	33.4%	39.4%	6.0
urb-prot	37.2%	38.1%	0.9
urb-cath	32.0%	33.5%	1.4
rur-mx	51.8%	51.9%	0.1
rur-prot	44.8%	50.6%	5.8
rur-cath	54.6%	56.0%	1.4
Nondep-mx	50.9%	49.7%	-1.1
Nondep-prot	47.5%	45.3%	-2.2
Nondep-cath	37.4%	46.7%	9.3
dep-mx	39.5%	44.3%	4.9
dep-prot	36.9%	45.3%	8.4
dep-cath	54.5%	53.8%	-0.8
<b>Strata</b>			
1 u/n/m	39.4%	47.0%	7.6
2 u/n/p	54.7%	46.7%	-7.9
3 u/n/c	38.9%	28.1%	-10.8
4 u/d/m	32.3%	38.0%	5.7
5 u/d/p	28.9%	34.4%	5.5
6 u/d/c	30.1%	35.2%	5.1
7 r/n/m	53.4%	50.4%	-2.9
8 r/n/p	43.5%	44.8%	1.3
<b>9 r/n/c</b>	<b>37.1%</b>	<b>51.1%</b>	<b>14.0</b>
10 r/d/m	49.9%	53.2%	3.3



Group	Income	No income	Difference
11 r/d/p	46.0%	58.6%	12.5
12 r/d/c	60.0%	57.2%	-2.8

The inclusion of an income question reduced the response rate by a statistically significant amount in rural areas only (Strata 9 and 11), from 58.6% without an income question to 46% with an income question (stratum 11,  $p < 0.05$ ), and from 51.1% without an income question to 37.1% with an income question (stratum 9,  $p < 0.05$ ). However, given the multiplicity of tests being conducted, an occasional significant outcome could occur by chance. Out of 12 individual strata, four have shown an increase in response rates with the inclusion of an income question and six have shown a decrease in response rates with the inclusion of an income question. As such, there is no evidence to show that income reduces response rates consistently across the 12 strata. It must be noted, however, that response rates across all of the 'deprived' strata have fallen (although not significantly so in most cases) with the inclusion of an income question.

### 3.3 Interpretation of results

There are a number challenges in interpreting the results, primarily because the conditions for the Test do not mirror the conditions for the Census.

The survey approach permits a generalisation to the five LGDs included in the test, and while they are not *proportionally* representative of types of LGDs in Northern Ireland, they do cover a spectrum. To generalise to the whole of Northern Ireland relies on model assumptions about the similarity of areas with the area types.

Secondly, as stated earlier, the small number of OAs used in this test means that the underlying normal distribution on which the p-values are based may not be a good approximation, particularly in the individual strata. Nonetheless the stratum results should still provide a general indication of where differences are more likely to occur i.e. particularly (but not exclusively) across deprived Enumeration Districts. More specifically, the logistic modelling suggests that differences are likely to occur in Stratum 5 (urban/deprived/protestant), Stratum 9 (rural/ non-deprived/catholic) and Stratum 11 (rural/deprived/protestant). This is supported by the initial analysis (see Table 3.3) which also shows a marked reduction in response rates where respondents received an 'Income' questionnaire in the Strata mentioned above.

### 3.4 Conclusions & Recommendations

Although the analyses (discussed above) have found significant Income effects within particular strata, there is no evidence to show that the inclusion of an income question produces a sustained reduction in response rates across the 12 strata tested. Nonetheless, respondents who received an income questionnaire were less willing to complete a household return than respondents who received a no income questionnaire.

Based on the findings presented above, the following recommendation can be made:

- If a decision is taken to include an Income question in the 2011 Census, Census Office should seek to clarify further (through additional research or small scale testing) the impact of an Income question on response rates in deprived and rural areas.
- If a decision is taken to include an Income question in the 2011 Census, the question should be included in the individual section rather than the household section of the questionnaire (based on the finding that more forms were requested in 'Income' areas than in 'No Income' areas for privacy purposes).

## **CHAPTER 4: Census Test Findings – Response Quality**

Users of Census data have a continuing requirement for the majority of data collected in the course of the 2001 Census<sup>8</sup>. In addition, it is intended that the 2011 Census questionnaire will restrict the burden placed upon respondents wherever possible. As such, the need exists to ensure that any additional questions (that would have an impact on the length of the 2011 Census Questionnaire and thus, respondent's burden) are clearly required by users. Furthermore, given the emerging data requirements for additional questions to be included in the 2011 Census Questionnaire, it is imperative that the responses provided to any potential question are accurate.

### **4.1 Item Response Rate**

Although the inclusion of Income questions did not have a significant overall impact on the proportion of returned (Income and Non Income) questionnaires that passed the 2 out of 4 rule, it may nevertheless be the case that householders did not answer the Income questions.

Table F1<sup>9</sup> demonstrates that the majority of respondents who received a questionnaire containing questions on Income completed the question (89.8% of respondents completed the 'Income Amount' question and 93.6% of respondents completed the 'Income Sources' question). Notably, the level of completion for both income questions was broadly similar to other economic questions such as "Employment Status" which had a non response of 8.38% (in 'Income' questionnaires). Furthermore, although the target responder group was more limited than the entire sample of responders, it must be recognised that "Month and Year of Arrival" had a much higher level of item non response than either of the income questions (55.1% blank – month of arrival, 48% blank – year of arrival).

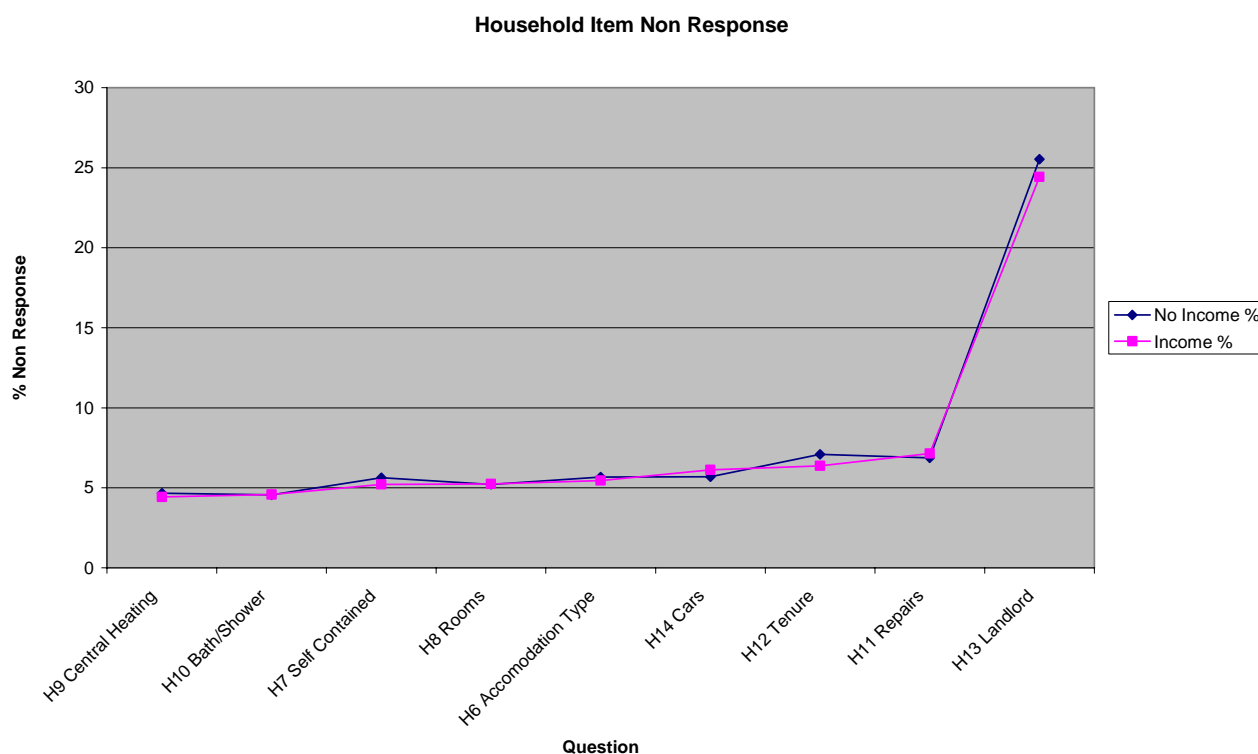
Figure 4.1 overleaf presents the level of item completion for household questions. It shows that the level of item/question response was very similar for both 'income' and 'no income' questionnaires.

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<sup>8</sup> [http://www.nisranew.nisra.gov.uk/census/2011\\_census\\_consultation.html](http://www.nisranew.nisra.gov.uk/census/2011_census_consultation.html)

<sup>9</sup> Appendix F Item non Response

**Figure 4.1**

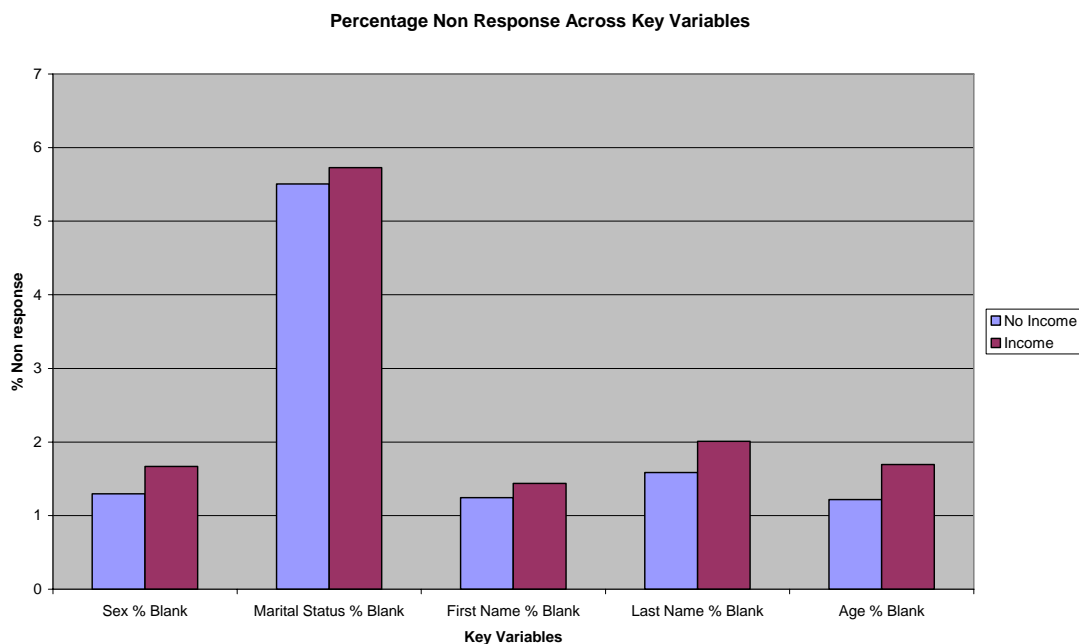


#### **4.2 Assessment of whether the level of completion of key variables differed by inclusion of an income question.**

In order to examine the relationship between the inclusion of an income question on the level of item completion (of key variables) within that questionnaire, analyses involving simple cross-tabulations between the Income/No income variable and a number of key variables including 'first name', 'last name', 'date of birth', 'marital status' and 'sex' was conducted.

