sociological science

Supplement to:

Hudde, Ansgar, and Marita Jacob. 2023. "There's More in the Data! Using Month-Specific Information to Estimate Changes Before and After Major Life Events." Sociological Science 10: 830-856.

ONLINE SUPPLEMENT TO:

There's More in the Data! Using Month-Specific Information to Estimate Changes Before and After Major Life Events

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Replication files are available here: https://osf.io/rhd8y/

Data sources for life events in SOEP

For the birth of a first child, information comes from the parents' individual questionnaires (data sets *pl* and, in cases of skipped waves, *plueckel*). If information is unavailable from these sources, we draw on *biobirth*, *kidlong*, and *ppath* (in *biobirth*, if parents gave conflicting information, we took the information provided by the mother). For the transition to parenthood, first births are identified as the first reported birth (including the retrospective, biographical information in *biobirth*). Furthermore, we exclude individuals who had a child living in the household during the two years prior to the birth event, because these may have been (social) children of the respondents. For the death of a partner, information comes from individual questionnaires (data sets *pl* and, in cases of skipped waves, *plueckel*); and further the biographical data *biocouplm*. For the death of a partner, we only included the first observed event per individual.

Appendix to 4.3 Simulation: Robustness Checks

As shown in Figure A1, for small data sets, monthly dummy estimates are noisy and lack precision. For the small data set and the first pattern, yearly dummy estimates and smoothed monthly estimates performed equally well (considering the results with the default bandwidths, as shown by the third estimate in each panel). For all other sample size and pattern combinations, smoothed monthly estimates outperform yearly dummy estimates. The gap between the approaches widens with the sample size. That is, the greater the sample size, the greater the insight gained from monthly information. This shows that even for relatively small

samples, smoothing monthly estimates provides equal or greater insight than the current state-of-the-art of yearly dummy estimates. Researchers can safely apply this approach to data sets with up to 500 individuals.

Figure A2 is analogous to A1, but it shows root mean squared errors (RMSE) instead of the adjusted R^2 (for the adjusted R^2, higher values signify better estimates; for RMSE, lower values signify better estimates). This alternative performance indicator leads to the same conclusion as the adjusted R^2.

