Matching as non-parametric preprocessing for the estimation of equivalence scales

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– Description of R code –

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Code

Files The code supplied with the paper consists of three files:

- `analysis-full-sample.r`

- `analysis-low-sample.r`

- `bootstrap.r`

All three files of code have extensive comments to ease understanding of the analyses. The file `analysis-full-sample.r` allows to fully replicate the results of section 6.1 in the main text, including table 1, figure 1 (saved as `ex1.pdf`), and figure 2 (saved as `ex2.pdf`); `analysis-low-sample.r` covers the results from section 6.2 including table 2 and figure 3 (saved as `ex3.pdf`); and `bootstrap.r` allows to calculate the bootstrapped variance estimates discussed in the last paragraph of section 6.2.

Remarks Three R packages are needed to run the code: `Matching`, `HapEstXXR`, and `nnet`. The latter is part of any R distribution, the former two can be downloaded from CRAN. The path of the EVS data file and the path for figures to be saved are both specified at the beginning of the code files. The implementation of the bootstrap is not parallelized, i.e., bootstrap replications are run one after the other, which might require some computing time.

Data: "Einkommens- und Verbrauchsstichprobe"

The data we used come from the German Survey of Income and Expenditure (Einkommens- und Verbrauchsstichprobe ; EVS) conducted in 2008. The data set can be obtained from the Research Data Centres of the Federal Statistical Office and the statistical offices of the Länder ; see `http://www.forschungsdatenzentrum.de` or email `forschungsdatenzentrum@destatis.de`. Currently, an overview of the EVS data available to researchers can be found at `http://www.forschungsdatenzentrum.de/bestand/evs/suf/index.asp` (in German).

We used the scientific use file (SUF) of the EVS. More specifically, we use the so called "Grundfile 3", which only covers some of the EVS variables (see `http://www.forschungsdatenzentrum.de/bestand/evs/suf/index.asp` for a description in German).