

Diverging Family Trajectories and Gendered Earnings Gaps: The Long-Term Impact of Parenthood across Family Types.

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Across Europe, families and households have diversified, creating new contexts in which gender inequalities in work and income emerge. As family life has become more differentiated—marked by cohabitation, separation, and repartnering—the structures within which women and men organize their employment and caregiving may vary, too. This study connects the diversification of family life courses across cohorts to the long term-accumulation of gendered economic (dis)advantage after the transition to parenthood, situating partnership, family, and household arrangements at the core of gender inequality dynamics.

The birth of a first child has significant implications for women’s employment and earnings, with the well-documented motherhood wage penalty (Cooke, 2014; England et al., 2016). In contrast, fatherhood tends to have less impact on men’s earnings, and in some cases, men’s earnings even increase post-fatherhood, often due to selection processes rather than causal effects (Glauber, 2018; Mari, 2019). However, our understanding of the role of parenthood in shaping women’s and men’s earnings is incomplete because less attention has been given to how long-term earnings trajectories are shaped by the growing complexity and diversification of family and household configurations as children grow up. By explicitly linking research on family life course differentiation with gendered economic inequalities, this study introduces a novel perspective on how family change contributes to inequality reproduction within and across families and household.

Family life courses have changed across cohorts, with a trend towards greater complexity among more recent cohorts (Rowold & Van Winkle, 2023; Van Winkle, 2018). This life course differentiation implies a shift away from stable marriage towards more turbulence and several alternative family types (Hiekel & Vidal, 2020). Our study combines sociological theory on how different family types can produce and reproduce gender inequality with demographic trends towards life course differentiation (Brückner & Mayer, 2005; Lesthaeghe, 2010), to assess (a) how gender earning inequalities after first childbirth accumulate differently across family types and (b) how family change across cohorts may influence long-run gendered earnings differences. In doing so, we provide a rare empirical integration of demographic trends in family diversification with sociological theories of gender inequality.

Based on gender theories and the well-documented gendered division of labour, we expect gendered earning differences to vary across family types. On the one hand, gender gaps may depend on the partnership type: prior research shows that gender attitudes and division of labour tend to be less egalitarian upon marriage (Anxo et al., 2011). Thus, we expect larger gender gaps after childbirth for family types dominated by (stable) marriage compared to stable cohabiting partnerships.

On the other hand, partnership transitions—such as union dissolution, or repartnering—can either compound or mitigate the earnings effects of parenthood. For mothers, single parenthood or repeated partnership transitions may exacerbate earnings declines or heighten pressures for economic independence. For fathers, family transitions can influence earnings in various ways, depending on changes in financial obligations, caregiving roles, and labour market engagement. Prior research suggests that women’s personal earnings increase after divorce while men’s earnings decrease (Brüggmann & Kreyenfeld, 2023) and that mothers tend to reenter or increase their labour market participation after union dissolution (Muller et al., 2020). However, we still lack

evidence on how mothers' and fathers' earnings evolve in the long-run across different family types and how cohort differences in family trajectories might affect trend in gender earnings gaps over time.

The findings will contribute to the understanding how changing family structures drive or mitigate economic gender disparities in the labour market and pension systems, offering insights for policy and social research on family, gender, and labour market dynamics.

1. Data and method

This study draws on a uniquely rich linkage between the German Socio-Economic Panel (SOEP) and earning points data from the German public pension insurance records (SOEP-RV) to examine long-term earnings trajectories after childbirth. In the German pension system, individuals' contributions are expressed as earning points (EP) —a measure of monthly income relative to the national average. Earning the average gross income of in a given month corresponds to one EP, while an income of 30% above the average yields 1.3 EP, for instance. We use the annual sum of EPs to capture cumulative yearly earnings.

The combination of survey and administrative data offers several advantages. The SOEP provides detailed socio-demographic information on family structure, partnership transitions, and parenthood, while the pension records supply precise, longitudinal, and highly reliable earnings data. Linking these sources allows us to trace gendered earnings trajectories across empirically derived family types with exceptional temporal depth and validity.

