

2021 Census Approximated Social Grade

**A regional comparison of 2021 Census
Approximated Social Grade vs. Barb
Establishment Survey data**

A report prepared for JICPOPS
May 2024

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Background and introduction

ONS has calculated an Approximated Social Grade (ASG) measure for each household in the 2021 Census, by applying an algorithm developed by the MRS Census & GeoDems Group. Early validations against the Publishers Audience Measurement Company (PAMCo) survey data showed acceptable comparisons but given the changes in methodology and scope of the PAMCo survey, the Barb Establishment Survey (ES) has been used for more detailed analysis.

We have compared the social grade profile of individual regions across England, Wales and Northern Ireland.

Given that social grade is allocated on the Chief Income Earners (CIEs) criteria, we analysed data amongst Household Reference Persons (HRPs) on the Census as the nearest equivalent to a CIE. This has been limited to HRP/CIEs aged 16-64 on both datasets, as this mirrors the age range on which ASG was assigned on the Census.

However, since Barb is a household survey, we were able to expand this analysis out to look across a wider population of individuals aged 16+ who live in a household where the HRP/CIE is aged 16-64.

Comparisons have also been made against the work that was done on the last census in 2011 where possible.

Census data

At the time of writing, 2021 census data was only available in England, Wales and Northern Ireland, with data more limited in Northern Ireland. Our dataset for HRPs aged 16-64 spans the three nations, whilst data for those who live in a household where the HRP is aged 16-64 was only available in England and Wales.

Barb data

The Barb Establishment Survey's main purpose is to provide information about television viewing across the UK population, not only their TV equipment but the demographic make-up of households.

The ES employs a stratified probability sample of private households in the UK. Around 54,000 household interviews are carried out each year.

A two year data period was used for this analysis in order to boost sample sizes and give us more reliable estimates. Barb interviewing had been suspended around the Covid pandemic with collection re-commencing without interruption from Q2 2021. It is for this reason that we have chosen to use data from Q2 2021 through to Q1 2023. The response rate for this data period was 54%.

The sample size for CIEs aged 16-64 was 62,826, whilst the sample size for individuals aged 16+ in a household where the CIE was aged 16-64 was 121,504. The latter excludes Northern Ireland to align with Census data available. Sample sizes within regions can be found in Appendix A.

Comparisons at HRP/CIE aged 16-64 level

Data is summarised in the two tables below, whilst histograms displaying this data can be found in Appendix B.

Table 1: HRP/CIE social grade profile by region – 2021 Census vs. Barb ES

	2021 Census				Barb ES			
	AB share	C1 share	C2 share	DE share	AB share	C1 share	C2 share	DE share
North East	17.2%	32.0%	20.9%	29.8%	20.7%	27.8%	22.4%	29.1%
North West	19.6%	33.1%	20.0%	27.3%	21.1%	33.2%	20.1%	25.6%
Yorkshire and The Humber	18.8%	32.4%	21.7%	27.2%	21.0%	28.8%	20.8%	29.4%
East Midlands	19.6%	33.5%	22.3%	24.6%	24.0%	30.2%	21.3%	24.5%
West Midlands	19.1%	32.1%	21.3%	27.5%	22.1%	30.2%	22.0%	25.7%
East	23.3%	34.6%	21.1%	21.1%	26.3%	31.6%	21.5%	20.6%
London	30.0%	31.9%	15.1%	22.9%	30.3%	34.5%	16.0%	19.2%
South East	27.0%	34.9%	19.3%	18.9%	26.2%	35.6%	20.4%	17.8%
South West	22.6%	34.0%	22.3%	21.0%	27.7%	34.1%	22.1%	16.0%
Wales	18.7%	32.8%	21.5%	27.0%	21.4%	30.3%	23.0%	25.4%
Northern Ireland	19.0%	29.6%	20.9%	30.5%	19.8%	29.0%	23.0%	28.2%
England/Wales/Northern Ireland	22.6%	33.1%	20.1%	24.2%	24.6%	32.2%	20.5%	22.6%

Table 2: HRP/CIE percentage point differences in social grade profile by region – 2021 Census vs. Barb ES

	Differences (Census – Barb ES)			
	AB share	C1 share	C2 share	DE share
North East	-3.5%	4.2%	-1.5%	0.7%
North West	-1.4%	-0.1%	-0.1%	1.7%
Yorkshire and The Humber	-2.2%	3.6%	0.9%	-2.2%
East Midlands	-4.4%	3.3%	1.0%	0.1%
West Midlands	-2.9%	1.9%	-0.7%	1.8%
East	-3.0%	2.9%	-0.4%	0.5%
London	-0.3%	-2.6%	-0.9%	3.7%
South East	0.7%	-0.8%	-1.1%	1.1%
South West	-5.1%	-0.1%	0.2%	5.0%
Wales	-2.6%	2.5%	-1.4%	1.6%
Northern Ireland	-0.8%	0.6%	-2.1%	2.3%
England/Wales/Northern Ireland	-2.0%	0.9%	-0.4%	1.6%

We are encouraged that whilst there are differences, results are broadly comparable across all regions.

We can see from this data that DEs are more likely to be over-estimated whilst ABs are under-estimated. The South West is one of the more extreme example of this, but to add context here, Barb response rates were at their lowest at 40% across the South West, compared to 54% across the UK.

Otherwise, there is a trend of over-estimating C1s in north and/or eastern regions and a very slight under-estimation of C2s.

Comparisons to 2011 analyses

This exercise was previously run for the 2011 Census, albeit Census data was compared to the National Readership Survey rather than the Barb Establishment Survey. Tables outlining results can be found in Appendix C.

The trend of over-estimating ABs is not a new one; this was also the case in 2011 where the Census showed 3.1% points fewer ABs across Great Britain than NRS. The same is true for the over-estimation of DEs.

The South East and East were regions where the profile was not as well aligned previously. They look to have corrected themselves in 2021, but we find new areas that match less well, like the South West, East Midlands and London.

Overall, we are pleased to see that data is very much in line with the work done in 2011.

Comparisons at individuals aged 16+ level

A fuller picture can be examined with data for individuals who live in a household where the HRP/CIE has been assigned an ASG. Tables can be found below, whilst accompanying histograms are listed in Appendix D.

Note that this data excludes Northern Ireland.

Table 3: Individual level social grade profile by region – 2021 Census vs. Barb ES

	2021 Census				Barb ES			
	AB share	C1 share	C2 share	DE share	AB share	C1 share	C2 share	DE share
North East	18.2%	33.3%	22.3%	26.2%	20.4%	30.8%	23.7%	25.1%
North West	20.4%	33.8%	21.2%	24.6%	22.3%	33.5%	20.7%	23.5%
Yorkshire and The Humber	19.4%	32.9%	23.0%	24.8%	22.5%	29.6%	21.4%	26.6%
East Midlands	20.1%	33.9%	23.4%	22.6%	25.1%	30.2%	22.2%	22.6%
West Midlands	19.6%	32.4%	22.6%	25.5%	23.7%	30.8%	22.3%	23.2%
East	24.0%	34.8%	22.4%	18.9%	27.7%	30.9%	22.5%	18.8%
London	28.7%	31.8%	17.4%	22.1%	30.2%	35.1%	17.1%	17.6%
South East	27.6%	35.1%	20.4%	16.9%	27.5%	35.4%	21.1%	15.9%
South West	23.3%	34.8%	23.5%	18.5%	28.6%	34.3%	23.2%	13.9%
Wales	19.5%	33.6%	23.0%	23.8%	22.2%	30.9%	23.9%	23.0%
England/Wales	23.1%	33.6%	21.4%	21.8%	25.8%	32.7%	21.2%	20.3%

Table 4: Individual level percentage point differences in social grade profile by region – 2021 Census vs. Barb ES

	Differences (Census – Barb ES)			
	AB share	C1 share	C2 share	DE share
North East	-2.3%	2.5%	-1.3%	1.1%
North West	-1.9%	0.3%	0.5%	1.1%
Yorkshire and The Humber	-3.1%	3.4%	1.6%	-1.8%
East Midlands	-5.0%	3.7%	1.2%	0.0%
West Midlands	-4.1%	1.6%	0.3%	2.3%
East	-3.7%	3.8%	-0.2%	0.1%
London	-1.5%	-3.3%	0.3%	4.5%
South East	0.1%	-0.4%	-0.7%	1.0%
South West	-5.3%	0.5%	0.3%	4.6%
Wales	-2.6%	2.7%	-0.9%	0.8%
England/Wales	-2.7%	0.9%	0.2%	1.6%

As one might expect, the results for individuals are very much in line with those seen for HRP/CIEs. We see a familiar under-estimation of ABs and under-estimation of DEs. The South West continues to be a region with larger swings than seen elsewhere.

