

## Origin-Destination Statistics

Summary report of second analysis of response to the discussion paper, May 2000

Advisory Group members are asked to note:

- (a) the comments in this paper that complete the summary of responses to the Discussion Paper on Origin-Destination Statistics; further arguments are welcome (by 18 May 2001) to support instances where the Census Office stance is stated as 'Will consider' or similar.
- (b) the decision on imputation of postcode;
- (c) the current position on full-time students in employment; and that a paper on this issue will be put to Scottish and UK users later this year; and
- (d) that final proposals on origin-destination statistics will be circulated later this year taking into account the response to the discussion paper.

Frank Thomas

GROS

24 April 2001

Tel: 0131 314 4217

Email: [frank.thomas@gros-scotland.gov.uk](mailto:frank.thomas@gros-scotland.gov.uk)

## Origin-Destination Statistics

### Summary report of second analysis of response to the discussion paper, May 2000

#### Introduction

1. In May last year, the Census Offices issued a discussion paper on origin-destination statistics. In the following month, users attended presentations of the proposals in the discussion paper and were invited to provide comments. The first report on these comments was issued as paper AG (00) 17 in October 2000. Omitted from that paper was a summary of comments received on the table layouts proposed in Annex A of the discussion paper. A summary of these comments is given in this paper together with an update on two of the other issues raised in the discussion paper.
2. This paper is primarily for information and completes the round on consultation centred on the May 2000 discussion paper. The paper
  - covers comments received on table layouts; further supporting comments (by 18 May) are welcome
  - reports on the decision to impute postcodes missing on the Census form
  - reports current thinking about how to treat full-time students in employment in Scottish output.
3. Final proposals on origin-destination statistics will be circulated later this year taking into account the response to the discussion paper. It is intended that these proposals be issued at the same time as those for area statistics (Standard Tables, Census Area Statistics, etc).

#### Comments on proposed Tables

4. Comments on the 35 proposed tables are set out in Annex A. The Annex also gives a preliminary response from the Census Offices. It should be noted that where this response is 'Will consider' or similar, it would be helpful to have (by 18 May) further supporting arguments from users.
5. Some general points are set out in the following paragraphs.

#### *More categorisation by gender*

6. Some users commented that all tables should have a gender dimension. This proposal will be considered table by table depending on the likely size of the flow tabulated.

### *Age classifications*

7. Comments from various users, not always compatible, were made that more detailed age grouping should be provided. These comments will be considered together with similar comments received on proposed Area Statistics (Standard Tables, etc) issued in September 2000.

### *Dependent child*

8. The definition now adopted for the 2001 Census is that a dependent child is
  - Either a person in a household aged 0-15 whether or not in a family
  - Or a person in a household aged 16-18 who is in full-time education and in a family with his/her parent(s).

### *National Statistics Socio-economic Classification (NS-SEC)*

9. Various comments were received about the NS-SEC, in particular about the treatment of students and the retired within the classification. The table below shows the current version of the most general categories that will be used for NS-SEC. It is proposed to adopt this for origin-destination statistics.

1 Higher managerial and professional occupations
1.1 Large employers and higher managerial occupations
1.2 Higher professional occupations
2 Lower managerial and professional occupations
3 Intermediate occupations
4 Small employers and own account workers
5 Lower supervisory and technical occupations
6 Semi-routine occupations
7 Routine occupations
8 Never worked and long-term unemployed
Never worked
Long-term unemployed
Not Classified
[Full-time] Students
Not coded
Not classifiable for other reasons

10. The category into which any particular person falls depends mainly on the occupation code on his/her record. For there to be an occupation code the person must first be in the age range 16-74. Then the person must be in employment or have worked before the Census. Next the person's occupation must be coded (or imputed if not codeable from the form). Coding (or imputation) will not be done for anyone aged 16-64 whose year of last employment was 1996 or earlier or anyone aged 65-74 not in employment. Those aged 16-74 with occupation not coded or imputed are shown as 'Not coded' in the above classification under 'Not classified'. Those outside the age range 16-74 are shown as 'Not classified for other reasons'.
11. The assumption made for economically active full-time students within the NS-SEC is that they should be classified as 'full-time students' rather than in a category associated

with any occupation. Part-time students are only recognised as such if they are not in employment. Those not in employment who have had an occupation will be classified as in the previous paragraph. It is to be decided whether part-time students that are 'Not classified' should appear under 'Students' or one of the other two categories under 'Not classified'.

