# Intra-couple gaps in retirees' financial resources: Their extent and predictors across Eastern and Western Germany

Nicole Kapelle<sup>a,b,c</sup> and Andreas P. Weiland<sup>d,e\*</sup>

<sup>a</sup> Department of Sociology, Trinity College Dublin, Dublin, Ireland

<sup>b</sup> Department of Social Sciences, Humboldt Universität zu Berlin, Berlin, Germany

<sup>c</sup> Nuffield College, University of Oxford, Oxford, United Kingdom

<sup>d</sup> Institute for Sociology, Otto-Friedrich-Universität Bamberg, Bamberg, Germany

<sup>e</sup> School of Social Sciences, University of Mannheim, Mannheim, Germany

Nicole Kapelle: ORCID ID 0000-0001-5855-1153, nicole.kapelle@tcd.ie

Andreas P. Weiland: ORCID ID 0000-0001-9658-794X, andreas.weiland@uni-bamberg.de

\*Corresponding author

## Abstract

Intra-couple disparities in economic resources are often downplayed, yet they substantially affect power dynamics, marital satisfaction, and financial well-being during the marriage and have lasting economic consequences in the event of separation. With the growing privatization of old-age security amidst population aging and welfare cuts, understanding economic intracouple disparities among retired couples and their life-course drivers is increasingly important. Expanding on previous research that predominantly focused on either singular economic resources or life-course contexts, we use data from the German Socio-Economic Panel Study (2002-2017) to examine intra-couple gaps in both pension wealth and personal net wealth between older spouses in Eastern (n=846) and Western Germany (n=2331). We find pronounced regional disparities: Pension wealth gaps of 12% in Eastern and 53% in Western Germany, contrasted with net wealth gaps of 21% and 8%, respectively. Regression analyses reveal that differences in spouses' employment histories primarily account for pension wealth disparities within couples, but do not explain net wealth inequalities. This suggests that couples may view net wealth, particularly housing wealth, as a shared asset. Our findings underscore the need for continued monitoring of intra-couple economic inequalities, especially as evolving marital norms and increasing individualization may reshape financial dynamics within marriages.

**Keywords:** Intra-couple inequalities, retirement, wealth, pension, gender, comparative research

## **1. Introduction**

In the dawn of demographic aging, the economic well-being of retirees and the fiscal sustainability of pension provisions are central concerns faced by most European societies. Pension provisions are subject to increasing marketization and privatization — even in countries with generous social welfare systems, such as Germany. As a result, the relevance to privately invest and accumulate pensions and wealth has grown alongside the emphasis placed on the accumulation of public pension entitlements through continuous employment over the life course (Ebbinghaus 2015; Seeleib-Kaiser 2016). Such developments affect particularly women's economic well-being in older ages because of their more disrupted career trajectories and thus lower potential to accumulate pension entitlements or private wealth over the life course compared to men (Blau and Kahn 2017; Cordova et al. 2022; Lersch et al. 2017). In Germany, the country context of the current study, women hold overall about 30 percent lower wealth and pensions than men (Eurostat, 2023; Sierminska et al., 2018).

Economic gender inequalities are often downplayed, especially for the married as it is assumed that the couple acts as an economic unit that protects each household member equally well. However, a well-established body of research has highlighted that economic resources are not fully pooled and shared within households, resulting in substantial intra-couple economic inequalities (Bennett 2013; Joseph and Rowlingson 2012). Economic inequalities between spouses are critical, as they are associated with power imbalances in partners' financial decision-making and decreased marital satisfaction (e.g. LeBaron-Black et al. 2024). Furthermore, these inequalities may trap the less financially advantaged partner in an unsatisfying relationship. In the case of marital dissolution through separation and divorce, intra-couple economic inequalities often result in significant financial disparities post-dissolution because of a potentially biased and unequal division of resources and pre-marital

differences that are not equalized (e.g. Bessière 2022; Kapelle and Baxter 2021). Thus, access to sufficient personal economic resources during the marriage is associated with autonomy and full financial security beyond potentially precarious access to a household's or partner's resources. An accurate reflection of the economic well-being of older married women and men can thus best be achieved by considering the couple-context and spouses' relative resources (e.g. Bennett 2013).

Despite the relevance of a thorough understanding of intra-couple inequalities in older ages for the well-being of current and future retired women and men, research on this topic is scarce and limited in two relevant ways. First, previous studies focus predominantly on current pension income (e.g. Möhring and Weiland 2022) as a proxy for economic well-being in retirement. We argue that it is additionally relevant to scrutinize accumulated resources pension wealth and personal net wealth—to paint a more comprehensive picture of the gap in spouses' financial resources in retirement (see Nutz and Gritti (2022) for an exception that focuses on intra-couple wealth in first-time married couples with women aged 55 and older). While pension wealth is defined as the sum of individual annual pensions across the subsequent years of life between the current age and the predicted life expectancy, personal net wealth refers to all individual assets less debts, including the personal share of any jointly held assets or debts. Considering both measures is particularly critical because focusing solely on pension wealth may underrepresent individuals with lower coverage by (public) pensions and a higher reliance on private wealth (e.g. self-employed individuals) (Kuhn 2020). Focusing on both personal wealth and pension wealth allows us to apply a more holistic perspective on the total financial resources an individual has available for their current and future needs, as well as the idea that future benefits are an asset that may contribute to individuals' current financial wellbeing. Second, little is known about how individual and contextual factors contribute to intracouple inequalities in older age. According to the life course framework, couple inequalities in

older age should be understood as a result of temporal processes that are embedded within the historical, institutional, and family context (Bernardi et al. 2019). Exploring which aspects within these dimensions are most relevant to explain inequalities is particularly important for discussions on interventions and potential preventions of such inequalities.

We aim to address these shortcomings in our current understanding of the intra-couple gap in economic resources in retirement by addressing three interconnected research questions: (a) How are personal financial resources, specifically personal pension wealth and personal net wealth, distributed between retired German spouses? (b) Which individual and couple characteristics determine intra-couple inequalities? And finally, (c) What can we learn about the role of the context from differences in intra-couple economic inequalities and their determinants between Eastern and Western Germany? We thus explicitly acknowledge the multi-dimensionality of economic well-being in retirement that has become increasingly relevant in recent decades, while exploring both individual and contextual explanations for inequalities. To answer these research questions, we draw on longitudinal data from the German Socio-Economic Panel Study (SOEP). Those data are internationally unique in collecting all relevant economic measures fully at the individual level irrespective of respondents' marital status, allowing a detailed analysis of intra-couple inequalities. Because personal wealth information is only available in survey years 2002, 2007, 2012, and 2017, our analyses focus on these years although we generate relevant information using all survey years and retrospective information.

## 2. Background

#### 2.1 The gendered accumulation and generation of economic resources

#### Pensions and wealth

While pensions are a reflection of previous accumulation efforts, pension systems differ in the degree to which pension payments reflect previous labor market achievements: Pension systems of the (Anglo-Saxon) Beveridge-type are characterized by a multi-pillar infrastructure where public benefits are mostly detached from income and work histories and serve the goal of poverty prevention. Stratification stems mostly from occupational and private pensions. (Continental) Bismarck-type systems, such as the German pension system (see also section 2.3), are social insurance based, emphasizing life course employment and status maintenance through earnings-related public pension benefits (Leisering 2003; Leitner 2001). Occupational and private pensions play a supplementary role within the Bismarck model (Ebbinghaus 2011).

