

JICPOPS

JOINT INDUSTRY COMMITTEE FOR POPULATION STANDARDS

Evaluation of Census Approximate Social Grade at Region Level

1. Introduction

The 2011 Census output on Approximate Social Grade (ASG) enables users to obtain social grade profiles for a range of geographies, including local authority districts, postal sectors and Census Output Areas.

Unlike other demographics captured by the Census, ASG is a derived variable obtained by applying a model algorithm to the census database – full details of the model are given by Helen Lambert and Corrine Moy (2013). Therefore the ASG outputs are modelled estimates, and so it is important to understand how well they agree with actual social grade profiles.

This note summarises the results of an evaluation of Census ASG output at region level, in comparison with data from the National Readership Survey (NRS). The NRS is widely regarded to be the “gold standard” measurement of social grade, and the ASG model was indeed developed using a sample of NRS data.

The purpose of this document is to demonstrate the differences between Census ASG and NRS social grade profiles, at region level, and offer guidance for users.

The evaluation was carried out and documented by members of the JICPOPS Technical Committee.

2. Comparison of Census ASG and NRS social grade profiles

Census ASG outputs were summarised at postal sector level, using the JICPOPS list of all postal sectors in Great Britain for 2011, and were then aggregated to Government Standard Regions. By definition, the ASG results are derived from a population dataset, and so are not subject to sampling errors.

The NRS is carried out across Great Britain and is based on a sample of adult individuals. Therefore the results are subject to sampling errors, which will be greater at region level. For this reason, in order to reduce the effects of sampling variation, three years of NRS data were used for this comparison, from January 2009 to December 2011. This choice of period was influenced by a change in the administrative regions used on NRS from January 2012; although the period is not perfectly symmetric around the timing of the Census, this lack of symmetry should not have affected the comparison.

The Census ASG and NRS social grade profiles are compared by Government Standard Regions in Table 1 below. Based on this information, a set of comparative charts for all regions is included in Appendix A.

Table 1	2011 Census Approximate Social Grade				National Readership Survey				Differences (Census - NRS)			
Government Standard Region	Census AB share	Census C1 Share	Census C2 share	Census DE share	NRS share AB	NRS share C1	NRS share C2	NRS share DE	Difference AB %	Difference C1 %	Difference C2 %	Difference DE %
Northern	16.92%	29.07%	22.53%	31.48%	18.65%	28.88%	21.72%	30.75%	-1.73%	0.20%	0.81%	0.73%
Yorkshire & Humberside	18.79%	29.34%	22.31%	29.56%	20.39%	29.04%	22.34%	28.24%	-1.60%	0.30%	-0.03%	1.33%
North West	19.37%	30.57%	20.26%	29.80%	22.13%	32.78%	19.11%	25.97%	-2.77%	-2.21%	1.15%	3.83%
East Midlands	20.03%	29.55%	22.60%	27.82%	21.48%	30.09%	22.49%	25.93%	-1.46%	-0.54%	0.11%	1.89%
West Midlands	19.42%	28.96%	22.34%	29.28%	22.69%	27.79%	21.27%	28.25%	-3.27%	1.17%	1.06%	1.03%
East Anglia	22.14%	29.65%	23.16%	25.06%	27.06%	26.70%	25.12%	21.12%	-4.93%	2.95%	-1.97%	3.94%
South East	26.71%	32.53%	20.48%	20.27%	33.66%	29.60%	19.71%	17.03%	-6.94%	2.92%	0.77%	3.25%
South West	22.86%	30.81%	23.12%	23.20%	25.90%	30.81%	21.59%	21.69%	-3.04%	0.00%	1.54%	1.51%
Wales	17.92%	29.31%	23.07%	29.70%	20.80%	28.56%	20.89%	29.74%	-2.88%	0.75%	2.18%	-0.05%
Scotland	18.58%	31.71%	21.85%	27.86%	21.81%	30.16%	18.07%	29.96%	-3.23%	1.55%	3.78%	-2.10%
London	29.47%	32.98%	15.15%	22.40%	29.34%	31.31%	15.47%	23.87%	0.13%	1.67%	-0.33%	-1.47%
Great Britain	22.31%	30.91%	20.87%	25.91%	25.38%	29.99%	19.98%	24.65%	-3.07%	0.92%	0.89%	1.26%

The NRS figures are based on Chief Income Earners (CIEs), while the Census results are based on numbers of Household Reference Persons (HRPs). As the Census did not ask respondents about their incomes, the HRP is the closest equivalent to the CIE. Both sets are restricted to those aged 16-64, as the Census ASG output was limited to this age range.

3. Comments on results

As the charts in Appendix A generally indicate, most regions show a good agreement between Census ASG and NRS. However it is clear that Census ASG generally understates the share of social grade AB for all regions except London. Overall, at Great Britain level, the Census shows 3.1% fewer AB's than NRS. At region level, the understatement of AB's is particularly great in South East (-6.9%) and East Anglia (-4.9%).

We do not have an explanation for this general understatement in AB's. As Lambert and Moy demonstrated, the ASG algorithm was better at grading those who were working (either full or part time), for whom occupation accurately classifies social grade, than for those who were not working. Therefore, the regional variations could reflect differences between regions in the working/non-working split amongst HRP's aged 16-64.

4. Guidance for users

We are not suggesting that the Census ASG results need to be corrected or reissued based on this evaluation. However, in situations where consistency with the NRS social grade profiles is important to users, they might consider adjusting their ASG estimates by carrying out a simple weighting of the data. For example, this could be achieved by deriving weighting factors by social grades within regions, using ratios based on:

NRS Social Grade share / Census ASG Social Grade share.

5. Conclusions

This evaluation has demonstrated that Census ASG broadly predicts well at region level, but tends to understate the share of AB's by around 3 percentage points on average.

In applications where consistency with the NRS is important to users, they might consider adjusting the Census ASG results by applying a simple weighting process to the data.

Reference

Lambert, H. and Moy, C.(2013) Social Grade allocation to the 2011 Census. Available at: <https://www.mrs.org.uk/pdf/Social%20Grade%20Allocation%20for%202011%20Census.pdf>

Appendix A:

Comparisons of Census ASG and NRS Social Grade profiles for Government Standard Regions and Great Britain







