

## Extended Abstract:

### Background and research questions

In light of an aging population and increasing pension expenses, there has been a move towards more market-based solutions to secure economic wellbeing at old age particularly in countries with formerly monolithic, generous public pension systems such as Germany (Börsch-Supan, Bucher-Koenen, Coppola, and Lamla, 2015). Private wealth accumulated until retirement age, thus, is playing an increasingly important role for the post-retirement living standards of birth cohorts still in the workforce. While the rising pressure on individuals to secure financial means until old age has led to an increase in private saving efforts for some, others have been left behind resulting in soaring economic inequality at older age in most OECD countries (OECD, 2013).

Despite the relevance of the labor market position and social background as sources of wealth inequality, recent research is increasingly recognizing the role of the pervasive and ongoing changes in family life courses for socio-economic stratification (e.g. Halpern-Manners, Warren, Raymo, and Nicholson, 2015; McLanahan and Percheski, 2008). Enacting traditional family roles (such as being in a stable marriage) is associated with higher wealth, more diverse wealth portfolios, and elevated saving levels even after controlling for labor market experience and parental socio-economic status (e.g., Halpern-Manners et al., 2015; Hurd, 2002; Lupton and Smith, 2003; Zissimopoulos, Karney, and Rauer, 2015). In contrast, some emerging family forms associated to changes in the formation and stability of families (e.g. never-married household, single-headed families, patchwork families) display economic disadvantage to varying degrees. Although the intersection of fertility and marital pathways seems highly relevant for the accumulation of economic advantage and disadvantage, this aspect has received only little attention in previous research. Thus, the role that accumulated economic (dis-)advantage associated to the family pathway individuals follow over the life course play for the economic wellbeing at older ages remains largely untapped.

To close this gaps, the present study examines wealth disparities at late working age and addresses the extent to which these disparities can be explained by the emerging diversity in family life courses including both fertility and marital trajectories of post-war German birth cohorts (born between 1943 and 1966), who were aged 51 to 59 between 2002 and 2017. Germany provides an interesting case due to the persistently strong social normalization and political support of traditional family arrangements (i.e. stable marriage with children) –even during its division in East and West Germany– despite pervasive, ongoing changes in partnership and fertility behaviors already starting for the post-war birth cohorts.

Adopting a life course approach, we explicitly acknowledge that an aggregate of time-dependent processes shape life-long accumulation of economic resources that lead to intra-cohort wealth inequality. We argue that following a *standard* family life course pathway, which is culturally and institutionally supported, can be beneficial for wealth accumulation, while the *departure* from this family pattern penalizes wealth growth. We additionally argue that the level of *deviation* from the *standard* family trajectory can further explain the differential in accumulated wealth among individuals of a birth cohort, with earlier and greater deviations incurring larger wealth penalties.

### Data and methods

To ease readability of our methodological section, we briefly preview our analytical approach at this stage: To establish relevant family life course patterns, we use multi-channel sequence analysis and cluster analysis. Second, we deploy regression analyses to assess the extent to which unequal wealth accumulation in later life is linked to diversity in family patterns.

Data: The empirical analyses are based on longitudinal (prospective and retrospective) data from the German Socio-Economic Panel Study (SOEP, 1984-2017; Goebel et al., 2018). The SOEP is a large and nationally representative study that tracks individuals living in eligible households annually since 1984. The dataset is suitable for our research purposes since (i) it collects information on a comprehensive set of personal and household wealth measures in several time periods, (ii) it contains detailed information on marital, and childbearing histories over entire respondents' life courses, and (iii) it contains relevant information on typical confounders of the associations under study (i.e. family and social background characteristics).

Sample: Since we address wealth at pre-retirement age, we restrict the sample to respondents aged 51 to 59 between the first and last year where information on personal wealth is collected (i.e. 2002 and 2017). We exclude respondents that have missing information on either fertility or marital histories, between age 16 and

50. After exclusions, our sample contains 15,109 respondents (7,668 women and 7,441 men). This sample is largely representative of German baby boomer birth cohorts, and we use it to construct a typology of family patterns. For the multivariate analyses we further restrict the sample to survey years 2002, 2007, 2012 and 2017 as the wealth module is administered in these years. Our regression sample consists of 8,727 respondents with 12,102 individual-year observation, 4,216 men (5,814 individual-year observations) and 4,511 women (6,288 individual-year observations).