A conceptual extension of pension income is pension wealth, which represents the sum of current and future pension payments until the prospective end of life. The expanded time horizon of pension wealth provides a more complete picture of a person's economic standing during retirement than (current) pension income and is also able to account for gender- and cohort-specific differences in life expectancy. This is relevant considering women's lower pensions, but higher life expectancy compared to men. Since private pension plans are part of the standard net wealth measurement in SOEP, our measure of pension wealth focuses on public and occupational pensions (see e.g. Bönke et al. 2019; Cordova et al. 2022 for a similar approach). While participation in the German public pension scheme is (quasi-)mandatory<sup>1</sup> and coverage of occupational pensions depends on the employer, private pensions constitute an individual financial venture. Vice versa, the former two pension types do not serve the typical purposes of wealth as they can neither be liquified nor be pledged as security for future investments (Cordova et al. 2022; 757).

<sup>&</sup>lt;sup>1</sup> Civil servants and self-employed are exempt from mandatory participation in the public pension insurance. While the former are insured in a separate public scheme, the latter may voluntarily insure in the public pension insurance or focus occupational and private schemes.

Similar to pension wealth, retiree's personal wealth levels are a reflection of previous accumulation processes. First and foremost, labor market earnings are a crucial channel for the accumulation of wealth over the life course. While income may also stem from asset revenue such as rental income, interest, or dividends, it is savings out of labor market earnings that provides an essential starting point and constant for the accumulation of wealth (e.g. Killewald et al. 2017; Spilerman 2000). Next to saving out of surplus income, financial transfers including *inter vivos* transfers, inheritances, or other windfall profits contribute to building wealth. And finally, wealth can appreciate over time depending on financial market developments, and the individual wealth portfolio. As such, wealth is a stock measure reflecting resources such as savings in a bank account or private pension funds that can be used to cover current and future consumption even in the absence of earnings or public pension income. Some wealth components, such as the family home, can also be beneficial without being consumed (Keister 2000).

#### Gendered accumulation processes

Although wealth and pensions are two different concepts, gender-specific differences in both measures are driven by women experiencing more disrupted careers in comparison to the male standard of continuous full-time employment across the life course. Normatively regarded as 'primary carers', women are more likely to interrupt their employment, permanently exit the labor market, or engage in (in-)involuntary part-time and marginal employment due to conflict between the spheres of work and family (Ginn and Arber 2018). Disadvantages from non-standard employment episodes may cumulate across women's life courses, decreasing prospects of full-time employment, career advancements, and subsequent wages (Aisenbrey et al. 2009; Kelle et al. 2017), as visible in an overrepresentation of men in higher-level and better-paying positions (Arulampalam et al. 2007). In addition to a more disruptive career and

associated disadvantages for the overall career progression, women are disadvantaged through the monetary undervaluing of jobs within female-dominated industries, internalized gender roles, and employer discrimination (Blau and Kahn 2017).

Overall, these differences result in a gendered accumulation of pension entitlements and subsequent inequalities in retirement, particularly in pension systems that emphasize earnings-related benefits, such as in Germany. Not only do women generally exhibit lower retirement incomes than men, but especially child rearing is associated with a substantial motherhood penalty in retirement (e.g. Möhring 2018). The gendered division of paid and unpaid labor across couples' life courses, further expresses itself in higher individual pensions of unmarried compared to married women (e.g. Sefton et al. 2011), whereas divorced and widowed women may benefit from derived pension entitlements (Kreyenfeld et al. 2022). Lower earnings and non-standard employment transcend into disadvantages in public pensions and lower coverage and benefits in occupational and private pension schemes (Ginn and Arber 2018; Yabiku 2000).

Although gender wealth gaps are particularly driven by the gender pay gap, wealth inequalities are additionally amplified based on the concept that men's earnings translate into wealth more efficiently due to the 'wealth escalator' (Chang 2010). Specifically, men's continuous employment with higher earnings and prestige results in access to additional wealth-building tools such as bonus payments, company car allowances, access to health care coverage, profit-sharing programs, pension plans, or tax advantages. Additionally, gender differences in investment behavior and access to different investments have been cited as another potential driver of the gender wealth gap (Sierminska et al. 2018). Some studies have shown that women invest more conservatively with lower returns on investment compared to men (Austen et al., 2014). While some claim that this is due to women's higher risk-aversion or lower financial literacy (e.g. Bajtelsmit and Bernasek 1996; Lusardi and Mitchell 2008), others have illustrated

that women also face structural constraints, for instance, in accessing credit or mortgage (Ladd 1998).

Finally, gender wealth gaps may emerge through gendered intergenerational transfers, where family wealth planning often endorses men's normative entitlement to relevant assets such as property or businesses (Bessière 2022). Although the discrimination of heirs based on gender is legally prohibited, particularly *inter vivos* transfers are not subject to legal restrictions. For Germany, previous research highlights that men compared to women have a higher likelihood to receive *inter vivos* transfers, receive higher transfers, and are more likely to be gifted housing property (Leopold and Schneider 2011). However, results for other countries such as Sweden or the US contradict the German findings (Loxton 2019; Nordblom and Ohlsson 2011).

#### 2.2 Economic intra-couple inequalities

Previously mentioned economic gender differences within the population are inherently linked to dynamic processes and inequalities within heterosexual couples. First and foremost, spouses' unequal division of paid and unpaid labor, including caregiving tasks, paves the way for gendered employment biographies (Krüger and Levy 2001). Here, new household economics and bargaining approaches explain the intra-couple division of labor against the background of spouses' relative distribution of human capital in terms of expected market earnings, whereas cultural approaches emphasize gender role norms enforcing women's role as main providers of unpaid and care work (e.g. Becker 1985; Blood and Wolfe 1960; Kühhirt 2012; Mandel et al. 2020). Couples are additionally embedded in an institutional context (dis-)favoring certain constellations, e.g. through tax incentives, long parental leave options particularly for mothers—or a lack of professional and affordable childcare options (e.g. Boeckmann et al. 2015). Further, mating preferences foster intra-couple inequalities beyond general gender differences, such as the selection of economically more successful men into marriage, the dominance of hypergamous marriages throughout the 20<sup>th</sup> century, and the tendency for men to be the older spouse with longer labor market tenure (Schwartz 2013; Xie et al. 2003).

Several studies explore average within-couple gaps in income and wealth (Dieckhoff et al. 2020; Frémeaux and Leturcq 2020; Grabka et al. 2015; Lee and Pocock 2007; Rehm et al. 2022). For Germany, Grabka et al. (2015) found that women owned 37 percent of couples' wealth in 2007, with male majority ownership in 52 percent of couples while only 19 percent of couples share wealth equally. For income, Dieckhoff et al. (2020) illustrate that German women contribute 30 to 45 percent of couples' income—with higher contributions of women in Eastern Germany than in Western Germany. However, with few exceptions, less attention has been paid to the distribution of wealth or pensions within couples in later life and specifically retirement. For instance, Nutz and Gritti (2022) find that gendered employment trajectories of couples transcend into a within-couple wealth gap in later life (i.e. 55 years of age and older) in Western Germany and Britain. Similarly, Möhring and Weiland (2022) highlight how couples' gendered careers cumulate into pension differences in Germany, whereas Weiland (2022) links maternal bargaining power to their long-term accumulation of pension entitlements in Western but not Eastern Germany. Nutz (2022) further shows that women's full-time employment is the main predictor of their share of individual wealth at age 50 and older, whereas access to jointly held assets is linked to both, stability in employment and marriage across the life course.

#### 2.3 The (East and West) German context

*The German Pension system.* In the Bismarck-type German pay-as-you-go pension system, the primary source of retirement income is a public pension that accentuates previous employment and earnings-related contributions made throughout individuals' working years assuming a

typical career span of 45 years of full-time employment (e.g. Leitner 2001). Periods of caregiving, unemployment, and education may contribute to pension entitlements, albeit to a lesser extent, and cannot fully offset the economic pension penalties associated with non-standard employment biographies (Frericks et al. 2008; Möhring 2018). Participation in public pension insurance is mandatory for employees and voluntary for the self-employed, whereas civil servants are insured in a similar but separate scheme.