The North East has seen less variability than at a HRP/CIE level, but the reverse is true of London.

Conclusions

We are satisfied that the 2021 Census ASG is a good predictor of social grade at region level, although users should bear in mind the tendency to under-estimate ABs and over-estimate DEs.

Previous guidance has suggested that simple weighting could be undertaken to correct these skews by deriving weighting factors from the ratios of individual social grades within regions between the two datasets. This remains the case if consistency with the Barb ES is desired.

Appendix A

Barb Establishment Survey Sample Sizes

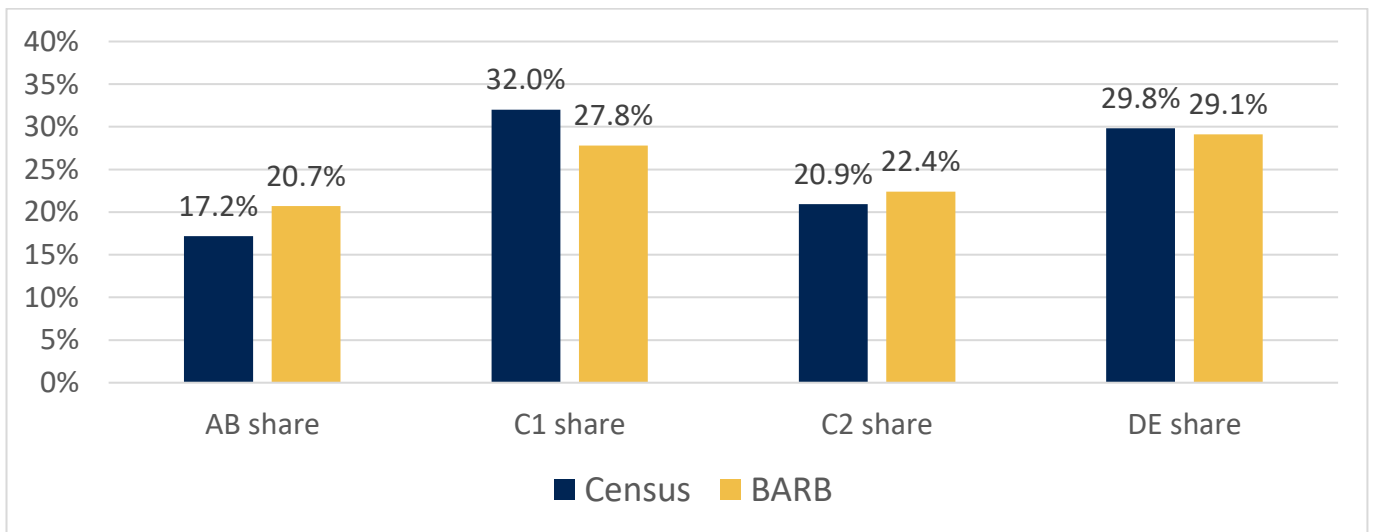
Table 5: Barb Establishment Survey Sample Sizes (Q2 2021 – Q1 2023)

	Number of CIEs aged 16-64	Number of individuals aged 16+ in households with CIE aged 16-64
North East	1972	4029
North West	8896	18513
Yorkshire and the Humber	4136	8389
East Midlands	4010	8510
West Midlands	4225	9059
East of England	5993	12482
London	10539	23174
South East	7668	16631
South West	3263	6865
Wales	6675	13852
Northern Ireland	5449	N/A
TOTAL	62826	121504

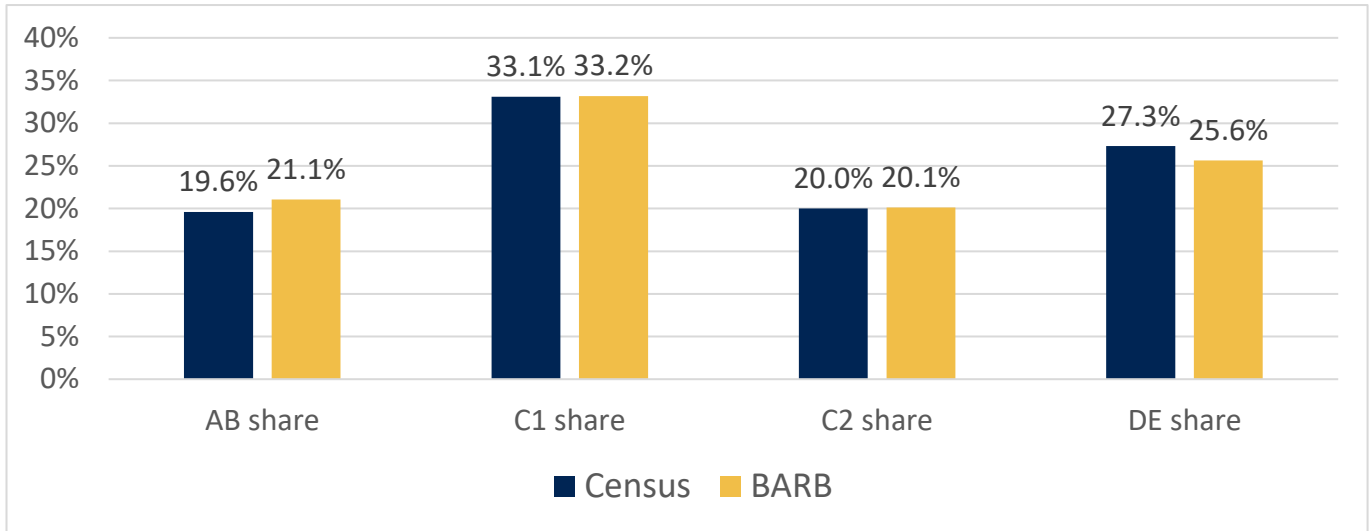
Appendix B

Comparisons of 2021 Census Approximated Social Grade and Barb Establishment Survey Profiles for Government Regions – all HRP/CIEs aged 16-64

