2001 Census Outputs by the MRS Social Grade Approximation

Introduction

The Census & Geodemographics Group of The Market Research Society has developed an algorithm for deriving approximate Social Grade codes solely from the demographics captured by the 2001 Census. The Census Offices have applied the algorithm to the Census output database in order to derive approximate Social Grades and have produced a series of tables by this new variable.

The purpose of this document is to compare results produced via the algorithm with industry estimates on Social Grade, show the extent of the similarities and differences and explain the likely causes. The results shown in this document are for England & Wales, however the same issues also apply to approximate Social Grade Census outputs for Scotland (though not Northern Ireland - see *Likely Causes*) .

The development and performance of the Social Grade approximation is documented in a paper by Erhard Meier and Corrine Moy 'Social Grading and the Census' (*International Journal of Market Research*, Volume 46, Quarter 2, 2004, pp141-170). This includes full details of the algorithm.

Annex A to this document provides an overview of how the algorithm operates, in order to help the reader to understand the issues in its application to Census data.

Comparison: 2001 Census Approx. Social Grade with Industry Estimates

Approximated Social Grade results from Table S066 in the National Report for England & Wales have been compared with corresponding estimates from the National Readership Survey (NRS). The key figures are summarised in Table 1 below.

Table 1: 2001 Census and NRS Comparison

	16-64		65-74		75+	
	NRS	*Census*	NRS	*Census*	NRS	*Census*
AB	25.2	*25.2*	21.6	*13.5*	18.2	*2.5*
C1	28	*29.8*	26.5	*6.8*	25.6	*56.1*
C2	20.8	*18.3*	22.5	*2.5*	17.1	*1.0*
D	17.3	*20.5*	16.9	*5.2*	18.2	*1.4*
E	8.7	*6.2*	12.6	*72.0*	20.9	*39.0*

Figures are column percentages

Notes:

1. National Readership Survey for all adults aged 15+, England & Wales, January to September 2001. Social Grade of Chief Income Earner in household applied to all household members.

2. 2001 Census for all people in England & Wales aged 16+, living in households. Approximated Social Grade of Household Reference Person applied to all household members.

   The main findings from the comparison are as follows:

   a) For adults aged 16 to 64, the Census profile is within +/- 3% of the NRS profile. Such differences are to be expected and the results for Census approximate Social Grade appear to be acceptable.
   b) For adults aged 65 to 74, the majority of the Census population has been classified as 'E' and the profile is severely different from the NRS profile.
   c) For adults aged 75+, 95% of the Census population has been classified as either C1 or E, which is again differs markedly from the NRS profile.

Likely Causes

The Social Grade algorithm uses occupation and employment-related information in order to assign grades to people who are working or have worked previously. These assignments are made with a good level of accuracy. For people below retirement age, the Census collects and codes occupation information if they have worked in the last five years.

For non-workers, including those where previous occupation details are not available, other information, such as working status (unemployed, retired etc), qualifications and tenure, has to be used as 'lifestyle indicators' of Social Grade. The approximation is less accurate in these cases.

The majority of adults aged 16 to 64 will have Household Reference Persons with current or previous occupation details and therefore the Social Grade approximation works well.

For those aged 65 to 74, occupation is coded only if the person is currently working. However, the majority of people in that age group were non-working and most of these were assigned to grade E by the algorithm's decision rules for non-workers. Under normal market research practices, they would have been coded accorded to their previous occupation.

For those aged 75+, no occupation or economic information was collected on the Census. An approximate Social Grade was assigned using a rule based on tenure. Therefore, again, the approximation was less accurate in these cases.

Note that the above relates to the coding of occupation in England and Wales. A similar approach is adopted in Scotland. However, in Northern Ireland, occupation information was collected and coded for all persons aged 16-74 who had ever worked.

Advice on Use of Census Tables

Users are advised to rework tables S066/CAS066 (Sex and approximated social grade by age) by excluding the columns for age groups 65+, in order to derive Social Grade profiles for those aged 16 to 64.

Users of Table UV78 (Approximated social grade for workplace population aged 16 to 74) will be unaffected by the above issues, as Social Grades are assigned on the characteristics of the individuals in this table, all of whom will have occupation details by definition.

We would advise users against relying on the information in Table UV50 (Approximated social grade) and tables S067/CAS067 (Age of Household Reference Person and dependent children by approximated social grade). These tables are affected by the above issues and cannot be manually reworked.

Conclusions

The MRS Social Grade algorithm has given a good approximation for people whose current or last occupation was captured by the 2001 Census.

Table 66 may be used to derive the approximate Social Grade profile for the residential population aged 16 to 64. Table UV78 will provide the profile for the workplace population aged 16 to 74.

The results are less accurate for other tables on approximated Social Grade and we would advise against the use of those tables in their present form.

The MRS Census & Geodemographics Group will be examining further ways of deriving accurate Census-based outputs by Social Grade.

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Annex A: Overview of MRS Social Grade Approximation

Stage 1: apply Social Grade matrix based on SOC 2000 code, employment status (four codes) and size of establishment (two codes) to full-time and part-time workers. This will result in each worker being given one of 14 possible codes, either an approximated Social Grade or a combination of grades – namely A, B, C1, C2, D, AB, ABC1, BC1, C1C2, C1C2D, C2D, BC1C2, "no combination" and "insufficient information".

Stage 2: apply special coding rules, derived from a decision tree analysis based on workers, to those workers of stage 1 who were assigned with one of the seven combinations of grades (the "doubtfuls"). The variables used at this stage are employment status (four codes), qualifications (six codes), size of establishment (five codes), sex (two codes), working status (four codes) and tenure (four codes). Together with stage 1, this results in all workers being given a final approximated Social Grade, except those with "no combination" and "insufficient information".

Stage 3: apply rules to non-workers, derived from a separate decision tree analysis based on non-workers. The same variables as those of stage 2 are used. Together with stages 1 and 2, this results in all persons being given an approximated Social Grade, except those with "no combination" and "insufficient information".