We follow mothers and fathers from three years before to 16 years following the first to capture both the immediate and long-term economic consequences of parenthood, including the effects of partnership transitions and career interruptions. The analytical sample consists of 5,315 women and men with complete partnership histories and at least one child. Using earnings as the outcome is particularly valuable, as it reflects inequalities in both wages and working hours, providing a comprehensive measure of gendered economic outcomes.

Our analysis proceeds in two steps. First, we use sequence cluster analysis to identify the most common family trajectories of women and men after the birth of their first child. We distinguish six partnership statuses: *single, never married*; *married, living together*; *married, living apart*; *cohabitation*; *partnership, living apart*; and *union dissolution* (including all separations, regardless of institutionalisation). This approach captures the complexity of family dynamics over time, moving beyond static classifications based on one point in time.

Second, we examine average earnings by gender within these family trajectory types over the 16 years following first childbirth, providing an overview of long-term earning patterns across family types and highlighting gender differences within and between them.

2. Preliminary findings

We identified seven clusters representing distinct partnership trajectories around the first birth, covering the period from three years before to sixteen years after childbirth (see Figure 1). These clusters illustrate the diversity of partnership dynamics, ranging from stable marriages to fragmentation.

The largest cluster, *Stable Marriage*, is characterised by long-term marital stability, with individuals marrying before or around childbirth and remaining together over time. The second, *Marriage, Long-term Living Apart*, includes those who marry before or around childbirth but live apart for several years thereafter. The third, *Stable Cohabitation* features early partnership formation, typically marked by living together without being married at childbirth. The fourth, *Cohabitation and Late Marriage*, describes couples who cohabit during early parenthood and marry later. *Early Separation* (Cluster 5) captures early union dissolution, mainly before the child reaches school age, without subsequent repartnering. *Late Separation* (Cluster 6), includes individuals who marry around

childbirth and separate later, often followed by repartnering. Finally, *Single Parenthood* captures parents who remain single long-term, with some entering a new partnership once their child reaches school age.

Figure 1. Family life course types

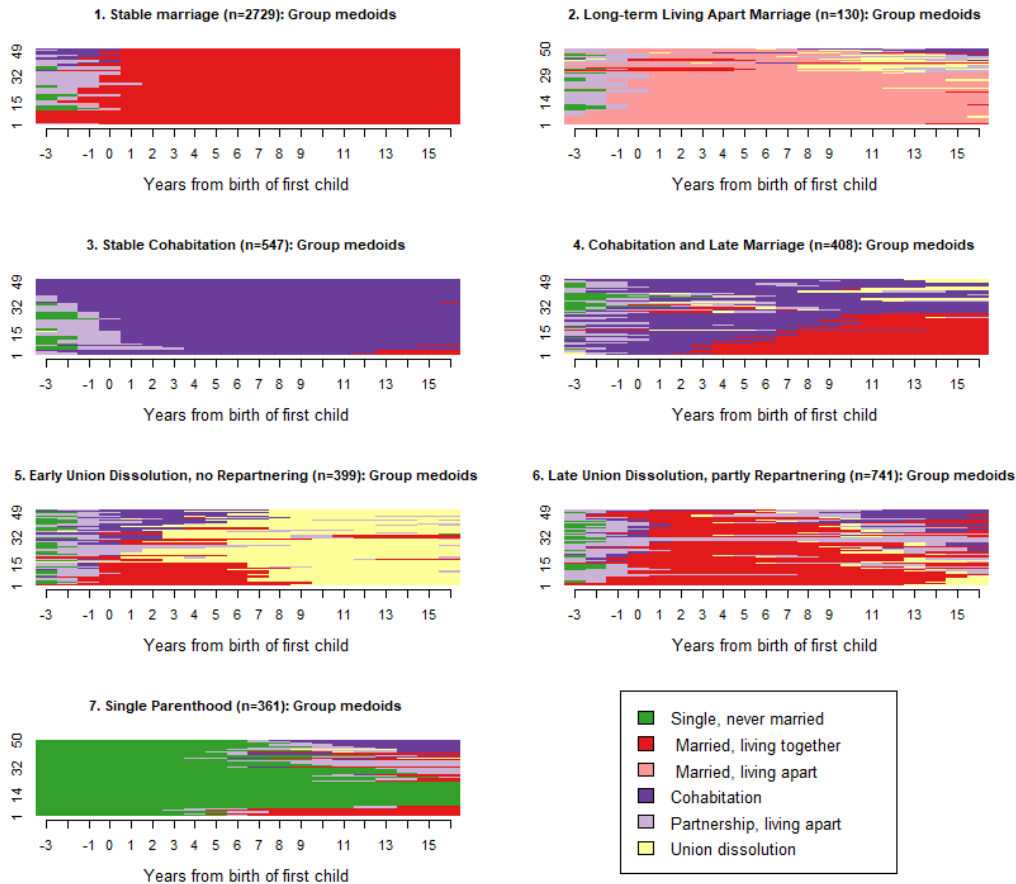
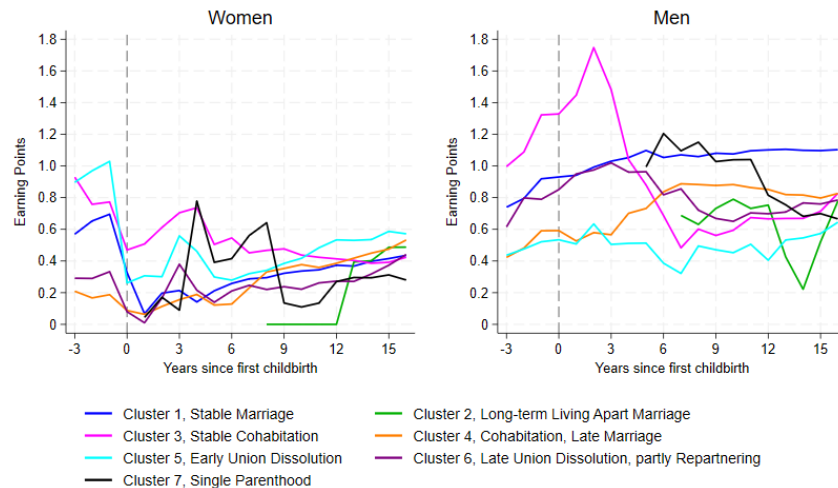


