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Replication materials for *Sociologický časopis / Czech Sociological Review* article: *Využití víceúrovňových modelů při analýze kontextuálních efektů míry ekonomické aktivity na podporu přerozdělování v komparativních longitudinálních datech* (The Use of Multilevel Models in Analysing Contextual Effects of Labour Force Participation Rate on Redistribution Support with Comparative Longitudinal Survey Data)

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Setup instructions

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R and RStudio are needed to replicate the outputs published in the article. The enclosed code was created and executed using R (version: 4.3.1 (2023-06-16 ucrt) -- "Beagle Scouts") and RStudio (version: 2023.06.1+524 "Mountain Hydrangea").

DELL Latitude 7410 laptop was used to conduct all analyses (*Processor*: Intel(R) Core(TM) i7-10610U CPU @ 1.80GHz, 2.30 GHz, *Operating system*: Windows 11 Pro, version: 21H2).

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Datasets

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The following seven data files are used in the article and are uploaded to the Dataverse repository:

1. **ESS1-9e01_1_reduced.sav** = This SPSS data file contains the cumulative *European Social Survey* data (Rounds 1 through 9, edition 1.0.). This reduced version of the cumulative dataset contains 22 variables and 422985 respondents. The full version of the dataset was downloaded from the ESS website on 24th June 2021.
2. **FIELDWORK_PERIODS.csv** = This .csv file contains information on the fieldwork periods in the analyzed *European Social Survey* country rounds. The variable *key_quartal* specifies the year quarter during which the majority of interviews in each country round were conducted.
3. **DP_LIVE_11072022201648574.csv** = This .csv file contains information on the *labour force participation rate*. The file was downloaded from the OECD database on 11th July 2022 at: https://data.oecd.org/emp/labour-force-participation-rate.htm

4. **DP_LIVE_14072021180102531.csv** = This .csv file contains information on *public social expenditure*. The file was downloaded from the OECD database on 14th July 2022 at: https://data.oecd.org/socialexp/social-spending.htm
5. **SPR_EXP_SUM__BG_CY_2000_2018.csv** = This .csv file contains information on *public social expenditure* of Bulgaria and Cyprus. The file was downloaded from the Eurostat database on 14th July 2022 at: https://ec.europa.eu/eurostat/databrowser/view/SPR_EXP_SUM__custom_1146171/default/table?lang=en
6. **DP_LIVE_12072022131229628.csv** = This .csv file contains information on *gross domestic product per capita*. The file was downloaded from the OECD database on 12th July 2022 at: https://data.oecd.org/gdp/gross-domestic-product-gdp.htm#indicator-chart
7. **swiid9_3.rda** = This R data contains information on the *Gini index of inequality in equivalized household disposable income*. The file was downloaded from *The Standardized World Income Inequality Database* (SWIID, Version 9.3) on 12th July 2022 at: https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/LM4OWF

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Code

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The replication files contain nine R scripts. These scripts must be run in the following order:

- **1 Data management of the individual-level variables.R** = This script loads and conducts data management on the European Social Survey (ESS) individual-level data.
- **2 Data management of the contextual-level variables.R** = This script loads datasets on four contextual country-level time-varying variables. Then, the script assigns the required contextual information to the respective ESS country rounds. Lastly, the script merges this harmonized information with the individual-level ESS data.
- **3 Centering variables before running the models.R** = This script subsets respondents who have observed values on all individual-level variables (i.e. listwise deletes the ESS data), centres all individual-level predictors within country rounds, decomposes the effects of the contextual-level variables into cross-sectional effect (BE) and longitudinal effect (WE) and creates welfare regime country-level variables.
- **4 Random effects models - compositional effects (OA1).R** = This script runs the linear mixed-effects models reported in Table 2 and Table OA1.
- **5 Random effects models - not controlling for compositional effects (OA2).R** = This script runs the linear mixed-effects models reported in Table OA2.
- **6 Random effects models - BEs and WEs of the country-round contextual variable (OA3).R** = This script runs the linear mixed-effects models reported in Table OA3.

- **7 Random effects models - individual-level CWC and BEs and WEs of the country-round variables (OA4).R** = This script runs the linear mixed-effects models reported in Table OA4.
- **8 Random effects models - BEs and WEs of the country-round contextual variables (OA5).R** = This script runs the linear mixed-effects models reported in Table OA5.
- **9 Figures and tables.R** = This script recreates the article figures and tables reported in the online appendix.

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Contact

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