Occupational and private pension schemes constitute complementary sources of retirement income with rising importance (Ebbinghaus 2015; Ebbinghaus and Gronwald 2011). However, coverage of occupational pensions is limited and often reserved for individuals with permanent contracts. Private pension schemes are characterized by a below-average coverage of lower income strata, while they constitute a central component of self-employed old-age provision.

Following German reunification in 1990, pension entitlements gathered in the comprehensive social security system of the German Democratic Republic (GDR) were retrospectively adjusted and incurred by the (West) German pension system. Although pension values for individuals who lived in the GDR are still at a lower level compared to individuals who lived in the FRG during Germany's division, pension values have been converging in the past decades alongside the cost of living.

*Family law.* In German law, the default ownership regime for married spouses is the community of accrued gains (Zugewinngemeinschaft)—which most couples fall under (e.g. Nutz et al. 2022). Under this regime, each spouse maintains ownership over their assets and liabilities that are obtained prior to or during the marriage. Hence, assets and liabilities are not automatically joint responsibility unless they are incurred jointly (e.g. buying a house or other household items together). Within certain restrictions, each spouse can therefore freely decide over their assets and liabilities without requiring permission of their spouse. However, in the

case of divorce, any gains accrued during the marriage, with the exception of personal inheritances and gifts but including pension entitlements, must be equalized. Thus, the wealthier partner must make an equalization payment to the less wealthy spouse amounting to half the difference in accrued gains.

Gendered family values, norms, and practices in Eastern and Western Germany. During Germany's division, the two parts—the FRG and the socialist GDR—constituted politically and culturally diverging contexts, whose lasting effects can still be observed. West Germany perpetuated gendered career constellations with a (male) main earner. Here, low public childcare capabilities focused on the provision of part-time care for 3-6-year-olds, which—combined with generous parental leave policies—encouraged at-home care. To a similar effect, sufficient middle-class incomes and a joint taxation scheme abate both necessity and incentives for a second full earner. In East Germany, women pursued full-time employment similar to men against the background of gradually expanding, extensive reconciliation opportunities such as full-time public childcare. Further, East German couples experienced earlier and higher fertility than West German couples, as well as a less traditional ordering of marriage and parenthood. In line with this, maternal employment was the norm and gender role attitudes were and continue to be persistently more egalitarian in Eastern Germany, whereas fertility levels have converged (Ebner et al. 2020; Klüsener and Goldstein 2016).

Women in both Eastern and Western Germany benefitted from educational expansion starting in the 1960s and 1970s. While women's representation in highly skilled technical occupations increased in the former, in the latter, women's employment grew, albeit predominantly in parttime positions (Fitzenberger et al. 2004; Trappe et al. 2015). However, the slow economic transition and changing labor market conditions following German reunification in 1990 have been accompanied by increased employment instability and discontinuity in Eastern Germany,

especially amongst men and for those in their early to mid-careers (Möhring and Weiland 2022; Trappe 2006).

Stark differences in gender inequalities in financial resources reflect the legacy of the East-West-divide. Among the working-age population, the unadjusted gender pay gap amounts to 19% in Western and only 6% in Eastern Germany (Destatis 2023). Similarly, the gender-specific gap in private wealth is approximately 38% in the West compared to 30% in the East (Cordova et al. 2022). Current retirees' gender-specific differences in public pensions amount to respectively 36.7% in West versus 13.8% in East Germany in 2021 (Deutsche Rentenversicherung Bund 2022). Women in Eastern Germany face a smaller motherhood penalty in retirement and hold higher shares of pension income and pension wealth in the couple than in Western Germany (Mika and Czaplicki 2017; Möhring and Weiland 2022). In a similar vein, the distribution of wealth in later life is distinctly more gendered in West Germany than in East Germany, reflecting the dominance of male breadwinner versus dualearner constellations, as well as the limitations and reduced capacity to accumulate wealth in the (post-)socialist East (Nutz 2022; Nutz and Lersch 2021).

## 3. Data and Methods

#### 3.1 Data

To explore intra-couple inequalities in pension wealth and personal net wealth during retirement, we use high-quality panel data from the German Socio-Economic Panel Study (SOEP) (doi:10.5684/soep.v37; see Goebel et al. (2019) for detailed descriptions on the SOEP data). The SOEP data are particularly well suited for our purposes as they (a) are internationally unique in providing a wide range of economic measures, including pension income and wealth, fully at the individual level over several panel years. The SOEP data are thus ideal for our

analysis of inequalities between spouses. Note that although pension income information is available annually, personal wealth data are only available for the years 2002, 2007, 2012, and 2017. Thus, our analyses focus on these years while also using other survey years and retrospective data to generate explanatory variables. Furthermore, the SOEP data (b) include detailed information on a wide range of potential predictors of intra-couple inequalities. And finally, the data (c) contain a sufficiently large subsample of retired, married couples in Eastern and Western Germany for our analyses.

In our analyses, we use wealth data that were edited and imputed by the SOEP survey team. Additionally, we imputed missing data with chained equations for all other analytical variables using Stata's *mi* procedure (Version 17). To enhance the quality of our imputations, a range of relevant auxiliary variables, such as households' living area and federal states of residency, were included. A detailed list of the entire set of variables used in the imputation process, including all auxiliary variables, can be found in Table A10 in the online appendix. The table additionally provides the share of missing values addressed through imputation. Note that we impute personal economic resources for each spouse and generate intra-couple gaps after the imputation process. Estimation results from five imputed data sets are combined using Rubin's rules (Rubin 1987). Checking for robustness, we re-run our analyses without imputed data—effectively using listwise deletion to address missing data (see tables B10-B13 in the appendix). These analyses are largely in line with our main findings but result in larger standard errors and a reduction in our sample by about 50% due to the high number of variables considered in our analyses.

#### 3.2 Analytical sample

For our analysis of the intra-couple gaps in economic resources, we apply a multi-actor perspective using wives as the reference spouse and linking husbands' information. We select

couples where both spouses provided valid interviews and are in a first-time or higher-order opposite-sex marriage. Furthermore, we focus on private households and thus exclude couples living in retirement or care homes. We also exclude couples living in multi-generational households to reduce the influence of other household members. Considering our focus on spouses' resources during retirement, we restrict our sample to couples where both spouses are retired. Since this may include spouses in early retirement, we exclude respondents younger than 50. However, the majority of respondents are regular old-age retirees. We use couples' most recent wave with available data on wealth and pensions for both spouses, providing us with a pooled cross-sectional data set of the years 2002, 2007, 2012, and 2017 for the multivariate analyses. We draw on separate samples for Eastern and Western Germany. To this end, we assess whether both spouses resided in Eastern or in Western Germany in 1989 and exclude couples where wife and husband did not live in the same part of Germany before reunification (<2% of retired couples). In total, our sample consists of 846 married women in Eastern and 2331 in Western Germany referring to the same number of married households.

#### 3.3 Measurements

*Outcome measures.* Our main outcome measures are *intra-couple gaps in personal pension wealth and personal net wealth.* To generate those gaps, we first focus on individual-level measures of pension wealth and net wealth.