*Measures:* Our outcome variable is a measure of personal net wealth (top and bottom coded, adjusted for inflation and IHS transformed). Our main explanatory variable is a categorical measurement of major family life course trajectories. To build this categorical measure, sample respondents' family sequences are compared and clustered into groups by their similarity. To compile respondents' family sequences, we use available information on the year of marital status and childbearing status changes between ages 16 and 50. For our preliminary analyses, we use a thirteen-cluster solution to reflect the complexity of family life courses (see Figure 1). The choice of cluster solutions was based on comparisons of empirical fit and theoretical interpretation across possible solutions (Everitt, Landau, Leese, and Stahl, 2011).

*Multivariate regression:* We predict the association between specific family life course patterns and wealth levels using OLS regressions on the measure of overall personal wealth. As we use personal wealth data that was edited and imputed by the SOEP team, estimation results from five imputed data sets are combined using Rubin's rule (Rubin, 1987). Since we use up to four survey waves with information on wealth, estimates are computed using clustered standard errors at the individual level. Analyses also address potential differences by gender and social contexts.

### **Preliminary results and summary**

Figure 2 depicts preliminary multivariate regression result. We include an interaction with gender and run regressions separately for respondents in eastern and western Germany. It should therefore be noted that reference personal wealth levels of the Standard trajectory (male) differ between eastern and western Germany with higher levels in the west. Family patterns are ordered in a descending fashion by their empirical and theoretical deviance from the standard trajectory. Hence, family pattern that are displayed on the top of the graph, deviate less from the standard trajectory, while pattern lower down have a higher deviance score.

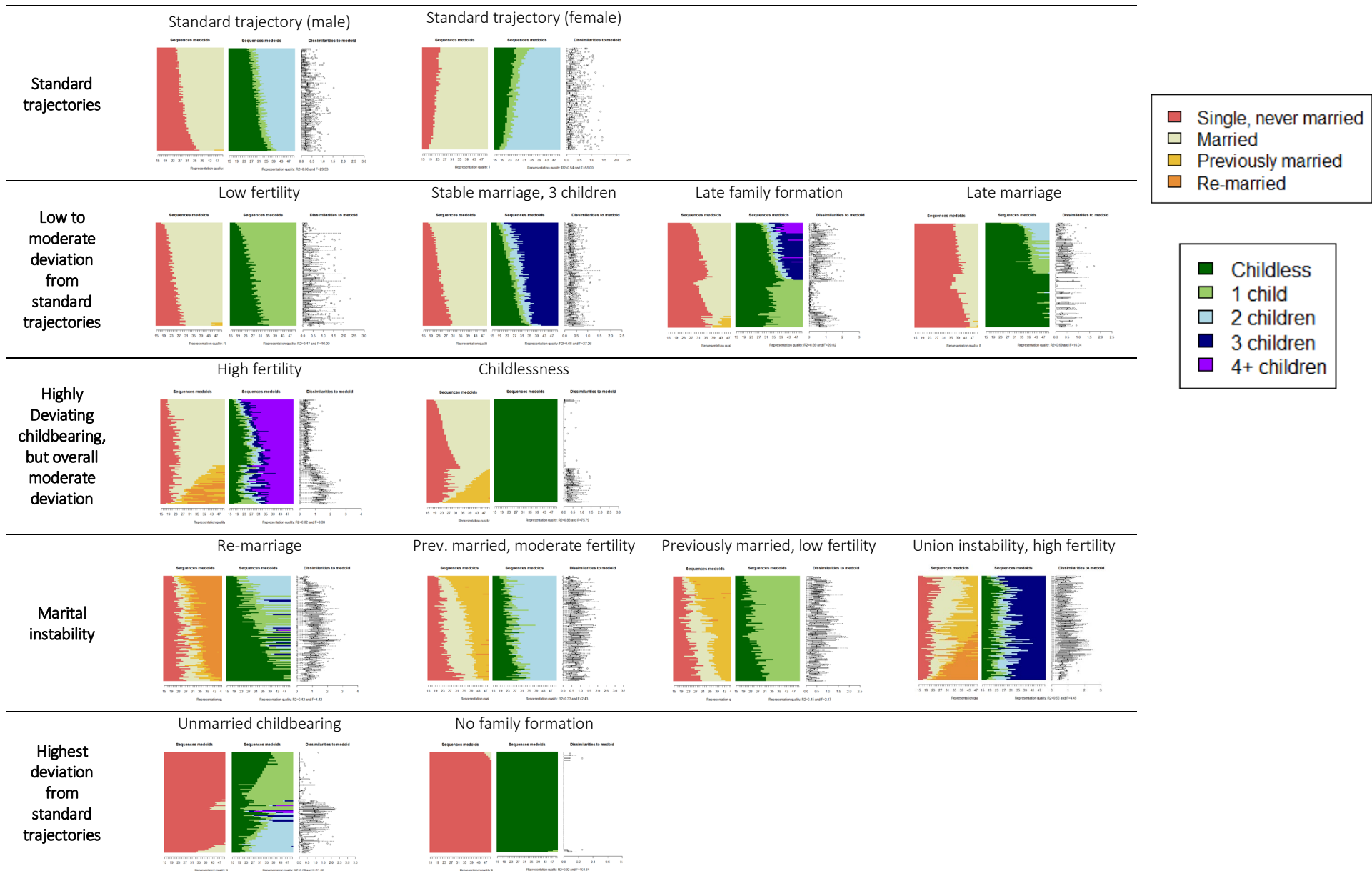
Overall, our results show substantially and statistically significant lower personal wealth levels for respondents that followed non-standard family patterns compared to the standard patterns of continuous marriage with two children (see Figure 2). While these results are in line with our expectations that deviance from the standard family pattern is associated with personal wealth penalties, there are a few results that we would like to highlight.