Figure 4.2 below presents the impact of the inclusion of an income question on the level of completion across the key variables. It demonstrates that across these variables, there is a marginally higher level of non response (in key variables) from responders who received 'Income questionnaires' ('Income questionnaires' contained 2.8% more blank responses than 'no Income questionnaires'). However, this relationship was not found to be statistically significant

**Fig 4.2: Percentage of blank responses across key variables**



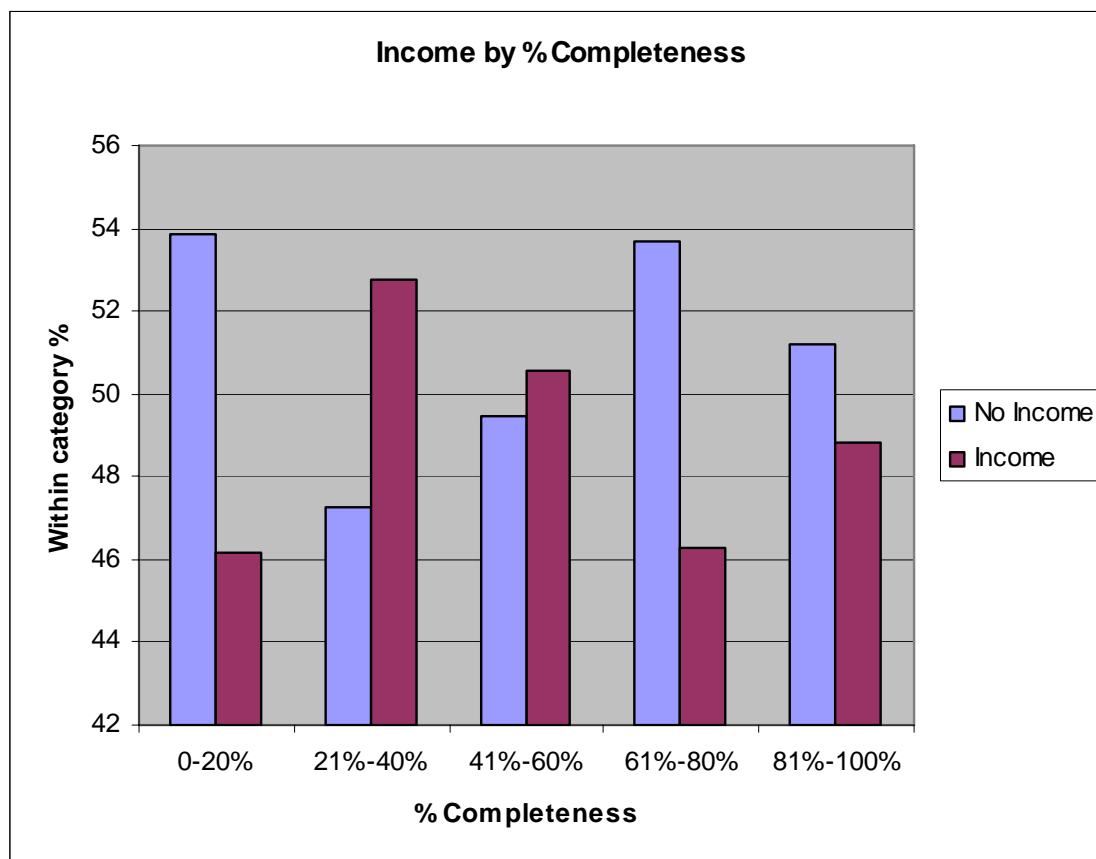
**4.3 Assessment of whether the level of questionnaire completion differed by inclusion of an income question.**

It is possible that content variation will have an impact on the overall level of questionnaire completion (i.e. did each householder complete all the questions expected of him or did he leave some unanswered). In the questionnaire there were routing questions implying that not all questions were to be answered by all respondents. As such, filters were created for each question and individual indicating whether or not they were expected to complete that question. The filters were used to total the number of questions each individual was expected to complete and the numbers of non-blank responses were taken as a percentage. This percentage provides an indication of quality in terms of questionnaire completion (i.e. a quality completion score of 80% indicates that the respondent provided information for 80% of all questions that he/she was expected to complete).

The average quality completion score for Income questionnaires was 82.2% which is broadly similar to the corresponding figure of 81.8% for No Income questionnaires. Furthermore, whilst those respondents receiving a questionnaire without an income question completed a slightly higher percentage of the questionnaire as a whole (96.9% of respondents who received a 'no income' questionnaire completed over half of the questionnaire whilst 96.4% of respondents who received an 'income questionnaire' completed over half of the questionnaire) the difference was minimal and non significant.

Figure 4.3 below shows the distribution of individual responses by content variation as a percentage of all responses. Percentages are used in Fig.4.4 as a slightly higher number of responses were received from respondents who received 'No Income' questionnaires.

**Fig 4.3: Percentage completeness by inclusion of income.**



#### 4.4 Predictive Validity of Census Test Income Question

Previous surveys of income levels (described further in Chapter 5) have found that:

- Males tend to have higher income levels than females,
- Income level is positively correlated with age from around 16-years-old up to around 65-year-old (retirement age),
- Ethnic minorities tend to have lower income levels; and,
- Income level is positive correlated with education level.

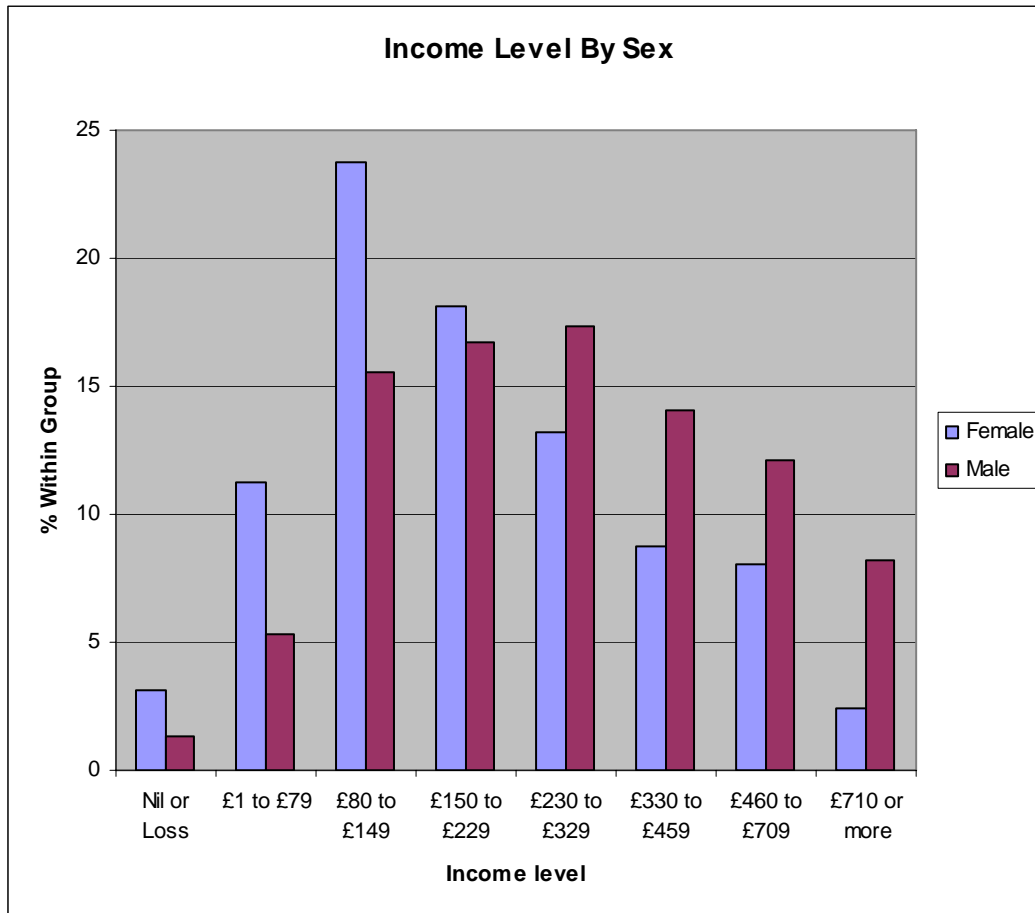
If the data obtained from the 2007 Test income level question is a valid measure of the 'true' income levels of householders who returned 2007 Test questionnaires that passes the two-of-of rule, these trends should be clearly evident in the 2007 Census Test data. A breakdown of income level responses by sex, age, and educational level (responses to the qualifications question) are presented below.