Following OECD guidelines and previous research (Bönke et al. 2019; Cordova et al. 2022; OECD 2013), we operationalize pension wealth as the sum of individual annual pensions across the subsequent years of life *t* between the current age *a* and a maximum age of T=100. Each annual pension is weighted by the birth-cohort- and gender-specific survival probability *s* for the prospective age *a*,*t* (based on cohort life tables published by the Federal Statistical Office of Germany 2020). Approximating the present value of future pension payments, we

account for a yearly discount rate *i* of 2%. We do not model inflation, based on the assumption that pension levels are adjusted in accordance and due to the challenge of acquiring robust estimates of future inflation rates (Kuhn 2020: 5).<sup>2</sup> As such, pension wealth, *PW*, is measured as follows:

$$PW = \sum_{t=0}^{T-a} s_{a,t} * \frac{annual \ pension}{(1+i)^t}$$

Our measurement of pensions draws on the following sources: Statutory public pensions (e.g. German pension insurance and civil servant pensions), occupational pensions for private and public sector employees, as well as other, more specific pensions such as accident insurance pensions, foreign pensions, and payments for war victims. To identify these pension income streams, SOEP survey respondents are first asked to report whether they receive any personal pension income. In a second step, respondents are asked to report who pays for their pension, identifying the amount for each potential source of pension income. For this second step, respondents can report pension income from nine sources (e.g. German pension insurance, civil service pension scheme, supplementary insurance for public sector employees, accident insurance, etc.) and can additionally report any pension income from sources not listed (see table B14 in the online appendix for the exact questions). As claims for widower pensions seize upon remarriage, they are not a valid individual income source in our sample of married couples. Further, our analyses do not include minimum social assistance payments since these are only measured at the household level. Prior to generating pension wealth, we top-code annual pension income at the 0.1% level to minimize the impact of outliers.

<sup>&</sup>lt;sup>2</sup> Since the operationalization of pension wealth is based on assumptions concerning discount rate and life expectancy (which may for instance vary by further characteristics such as education; e.g. Luy et al. 2015), we performed robustness analyses utilizing pension income (see tables B1, B2 and B3 in appendix). Results for pension income and pension wealth point in a similar direction; Inequalities in pension wealth are slightly less pronounced because the measure accounts for the higher life expectancy of women and their potentially longer period of pension receipt.

Personal net wealth is defined as the sum of all personally owned assets minus personally owned loans and debts. Assets encompass personal values in real estate, financial assets (such as savings, stocks, bonds), life insurance, private pensions, business holdings, and valuables like gold and jewelry. Liabilities cover mortgage debt and consumer credits. An assessment of personal net wealth is feasible with the SOEP data because wealth data are collected separately for each household member aged 17 and older in a three-step process: First, a filter question identifies respondents with specific wealth components. Next, the market value of these components is recorded. Finally, for potentially jointly held assets (like real estate), respondents specify whether they are sole or joint owners and, if jointly held, indicate their ownership share (see table B14 in the online appendix for exact questions). We adjust personal net wealth for inflation and apply top- and bottom-coding at the 0.1% level.

Based on our individual-level pension wealth and net wealth measures, we create measures to reflect inequalities between spouses: the *within-couple personal pension wealth gap* and the *within-couple personal net wealth gap*. We create these household-level measures by subtracting the male partner's personal resources from the corresponding female partner's personal resources. Negative values thus indicate a majority share of the male, positive values vice versa a majority share of the female spouse. We apply inverse hyperbolic sine (IHS) transformations to both gap measures (Friedline et al. 2015). This transformation compresses extreme values and can be interpreted as percentage differences analogous to a log-transformed outcome variable, but with the advantage of retaining negative values. While some studies combined these two wealth measures into augmented wealth, we argue that it is beneficial to consider intra-couple inequalities separately in the two measures, because the within-couple distributions of both may vary substantially. Further, the interpretation of augmented wealth may be challenging, not only due to the expanded time horizon, but also because wealth and

pension wealth differ with regard to market liquidation and disposability, as well as legal classification (Bönke et al. 2019: 835; Wolff 2015).

The self-reported nature of our measures needs to be highlighted as a potential limitation of our study. Self-reported measures might be biased by the desire for social conformity, which has been shown to lead survey respondents to over-report socially favorable behavior and under-report less favorable ones (Krumpal 2013). For instance, when wives out-earn their husbands, respondents were found to reduce this social norm violation by inflating the earnings of the husband and deflating the earnings of the wife (Roth and Slotwinski 2019). Although it is unclear whether social desirability influences the reporting of personally owned pension and wealth within couples, we may hypothesize that particularly intra-couple inequalities within wealth are under-reported due to strong social norms around jointness within marriage and savings. Pension wealth, which is by definition accumulated independently of the other spouse, may be less influenced by such norms. Our results for net wealth may thus be seen as more conservative estimates.

*Explanatory variables.* To explore the predictors of intra-couple net wealth and pension wealth gaps, we follow previous research (e.g. Grabka et al. 2015; Möhring and Weiland 2022; Nutz and Gritti 2022) and previously highlighted aspects of the gendered accumulation of pension and wealth. Broadly, we include two groups of explanatory variables that refer to individual-level and couple-level characteristics: (I) socio-demographic and parental background, and (II) employment histories.

The first set of predictors refers to socio-demographic and parental background factors. We include a measure to reflect women's birth cohort (born before 1930 [ref.], 1930-1939, 1940-1949, and 1950-1966) for two reasons: First, potential links between mortality and financial resources (e.g. Demakakos et al. 2016) may contribute to selective survival and distribution of

resources among older birth cohorts of coupled pensioners.<sup>3</sup> Second, the changing sociopolitical context affected access to the labor market and education of both, women in Eastern and Western Germany (Trappe et al. 2015). Further, we include a continuous measure reflecting the age gap between spouses, operationalized as women's age minus husband's age, because the measure of pension wealth is based on the prospective remaining years of life. As divorce and widowhood may affect the accumulation of wealth and pension entitlements, we include two dummy variables to account for whether the wife or husband was previously married (no [ref.], yes). Further demographic controls consist of a continuous measure of the duration of the current marriage in years, continuous measures of women's age at first marriage and her age at first birth, and a categorical indicator of her number of children (none [ref.], one, two, three or more). We include indicators of family life courses in line with the previously highlighted relevance of children, particularly for women's labor market tenure and their associated economic potential and capability. We also consider whether the couple lives in an urban ([ref.]) as opposed to a rural environment. As previously highlighted, intergenerational transmission of resources matters for wealth. To reflect this, we include measures capturing the parental background. Specifically, we generate measures for each spouse's parents' highest Standard International Occupational Prestige Scale (SIOPS) score (Ganzeboom and Treiman 1996). We use this measurement as an approximation of social origin and the potential for past wealth transfers. Lastly, we control for both partners' migration background because migration histories importantly affect the accumulation of economic resources for instance due to disrupted careers and limited intergenerational transfers (Muckenhuber et al. 2022). To reflect spouses' migration background, we use two dummy measures (no migration background [ref.], direct or indirect migration background) for Western German couples (e.g. Rehm et al. 2022)

<sup>&</sup>lt;sup>3</sup> Cohort-specific differences in the distribution of pension wealth and wealth are documented in tables A11 and A12 in the appendix.

but exclude those measures for Eastern Germany as the sample size is insufficient in light of GDR's migration restrictions and political climate.

The second set of explanatory variables refers to spouses' employment histories and human capital. As highlighted in the background section of the manuscript, the accumulation of pension entitlements and wealth are closely linked to those factors, which are also highly gendered. Spouses' employment histories are reflected through the following nine measures: the respective sums of women's life course in full-time employment, part-time employment, and unemployment as continuous measures in years<sup>4</sup>, the respective intra-couple-difference in full-time employment and unemployment experience (her minus his)<sup>5</sup>, her sum of years in education, as well as the intra-couple gap in educational years (her minus his).

*Control variables.* Considering the large set of potential determinants of intra-couple gaps, we include only a small set of baseline control variables: For the analyses of the intra-couple wealth gap, we include a dummy measure to flag imputed wealth data within the couples (no [ref], yes) and a dummy to adjust for the financial crisis 2008 [2002/2007 [ref], 2012/2017). For all analyses, we additionally include a set of dummy variables to adjust for the extension subsamples of the SOEP.