12. People who are retired at the time of the Census will also be assigned to a socio-economic class within the NS-SEC or placed in category under 'Not classified' as described in paragraph 10.
13. Current plans are for armed forces personnel to be allocated to two occupational codes that will each be combined with other occupations in their respective classes in NS-SEC. The NS-SEC class will also depend on other Census variables such as supervisor status and size of workplace.

### **Comments proposing additional Tables**

#### *Special Migration Statistics 2*

14. An additional table showing moving groups by tenure was proposed on the lines of SMS 1, Table 7. The Census Offices will consider this.

#### *Special Workplace Statistics 1 and 2*

15. These products should each include a table on occupation. The Census Offices will consider this if data on occupation is going to add much to what is in tables on NS-SEC.

### **Imputation of postcodes**

16. The proposal to impute postcodes when not supplied by the form-filler (para 23 et seq of discussion paper) was strongly welcomed by users.
17. Following the completion of further work to meet the concerns of their statistical consultant, the Census Offices have now decided to implement this proposal. The precise method has to be specified. Users should note that the scope of imputation will exclude
  - Imputing a postcode for migrants who tick 'no usual address one year ago',
  - Imputing a workplace for full-time students in employment for whom the destination recorded on the Census form is a place of study (see next section)
18. It was decided to make these exclusions so that the imputation would make good the information that was asked for, rather than extend it beyond what was sought.

### **Identification of workers and students**

19. The travel questions (destination and means of travel) on the Census form in Scotland cover travel to work or study (instead of travel to work only in the rest of the UK). The form in Scotland has room for only one destination and students who also have jobs have to choose either place of work or study but not both. From the order of the

questions on the form and from the results of the Census Rehearsal 1999, it can be assumed that working students generally enter their place of study.

20. The proposal in the discussion document (para 29) – to exclude full-time students in employment (FTSEs) from counts of economically active – was not found acceptable. A detailed paper on options for commuting statistics for Scotland will be put to Scottish and UK users later this year. The options are either
  - To give each FTSE a notional second destination and means of travel. The notional items could be ‘not stated’ or duplicates of the study destination and means of travel. Special Workplace Statistics (SWS) and Special Place of Study Statistics (SSS) would then be produced with FTSEs included in both.
  - To specify a single product that combines travel to work and study. FTSEs would have to be distinguishable in the product so as to provide consistency with SWS for elsewhere in the UK.
21. Whatever of the above options is chosen, SWS will still be produced for England and Wales and Northern Ireland and Annex A can be read in that light. For Scotland, Annex A of this paper retains the assumption made in the discussion document that separate products SWS and SSS will be produced. However, a detailed specification of a possible single combined ‘Special Travel Statistics’ will be developed.

#### **Action**

#### **22. Advisory Group members are asked to note:**

- (e) the comments in this paper that complete the summary of responses to the Discussion Paper on Origin-Destination Statistics; further arguments are welcome (by 18 May 2001) to support instances where the Census Office stance is stated as ‘Will consider’ or similar.**
- (f) the decision on imputation of postcode;**
- (g) the current position on full-time students in employment; and that a paper on this issue will be put to Scottish and UK users later this year; and**
- (h) that final proposals on origin-destination statistics will be circulated later this year taking into account the response to the discussion paper.**

**Frank Thomas**

**GROS**

**24 April 2001**

**Tables for Set SMS1 (zone 1, local authority)**

1. Migrants (age by gender)

Age	Gender	
	Male	Female
0		
1-3		
4		
5-9		
10-14		
15		
16-19		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75-79		
80-84		
85+		