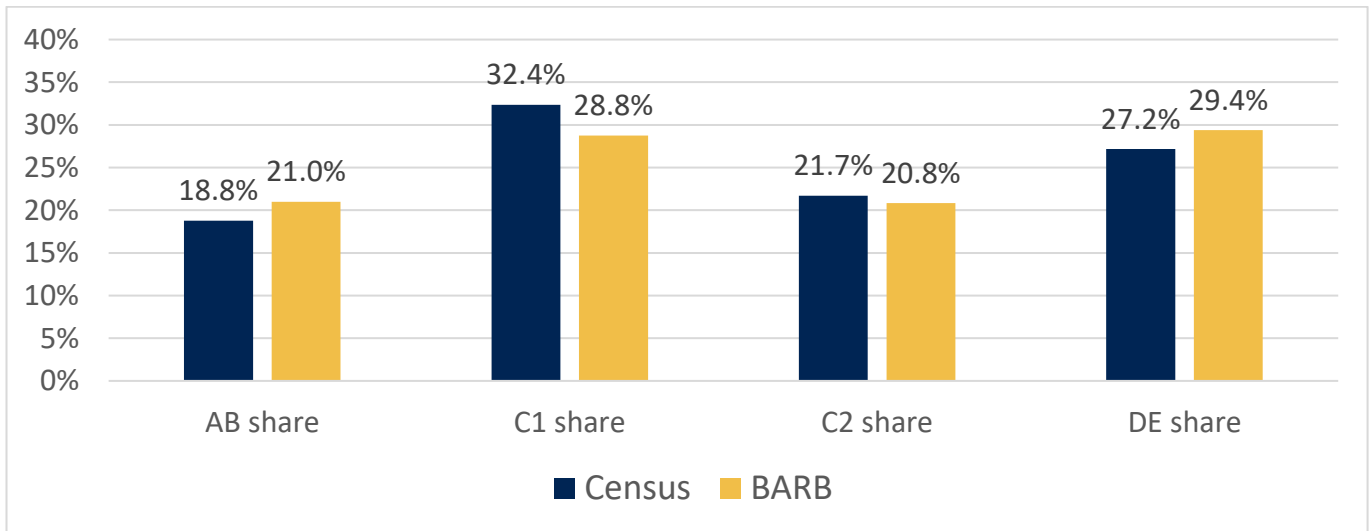
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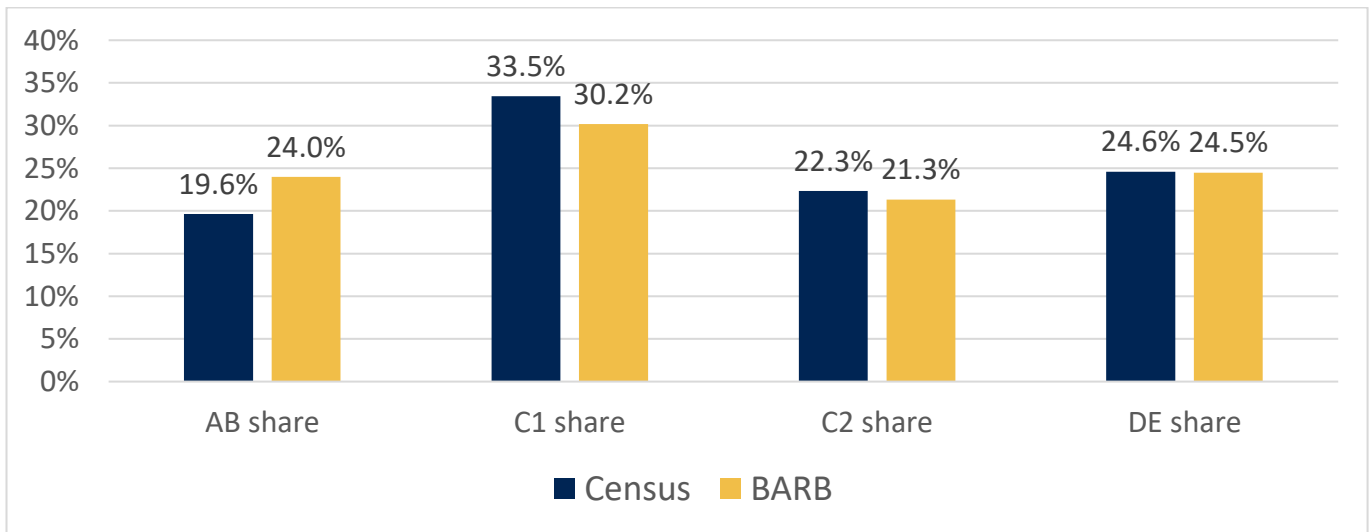
North West