#### 3.4 Analytical Strategy

Our analysis consists of two steps: In a first step, we explore spouses' average economic resources in retirement and the extent of within-couple inequalities in pension wealth and net wealth through a descriptive analysis. Because the strategy of utilizing respondents' most recent wealth data is associated with an overrepresentation of panel mortality cases and older

<sup>&</sup>lt;sup>4</sup> For unemployment, we further include a squared term, since pension entitlements associated with the initial (2year) period of unemployment benefits are higher than for the reduced benefit levels of subsequent unemployment. <sup>5</sup> We refrain from including the within-couple difference in part-time employment, due to the low prevalence of part-time employment among husbands.

cohorts in earlier waves, the descriptive analysis focuses on the most recent wave of 2017. Following the approach of Grabka et al. (2015), we apply women's survey weights to the descriptive analysis.

In a second step, we scrutinize potential determinants of intra-couple gaps in pension wealth and net wealth through Ordinary-Least-Squares regression analyses. We run separate regression models for Eastern and Western Germany using Hubert and White robust standard errors. In the regression analyses, we first include sociodemographic characteristics and parental background variables. In the second regression model, we also incorporate employment history variables (Grabka et al. 2015)(see Table A1 for sample means). Tables in the article focus on the most central results and full regression models are available in the online appendix.

#### 4. Results

## 4.1 Descriptions of intra-couple resource gaps

Figure 1 displays spouses' average pension wealth and net wealth, as well as the respective raw differences within retired couples for the survey year 2017 (see also Table A2).<sup>6</sup> Both, differences within and between Eastern and Western German couples are distinct. Women in Western German couples hold an average pension wealth of 194,625€, which is 223,885€ or about 53 percent less than their husbands. In contrast, the average gap in pension wealth between Eastern German spouses amounts to only 33,693€ (about 12 percent). This is driven by Eastern German wives' substantially higher, and husbands' respectively lower pension wealth compared to their Western German counterparts. In relative terms, intra-couple gaps in

<sup>&</sup>lt;sup>6</sup> The average distribution of economic resources across spouses across all sample waves (2002-2017) paints a similar picture as depicted in Tables S2 and S3 in supplementary analyses.

net wealth are considerably smaller. With an average wealth level of  $161,350\in$ , Western German women hold  $14,837\in$  or about 8 percent less personal net wealth than their male spouses. In Eastern Germany, retired women in our sample hold an average net wealth of  $41,828\in$ , which translates into  $11,248\in$  less than their male spouses. However, as the overall level of accumulated wealth in couples is substantially higher in Western than in Eastern Germany, the relative gap between spouses' net wealth lies at 21 percent in Eastern Germany.

Figure 2 shifts the focus to the different resource constellations within couples (see also Table A3). In 16 percent of Western German couples, women exhibit higher pension wealth than their spouses, whereas men hold the majority of pension wealth within 84 percent of couples. Among the former constellation, the average absolute gap in pension wealth amounts to 115,568€, whereas the gap is about 2.5 times larger at 290,318€ in the latter group that favors men. In about 39 percent of Eastern German couples, women exhibit higher pension wealth than their spouse, as opposed to 61 percent of couples where men do. With absolute gaps of 80,829€ and 105,883€, respectively, gaps in pension wealth are considerably smaller in Eastern German than in Western German couples. In both parts of Germany, couples with a gap in favor of the female exhibit considerably higher couple pension wealth (i.e. aggregation of both spouses' pension wealth), than in those where men hold the majority share.

In contrast to pension wealth, an equilibrium between spouses' personal net wealth is a common constellation, at respectively 30 percent in Western and 42 percent in Eastern German couples. However, couples with an equal wealth distribution draw on considerably smaller couple wealth (i.e. aggregation of both spouses' wealth) than those where either spouse commands a majority share. In 40 percent of Western German couples, men have on average 124,861€ more wealth than their spouse compared to 28 percent of couples where women hold on average 116,365€ more wealth. In 28 percent compared to 31 percent of Eastern German

couples, respectively women or men hold more net wealth than their spouse. Here, the wealth gap favoring male spouses is more than twice as high compared to that in favor of the female spouse, albeit absolute differences are considerably smaller than in Western German couples.

## [Figure 1 here]

# [Figure 2 here]

## 4.2 Predictors of within-couple inequalities

Table 1 shows covariates of the IHS-transformed within-couple gap in pension wealth in Eastern and Western Germany. As we subtracted men's from women's individual pension wealth, positive coefficients indicate women's higher relative share within the couple and thus—in most couple constellations—a narrower intra-couple gap.

Starting with an examination of cohort effects, we find that the within-couple gap in pension wealth does not significantly differ across cohorts in Western Germany, whereas in Eastern Germany the cohort born 1950-1966 exhibits a significantly smaller gap than the reference cohort born before 1930 (m1a and m1b). This difference turns insignificant after controlling for employment histories, which is the central predictor of differences in pension wealth. In Western Germany, each year women spent in full-time or—to a lesser extent—in part-time employment (m2a) is linked to an increase in their share of pension wealth. In Eastern but not Western Germany, the gap decreases for each year that women are closer to their spouse's full-time experience. In both parts of Germany, each year difference in spouses' previous unemployment is associated with a growing gap (m2a, m2b). Against the background of differential employment biographies of mothers compared to non-mothers, children are linked to a higher intra-couple gap in pension wealth in Western but not in Eastern Germany (m1a, m1b, m2a, m2b). We further find that educational attainment (only Western Germany) and

spousal differences herein (m2a, m2b) contribute to explaining the gap in both regions. Since higher age equals fewer remaining years of future pension payments, spouses' age difference is negatively related to the gap in pension wealth.

Table 2 shows predictors for the intra-couple wealth gap in Eastern and Western Germany, which may be interpreted in a fashion similar to the within-couple pension gap. In contrast to pension wealth, we find that both, demographic and employment characteristics play a lesser role in explaining the wealth gap within retired couples. In both regions, cohort differences are not significant (m1a, m1b). In Western Germany, each additional year of unemployment that women have experienced in contrast to their spouse is associated with a larger intra-couple gap in net wealth (m2a). However, neither full-time and part-time work experience, nor spouses' differences herein are linked to the intra-couple wealth gap. Further, in this region, spousal differences in educational attainment are linked to women's relative share of net wealth. Spouses' employment biographies and educational differences are not significantly related to couples' distribution of wealth in the East.

## [Table 1 here]

#### [Table 2 here]

# 4.3 Supplementary analyses: Personal financial wealth versus housing wealth

Our measure of net wealth combines two components: financial wealth and primary housing wealth. Previous research points out (Joseph and Rowlingson 2012) that spouses tend to own housing wealth jointly while intra-couple inequalities are stronger in financial wealth. Against this background, our sensitivity analyses disaggregate prevalence and predictors of within-couple gaps in personal net wealth into financial and housing wealth (see e.g. Kapelle and Lersch 2020 for a similar approach). In both Eastern and Western Germany, the within couple-

gap in housing wealth is less pronounced than differences in financial wealth, even though housing wealth accounts for a greater share of total wealth. Women hold 7,831 less in financial wealth than men in Eastern compared to 10,664 less in Western Germany (see Figure 3 or Table A6). For housing wealth, the respective gaps amount to 3,417 in Eastern and 4,173 in western Germany. However, as spouses' overall wealth levels in both components are substantially lower in Eastern Germany, the relative difference between spouses is larger for Eastern couples than for Western couples.