User comment	Census Office response
<p>Further age breaks required to reflect ages of school stages (note different break between primary and secondary within UK).            Split 16-19 to single years.            Continue 5-year cohorts to 90+.</p>	<p>Will consider with similar points made on Area Statistics.</p>

2. Migrants in households (family status)

Family status of migrant	Gender	
	Male	Female
Not in family – pensioner Not in family – other In couple family – member of couple In couple family – dependent child of couple In couple family – other child of couple In lone parent family – parent In lone parent family – dependent child of parent In lone parent family – other child of parent Not in household		

User comment	Census Office response
Clarify whether 'Not in family' relates to single person household or to non-family person in household possibly with others. Should distinguish these categories anyway	'Not in family' means 'non-family person in household possibly with others'. Will consider splitting categories.
Need to agree definition of dependent child	See para 8.
Need to agree definition of family, in particular when two siblings live together	Definition of family for Census output already programmed. Two sibling households will not be classified as family (but should be distinguished if required in commissioned output).
Split 'Not in household' by age: 0-pensionable age, pensionable age – 74, 75+	Will consider
Delete 'in households' from heading	Agree

3. Migrants (ethnic group)

Ethnic group	Gender	
	Male	Female
White Mixed Asian, Asian British, Asian Scottish Black, Black British, Black Scottish Chinese or Other		

User comment	Census Office response
Need full (16-category classification) for England and Wales)	Query this given that the average number of migrants per district to district flow will be around 45.
Need different 5-way grouping to reflect Scottish situation.	Will consider with similar request for Area Statistics

4. Migrants (limiting long-term illness)

Limiting long-term illness	Gender	
	Male	Female
Yes In household Not in household No In household Not in household		

User comment	Census Office response
Split by age: 0-pensionable age, pensionable age – 74, 75+	Will consider



5. Migrants aged 16 to 74

Economic activity	Gender	
	Male	Female
Employed – full-time Employed – part-time Self-employed – full-time Self-employed – part-time Unemployed Retired Student Looking after home/family Permanently sick/disabled Other inactive		

User comment	Census Office response
Replace full-time/part-time with hours worked: up to 15, 16-30, 31+	Will consider
Clarify treatment of students, in particular, those economically active	Revised classification of economic activity being considered for Area Statistics

6. Moving groups of migrants in households

	Wholly moving households		Other moving groups	
	More than one person	One person	More than one person	One person
Groups Residents in moving groups				

User comment	Census Office response
Size of group/household should be 1, 2, 3+ rather than 1, 2+	Will consider

7. Moving groups of migrants in households

Tenure	Wholly moving households		Other moving groups	
	More than one person	One person	More than one person	One person
Owner occupied Rented – council etc Rented – housing association etc Rented – private sector				

User comment	Census Office response
More categories of tenure required	Will consider along with similar comments on Area Statistics

8. Moving groups of migrants in households

Gender and economic position of head of group	Wholly moving households		Other moving groups	
	More than one person	One person	More than one person	One person
<i>Male</i> Employed – full-time Employed – part-time Self-employed – full-time Self-employed – part-time Unemployed Retired Student Looking after home/ family Permanently sick/disabled Other inactive <i>Female</i> Employed – full-time Employed – part-time Self-employed – full-time Self-employed – part-time Unemployed Retired Student Looking after home/ family Permanently sick/disabled Other inactive				

User comment	Census Office response
Replace full-time/part-time with hours worked: up to 15, 16-30, 31+	Will consider
Clarify treatment of students, in particular, those economically active	Revised classification of economic activity being considered for Area Statistics
Clarify how 'head of group' is selected.	Method will be outlined in next set of proposals. Thinking on lines of a definition similar to household reference person. Would want to ensure that head of moving group is the reference person when group is wholly moving household.