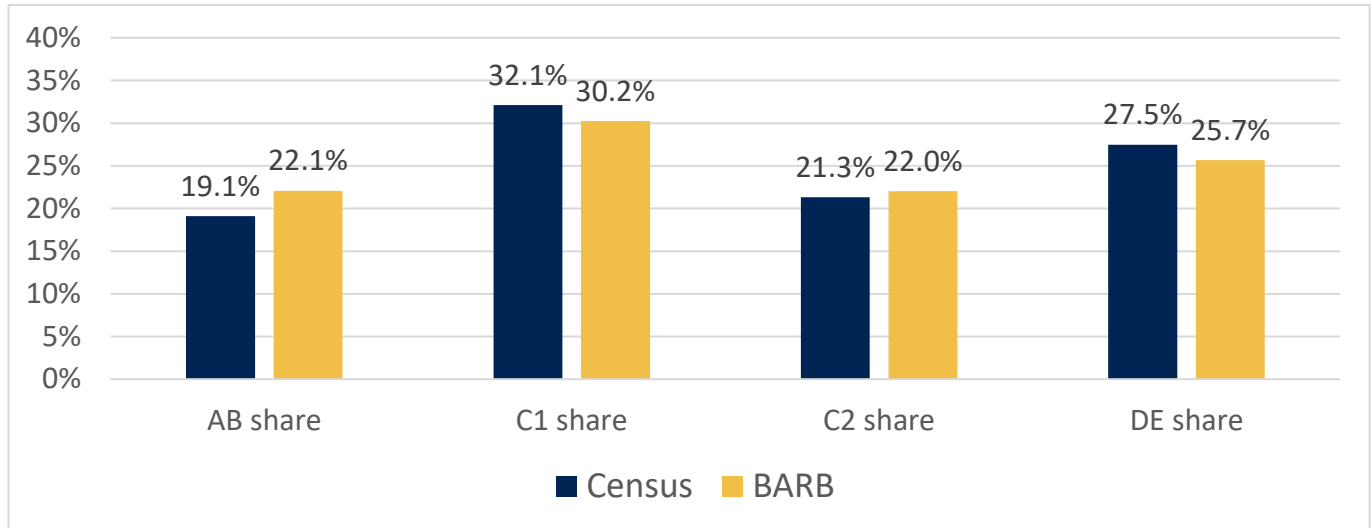
Yorkshire and The Humber



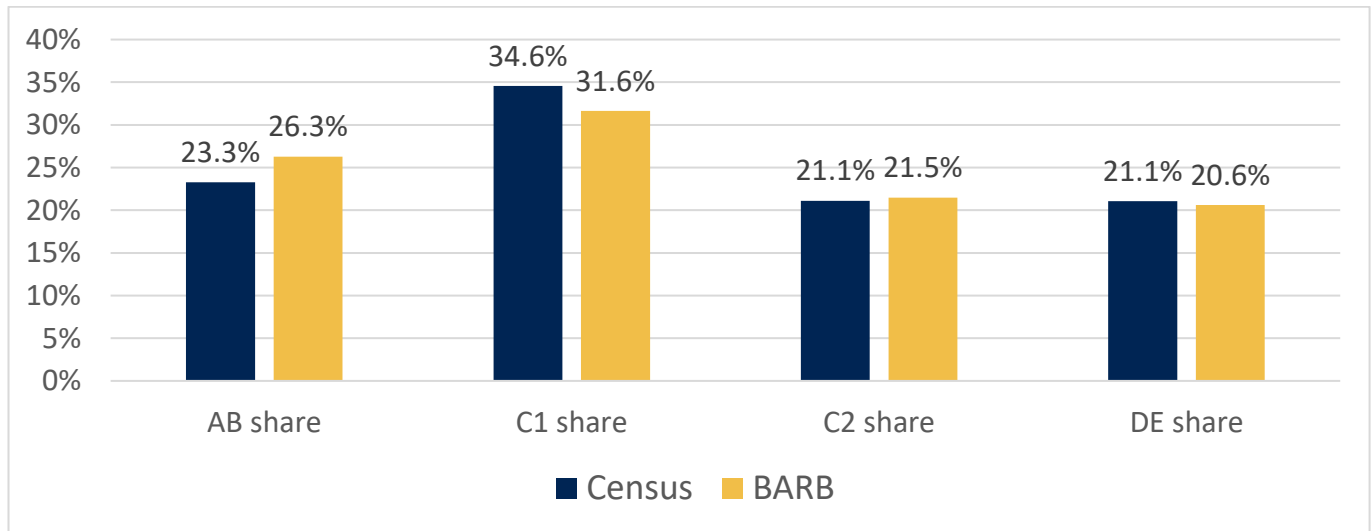
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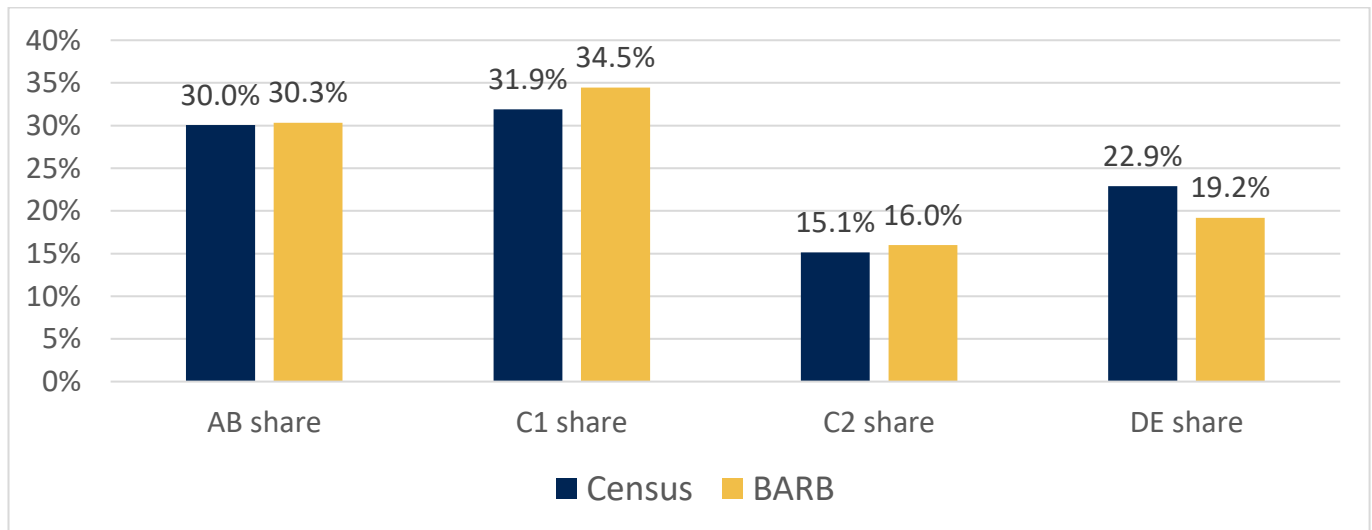
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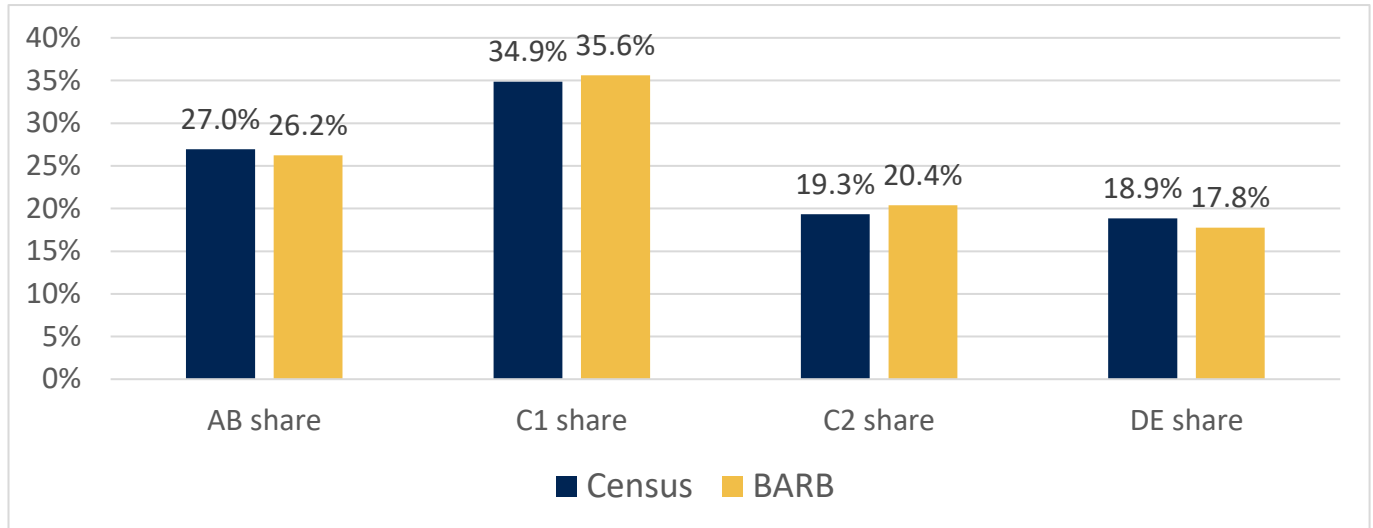
East