First, we identified six family patterns that deviated only moderately from the standard pattern of continuous marriage with two children. These six patterns differed from the standard in the timing of marriage, in the timing of childbearing and/or in the total number of children. While the majority of these patterns associate to personal wealth levels at older age similar to those of the reference group (Standard trajectory (male)), above average fertility within marriage carries substantial wealth penalties. Compared to the reference, western German men and women in the High fertility pattern have 93 percent and 95 percent less personal wealth, respectively. The penalty for the High fertility pattern is slightly larger in eastern Germany, with men's wealth levels 99 percent lower than the eastern German Standard trajectory (male) and women's personal wealth almost 100 percent lower. Overall, even smaller deviation from the standard patterns seem to lead to larger penalties in Eastern than Western Germany.

Second, following a pattern of union instability leads to substantial wealth penalties at older age that are larger than penalties of the High fertility pattern. The gap in wealth accumulation across marital dissolution patterns is however moderated by the number of children ever had. In line with previous research, the Re-marriage pattern is linked with comparatively smaller wealth penalties, particularly for women in both social contexts – 78 percent in the west and 72 percent in the east–, although personal wealth is still substantially lower compared to the standard pattern. Remarried men in western and eastern Germany fare on average slightly better than men in most marital instability patterns.

Finally, the two remaining family patterns that deviate highly from the standard family trajectory, Non-marital childbearing and No family formation, carry comparable wealth penalties to those observed in patterns of

Figure 1. Visual description of major family patterns (relative frequency sequence plots)



marital instability. For eastern and western German women, remaining unmarried and childless until age 50 however carries lower penalties than those associated with unmarried childbearing.

In summary, preliminary results emphasize the beneficial effect of continuous marriage for both men and women's personal wealth levels at later life. Deviation from the standard pattern seems to carry substantial economic disadvantage. However, we also like to acknowledge that our study is of rather descriptive nature. It should therefore be emphasised that selection and developments in other life course domains (e.g. education, employment) can be expected to play an important role in the link between family life courses and wealth at older age.

**Figure 2.** Regression estimates of personal wealth (his transformed) for men and women in Western and Eastern Germany



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