##### 4.4.1 Income Level by Sex

Figure 4.4 demonstrates that as predicted, males tended to report higher income levels than females. A greater proportion of males than females reported that their

incomes fell into the top four eight income level bands (£710 or more, £460 to £709, £330 to £459 and £230 to £329). A greater proportion of females than males reported that their income fell into the bottom four income level bands (Nil or loss, £1 to £79, £80 to £149 and £150 to £229),

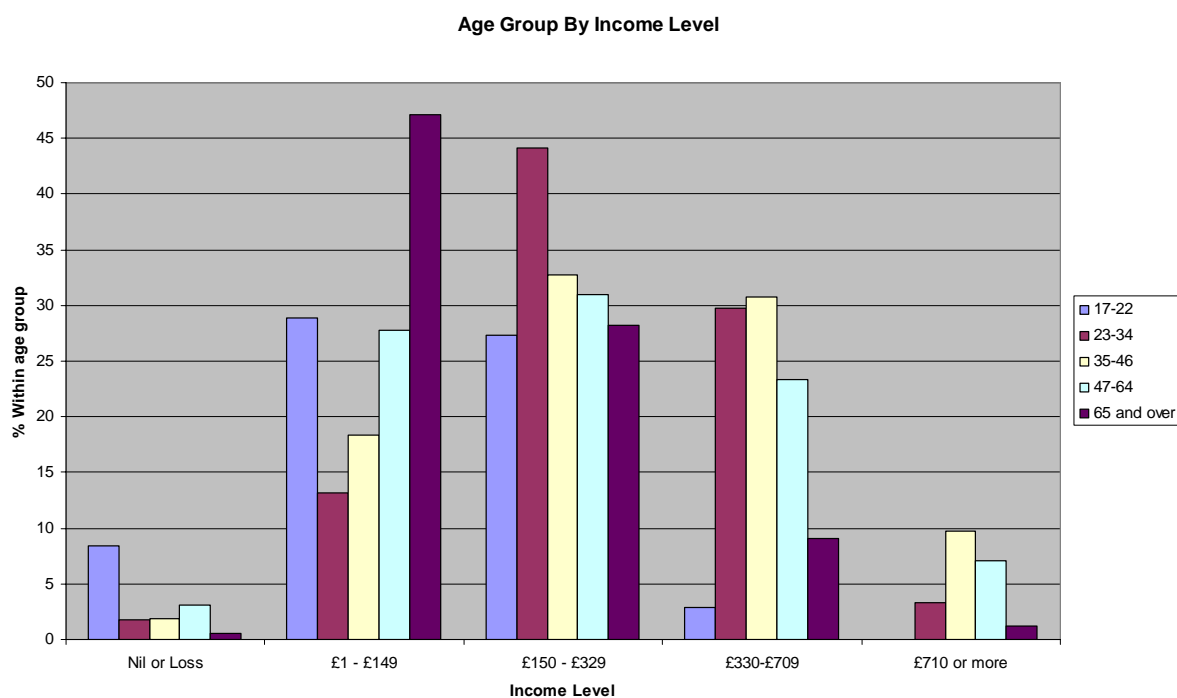
**Figure 4.4**



#### 4.4.2 Income Level by Age

For the purposes of analysis, householders were classified into ten groups from age 0 - 16 to 65 and over. Each intermediate age group had a range of five years. Figure 4.5 demonstrates that as predicted, income level is (broadly speaking) positively correlated with age (between 16 and 65). The highest proportion of respondents earning £710 or more per week were between 35 and 58 years old.

**Figure 4.5**



#### 4.4.3 Income Level by Educational Level

For analysis purposes householders were classified into five ranked educational level groups based on their responses to the qualifications question:

Group 1 = No qualification

Group 2 = Selection of at least one response option from:

- 1-4GCSEs, Basic Skills
- NVQ level 1, Foundation GNVQ
- Other vocational work-related qualifications
- Foreign qualifications

Group 3 = Selection of least one response option from:

- 5+ O levels
- NVQ Level 2

Group 4 = Selection of least one response option from:

- Apprenticeship
- 2+ A levels
- NVQ Level 3

Group 5 = Selection of at least one response option from:

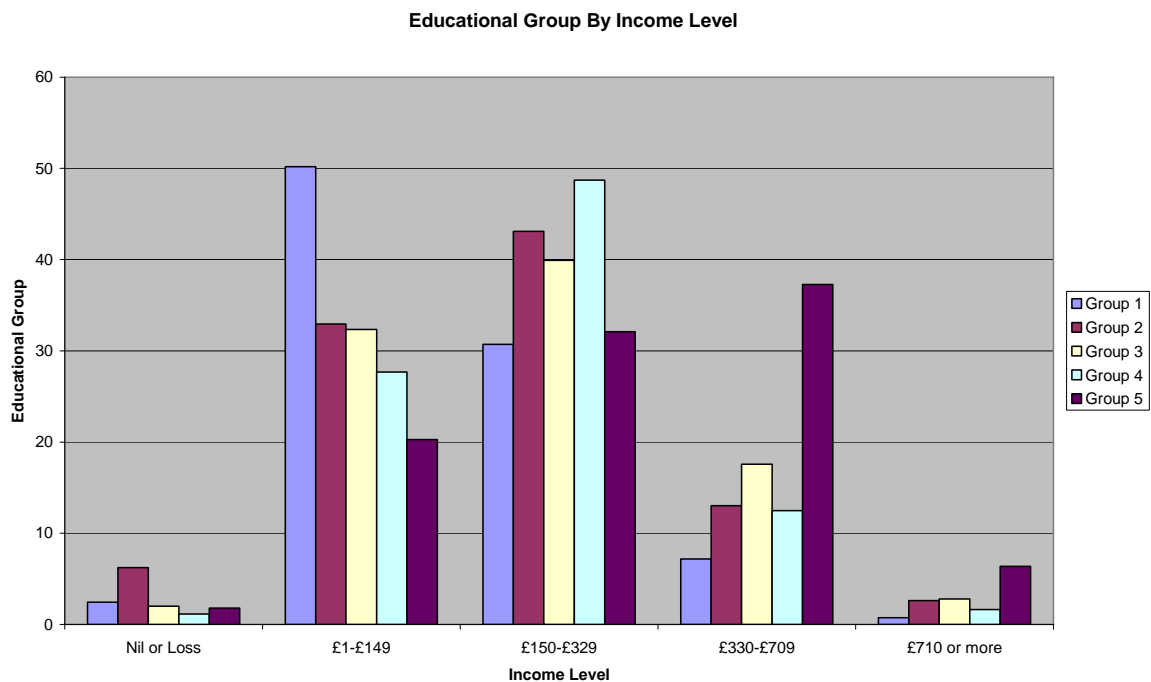
- First degree
- NVQ Level 4-5



- Professional qualifications

Figure 4.6 demonstrates that as predicted, income levels varied as a function of educational level. The highest proportion of householders selecting income levels £1 to £79 and £80 to £149 were from educational Group 1, and the highest proportion of householders selecting the three highest income bands were from educational Group 5.

**Figure 4.6**



#### 4.4 Conclusions & Recommendations

Overall, the findings presented indicate that the data obtained from the income questions and the resultant relative distributions presented in the Census Test are plausible. The response rates to the income questions were acceptable (relative to other questions) and there was no evidence that inclusion of the income questions led to householders completing their questionnaires less comprehensively. Based on the findings presented above, the following recommendation can be made:

- Census Office should seek to initiate further research to ascertain whether non-response rates to the income question vary between households of different income levels and demographic characteristics.

## **Chapter 5: Review of Alternative Data Sources.**

### **5.1 Introduction**

There is an increasing requirement from users for income data at the smallest possible geographical level. The National Statistics Quality Review on 'Issues in Measuring Household Income and the Redistribution of Income'<sup>10</sup> identified that there was a gap in income statistics, suggesting that reliable income data from country down to ward level were required. Although a validated and calibrated income question on the Census questionnaire would answer this requirement, it may also affect response rates, potentially impacting on the length of the questionnaire which would have implications across the entire range of Census planning and procurement issues<sup>11</sup>. In addition, the data may not be of a sufficiently high quality. It is therefore necessary to consider if any feasible alternative sources of income data exist, or are likely to exist by 2011.

### **5.2 Potential Alternative Sources**

Potential alternative sources have been identified through research by NISRA, the Office for National Statistics' topics consultation and research within the ONS 2011 Census Division and the ONS Social and Health Analysis Reporting Division, and through work undertaken by the Economic and Social Data Service (ESDS Government)<sup>12</sup>. These include<sup>13</sup>:

- Family Resources Survey
- Continuous Household Survey
- Integrated Household Survey
- Northern Ireland Household Panel Survey
- Survey of Personal Incomes
- Annual Survey of Hours and Earnings

Further detail on these sources is given in annex D.

### **5.3 Modelled Income Data**

The short overview of alternative sources in annex D demonstrates that alternative data sources are not, in themselves, able to provide estimates of income for small population groups or small geographic areas. In recent years, modelling of small area estimates has developed rapidly, and it is highly likely that small area estimation methods will be able to produce robust small area statistics in the near future.

There are three related developments that may lead to the development of sufficiently robust statistics for small areas in the near future.

The first approach is micro-simulation. Using the FRS database, a regression model is used to establish which predictive variables are associated with income. Separately for each small area, the micro-simulation process then post-weights the

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<sup>10</sup> <http://www.statistics.gov.uk/about/data/methodology/quality/reviews/default.asp>

<sup>11</sup> 2011 Census UKCC Paper for Decision: 2011 Questionnaire Length and Content

<sup>12</sup> ESDS Government, Guide to Data Sources for Northern Ireland, June 2007

<sup>13</sup> See Appendix D for summary of each potential alternative data source listed.

FRS sample such that the weighted FRS sample matches the characteristics (in terms of the predictive variables) of the small area. This leads to a micro-simulation estimate for each ward of other FRS variables, such as income. NISRA will shortly be publishing commissioned research in this area.

The second approach is a model based approach using statistical aggregates for small areas. This approach has been developed by ONS, and rests upon the clustered sample design of many ONS household surveys. The approach estimates predictive models of, for example, ward-level average household income using data from the FRS, where the independent variables are ward level estimates from FRS. The choice of independent variables is driven by their theoretical relationship to income and their presence in both FRS and the Census. The FRS-based model, derived from the wards in the FRS sample, is then applied to all wards in the Census database. ONS has published a number of research reports on this work. There may be theoretical problems in applying this to Northern Ireland given the unclustered samples used by official sample surveys in Northern Ireland.

The third approach depends upon a greater degree of computing power and access to the Census database; NISRA has conducted some initial work in this area. The idea is similar to that above, but at the level of individual households. Thus, a predictive model for income is derived through FRS (at the level of individual households) and this model is then applied to individual households in the Census database. Initial results have been encouraging.

In summary, it appears likely that small area estimation techniques could be used in the near future to produce small area estimates for a range of non-Census variables including income.