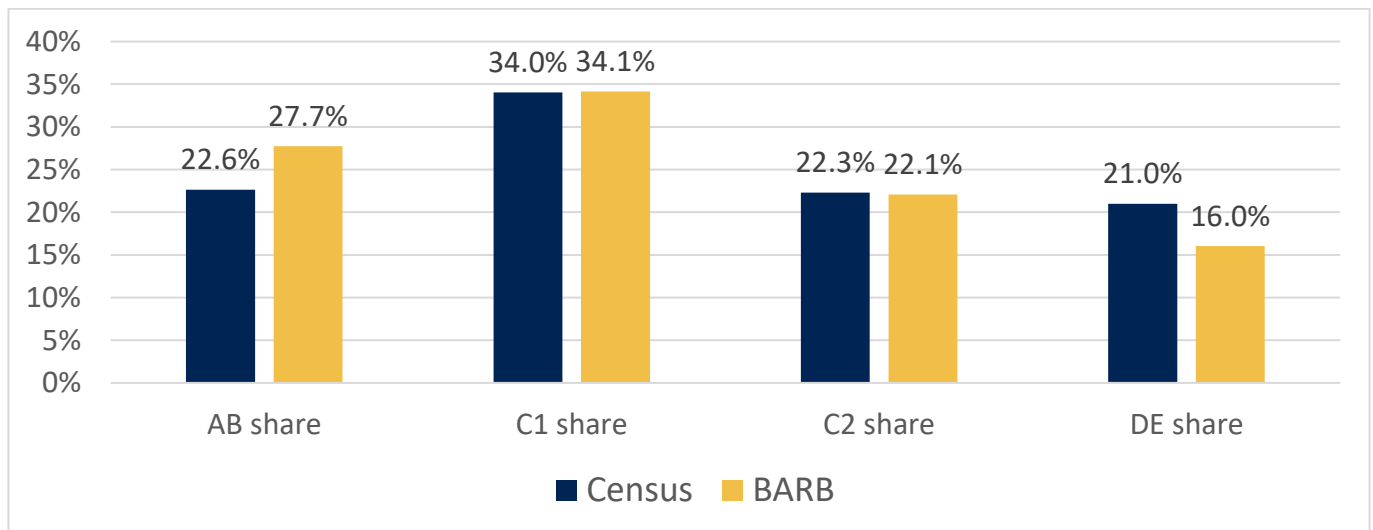
London



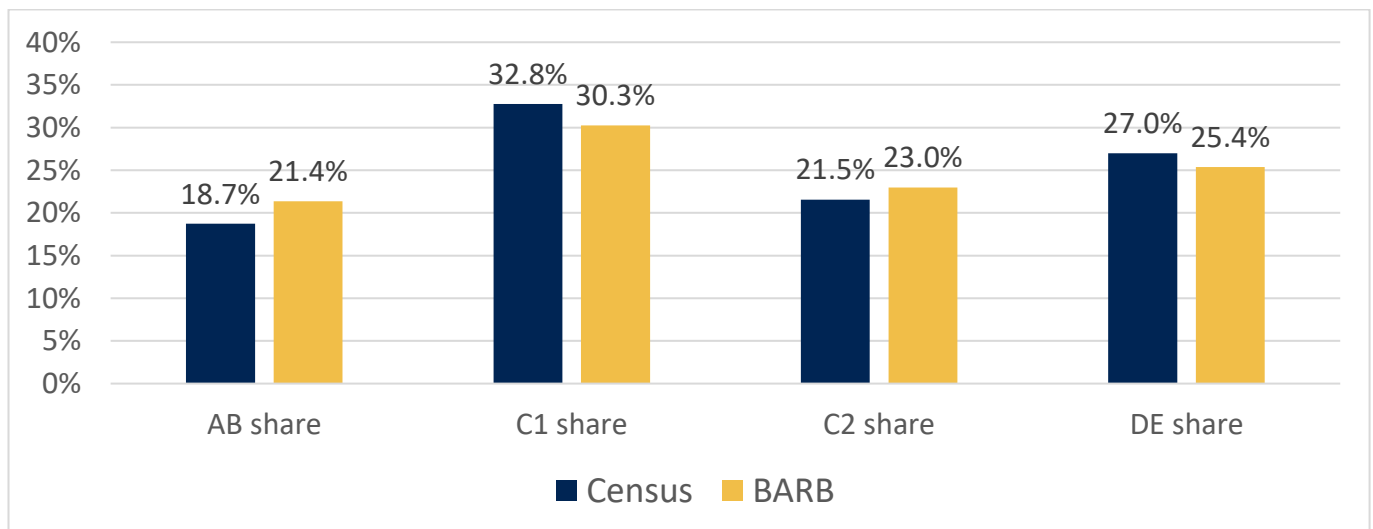
South East



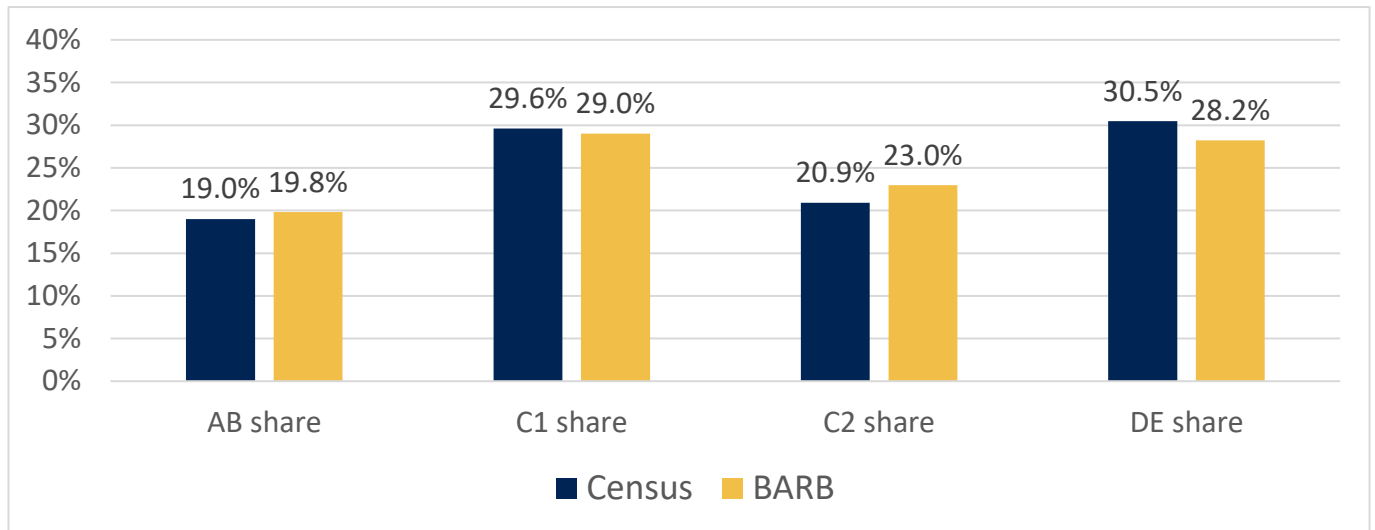
South West



Wales



Northern Ireland



Appendix C

2011 Comparisons of Census Approximated Social Grade and NRS Profiles for Government Regions – all HRP/CIEs aged 16-64¹

Table 6: HRP/CIE social grade profile by region – 2011 Census vs. NRS

	2011 Census ASG				NRS			
	AB share	C1 share	C2 share	DE share	AB share	C1 share	C2 share	DE share
Northern	16.9%	29.1%	22.5%	31.5%	18.7%	28.9%	21.7%	30.8%
Yorkshire & Humberside	18.8%	29.3%	22.3%	29.6%	20.4%	29.0%	22.3%	28.2%
North West	19.4%	30.6%	20.3%	29.8%	22.1%	32.8%	19.1%	26.0%
East Midlands	20.0%	29.6%	22.6%	27.8%	21.5%	30.1%	22.5%	25.9%
West Midlands	19.4%	29.0%	22.3%	29.3%	22.7%	27.8%	21.3%	28.3%
East Anglia	22.1%	29.7%	23.2%	25.1%	27.1%	26.7%	25.1%	21.1%
South East	26.7%	32.5%	20.5%	20.3%	33.7%	29.6%	19.7%	17.0%
South West	22.9%	30.8%	23.1%	23.2%	25.9%	30.8%	21.6%	21.7%
Wales	17.9%	29.3%	23.1%	29.7%	20.8%	28.6%	20.9%	29.7%
Scotland	18.6%	31.7%	21.9%	27.9%	21.8%	30.2%	18.1%	30.0%
London	29.5%	33.0%	15.2%	22.4%	29.3%	31.3%	15.5%	23.9%
Great Britain	22.3%	30.9%	20.9%	25.9%	25.4%	30.0%	20.0%	24.7%

¹ See JICPOPs Evaluation of Census Approximate Social Grade at Region Level

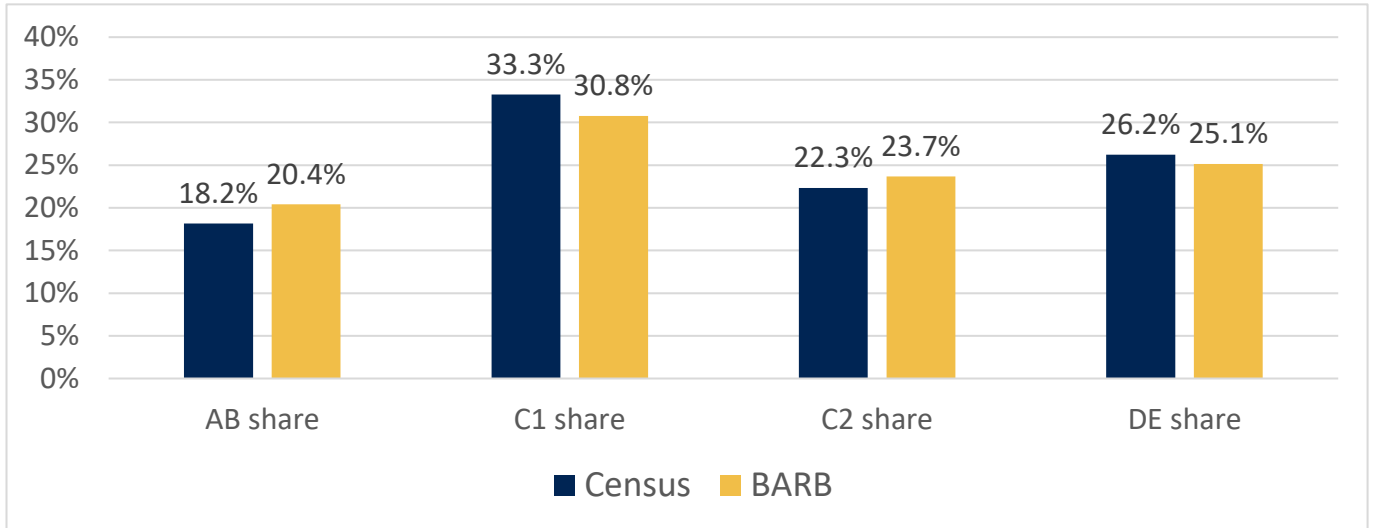
Table 7: HRP/CIE percentage point differences in social grade profile by region – 2011 Census vs. NRS