9. Moving groups of migrants in households

NS-SEC of head of group	Wholly moving households		Other moving groups	
	More than one person	One person	More than one person	One person
<i>Male</i> Employers and managers in larger organisations Higher professionals Lower managerial and professional occupations Intermediate occupations Small employers and own account workers Lower supervisory, craft and related occupations Semi-routine occupations Routine occupations Never worked Long-term-unemployed Full-time student Not classified <i>Female</i> Employers and managers in larger organisations Higher professionals Lower managerial and professional occupations Intermediate occupations Small employers and own account workers Lower supervisory, craft and related occupations Semi-routine occupations Routine occupations Never worked Long-term-unemployed Full-time student Not classified				

User comment	Census Office response
Clarify treatment of students, in particular, those economically active	See paragraph 11. See also paragraphs 9 to 13 for general points about the NS-SEC.
Clarify how 'head of group' is selected.	Method will be outlined in next set of proposals. Thinking on lines of a definition similar to household reference person. Would want to ensure that head of moving group is the reference person when group is wholly moving household.
Size of group/household should be 1, 2, 3+ rather than 1, 2+.	Will consider
Add category for Armed Forces.	See paragraph 13

10. Migrants resident in Scotland/Wales/NI who know Gaelic /Welsh/Irish

Family status	Gender	
	Male	Female
Not in family – pensioner Not in family – other In couple family – member of couple In couple family – dependent child of couple In couple family – other child of couple In lone parent family – parent In lone parent family – dependent child of parent In lone parent family – other child of parent Not in households		

User comment	Census Office response
Clarify what ‘know’ means.	Will do so in line with what is decided for Area Statistics
Age may be preferable to family status in this table	Will consider.

## Tables for Set SMS2 (level 2, wards/postcode sectors)

### 1. Migrants

Age	Gender	
	Male	Female
0		
1-4		
5-15		
16-19		
20-24		
25-29		
30-44		
45-59		
60-64		
65-74		
75+		

User comment	Census Office response
Split 5-15 in various (different) ways. Split 16-19 into 16-17 and 18-19. Split 45-59 into 45-54 and 55-59. Oldest age group should be 90+.	Will consider with similar points made on Area Statistics.

### 2. Moving groups of migrants in households

	Wholly moving households	Other moving groups
Groups		
Residents in moving groups		

User comment	Census Office response
Introduce size of group/household 1, 2+	Will consider

### 3. Migrants

Ethnic group	Gender	
	Male	Female
White		
Other		

User comment	Census Office response
Need full (16-category classification) for England and Wales)	Query this given that the average number of migrants per ward to ward flow will be around 0.1.

### 4. Moving groups of migrants in households (NS-SEC)

NS-SEC of head of group	Wholly moving households	Other moving groups
Employers and managers in larger organisations Higher professionals Lower managerial and professional occupations Intermediate occupations Small employers and own account workers Lower supervisory, craft and related occupations Semi-routine occupations Routine occupations Never worked Long-term-unemployed Full-time student Not classified		

User comment	Census Office response
Table omits 'retired'	See paragraph 12. See also paragraphs 9 to 13 for general points about the NS-SEC.
Equivalent table required for armed forces	Propose as commissioned table, subject to confidentiality.
Clarify how 'head of group' is selected.	Method will be outlined in next set of proposals. Thinking on lines of a definition similar to household reference person. Would want to ensure that head of moving group is the reference person when group is wholly moving household.

## Tables for Set SWS 1 (level 1, local authority)

### 1. Workers (age by gender)

Age	Gender	
	Male	Female
16-29		
30-44		
45-59		
60-64		
65-74		

User comment	Census Office response
Split into employees and self-employed as in 1991 SWS Table 1 Identify students included	Will consider
More age categories: 16-17, 18-19, then 5 year bands.	Will consider with similar points made on Area Statistics.