At 44 percent, most Eastern German spouses hold equal shares of financial wealth as opposed to 32 percent of Western German couples (see Figure 4 and Table A7). Among the latter, male majority ownership constitutes the predominant constellation with 39 percent. In comparison, male majority ownership is the least common constellation in Eastern Germany at 27 percent. In contrast, shared ownership of housing wealth is by far the predominant constellation in both Eastern (88 percent) and Western Germany (85 percent). On average, couples holding equal shares in housing or financial wealth exhibit a lower household total, since couples with no housing wealth fall into this category. For financial wealth, excluding couples with zero financial wealth (17.5 percent of couples in Eastern and 17.4 percent in Western Germany) decreases the share of equal ownership constellations to about 30 percent in Eastern and 18 percent in Western Germany (Table B7). Excluding couples without housing wealth (54.2 percent of couples in Eastern and 31.8 percent in Western Germany) results in little change as respective shares of equal ownership are 77 percent and 80 percent in East and West, respectively.

Supplementary regression analyses show that spouses' employment biographies are no significant predictors of the within-couple gap in financial wealth, with the exception of spousal differences in unemployment experiences in Western Germany (see Table B8). In a

similar vein, employment history is not significantly linked to the distribution of housing wealth within Eastern and Western German couples (see Table B9).

[Figure 3 here]

[Figure 4 here]

#### **5. Discussion and Conclusion**

In this study, we explored the extent and potential explanations of within-couple gaps in pension wealth and net wealth of retired spouses in Eastern and Western Germany. Our study was theoretically driven by notions around the gendered accumulation of economic advantage and disadvantage over the life course—in the population in general and more specifically between spouses—based on gendered structures. For our analyses, we used data from the German Socio-Economic Panel (SOEP) study, which is one of the few household panel studies that measures (pension) income and wealth at the personal level and thus allows an analysis of economic intra-couple gaps.

To subsume, our descriptive analyses show that pension wealth constitutes a substantially more sizable component of retirees' financial resources than personal net wealth in Germany. In most couples, the within-couple gap in pension wealth favors men and is substantially more pronounced in Western than Eastern Germany with 53 percent compared to 13 percent in 2017, respectively. In contrast, spousal differences in personal net wealth are less pronounced in absolute terms due to lower spousal net wealth compared to spousal pension wealth but are larger in relative terms—at least in Eastern Germany with an intra-couple gap of 21 percent. Intra-couple wealth gaps are substantially smaller for Western German couples with women holding on average 8 percent less personal net wealth than their male partners. On average,

West German husbands hold the most pension and net wealth, followed by East German husbands and wives, whereas West German wives exhibit the least financial resources.

Applying multivariate regression analyses to a sample of 2331 West and 846 East German couples, we subsequently scrutinized potential predictors of IHS-transformed within-couple gaps in pension wealth and personal net wealth. We find that differences in spousal employment across the life course transcend into a within-couple gap in pension wealth in retirement, explaining most of the remaining demographic predictors, such as stratification along women's fertility (West Germany) or cohort differences (East Germany). Employment characteristics contribute little to explaining spousal differences in personal net wealth. Thus, our study indicates substantially different mechanisms that are underlying intra-couple gaps in pension wealth and personal net wealth.

Results on retirees within-couple gaps in pension wealth are in line with previous research (e.g. Mika 2022; Möhring and Weiland 2022; Rasner 2014). As public pensions as well as most occupational pensions in Germany award benefits in relation to previous earnings-based contributions, spousal differences in labor market engagement and educational attainment are central predictors of the within-couple gap. Therefore, couples' pension wealth is distinctively more gendered in West than in East Germany. In (post-)socialist East Germany, normative pressure and institutional support for equal labor market engagement and educational attainment of women, in combination with a low wage stratification during the GDR, facilitated low gender-specific pension differences both within and outside the couples' context (Möhring and Weiland 2022; Rasner 2014). This advancing alignment in labor market integration and qualification expresses itself in a decreasing within-couple gap in pension wealth across cohorts. We observe this especially for the birth cohort 1950-1966, for which the subsequent economic transformation of East Germany following German reunification in 1990, would

have affected the accumulation of pension rights of couples in their mid-careers in the long term. Albeit both men and women faced increased employment instability, especially the maledominated manufacturing sector experienced permanent downsizing (Mika 2022; Rosenfeld et al. 2004).

In Western Germany, low public childcare provision and institutional incentives for at-home care, as well as joint taxation penalized secondary earners. Additionally, comparatively lower normative acceptance of maternal employment fed into a gendered accumulation of pension wealth (Trappe et al. 2015). The motherhood penalty linked to the within-couple pension wealth gap that we observe in West but not East Germany is also an expression of that. Although labor market integration of West German women has increased across cohorts, this can mainly be attributed to part-time employment with limited benefits for pension wealth accumulation (Simonson et al. 2011). Consequently, cohort differences in the within-couple gap in pension wealth are marginal in West Germany even though employment stability and pension entitlements of West Germans have decreased across cohorts as Mika (2022) points out for public pensions. However, at the same time, we must acknowledge, that our (pooled) cross-sectional research design only allows for limited insights on cohort differences, since with increasing age, survival, and resource distribution of spouses may become more selective.

Our results not only show that the intra-couple gap in net wealth in retirement is smaller than for pension wealth, but further that their underlying mechanisms differ. While spouses' gendered employment trajectories are relevant predictors of intra-couple pension wealth gaps, they are—for the most part—no substantial vector for personal net wealth differences in retirement and only differences in unemployment spells can partly account for personal net wealth differences. This finding contradicts studies by Cordova et al. (2022) and Grabka et al. (2015), who emphasize employment biographies as central predictors of both, general gender

differences in personal net wealth and within-couple personal net wealth differences for working-age couples. However, we argue that our results need to be considered keeping the historical contexts and cohorts under study in mind: Marriage is the predominant living arrangement among today's retirees, and most marriages in our study were formed and respondents socialized during a time when traditional norms of jointness within marriage were particularly strong in both Western and Eastern Germany (Dennis 1998; Sobotka and Toulemon 2008). Consequently, our results on the intra-couple gap in personal net wealth need to be discussed in light of Joseph and Rowlingson (2012), who argue that boundaries of asset ownership become increasingly blurred with time in marriage as norms of financial jointness prevail. As a result, pooling personal net wealth is likely seen as the normative default, outweighing emerging trends around individualization within marriage—at least within our study sample of predominantly first-time married respondents with an average marital duration of 46 years.

Joint ownership is particularly assumed and practiced for assets normatively acquired together, such as the family home, serving as compensation for women's focus on unpaid care work (Nutz 2022). However, for assets such as the family home, we also need to consider structural constraints, such as restricted access to individual mortgage loans, that prevented spouses from acquiring such assets solely before or during the marriage. Such ideas about the prominence of jointness and structural constraints are also supported by our supplementary analyses that show that most retired couples in East and West Germany own equal shares of housing wealth, while intra-couple wealth gaps are more pronounced in financial wealth.

In contrast, pension entitlements are—by definition—rarely perceived as a joint resource. This can partially explain why we find lower intra-couple gaps in personal net wealth but higher gaps in pension wealth. We argue that considering that normative perceptions and structural

constraints around wealth ownership within couples have been evolving toward a more individualized ideal, it is crucial to continue monitoring intra-couple inequalities in general, but particularly in older age, for the upcoming cohorts. More independent financial management of upcoming cohorts may lead to wider intra-couple inequalities. However, at the same time, women's higher labor market participation in more recent cohorts may dampen intra-couple inequalities for those cohorts. This can already be seen in lower pension inequalities in Eastern Germany found in our study.