	Differences (Census - NRS)			
	AB share	C1 share	C2 share	DE share
Northern	-1.7%	0.2%	0.8%	0.7%
Yorkshire & Humberside	-1.6%	0.3%	0.0%	1.3%
North West	-2.8%	-2.2%	1.2%	3.8%
East Midlands	-1.5%	-0.5%	0.1%	1.9%
West Midlands	-3.3%	1.2%	1.1%	1.0%
East Anglia	-4.9%	3.0%	-2.0%	3.9%
South East	-6.9%	2.9%	0.8%	3.3%
South West	-3.0%	0.0%	1.5%	1.5%
Wales	-2.9%	0.8%	2.2%	-0.1%
Scotland	-3.2%	1.6%	3.8%	-2.1%
London	0.1%	1.7%	-0.3%	-1.5%
Great Britain	-3.1%	0.9%	0.9%	1.3%

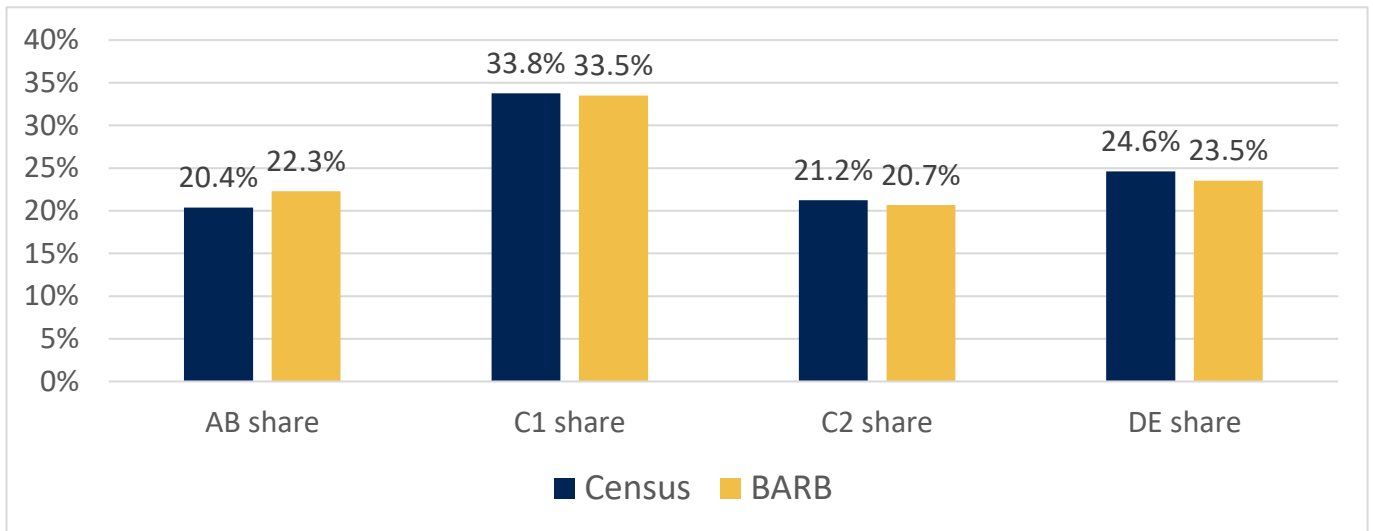
Appendix D

Comparisons of 2021 Census Approximated Social Grade and Barb Establishment Survey Profiles for Government Regions – all individuals aged 16+ in a household with a HRP/CIE aged 16-64

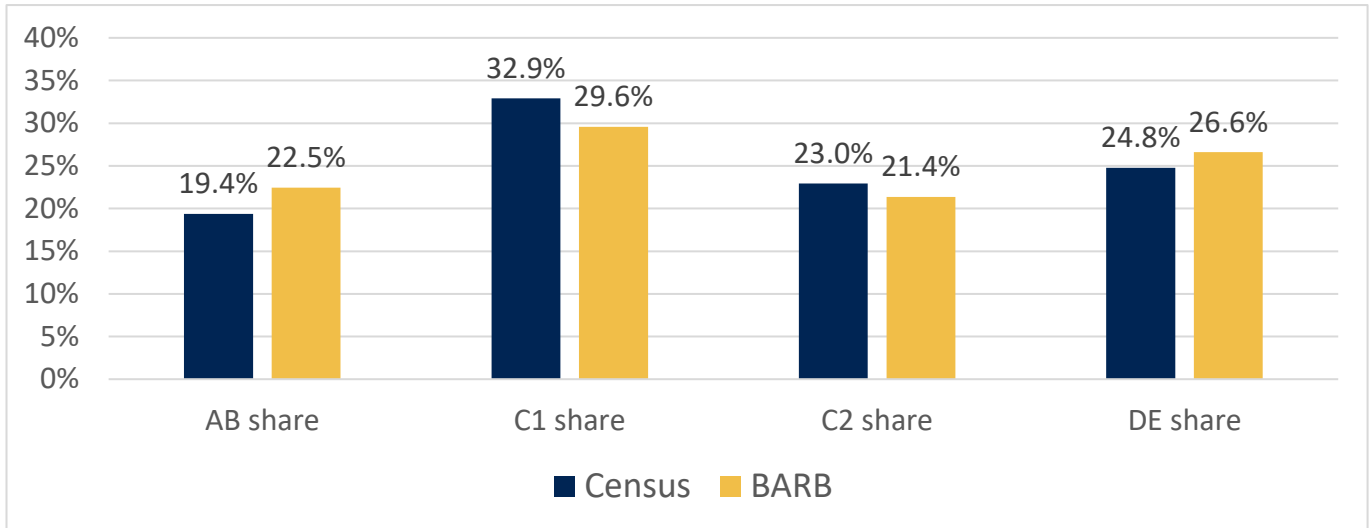
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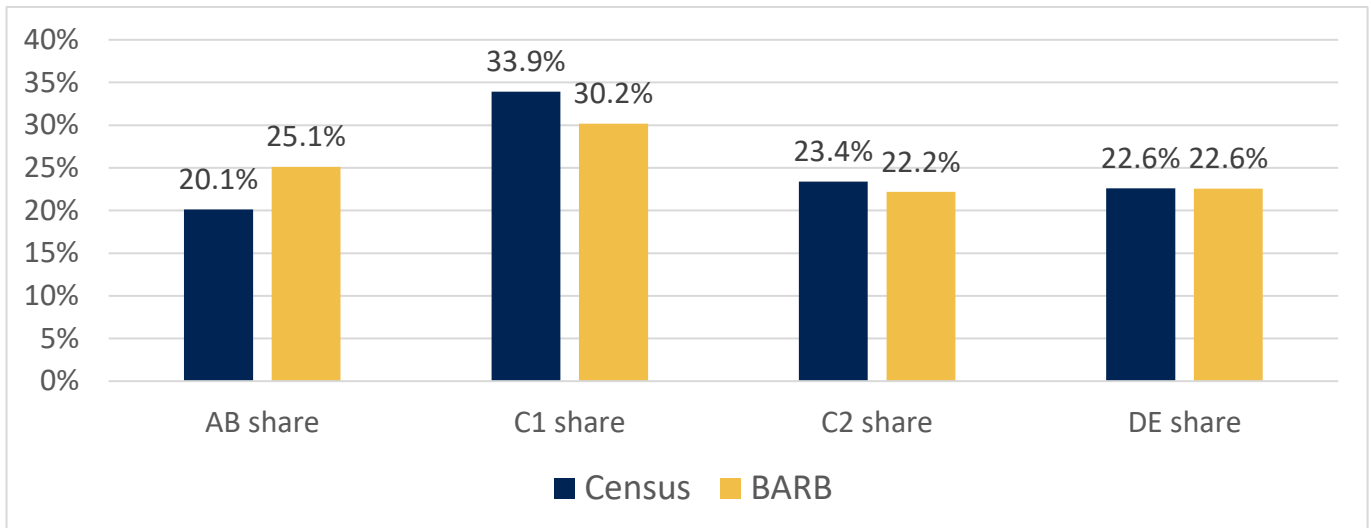
North West