2. Workers (family status by gender)

Family status	Gender	
	Male	Female
Not in family – pensioner Not in family – other In couple family – member of couple In couple family – dependent child of couple In couple family – other child of couple In lone parent family – parent In lone parent family – dependent child of parent In lone parent family – other child of parent Not in households		

User comment	Census Office response
Clarify whether ‘Not in family’ relates to single person household or to non-family person in household possibly with others. Should distinguish these categories anyway	‘Not in family’ means ‘non-family person in household possibly with others’. Will consider splitting categories.
Need to agree definition of dependent child	See para 8.
Need to agree definition of family, in particular when two siblings live together	Definition of family for Census output already programmed. Two sibling households will not be classified as family (but should be distinguished if required in commissioned output).
Combine with SWS1 Table 3	Will consider.

3. Workers (family status by hours worked)

Family status	Workers: Hours Worked		
	15 and under	16-30	31 and over
Not in family – pensioner Not in family – other In couple family – member of couple In couple family – dependent child of couple In couple family – other child of couple In lone parent family – parent In lone parent family – dependent child of parent In lone parent family – other child of parent Not in households			

User comment	Census Office response
Clarify whether ‘Not in family’ relates to single person household or to non-family person in household possibly with others. Should distinguish these categories anyway	‘Not in family’ means ‘non-family person in household possibly with others’. Will consider splitting categories.
Need to agree definition of dependent child	See para 8.
Need to agree definition of family, in particular when two siblings live together	Definition of family for Census output already programmed. Two sibling households will not be classified as family (but should be distinguished if required in commissioned output).
Combine with SWS1 Table 2	Will consider.

4. Workers (means of travel to work)

Means of travel to work	Worker
Works mainly at or from home Underground etc Train Bus etc Taxi Car – driver Car – passenger Motorcycle etc Bicycle On foot Other	

User comment	Census Office response
Add gender	Will consider

5. Workers (NS-SEC)

NS-SEC	Male	Female
Employers and managers in larger organisations Higher professionals Lower managerial and professional occupations Intermediate occupations Small employers and own account workers Lower supervisory, craft and related occupations Semi-routine occupations Routine occupations Never worked Long-term-unemployed Full-time student Not classified		

User comment	Census Office response
Distinguish between full-time and part-time students	See paragraph 11. See also paragraphs 9 to 13 for general points about the NS-SEC.

6. Workers (Industry)

Industry	Male	Female
Agriculture, Hunting, and Forestry Fishing Mining and quarrying Manufacturing Electricity, Gas and Water Supply Construction Wholesale and Retail Trade Hotels and Catering, Repairs Transport, Storage and Communication Financial Intermediation Real Estate, Renting and Business Activities Defence Public Administration Education Health and Social Work Other		

User comment	Census Office response
Distinguish students.	Will consider.

7. Workers (ethnic group)

Ethnic group	Worker
White Mixed Asian, Asian British, Asian Scottish Black, Black British, Black Scottish Chinese or Other	

User comment	Census Office response
Distinguish students.	Will consider.
Add gender	Will consider.
Need different 5-way grouping to reflect Scottish situation.	Will consider with similar request for Area Statistics

## Tables for Set SWS2 (level 2, ward/postcode sector)

### 1. Workers (age)

Age	Workers
16-29 30-44 45-59 60-64 65-74	

User comment	Census Office response
Combine with SWS2 Table 2 to show commuting by age and gender	Will consider

### 2. Workers (gender)

Gender	Workers
Male Female	

User comment	Census Office response
Combine with SWS2 Table 1 to show commuting by age and gender	Will consider

### 3. Workers

Family status	Workers
Not in family – pensioner Not in family – other In couple family – member of couple In couple family – child of couple In lone parent family – parent In lone parent family – child of parent Not in households	

User comment	Census Office response
Add gender	Will consider
Clarify whether ‘Not in family’ relates to single person household or to non-family person in household possibly with others. Should distinguish these categories anyway	‘Not in family’ means ‘non-family person in household possibly with others’. Will consider splitting categories.
Distinguish students.	Will consider.