## **5.5 ONS and GROS Census Test Findings**

The GROS Census Test Evaluation for Scotland in 2006 found that the return rate for questionnaires with the Income Question (47.9%) was higher than for those without an Income Question (44.1%). Furthermore, of the questionnaires returned with an Income Question, 87.6% had the Income Question completed; this was found to be the lowest completion percentage of any household level question on the Scottish form. The ONS Census Test Evaluation for England and Wales found an overall statistically significant drop of 2.7% in response rates in areas where questions on income were included in the Test questionnaire. Furthermore, this increased to a 3.3% drop on areas where questionnaires with questions on income were delivered using the post out methodology. Of the questionnaires (containing income questions) returned, over 94% of respondents had completed the Income Sources question and over 91% of respondents had completed the Income Amount question.

## **5.6 Conclusions & Recommendations**

Alternative income data sources may be more appropriate than a Census question due to difficulties in defining income sufficiently clearly within the context of a Census, and difficulties in obtaining accurate information. In addition, analyses from the Census Test would appear to indicate the inclusion of a question/questions on income in the 2011 Census may result in a reduction in response rates overall, a reduction in data quality and, potentially, a reduction in response rates across a number of potentially 'hard to count' strata.

Currently, there are no single alternative sources of income data available that meet all user requirements. However, statistical methods for small area estimation are developing rapidly, and it is likely that robust methods will be available before 2011.

## **CHAPTER 6: Census Test Evaluation Survey**

### **6.1 Introduction**

The aim of the Census Test Evaluation Survey was to examine the quality of the information provided by respondents in the Census Test questionnaire by repeating the Census Test questions with a sample of respondents. A number of questions were also asked to determine the acceptability of the form in terms of its overall appearance and to find out whether there were any questions which had caused particular difficulties or which respondents found unacceptable. Questions asked specifically of Census Test non-responding households were used to discover reasons for non-response, and particularly whether this was associated with one (or more) of the key design variables of the Test.

### **6.2 Methodology**

CTES addresses were selected from 48 Census Output Areas across each of the 5 LGDs chosen for the Census Test, such that each of the area variants (in delivery method and socio economic strata) and form variants which made up the design strata of the Test were sampled in a balanced fashion. One person per responding household was scheduled for interview.

Both the responder sample and the non-responder samples were stratified to provide a balanced representation of the four main treatment variables. In addition, each of the 48 areas were chosen to provide a balanced representation of the 12 socioeconomic strata established for the Census Test.

Each batch was sampled at key points in the Census Test in order to provide insight into:

- early responders (i.e. those householders who returned a Census Test Questionnaire without any intervention from Census follow up field staff),
- late responders (i.e. those householders who returned a Census Test Questionnaire following the initiation of Census follow up activity), and;
- non-responders (i.e. those householders who did not return a Census Test Questionnaire).

#### **6.2.1 Response Rate in Responders Sample**

Table 6.1 below demonstrates that the level of public co-operation with the CTES was relatively high, with full co-operation from 81% of the Census Test Responders who were sampled.

**Table 6.1: Response Rate in Responders Sample**

	<b>Number</b>	<b>Percent</b>
Set sample of addresses	1,000	
- Ineligible known	18	
- Ineligible unknown (pre-adjustment)	4	
- Eligible known (pre-adjustment)	978	

- Ineligible (after adjustment)	19	
Eligible (after adjustment) <sup>1</sup>	981	100.0
<b>Fully co-operating</b>	<b>796</b>	<b>81</b>
Refusal to co-operate	56	6
Non-contact	129	13

<sup>1</sup> The adjusted eligible households include all pre-adjustment eligible households and a proportion of the pre-adjustment "eligibility unknown" households. The proportion of the pre-adjustment 'eligibility unknown' households reclassified as eligible is set at the proportion of pre-adjustment eligible households in the set sample of households: 90%.

### 6. 3 CTES Results

When the level of agreement between responses provided in the Census Test Questionnaire and responses provided in the Census Test Evaluation Survey is examined, the mean level of agreement overall is 90% with a range of 91.1% - 53.6%. The lowest level of agreement (53.6%) is between responses provided to the 'amount of income' question, closely followed by the 'sources of income' – state benefits category (74.7%). Table G1 in Appendix G further demonstrates that when asking respondents specifically about their amount of income, the level of agreement between responses provided in the Census Test questionnaire and responses provided at interview was low. For example, the mean % agreement level between income amounts for those respondents who reported that they had completed the household section of the Census Test questionnaire was 48.04%. For those respondents who reported that they had completed the entire Census Test questionnaire, the mean % level of agreement was 38.21%. However, when respondents had completed individual questions for themselves only, the mean % agreement level was 100%.

This lack of agreement may be due to a number of reasons, for example the CTES was carried out through face to face interviews whereas the Census Test was delivered via a paper questionnaire, as such, respondents may have been reluctant to provide the amount of their income to an interviewer. Secondly, the income of a respondent may have changed (due to new job, for example) during the weeks between the Census Test and the CTES. Finally, the respondent may not have had the same information 'to hand' under both conditions and may have guessed their income in one or both. Even so, given that respondents were not asked to provide a reason for the discrepancy, it is not possible to accurately provide an explanation. This highlights the difficulty in collecting self reported information on the personal income of the population.

The following section presents a number of tables which outline responses to a number of key questions put to responders. Table 7 below illustrates that those responders who received a Census Test Questionnaire containing an income question were less likely to complete the Household section and the Individual section (for someone else) of the questionnaire.

**Table 6.2: Can I just check: which parts of the Census questionnaire did you complete?**

All full interviews	No Income	Income	Total
The household section	43%	40%	42%
The individual questions for yourself	43%	40%	42%
The individual questions for someone else	15%	16%	15%
None of the Census questionnaire	2%	1%	2%

<b>All of the Census questionnaire</b>	53%	51%	52%
<b>Can't remember</b>	1%	5%	3%
<b>Don't know</b>	0%	0%	0%
<b>Blank form household</b>	0%	1%	1%
<b>Individual questions for yourself only</b>	1%	1%	1%
<b>Total*</b>	403	393	796

\*Percentages may add up to more than 100% due to multiple responses.

No real differences were reported regarding how responders felt about the time taken to complete the questionnaire. In the main, responders indicated that they felt that the questionnaire took a reasonable length of time to complete.

### 6.3.1 Difficult to answer.

33 respondents (4.1%) indicated that they found at least one question difficult to answer. When asked about which questions respondents found difficult to answer, 82.5% of respondents (who indicated that they found a question difficult to answer, i.e. 27 respondents) highlighted a question or questions in the individual section of the questionnaire. Table 10 below demonstrates that amongst those responders who had received an 'income questionnaire', 31.6% of reported question difficulties were in relation to the income questions. However, overall, a higher proportion of difficulties were reported in relation to the Qualifications question (33% of difficulties attributed to this question). As such, the inclusion of the Income question had no real effect on the type of questions that responders found difficult to answer.

**Table 6.3: Which individual questions did you find difficult to answer?**

<b>All those who said they found individual questions difficult to answer</b>	<b>No Income</b>	<b>Income</b>	<b>Total</b>
<b>Marital Status</b>	1		1
<b>Country of Birth</b>		2	2
<b>Date of arrival</b>		2	2
<b>Lived outside NI</b>		1	1
<b>Health in general</b>	1		1
<b>Medical conditions</b>	1	3	4
<b>Languages</b>	5	3	8
<b>National Identity</b>	2	1	3
<b>Ethnic Group</b>	1		1
<b>Religion belong to</b>	1		1
<b>Religion brought up in</b>	1	1	2
<b>Address last year</b>	1		1
<b>Whether working or not</b>	1	1	2
<b>Looking for work</b>	1		1
<b>Qualifications</b>	7	4	11
<b>Sources of income</b>		2	2
<b>Amount of income</b>		4	4
<b>Other (Specify)</b>		1	1
<b>Total*</b>	14	19	33

\* Count may add up to more than the total due to multiple responses

### 6.3.2 Unhappy answering.

54 respondents (6.8%) indicated that they were unhappy answering one or more questions. When asked about which questions respondents felt unhappy answering, 29.2% of responses ( from respondents who had received an 'income questionnaire') were in relation to the amount of income question. 29.2% of responses from the same group indicated that they were also unhappy answering the sources of income question. Table 11 below demonstrates that overall, respondents were least happy answering questions relating to income. Highlighting that whilst respondents did not find the questions difficult to answer, they continued to be unhappy answering them for other reasons.

**Table 6.4: Which individual questions in particular were you unhappy about answering?**

All those who said they were unhappy about answering a particular individual question	No Income	Income	Total
Date of birth	1		1
Marital Status		1	1
Lived outside NI		1	1
Health in general	1	2	3
Medical conditions	1	3	4
Languages		1	1
National Identity	3	2	5
Ethnic Group	2	3	5
Religion belong to	8	7	15
Religion brought up in	7	3	10
Why other address		1	1
Qualifications		3	3
Sources of income		19	19
Amount of Income		19	19
<b>Total*</b>	10	44	54

\* Count may add up to more than the total due to multiple responses



When asked “Why were you unhappy about answering the question about sources of income?” responses included ‘too intrusive’ (34.4%), ‘too personal’ (31.3%) and ‘none of the governments business’ (12.5%). A similar pattern emerges when examining the responses to “Why were you unhappy about answering the questions about amount of income?” 36.6% (of those who had received and ‘income questionnaire’ and indicated that they were unhappy answering the question about ‘amount of income’) stated that this question was ‘too intrusive’.

#### 6.4 Public Perception

Overall, 807 requests from members of the public were made to the Contact Centre and recorded on the Operational Intelligence system for Northern Ireland. Of these, 38.5% (311) were from ‘No Income’ households and 61.5% (496) were from ‘Income’ households. This shows that ‘Income’ households had 23% more queries/requests than ‘No Income’ households. However, these findings must be interpreted within the wider context, i.e. 807 contacts represents only 5.4% of the total number (14874) of questionnaire records (questionnaires delivered or questionnaires that were attempted to be delivered in the course of the Census Test.)