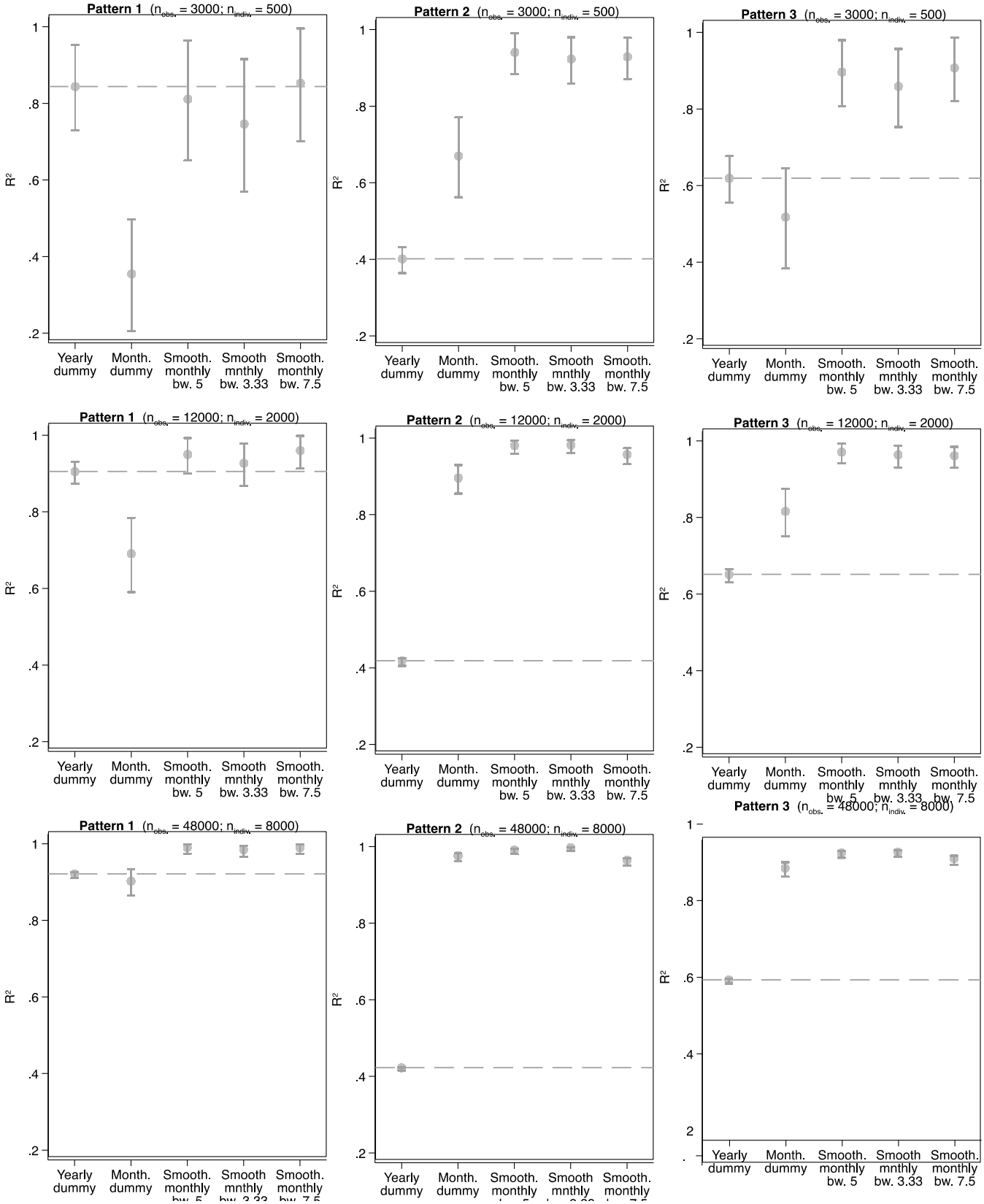

Figure A1. Robustness checks for simulation analyses. Varying the sample size and bandwidth for smoothing.

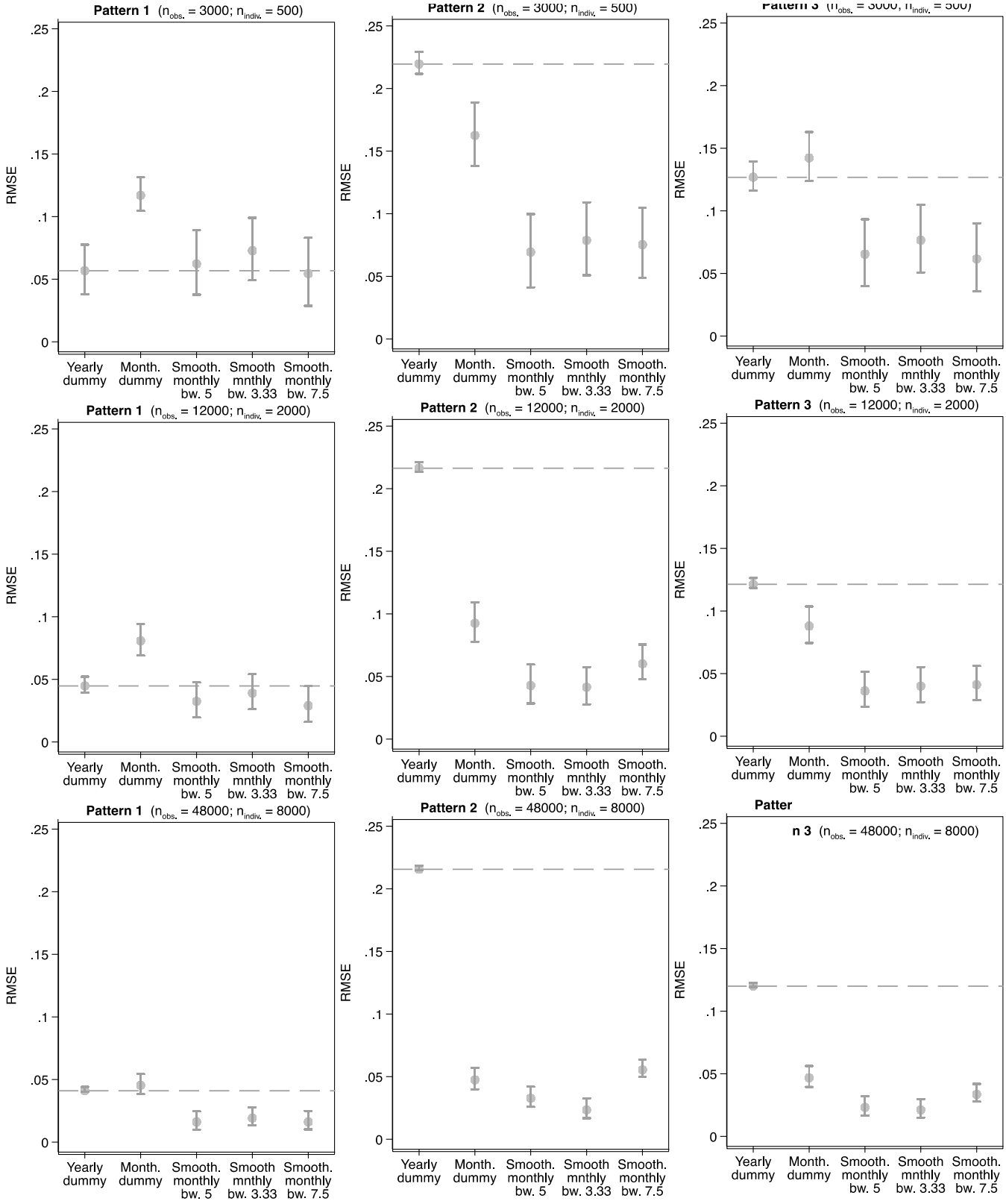

Figure A2. Robustness checks for simulation analyses. Reporting root mean squared errors (RMSE) instead of the adjusted R2

Appendix to 5.5 Empirical example: Robustness Checks

Figure A3 shows the proportion of interviews conducted in the exact month of the hypothetical interview (i.e., 12 months after the last interview), the proportion that were delayed, and the proportion that were skipped altogether.