### 4. Workers (hours worked)

Hours Worked	Male	Female
15 and under 16-30 31 and over		

User comment	Census Office response
Add gender	Will consider
Add ethnicity	Doubt if numbers warrant this.
Distinguish students.	Will consider.

5. Workers (Means of travel to work)

Means of travel to work	Worker
Works mainly at or from home Underground etc Train Bus etc Taxi Car – driver Car – passenger Motorcycle etc Bicycle On foot Other	

User comment	Census Office response
Add gender	Will consider
Distinguish students.	Will consider.

6. Workers (NS-SEC)

NS-SEC	Workers
Employers and managers in larger organisations Higher professionals Lower managerial and professional occupations Intermediate occupations Small employers and own account workers Lower supervisory, craft and related occupations Semi-routine occupations Routine occupations Never worked Long-term-unemployed Full-time student Not classified	

User comment	Census Office response
Add gender	Will consider. See also paragraphs 9 to 13 for general points about the NS-SEC.
Distinguish students.	Will consider.

## Tables for Set SWS3 (level 3, output area)

### 1. Workers

Method of travel to work	Workers
Works mainly at or from home Underground etc Train Bus etc Taxi Car – driver Car – passenger Motorcycle etc Bicycle On foot Other	

User comment	Census Office response
Add gender	Flows too small
Distinguish students.	Flows too small.



## Tables for Set SSS1 (level 1, local authority)

### 1. Students and schoolchildren

Age	Gender	
	Male	Female
0-11		
12-15		
16-18		
19-24		
25+		

User comment	Census Office response
Further age breaks required to reflect ages of school stages (note different break between primary and secondary within UK).	Will consider with similar points made on Area Statistics.

### 2. Students and schoolchildren

Family status	Gender	
	Male	Female
Not in family – pensioner Not in family – other In couple family – member of couple In couple family – dependent child of couple In couple family – other child of couple In lone parent family – parent In lone parent family – dependent child of parent In lone parent family – other child of parent Not in households		

User comment	Census Office response
Clarify whether 'Not in family' relates to single person household or to non-family person in household possibly with others. Should distinguish these categories anyway	'Not in family' means 'non-family person in household possibly with others'. Will consider splitting categories.

### 3. Students and schoolchildren

Ethnic group	Student and schoolchildren
White Mixed Asian, Asian British, Asian Scottish Black, Black British, Black Scottish Chinese or Other	

User comment	Census Office response
Need different 5-way grouping to reflect Scottish situation.	Will consider with similar request for Area Statistics
Add gender	Will consider

## Tables for Set SSS2 (level 2, ward/postcode sector)

### 1. Students and schoolchildren

Age	Student and schoolchildren
0-11 12-15 16-18 19-24 25+	

User comment	Census Office response
Further age breaks required to reflect ages of school stages (note different break between primary and secondary within UK).	Will consider with similar points made on Area Statistics.
Combine with SSS 1 table 2 to give age by gender	Will consider

### 2. Students and schoolchildren

Gender	Student and schoolchildren
Male Female	

User comment	Census Office response
Combine with SSS 1 table 1 to give age by gender	Will consider

### 3. Students and schoolchildren

Family status	Student and schoolchildren
Not in family – pensioner Not in family – other In couple family – member of couple In couple family – dependent child of couple In couple family – other child of couple In lone parent family – parent In lone parent family – dependent child of parent In lone parent family – other child of parent Not in households	

User comment	Census Office response
Clarify whether ‘Not in family’ relates to single person household or to non-family person in household possibly with others. Should distinguish these categories anyway	‘Not in family’ means ‘non-family person in household possibly with others’. Will consider splitting categories.

**Tables for Set SSS3 (level 3, output area)**

1. Students and schoolchildren

Method of travel to study	School-child /student
Studies mainly at or from home <sup>1</sup> Underground etc Train Bus etc Taxi Car – driver Car – passenger Motorcycle etc Bicycle On foot Other	

<sup>1</sup>N/A except when destination zone = origin zone.

User comment	Census Office response
None	