**Table 6.5: Percentage of contacts from households**

<b>% of Contacts from ‘Income’ Households</b>	<b>% of Contacts from ‘Non Income’ Households</b>	<b>Request Working Group</b>
0.2	0.3	Call For Assistance
0.2	1	Information About Call
2.0	1	No Questionnaire Received
0	1	Privacy Reasons
0.4	1.9	Call For Supplementary Material
12.3	3.2	Not stated
1.4	3.5	Questionnaire Already Sent Back
2.8	3.5	Question On Questionnaire
9.9	8.7	General Question
6.3	8.7	Refusal
8.7	14.1	Large Household
16.7	20.9	Escalation
39.1	32.2	Questionnaire Lost Or Damaged

When the requests/contacts are examined in more detail, Tables 12 demonstrates that the majority of requests were in relation to lost or damaged questionnaires. Notably, of those who contacted the Contact Centre, a higher proportion of householders who received a ‘No Income’ questionnaire than those who received an ‘Income’ questionnaire intended to formally refuse to complete the questionnaire. However, in real terms, 27 householders who received a ‘No Income’ questionnaire (0.18% of all questionnaire records) formally refused to complete and return the questionnaire whereas 31 who received an ‘Income’ questionnaire (0.21% of all questionnaire records) formally refused to complete and return the questionnaire. As

such, the percentage difference demonstrated must be treated with caution. As such, it is not proven in this instance that the inclusion of Income questions had any effect on public perception.

## **6.5 Conclusions**

- Whilst the level of agreement between the CTES and the Census Test was high, the level of agreement on the amount of income across both conditions was much lower (36.4% lower than the mean).
- When the 'Amount of Income' question is examined in more detail, for those who completed the household section of the Census Test questionnaire and the entire questionnaire, the mean % level of agreement is found to be less than 50%.
- Whilst respondents did not find the income questions particularly difficult to answer, they reported that they were more unhappy answering them than any other question.

## **CHAPTER 7: Conclusions & Recommendations**

### **7.1 Conclusions**

When each evaluation objective is assessed separately, the inclusion of income questions has been shown to have had a limited impact. Although the analyses have found significant Income effects within particular strata, there is no evidence to show that the inclusion of an income question reduces overall response rates.

The response rate for questionnaires where an Income question was not asked (45.2%) was higher than where an income question was asked (42.6%)- Table 3.1. In addition, where Income questions were asked, they were answered by 93.6% (income source) and 89.2% (income amount) of respondents (Table F1). Overall, these findings indicate that the data obtained from the income questions in the Census Test generate plausible distributions relative to existing data sources. The response rates to the income questions were acceptable and there was no evidence that inclusion of the income questions led to householders completing their questionnaires less comprehensively.

On the whole, this evaluation has demonstrated that the inclusion of questions on income in the 2007 Census Test has had a detrimental effect on response rates across some but not all design strata, has had no impact on data quality and has made only a marginal impression on public acceptability. As such, the inclusion of a question or questions in the 2011 Census is not likely to have any major impact on the overall success of the exercise. In addition, any decision to include a question or questions on Income in the 2011 Census must be taken within the context of the limited space available on the proposed questionnaire, particularly in the Individual section.

Alternative income data sources may also be more appropriate than a Census question due to difficulties in defining income sufficiently clearly within the context of a Census, and difficulties in obtaining accurate information. Currently, there are no single alternative sources of income data available that meet all user requirements. The modelled income estimates being developed by ONS and NISRA potentially offer the best alternatives to a Census income question.

### **7.2 Recommendations**

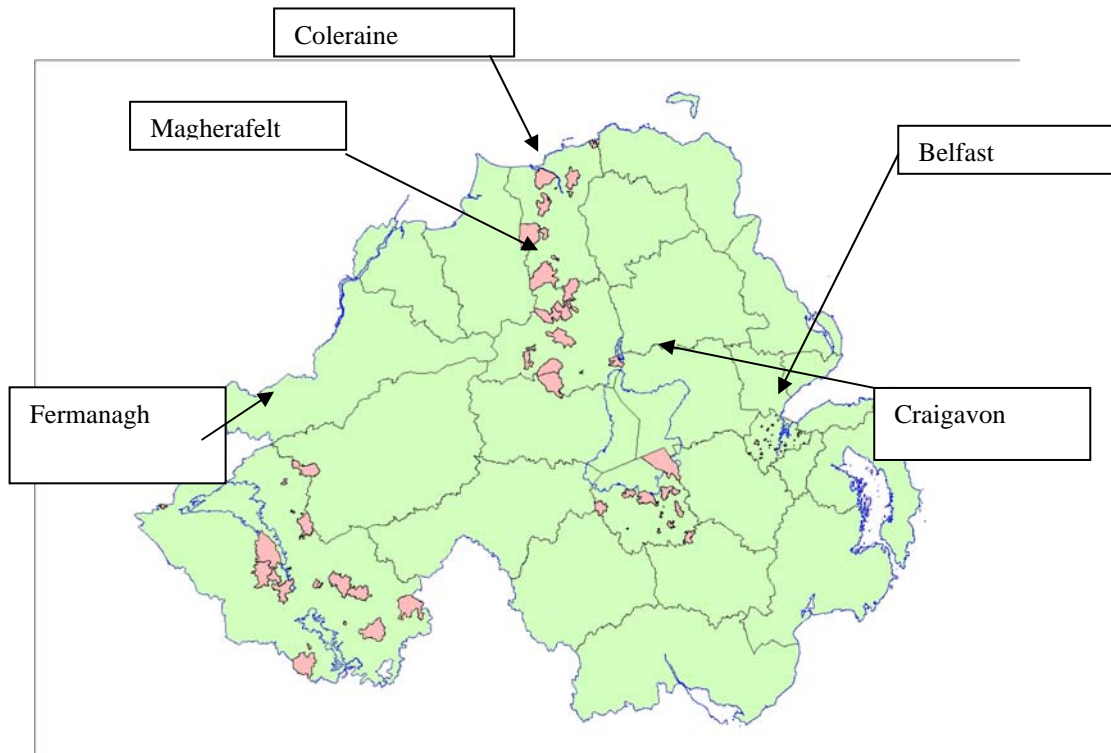
The following are a series of recommendations, based on the above conclusions, regarding the potential inclusion of a question or questions on Income in the 2011 Census.

- Census Office should continue to work closely with colleagues in ONS and GROS to further assess the level of user need for a question or questions on income within the context of the findings of the 2007 Census Test Evaluations in Northern Ireland and England & Wales, and the GROS 2006 Census Test Evaluation in Scotland.
- Census Office should continue to work closely with colleagues in ONS and GROS to further assess the impact of the inclusion of a question or questions on income on the length of the 2011 Census Questionnaire and the impact that further lengthening the questionnaire would have on response rates, data quality and costs.

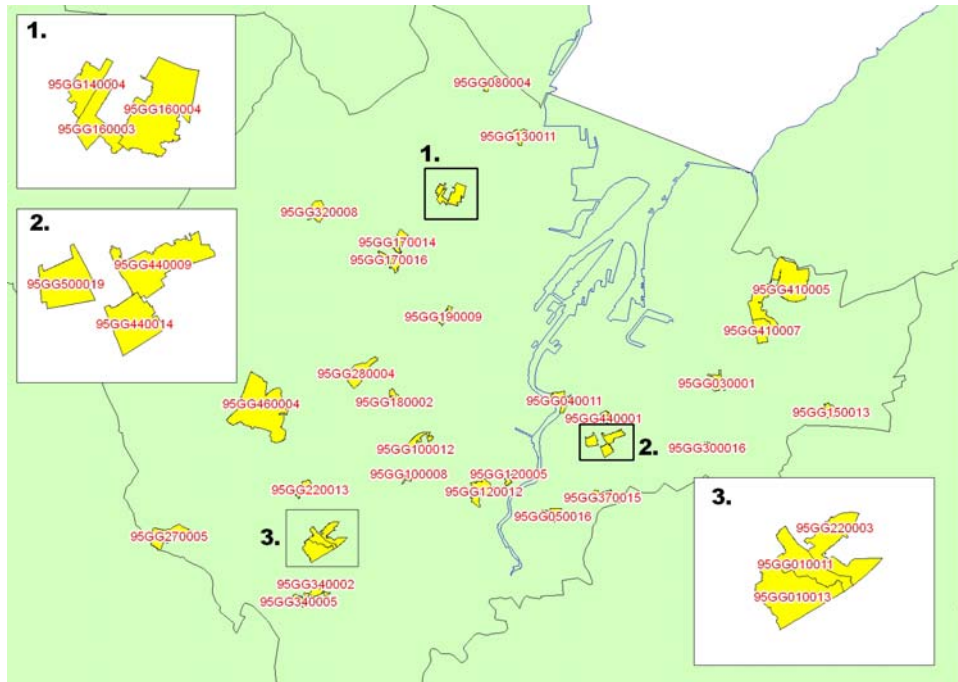
- Census Office should seek to initiate further research/small scale testing to ascertain whether non-response rates to the income question vary between households of different income levels and demographic characteristics, particularly those households in rural or deprived areas.
- If a decision is taken to include an Income question in the 2011 Census, the question should be included in the individual section rather than the household section of the questionnaire (for privacy purposes).