Figure 2 displays average earning points by partnership cluster and gender from three years before to sixteen years after childbirth. Across nearly all family types, women accumulate fewer earning points than men. Men’s earning points remain consistently higher over time since parenthood, while women’s earnings decline sharply following childbirth and recover only partially. As expected, these patterns are most pronounced in the *Stable Marriage* cluster, describing a family trajectory in which gendered specialization is most common. In contrast, dissolution clusters (5 & 6) display stagnating or declining trajectories for men, while women’s earnings tend to increase slightly over time, narrowing gender gaps in earnings within these family forms. Mothers in stable cohabitations or who experience early union dissolution show the highest and most stable earnings over time.

Taken together, the results suggest that contemporary family complexity has become a new frontier for understanding cumulative gender inequality.

Figure 2. Average earning points by family type and gender



5. Discussion and Outlook

How and why do gendered earnings inequalities vary across different family trajectories and cohorts? Our forthcoming analyses address this question by examining how the composition and structure of family types shape long-term earnings outcomes for women and men.

Our preliminary findings reveal persistent gendered inequalities in earnings that differ substantially across family types. These disparities are closely linked to caregiving responsibilities and reduced employment opportunities, reflecting the enduring impact of non-egalitarian gender roles (Samtleben & Müller, 2022). By showing that long-term gendered earnings gaps depend on the shape and stability of families, our study connects family demography with inequality research and informs policy debates on how changing family structures are linked to economic opportunity.

Next, we will apply fixed-effects models to analyse the long-term earning trajectories from three years before to sixteen years after the birth of the first child, identifying how gender differences evolve across key phases of family and partnership transitions. We will also extend the analysis to a cohort perspective to capture how broader generational shifts in family patterns relate to trends in gendered earning inequalities. Finally, a decomposition analysis will disentangle changes due to shifting gender compositions of the family types from differences in gendered earnings returns within family types. Taken together, these next steps will show how family diversity and cohort change jointly shape the accumulation of gendered economic inequalities over time.

6. References

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