Overall, our study highlights substantial absolute intra-couple gaps, particularly within pension wealth for Western German couples. As highlighted by the lower pension gaps in Eastern Germany, contextual factors that also drive individual behavior, for instance in employment patterns, matter extensively in the prevention of intra-couple inequalities. Although absolute intra-couple gaps in personal net wealth were lower, strong social norms around the joint possession of wealth, for instance as a compensation of specialization within marriage, need to be considered. We may thus hypothesize that intra-couple wealth gaps found in the current study are mainly the result of normative perceptions about financial jointness and less based on legal considerations about ownership. However, it needs to be emphasized that legal ownership may be more relevant in case of a marital breakdown, which increasingly occurs during older age (Brown & Lin, 2012). But even if the marriage does not break down, decisionmaking power and control are strongly connected to underlying gendered norms and the level of financial contributions to joint assets. Thus, even if couples report equal ownership, it is men who are often perceived as the 'rightful' owner when it comes to questions of power and decision-making during marriage or in the case of divorce (Joseph and Rowlingson 2012; Klesment and Van Bavel 2022). Concerning future cohorts of pensioners, the trend towards an individualization of wealth could result in more pronounced intra-couple gaps in wealth on the one hand (e.g. Frémeaux and Leturcq 2020). On the other hand, the increased labor market

participation of women in pre-retirement cohorts (e.g. Trappe et al. 2015), may be associated with lower intra-couple gaps in both pension wealth and net wealth. In line with this, policies enabling more egalitarian employment trajectories, such as adequate and affordable public childcare provision (see e.g. Ferragina 2019), may ultimately contribute to reducing the disparities in spouses' individual pension entitlements and personal net wealth. (Mandatory) pension splitting constitutes an alternative approach to de-gendering pension wealth by pooling and redistributing spouses' pension entitlements equally. Lastly, measures targeting genderspecific differences in investment behavior and access to investments may mitigate the gap in spouses' net wealth both before and in retirement (e.g. Sierminska et al. 2018). Overall, our study highlights the strong relevance of norms and the context in driving individual factors that influence pension wealth and personal net wealth inequalities between spouses in later life. Due to high data demands (i.e. collection of personal wealth at the fully individual level), research within other contexts is currently missing but would be highly beneficial to further explore how our findings compare to different contexts.

# Acknowledgments

The manuscript greatly benefited from discussions with participants of the ECSR Network Workshop "Wealth Inequalities, Gender and Family Structures" at CHASM, School of Social Policy, University of Birmingham (15.-16. June 2023). We thank the reviewers for their helpful comments, as well as Sophia Hamdorf for excellent assistance.

# **Disclosure Statement**

No potential conflict of interest was reported by the author(s)

# **Funding details**

-

# Data availability statement

All analyses rely on data from the Socio-Economic Panel (SOEP v37). The full data is available here: doi:10.5684/soep.v37. Replication code of the analyses is available here: https://osf.io/auzm4/.

## References

- Aisenbrey, S., Evertsson, M. and Grunow, D. (2009) 'Is There a Career Penalty for Mothers' Time Out? A Comparison of Germany, Sweden and the United States', *Social Forces*, 88(2), pp. 573–606. https://doi.org/10.1353/sof.0.0252.
- Arulampalam, W., Booth, A.L. and Bryan, M.L. (2007) 'Is There a Glass Ceiling over Europe? Exploring the Gender Pay Gap across the Wage Distribution', *ILR Review*, 60(2), pp. 163–186. https://doi.org/10.1177/001979390706000201.
- Bajtelsmit, D. and Bernasek, A. (1996) 'Why Do Women Invest Differently than Men?', *Financial Counseling and Planning*, 7, pp. 1–10. https://doi.org/10.2139/ssrn.2238.
- Becker, G.S. (1985) 'Human Capital, Effort, and the Sexual Division of Labor', *Journal of Labor Economics*, 3(1, Part 2), pp. 33–58. https://doi.org/10.1086/298075.
- Bennett, F. (2013) 'Researching Within-Household Distribution: Overview, Developments, Debates, and Methodological Challenges', *Journal of Marriage and Family*, 75(3), pp. 582– 597. https://doi.org/10.1111/jomf.12020.
- Bernardi, L., Huinink, J. and Settersten, R.A. (2019) 'The life course cube: A tool for studying lives', Advances in Life Course Research, 41, p. 100258. https://doi.org/10.1016/j.alcr.2018.11.004.
- Bessière, C. (2022) 'Reversed accounting: legal professionals, families and the gender wealth gap in France', *Socio-Economic Review*, 20(1), pp. 233–256. https://doi.org/10.1093/ser/mwz036.
- Blau, F.D. and Kahn, L.M. (2017) 'The Gender Wage Gap: Extent, Trends, and Explanations', *Journal of Economic Literature*, 55(3), pp. 789–865. https://doi.org/10.1257/jel.20160995.

- Blood, Robert. and Wolfe, D.M. (1960) *Husbands and wives: The dynamics of family living*. New York: Free Press.
- Boeckmann, I., Misra, J. and Budig, M. (2015) 'Cultural and Institutional Factors Shaping Mothers' Employment and Working Hours in Postindustrial Countries', *Social Forces*, 93(4), pp. 1301–1333. https://doi.org/10.1093/sf/sou119.
- Bönke, T. et al. (2019) 'The Joint Distribution of Net Worth and Pension Wealth in Germany', Review of Income and Wealth, 65(4), pp. 834–871. https://doi.org/10.1111/roiw.12371.
- Brown, S.L. and Lin, I.-F. (2012) 'The Gray Divorce Revolution: Rising Divorce Among Middle-Aged and Older Adults, 1990–2010', *The Journals of Gerontology: Series B*, 67(6), pp. 731–741. https://doi.org/10.1093/geronb/gbs089.
- Chang, M.L. (2010) Shortchanged: Why Women Have Less Wealth and What Can Be Done About It. Oxford University Press.
- Cordova, K., Grabka, M.M. and Sierminska, E. (2022) 'Pension Wealth and the Gender Wealth Gap', *European Journal of Population* [Preprint]. https://doi.org/10.1007/s10680-022-09631-6.
- Demakakos, P. *et al.* (2016) 'Wealth and mortality at older ages: a prospective cohort study', *J Epidemiol Community Health*, 70(4), pp. 346–353. https://doi.org/10.1136/jech-2015-206173.
- Dennis, M. (1998) 'The east German family: Change and continuity', *German Politics*, 7(3), pp. 83–100. https://doi.org/10.1080/09644009808404528.

Destatis (2023) Unadjusted Gender Pay Gap by territory. Wiesbaden. https://www.destatis.de/EN/Themes/Labour/Earnings/Earnings-Earnings-Differences/Tables/ugpg-01-by-territory-gpg.html.

- Deutsche Rentenversicherung Bund (2022) *Rentenversicherung in Zeitreihen*. 22. Berlin. https://www.deutsche-rentenversicherung.de/SharedDocs/Downloads/DE/Statistiken-und-Berichte/statistikpublikationen/rv\_in\_zeitreihen.pdf?\_\_blob=publicationFile&v=3.
- Dieckhoff, M. *et al.* (2020) 'Partnered women's contribution to household labor income: Persistent inequalities among couples and their determinants', *Social Science Research*, 85, p. 102348. https://doi.org/10.1016/j.ssresearch.2019.102348.
- Ebbinghaus, B. (ed.) (2011) *The Varieties of Pension Governance: Pension privatization in Europe*. 2nd edn. Oxford: Oxford University Press.
- Ebbinghaus, B. (2015) 'The Privatization and Marketization of Pensions in Europe: A Double Transformation Facing the Crisis', *European Policy Analysis*, 1(1), pp. 56–73. https://doi.org/10.18278/epa.1.1.5.
- Ebbinghaus, B. and Gronwald, M. (2011) 'The Changing Public–Private Pension Mix in Europe: From Path Dependence to Path Departure', in *The Varieties of Pension Governance*. Oxford University Press, pp. 23–53. https://doi.org/10.1093/acprof:oso/9780199586028.003.0002.
- Ebner, C., Kühhirt, M. and Lersch, P. (2020) 'Cohort Changes in the Level and Dispersion of Gender Ideology after German Reunification: Results from a Natural Experiment', *European Sociological Review*, 36(5), pp. 814–828. https://doi.org/10.1093/esr/jcaa015.
- Eurostat (2023) Gender pension gap by age group EU-SILC survey, Eurostat. https://ec.europa.eu/eurostat/databrowser/view/ILC\_PNP13\_custom\_5098978/default/table? lang=en (Accessed: 26 November 2023).
- Federal Statistical Office of Germany (2020) Kohortensterbetafeln für Deutschland. Ergebnisse aus den Modellrechnungen für Sterbetafeln nach Geburtsjahrgang [Cohort Life Tables for