## Appendix A Census Test Area Maps

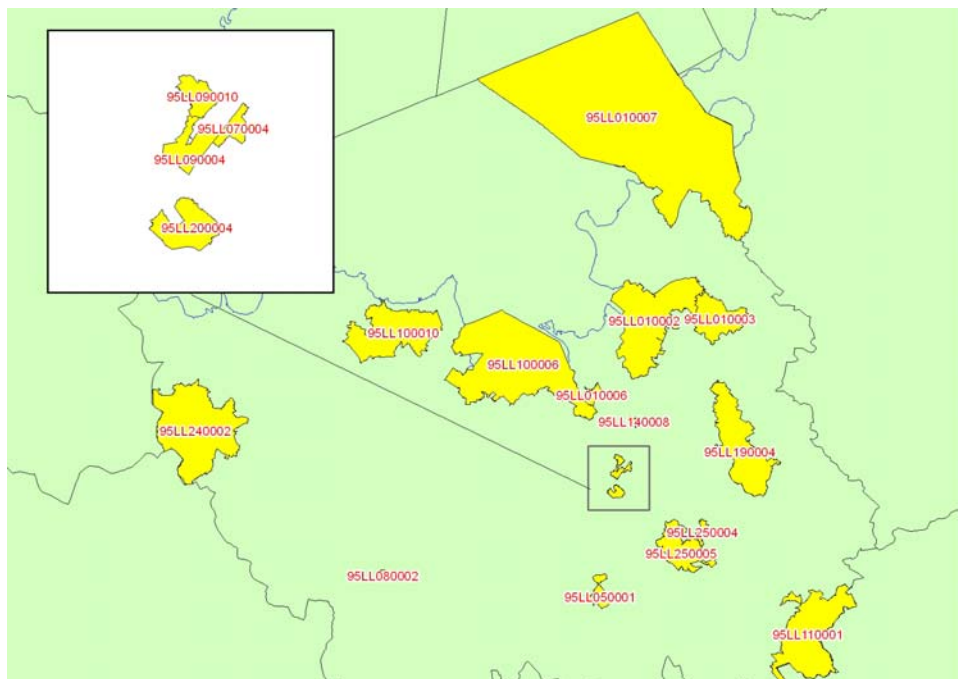
Fig A1: 2007 Test Areas



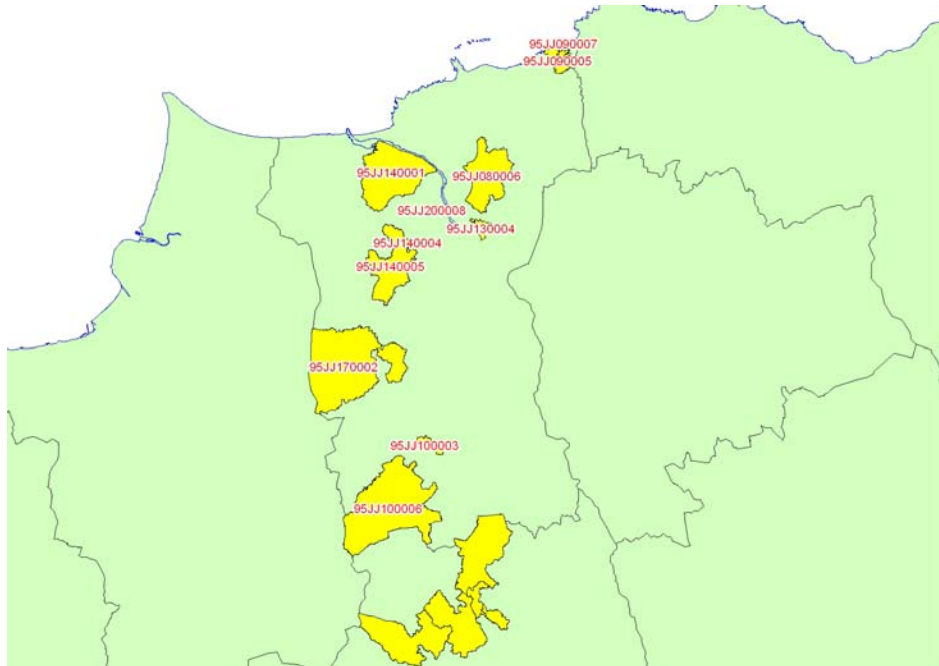
**Fig A2: Belfast**



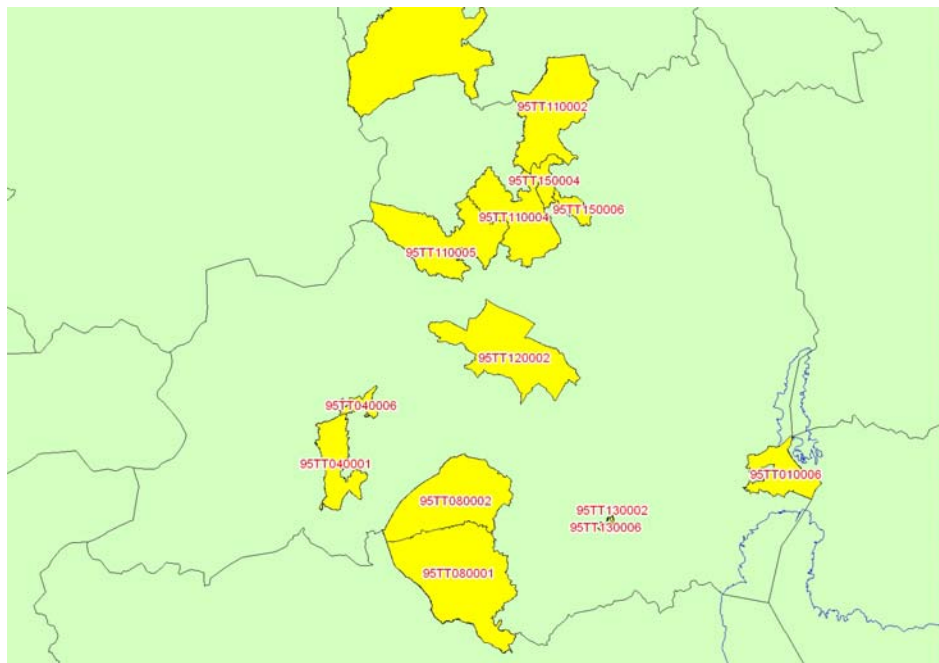
**Fig A3: Craigavon**



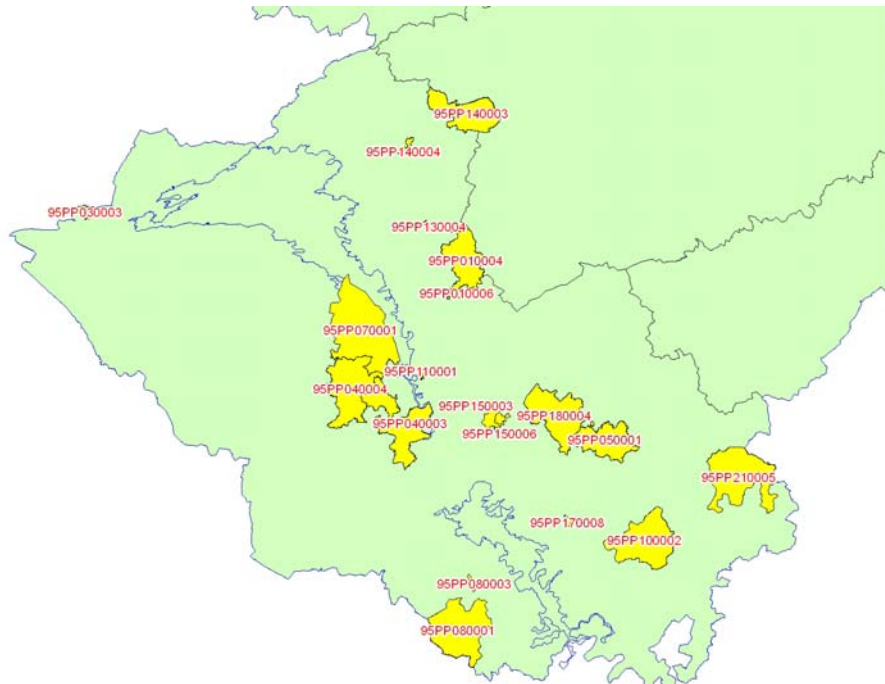
**Fig A4: Coleraine**



**Fig A5: Magherafelt**



**Fig A6: Fermanagh**





## Appendix B Design Strata

Table B1 presents a breakdown of the number of OAs where each design variable/ design strata combination will be examined.

**Table B1: Design Strata by OA**

Design Strata			Design Variables				Total OAs	
			Post-out		Enumerator Delivery			
			Income	No Income	Income	No Income	In 2007 Test	In whole of NI
Urban	Deprived	Protestant	2	2	2	2	8	627
		Roman Catholic	2	2	2	2	8	645
		Mixed	2	2	2	2	8	387
	Non-deprived	Protestant	2	2	2	2	8	790
		Roman Catholic	2	2	2	2	8	172
		Mixed	2	2	2	2	8	826
Rural	Deprived	Protestant	2	2	2	2	8	131
		Roman Catholic	2	2	2	2	8	315
		Mixed	2	2	2	2	8	406
	Non-deprived	Protestant	2	2	2	2	8	391
		Roman Catholic	2	2	2	2	8	60
		Mixed	2	2	2	2	8	272
<b>Total</b>			24	24	24	24	96	5022

**Table B2: Design Strata by 2001 Census Household Count**

Design Strata			Design Variables				Total Households	
			Post-out		Enumerator Delivery		In 2007 Test	In whole of NI
			Income	No Income	Income	No Income		
Urban	Deprived	Protestant	253	231	248	192	924	77804
		Roman Catholic	249	255	247	305	1056	80515
		Mixed	245	248	237	264	994	47974
	Non-deprived	Protestant	245	263	241	239	988	98940
		Roman Catholic	248	221	230	266	965	21567
		Mixed	259	250	237	217	963	103982
Rural	Deprived	Protestant	216	252	220	234	922	16102
		Roman Catholic	215	256	234	246	951	38818
		Mixed	228	252	254	239	973	50455
	Non-deprived	Protestant	249	232	238	232	951	48830
		Roman Catholic	236	244	246	259	985	7534
		Mixed	268	213	241	251	973	34197
<b>Total</b>			2911	2917	2873	2944	11645	626718

## Appendix C Northern Ireland Census Test 2007 Income Questions

**29** Tick as many boxes as you need to show all the sources of income you had in the 12 months that ended on 31 March 2007.

- Earnings, wages, salary, bonuses
- Income from self-employment
- Occupational pensions, state retirement pensions
- State benefits such as incapacity benefit, child benefit or tax credits
- Interest from savings or investments
- Rent from property
- Other income (e.g. maintenance payments, grants)
- No source of income during that time

**30** From all the sources of income you ticked in question 29, what is your total income?

- ◆ Tick the box for the range into which your income falls.
- ◆ Count all income you received in the 12 months that ended on 31 March 2007.
- ◆ Do not deduct Tax, National Insurance, Health Insurance payments, or your contributions to occupational pension schemes.
- ◆ Do not count loans because they are not income.
- ◆ For joint income, provide the share that you receive.

Per week		Per year
Nil or loss	<input type="checkbox"/>	Nil or loss
£1 to £79	<input type="checkbox"/>	£1 to £3,999
£80 to £149	<input type="checkbox"/>	£4,000 to £7,999
£150 to £229	<input type="checkbox"/>	£8,000 to £11,999
£230 to £329	<input type="checkbox"/>	£12,000 to £16,999
£330 to £459	<input type="checkbox"/>	£17,000 to £23,999
£460 to £709	<input type="checkbox"/>	£24,000 to £36,999
£710 or more	<input type="checkbox"/>	£37,000 or more

## ***Appendix D: Alternative Data Sources***

A number of alternative sources for income exist, from both administrative and sample survey sources. These sources all have certain strengths and weaknesses and these are briefly described below. In general, administrative sources provide good coverage, enabling analyses for small geographic areas, but the definition of income is naturally defined by the administrative system and may not match that required by the user. Conversely, sample surveys give more flexible definitions of income, but generally cannot provide analyses by small geographic areas.