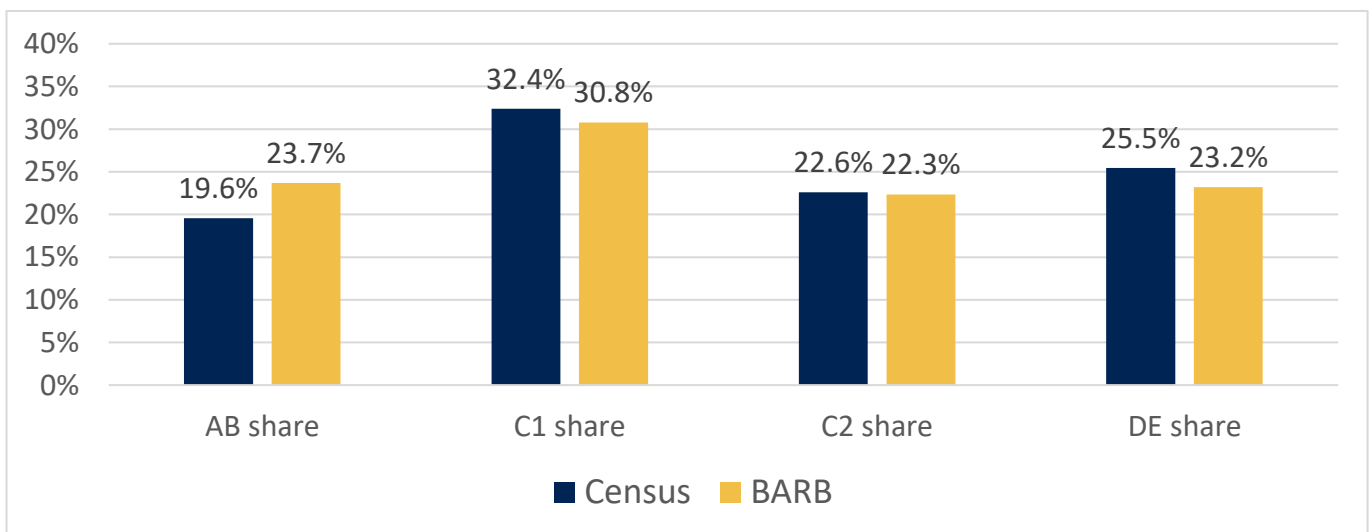
Yorkshire and The Humber



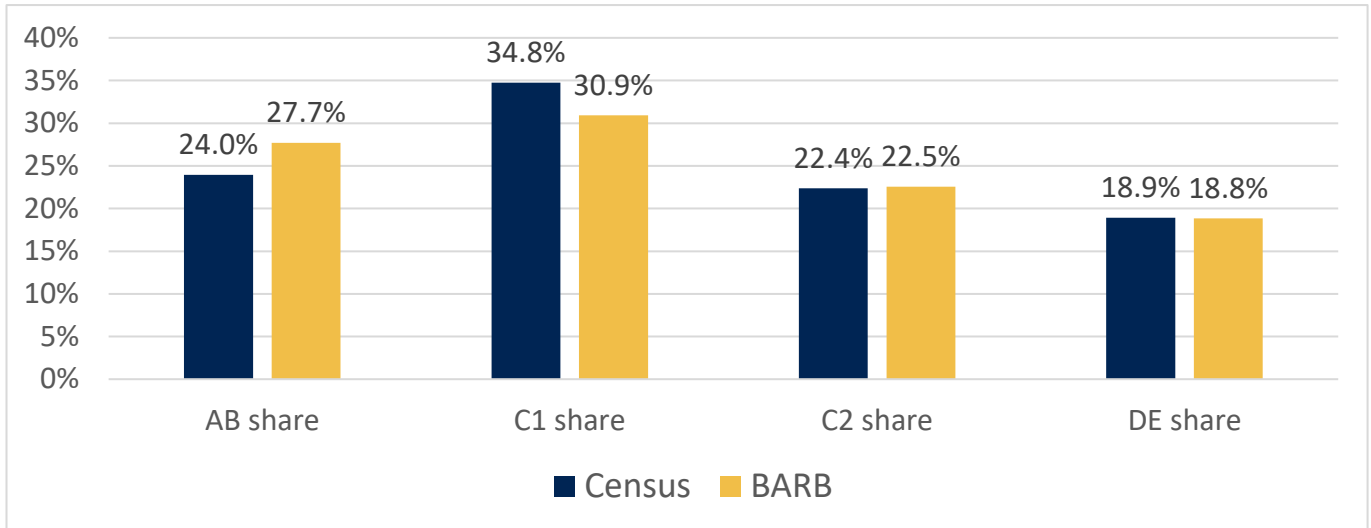
East Midlands



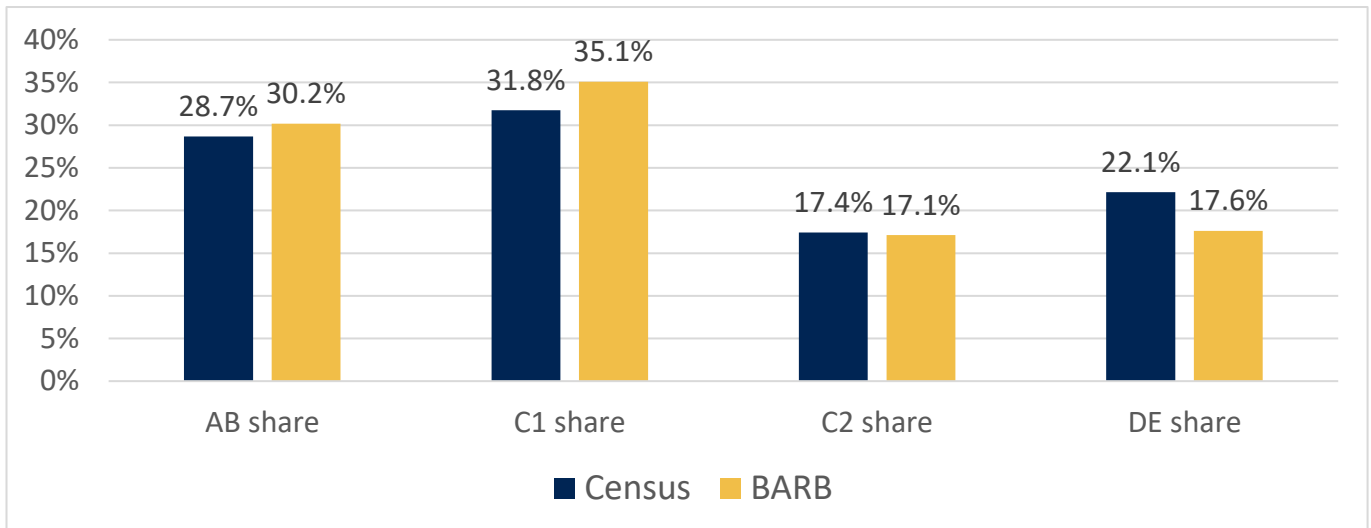
West Midlands



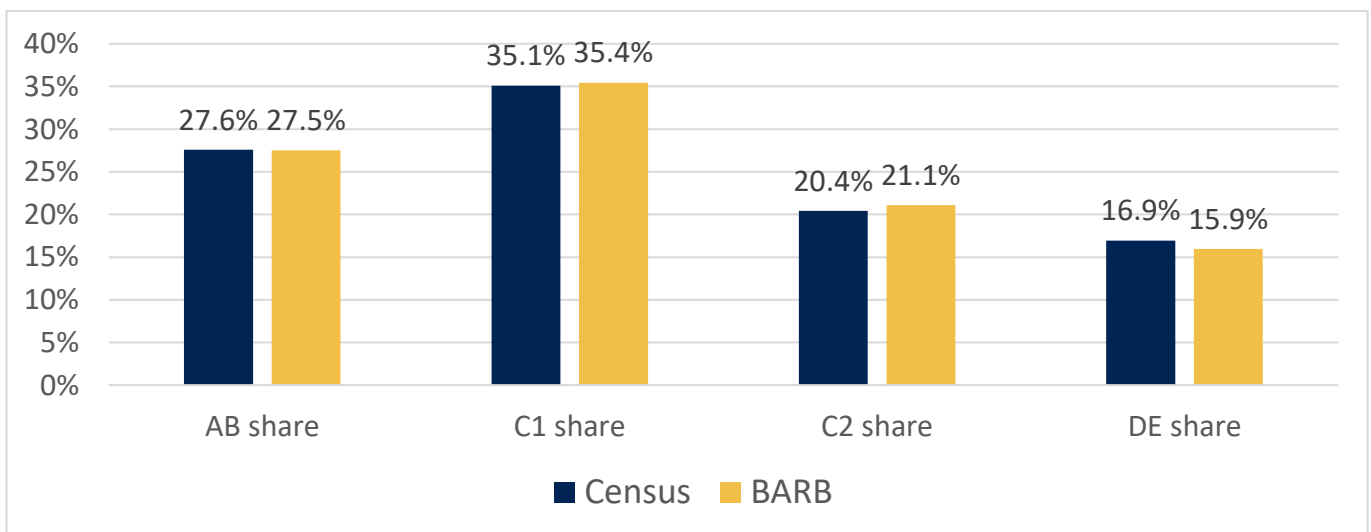