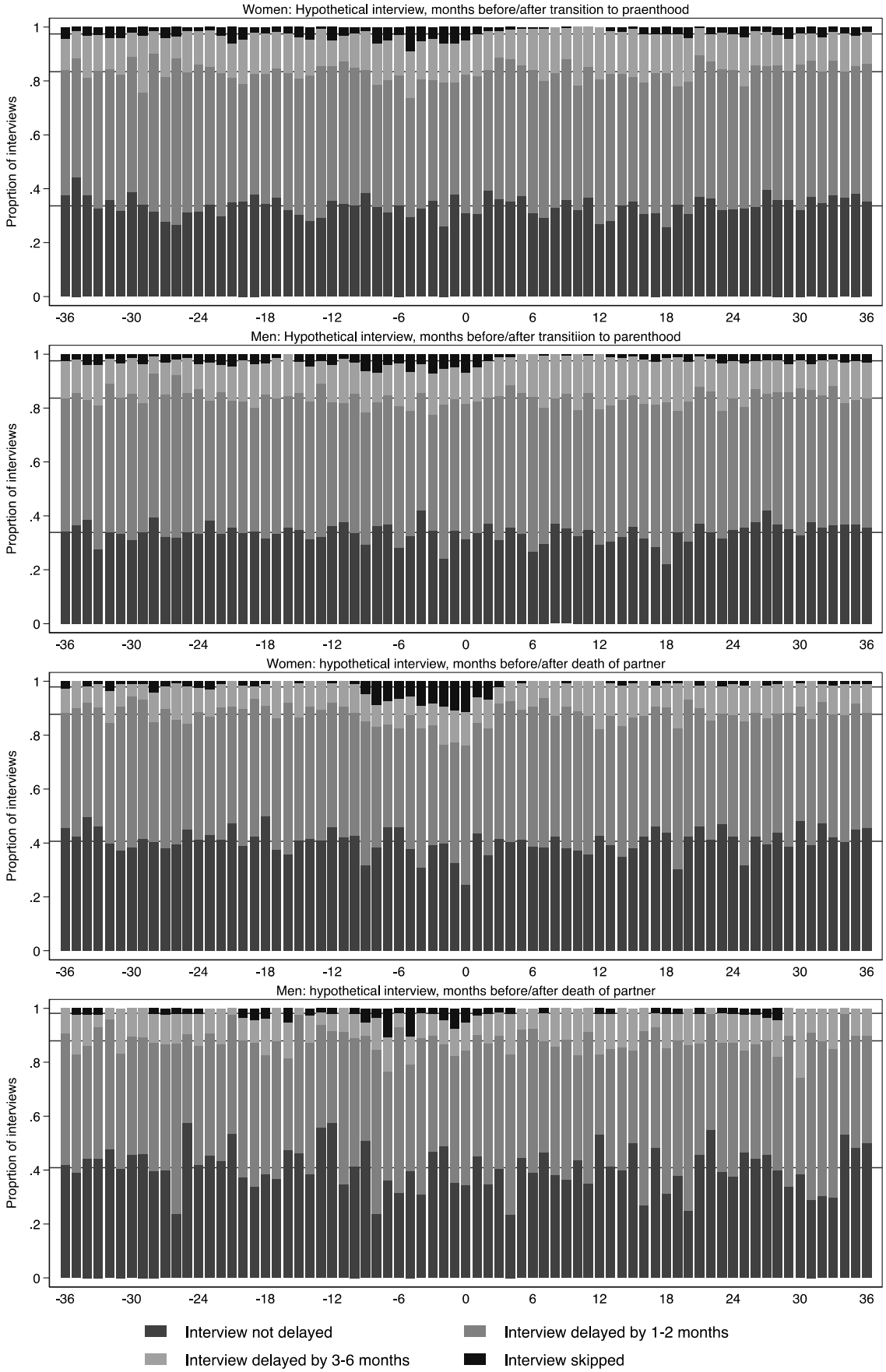

Figure A3. Robustness check for analyses of SOEP data. Share of interviews that were conducted exactly in the hypothetical month of the interview (dark gray at the bottom), delayed by one or two months (lighter gray), delayed by three to six months (lightest gray), or skipped altogether (black bars at the top).