Both administrative sources and sample surveys struggle to provide statistical estimates for small population subgroups, although for differing reasons. Administrative sources are clearly powerful when the necessary data fields are available, as evidenced by their ability to provide detailed analysis by geographic units, but few administrative sources would hold information on, for example, ethnic group. Sample surveys can provide estimates for large subgroups of the population, for example males and females, where each subgroup contains relatively large numbers. However, subgroups that are sparse in the population, for example ethnic minorities in Northern Ireland, will necessarily have low representation in sample surveys and any statistical estimates will be less than robust.

Some of the key alternative sources are described below.

### *Family Resources Survey*

The Family Resources Survey (FRS) is the main sample survey source for income throughout the UK. Its primary focus is on household incomes, and sample respondents are asked to complete a very comprehensive inquiry into their financial resources. The comprehensive nature of the questionnaire enables a wide range of financial analyses, and in addition to reports on the Family Expenditure Survey itself, the FRS is the source material for the Households Below Average Income publication series. This latter report provides estimates of the proportion of households that have incomes below certain poverty thresholds such as 60% of the population median. In summary, FRS can provide detailed analyses of the incomes of households in Northern Ireland on an annual basis.

FRS has an annual achieved sample size of approaching 2,000 households providing very robust statistics for Northern Ireland. Like all official household surveys in Northern Ireland, the sample is a simple random sample of households, based on the domestic rating household frame, with some geographic stratification to ensure good geographic spread. However, like all sample surveys, it is not designed to provide robust statistics for small areas or small geographic areas.

### *Continuous Household Survey*

The Continuous Household Survey (CHS) is a sample survey that covers about 3,000 responding households every year. As with FRS, the sample is a geographically stratified random sample. Each adult in every sampled household is covered. Respondents are asked both about their own income, and the income of their household. The two income questions are both asked in terms of gross income (before taxes and so forth), and both questions used a common set of banded

incomes to record the response; there are 38 income bands offered that span from zero income to £1,000 per week and above. The CHS implicitly asks respondents to combine all their income sources and give an aggregated estimate of their income.

The limitations of sample surveys with respect to estimates for small population subgroups and small geographic areas apply to CHS.

While the CHS does ask about income, the complexity of income (for example, gross income, net income, relation to trading accounts for the self-employed, the treatment of benefits that may be paid directly to third parties such as housing benefit and so forth) and the large numbers of potential sources of income, lead to the Family Resources Survey being treated as the key sample survey source of household income.

### *The Integrated Household Survey*

Household sample surveys in Great Britain have evolved separately and have very different, complex sample designs usually involving two-stage clustered sampling. Thus makes the combination of results from different surveys difficult. ONS has started an ambitious project to bring some of their key household surveys together, with a single design and a common module of demographic variables. Through this approach, ONS will be able to combine estimates of demographic from the different surveys; this will both improve the coherence of their survey results and enable estimates for smaller geographic areas. Note that while this will typically enable robust survey results at local council level, it will not enable results at ward level.

The random sample design of household surveys in Northern Ireland means that this is less of an issue. However, NISRA are working to ensure that the demographic questions in different surveys are more consistent, and that estimates from the surveys can be combined. Although Northern Ireland does not have plans for a specific Integrated Household Survey, there is work that will lead to similar outcomes.

In the context of an income question however, it is unlikely that a simple acceptable, valid income question could be developed that would slot into a common demographic core with questions on age, sex, marital status and so forth. It is unlikely therefore that income will be part of any Integrated Household Survey.

### *The Household Panel Survey*

The Northern Ireland Household Panel Survey (NIHPS) is the Northern Ireland equivalent, and counterpart, of the British Household Panel Survey. It involves an ongoing sample of just under 2,000 responding households who are sampled in a series of survey waves. As with FRS and CHS, the sample is a geographically stratified random sample.

The NIHPS relating to income are more complex than those in CHS. Respondents are asked if they obtain income from a list of sources (employment, benefits, interest on savings and so forth). For each applicable source, the respondent is asked to estimate their income.

As with FRS and CHS, the NIHPS shares the limitations of sample surveys in producing robust estimates for small population groups and small geographic areas.

### *Survey of Personal Incomes*

The Survey of Personal Incomes (SPI) is a sample survey conducted annually by HMRC based on administrative records. It is a UK survey, and in recent years the sample size has been of the order of 0.5 million records. The sample is described as purely random, and there is no geographical stratification. Accordingly, the Northern Ireland component of the sample is likely to be about 15,000 cases. While this is large by sample survey standards, it would still not be sufficiently robust to produce small area statistics – on average, the SPI would contain fewer than 20 respondents per Super Output Area in Northern Ireland.

Further, the survey is based on HMRC returns and the underlying population is restricted to those individuals liable to income tax (as an employee or self-employed), and does cover all sources of income.

### *Annual Survey of Hours and Earnings*

The Annual Survey of Hours and Earnings (ASHE) is a survey based on administrative sources, in this case information held by employers on payments made to employees who are subject to PAYE. While income from employment is the most important component part of household incomes, and covers a large proportion of people of working age, ASHE clearly covers only a subset of the population, and for only one source of income.

The above short overview demonstrates that alternative data sources are not, in themselves, able to provide estimates of income for small population groups or small geographic areas. In recent years, modelling of small area estimates has developed rapidly, and it is likely that, as described in the main report, modelling has more potential estimating income for small areas.

## Appendix E

Table E1 Observed Initial Return, Final Return Rates and Response Rates

	Number of eligible households	Total initial returns	Initial return rate	Total final returns	Final return rate	Total response	Response rate
<b>ALL</b>	12,919	3,644	28.2	5,777	44.7	5,675	43.9
<b>Census District</b>							
1	4,480	1,041	23.2	1,662	37.1	1,642	36.7
2	4,449	1,319	29.6	2,032	45.7	1,976	44.4
3	3,990	1,284	32.2	2,083	52.2	2,057	51.6
<b>DC</b>							
101	4,480	1,041	23.2	1,662	37.1	1,642	36.7
202	1,678	491	29.3	795	47.4	759	45.2
203	2,771	828	29.9	1,237	44.6	1,217	43.9
304	2,184	686	31.4	1,163	53.3	1,144	52.4
305	1,806	598	33.1	920	50.9	913	50.6
<b>CTL</b>							
1011	1,595	427	26.8	693	43.4	687	43.1
1012	1,179	283	24.0	434	36.8	425	36.0
1013	1,706	331	19.4	535	31.4	530	31.1
2021	1,678	491	29.3	795	47.4	759	45.2
2031	1,237	349	28.2	482	39.0	473	38.2
2032	1,534	479	31.2	755	49.2	744	48.5
3041	1,228	362	29.5	641	52.2	633	51.5
3042	956	324	33.9	522	54.6	511	53.5
3051	851	294	34.5	490	57.6	487	57.2
3052	955	304	31.8	430	45.0	426	44.6
<b>TAC</b>							
101101	112	32	28.6	47	42.0	47	42.0
101102	110	36	32.7	48	43.6	48	43.6
101103	160	44	27.5	75	46.9	75	46.9
101104	112	25	22.3	44	39.3	41	36.6
101105	92	18	19.6	37	40.2	37	40.2
101106	115	29	25.2	56	48.7	56	48.7
101107	122	16	13.1	30	24.6	30	24.6
101108	129	28	21.7	37	28.7	37	28.7
101109	130	29	22.3	50	38.5	49	37.7
101110	117	47	40.2	79	67.5	79	67.5
101111	132	71	53.8	101	76.5	100	75.8
101112	145	22	15.2	35	24.1	35	24.1
101113	119	30	25.2	54	45.4	53	44.5
101201	114	16	14.0	31	27.2	30	26.3
101202	114	31	27.2	48	42.1	48	42.1
101203	135	39	28.9	74	54.8	73	54.1

	Number of eligible households	Total initial returns	Initial return rate	Total final returns	Final return rate	Total response	Response rate
101204	116	41	35.3	46	39.7	46	39.7
101205	159	32	20.1	50	31.4	49	30.8
101206	223	49	22.0	68	30.5	66	29.6
101207	143	47	32.9	72	50.3	68	47.6
101208	93	24	25.8	38	40.9	38	40.9
101209	82	4	4.9	7	8.5	7	8.5
101301	140	30	21.4	54	38.6	54	38.6
101302	136	28	20.6	37	27.2	37	27.2
101303	165	28	17.0	32	19.4	32	19.4
101304	122	21	17.2	30	24.6	30	24.6
101305	134	18	13.4	40	29.9	40	29.9
101306	126	18	14.3	40	31.7	39	31.0
101307	126	30	23.8	49	38.9	48	38.1
101308	150	4	2.7	11	7.3	11	7.3
101309	109	24	22.0	48	44.0	48	44.0
101310	103	30	29.1	40	38.8	40	38.8
101311	163	38	23.3	68	41.7	66	40.5
101312	116	24	20.7	44	37.9	44	37.9
101313	116	38	32.8	42	36.2	41	35.3
202101	226	54	23.9	73	32.3	61	27.0
202102	131	45	34.4	57	43.5	54	41.2
202103	120	38	31.7	66	55.0	64	53.3
202104	129	45	34.9	72	55.8	70	54.3
202105	128	28	21.9	72	56.3	71	55.5
202106	153	45	29.4	101	66.0	101	66.0
202107	130	46	35.4	73	56.2	73	56.2
202108	130	28	21.5	44	33.8	43	33.1
202109	138	46	33.3	64	46.4	64	46.4
202110	228	60	26.3	82	36.0	70	30.7
202111	165	56	33.9	91	55.2	88	53.3
203101	145	39	26.9	51	35.2	51	35.2
203102	140	44	31.4	68	48.6	67	47.9
203103	180	54	30.0	80	44.4	80	44.4
203104	99	48	48.5	78	78.8	77	77.8
203105	178	31	17.4	50	28.1	50	28.1
203106	166	49	29.5	52	31.3	52	31.3
203107	127	24	18.9	38	29.9	32	25.2
203108	105	39	37.1	40	38.1	39	37.1
203109	97	21	21.6	25	25.8	25	25.8
203201	85	31	36.5	36	42.4	34	40.0
203202	120	46	38.3	53	44.2	53	44.2
203203	210	62	29.5	129	61.4	126	60.0
203204	158	47	29.7	85	53.8	84	53.2
203205	154	18	11.7	31	20.1	31	20.1
203206	242	67	27.7	100	41.3	99	40.9
203207	278	103	37.1	154	55.4	154	55.4
203208	109	49	45.0	70	64.2	70	64.2
203209	178	56	31.5	97	54.5	93	52.2