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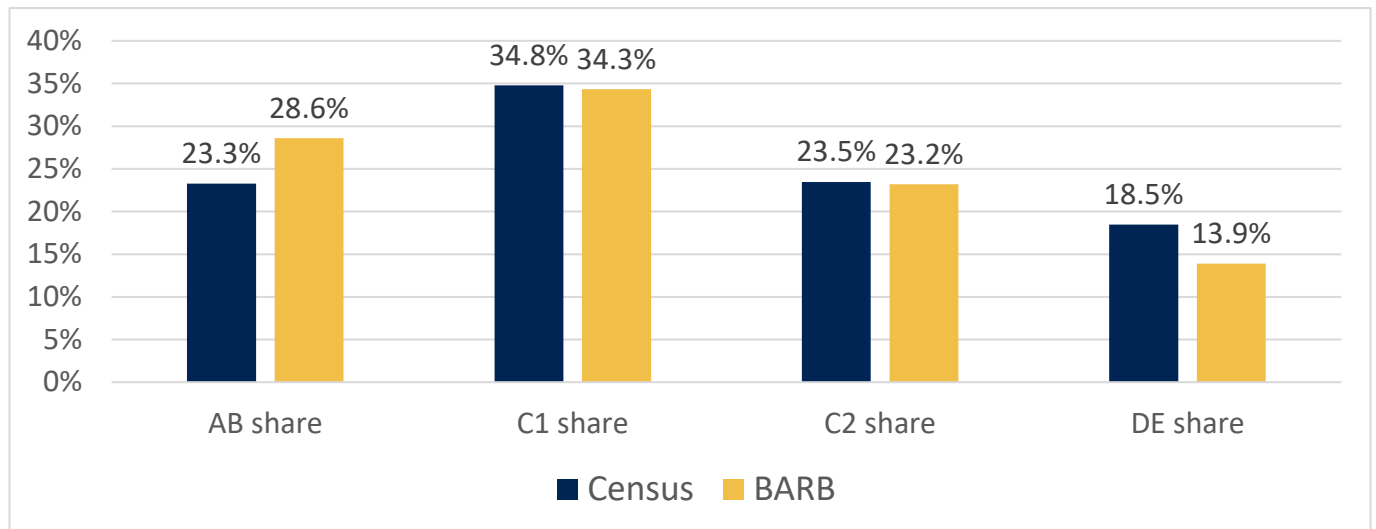
London



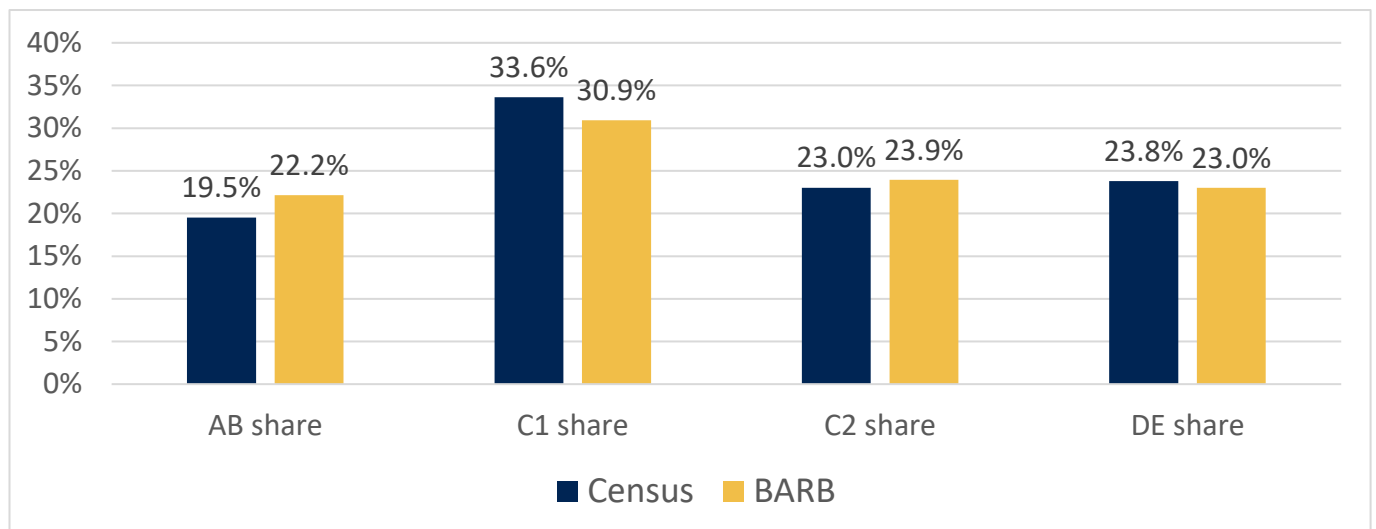
South East



South West



Wales



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