	Number of eligible households	Total initial returns	Initial return rate	Total final returns	Final return rate	Total response	Response rate
304101	138	31	22.5	52	37.7	52	37.7
304102	63	14	22.2	25	39.7	24	38.1
304103	83	17	20.5	43	51.8	43	51.8
304104	86	23	26.7	43	50.0	41	47.7
304105	102	41	40.2	70	68.6	69	67.6
304106	122	40	32.8	82	67.2	81	66.4
304107	110	30	27.3	70	63.6	70	63.6
304108	107	36	33.6	59	55.1	58	54.2
304109	174	50	28.7	75	43.1	75	43.1
304110	122	40	32.8	63	51.6	63	51.6
304111	121	40	33.1	59	48.8	57	47.1
304201	104	39	37.5	63	60.6	62	59.6
304202	102	47	46.1	67	65.7	66	64.7
304203	120	44	36.7	71	59.2	70	58.3
304204	136	26	19.1	42	30.9	40	29.4
304205	132	38	28.8	63	47.7	63	47.7
304206	102	33	32.4	63	61.8	62	60.8
304207	144	43	29.9	61	42.4	59	41.0
304208	116	54	46.6	92	79.3	89	76.7
305101	128	32	25.0	60	46.9	60	46.9
305102	142	47	33.1	77	54.2	77	54.2
305103	123	47	38.2	78	63.4	77	62.6
305104	100	40	40.0	66	66.0	65	65.0
305105	133	48	36.1	79	59.4	78	58.6
305106	107	30	28.0	60	56.1	60	56.1
305107	118	50	42.4	70	59.3	70	59.3
305201	189	37	19.6	57	30.2	57	30.2
305202	239	81	33.9	114	47.7	113	47.3
305203	140	38	27.1	57	40.7	57	40.7
305204	117	57	48.7	75	64.1	75	64.1
305205	140	32	22.9	53	37.9	50	35.7
305206	130	59	45.4	74	56.9	74	56.9
<b>Hand Del No Inc</b>	<b>3,186</b>	<b>1,105</b>	<b>34.7</b>	<b>1,628</b>	<b>51.1</b>	<b>1,608</b>	<b>50.5</b>
<b>Hand Del Inc</b>	<b>3,211</b>	<b>895</b>	<b>27.9</b>	<b>1,405</b>	<b>43.8</b>	<b>1,373</b>	<b>42.8</b>
<b>Post Out No Inc</b>	<b>3,357</b>	<b>878</b>	<b>26.2</b>	<b>1,377</b>	<b>41.0</b>	<b>1,349</b>	<b>40.2</b>
<b>Post Out Inc</b>	<b>3,165</b>	<b>766</b>	<b>24.2</b>	<b>1,367</b>	<b>43.2</b>	<b>1,345</b>	<b>42.5</b>
<b>Hand Del</b>	<b>6,397</b>	<b>2,000</b>	<b>31.3</b>	<b>3,033</b>	<b>47.4</b>	<b>2,981</b>	<b>46.6</b>
<b>Post Out</b>	<b>6,522</b>	<b>1,644</b>	<b>25.2</b>	<b>2,744</b>	<b>42.1</b>	<b>2,694</b>	<b>41.3</b>

	Number of eligible households	Total initial returns	Initial return rate	Total final returns	Final return rate	Total response	Response rate
<b>Inc</b>	6,376	1,661	26.1	2,772	43.5	2,718	42.6
<b>No Inc</b>	6,543	1,983	30.3	3,005	45.9	2,957	45.2

## Appendix F Item Non Response

Table F1: Individual Level Question Completion

Question	Overall Pop.	No Income Pop.	No Income Non Response % (within pop)	No Income Response %	Income Pop.	Income % (within pop)	Income Response %
First Name	14649	7630	1.25	98.75	7019	1.44	98.56
Sex	14649	7630	1.30	98.70	7019	1.67	98.33
DOB Year	14649	7630	1.22	98.78	7019	1.70	98.30
DOB Month	14649	7630	1.22	98.78	7019	1.78	98.22
DOB Day	14649	7630	1.22	98.78	7019	1.78	98.22
Q6 Term time filter	2929	1512	1.52	98.48	1417	1.83	98.17
Last Name	14649	7630	1.59	98.41	7019	2.01	97.99
Q10 Health	11986	6251	2.82	97.18	5735	2.06	97.94
Q14 National Identity	11986	6251	3.22	96.78	5735	3.82	96.18
Q13 Language English	11986	6251	3.81	96.19	5735	4.31	95.69
Q7 Country of Birth	11986	6251	3.98	96.02	5735	5.04	94.96
Marital Status	14649	7630	5.50	94.50	7019	5.73	94.27
Q15 Ethnic Group	11986	6251	5.09	94.91	5735	6.03	93.97
Q17 Religion brought up in	11986	6251	5.70	94.30	5735	6.87	93.13
Q9 Outside NI	11986	6251	6.13	93.87	5735	6.92	93.08
Q16 Current Religion	11986	6251	6.46	93.54	5735	7.22	92.78
Q11 Difficulties	11986	6251	6.80	93.20	5735	7.27	92.73
Q18 Another address for part of the week	11986	6251	6.83	93.17	5735	7.76	92.24
Q23 Employment	11102	5794	8.44	91.56	5308	8.38	91.62
Q28 Qualifications	11102	5794	9.79	90.21	5308	10.15	89.85
Q5 F/T Education	14649	7630	9.45	90.55	7019	10.20	89.80

Question	Overall Pop.	No Income Pop.	No Income Non Response % (within pop)	No Income Response %	Income Pop.	Income % (within pop)	Income Response %
Q12 LLTI	11986	6251	9.61	90.39	5735	10.60	89.40
Q21 Usual Address one year ago	11986	6251	9.77	90.23	5735	11.07	88.93
Q29 Income Source	5308		n/a	n/a	5308	6.37	93.63
Q30 Income Amount	5308		n/a	n/a	5308	10.25	89.75
Q8 Recent Arrival Year	1109	525	47.81	52.19	584	48.12	51.88
Q8 Recent arrival Month	1109	525	52.38	47.62	584	57.53	42.47
Q20 How long other address	1290	662	63.60	36.40	628	69.75	30.25
Q19 Why other address	1290	662	62.99	37.01	628	70.38	29.62
Q13 Languages Irish	11986	6251	73.72	26.28	5735	74.14	25.86
Q 24 Actively looking	7240	3824	77.51	22.49	3416	76.29	23.71
Q13 Languages Ulster Scots	11986	6251	77.00	23.00	5735	78.03	21.97
Q26 Waiting to start	7240	3824	81.59	18.41	3416	81.88	18.12
Q25 Available last week	7240	3824	85.17	14.83	3416	85.28	14.72
Q27 Last week	7240	3824	85.33	14.67	3416	85.92	14.08

## Appendix G CTES/ Census Test Income Amount Agreement

Table G1 Census Income Amount by CTES Income Amount

		Total Income - Census Test Data								
		Nil or loss	£1 to £3,999	£4,000 to £7,999	£8,000 to £11,999	£12,000 to £16,999	£17,000 to £23,999	£24,000 to £36,999	£37,000 or more	Total
The household section	£1 to 3,999 per year/£1 to £79 per week	0.0	40.0	0.0	6.7	4.5	0.0	0.0	0.0	4.4
	£4,000 to £7,999 per year/£80 to £149 per week	0.0	10.0	55.0	6.7	9.1	0.0	0.0	0.0	11.0
	£8,000 to £11,999 per year/£150 to £229 per week	0.0	20.0	30.0	40.0	4.5	7.4	0.0	0.0	12.5
	£12,000 to £16,999 per year/£230 to £329 per week	0.0	0.0	5.0	13.3	40.9	0.0	0.0	0.0	8.8
	£17,000 to £23,999 per year/£330 to £459 per week	0.0	10.0	0.0	6.7	27.3	66.7	6.7	0.0	20.6
	£24,000 to £36,999 per year/£460 to £709 per week	0.0	0.0	5.0	0.0	0.0	22.2	66.7	0.0	19.9
	£37,000 or more per year/£710 or more per week	0.0	0.0	0.0	13.3	4.5	3.7	20.0	75.0	14.0
	Refusal	0.0	10.0	5.0	13.3	4.5	0.0	6.7	25.0	7.4
	Dont Know	0.0	10.0	0.0	0.0	4.5	0.0	0.0	0.0	1.5
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
All of the census questionnaire	£1 to 3,999 per year/£1 to £79 per week	80.0	0.0	0.0	2.6	4.8	4.2	0.0	0.0	4.0
	£4,000 to £7,999 per year/£80 to £149 per week	0.0	36.4	45.8	15.4	4.8	4.2	0.0	16.7	19.8
	£8,000 to £11,999 per year/£150 to £229 per week	0.0	36.4	29.2	43.6	14.3	4.2	0.0	0.0	22.0
	£12,000 to £16,999 per year/£230 to £329 per week	20.0	18.2	6.3	23.1	42.9	12.5	4.3	0.0	15.8

	£17,000 to £23,999 per year/£330 to £459 per week	0.0	0.0	2.1	5.1	9.5	<b>45.8</b>	4.3	0.0	9.6
	£24,000 to £36,999 per year/£460 to £709 per week	0.0	9.1	6.3	2.6	14.3	0.0	<b>60.9</b>	16.7	13.0
	£37,000 or more per year/£710 or more per week	0.0	0.0	2.1	2.6	9.5	4.2	26.1	<b>66.7</b>	8.5
	Refusal	0.0	0.0	6.3	2.6	0.0	20.8	4.3	0.0	5.6
	Dont Know	0.0	0.0	2.1	2.6	0.0	4.2	0.0	0.0	1.7
	<b>Total</b>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Individual questions for yourself only	£4,000 to £7,999 per year/£80 to £149 per week	0	0	<b>100</b>	0	0	0	0	0	50
	£12,000 to £16,999 per year/£230 to £329 per week	0	0	0	0	<b>100</b>	0	0	0	50
	<b>Total</b>	100	100	100	100	100	100	100	100	100