Germany. Results from Model Calculations for Life Tables by Birth Cohort.]. Wiesbaden:StatistischesBundesamt.https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Bevoelkerung/Sterbefaelle-Lebenserwartung/Publikationen/Downloads-Sterbefaelle/kohortensterbetafeln-5126101209005.xlsx?\_\_blob=publicationFile(Accessed:21 January 2024).

- Ferragina, E. (2019) 'Does Family Policy Influence Women's Employment?: Reviewing the Evidence in the Field', *Political Studies Review*, 17(1), pp. 65–80. https://doi.org/10.1177/1478929917736438.
- Fitzenberger, B., Schnabel, R. and Wunderlich, G. (2004) 'The gender gap in labor market participation and employment: A cohort analysis for West Germany', *Journal of Population Economics*, 17(1), pp. 83–116. https://doi.org/10.1007/s00148-003-0141-6.
- Frémeaux, N. and Leturcq, M. (2020) 'Inequalities and the individualization of wealth', *Journal of Public Economics*, 184, p. 104145. https://doi.org/10.1016/j.jpubeco.2020.104145.
- Frericks, P., Maier, R.M. and Graaf, W. (2008) 'Male norms and female adjustments: The influence of care credits on gender pension gaps in France and Germany', *European Societies*, 10(1), pp. 97–119. https://doi.org/10.1080/14616690701348810.
- Friedline, T., Masa, R.D. and Chowa, G.A.N. (2015) 'Transforming wealth: Using the inverse hyperbolic sine (IHS) and splines to predict youth's math achievement', *Social Science Research*, 49, pp. 264–287. https://doi.org/10.1016/j.ssresearch.2014.08.018.
- Ganzeboom, H.B. and Treiman, D.J. (1996) 'Internationally comparable measures of occupational status for the 1988 International Standard Classification of Occupations', *Social science research*, 25(3), pp. 201–239.

- Ginn, J. and Arber, S. (2018) 'Gender and pensions in Europe: current trends in women's pension acquisition', in P.J. Brown and R. Crompton (eds) *Economic restructuring and social exclusion*. London: Routledge, pp. 58–85.
- Goebel, J. et al. (2019) 'The German Socio-Economic Panel (SOEP)', Jahrbücher für Nationalökonomie und Statistik, 239(2), pp. 345–360. https://doi.org/10.1515/jbnst-2018-0022.
- Grabka, M.M., Marcus, J. and Sierminska, E. (2015) 'Wealth distribution within couples', *Review* of Economics of the Household, 13(3), pp. 459–486. https://doi.org/10.1007/s11150-013-9229-2.
- Joseph, R. and Rowlingson, K. (2012) 'Her House, His Pension? The Division of Assets Among (Ex-) Couples and the Role of Policy', *Social Policy and Society*. 2011/12/06 edn, 11(1), pp. 69–80. https://doi.org/10.1017/S147474641100042X.
- Kapelle, N. and Baxter, J. (2021) 'Marital Dissolution and Personal Wealth: Examining Gendered Trends across the Dissolution Process', *Journal of Marriage and Family*, 83(1), pp. 243–259. https://doi.org/10.1111/jomf.12707.
- Kapelle, N. and Lersch, P.M. (2020) 'The Accumulation of Wealth in Marriage: Over-Time Change and Within-Couple Inequalities', *European Sociological Review*, 36(4), pp. 580–593. https://doi.org/10.1093/esr/jcaa006.
- Keister, L.A. (2000) Wealth in America: Trends in Wealth Inequality. Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511625503.

- Kelle, N., Simonson, J. and Gordo, L.R. (2017) 'Is Part-Time Employment after Childbirth a Stepping-Stone into Full-Time Work? A Cohort Study for East and West Germany', *Feminist Economics*, 23(4), pp. 201–224. https://doi.org/10.1080/13545701.2016.1257143.
- Killewald, A., Pfeffer, F.T. and Schachner, J.N. (2017) 'Wealth inequality and accumulation', *Annual Review of Sociology*, 43, pp. 379–404.
- Klesment, M. and Van Bavel, J. (2022) 'Women's Relative Resources and Couples' Gender Balance in Financial Decision-Making', *European Sociological Review*, 38(5), pp. 739–753. https://doi.org/10.1093/esr/jcac019.
- Klüsener, S. and Goldstein, J.R. (2016) 'A Long-Standing Demographic East-West Divide in Germany', *Population, Space and Place*, 22(1), pp. 5–22. https://doi.org/10.1002/psp.1870.
- Kreyenfeld, M., Schmauk, S. and Mika, T. (2022) 'The gender pension gap in Germany: is divorce
  a gender-equaliser?', *Ageing & Society*, pp. 1–21.
  https://doi.org/10.1017/S0144686X21001513.
- Krüger, H. and Levy, R. (2001) 'Linking life courses, work, and the family: Theorizing a not so visible nexus between women and men', *Canadian Journal of Sociology/Cahiers canadiens de sociologie*, 26(2), pp. 145–166. https://doi.org/10.2307/3341676.
- Krumpal, I. (2013) 'Determinants of social desirability bias in sensitive surveys: a literature review', *Quality & Quantity*, 47(4), pp. 2025–2047. https://doi.org/10.1007/s11135-011-9640-9.
- Kühhirt, M. (2012) 'Childbirth and the Long-Term Division of Labour within Couples: How do Substitution, Bargaining Power, and Norms affect Parents' Time Allocation in West

Germany?', *European Sociological Review*, 28(5), pp. 565–582. https://doi.org/10.1093/esr/jcr026.

- Kuhn, U. (2020) 'Augmented wealth in Switzerland: the influence of pension wealth on wealth inequality', Swiss journal of economics and statistics, 156(1), p. 19. https://doi.org/10.1186/s41937-020-00063-9.
- Ladd, H.F. (1998) 'Evidence on Discrimination in Mortgage Lending', *Journal of Economic Perspectives*, 12(2), pp. 41–62. https://doi.org/10.1257/jep.12.2.41.
- LeBaron-Black, A.B. *et al.* (2024) 'Pennies and power: finances, relational power, and marital outcomes', *Family Relations*, n/a(n/a). https://doi.org/10.1111/fare.12989.
- Lee, J. and Pocock, M.L. (2007) 'Intrahousehold allocation of financial resources: evidence from South Korean individual bank accounts', *Review of Economics of the Household*, 5(1), pp. 41– 58. https://doi.org/10.1007/s11150-007-9004-3.
- Leisering, L. (2003) 'Government and the Life Course', in J.T. Mortimer and M.J. Shanahan (eds) *Handbook of the life course*. New York: Kluwer Academic/Plenum Publ (Handbooks of Sociology and Social Research), pp. 205–225. https://doi.org/10.1007/978-0-306-48247-2\_10.
- Leitner, S. (2001) 'Sex and Gender Discrimination Within EU Pension Systems', *Journal of European Social Policy*, 11(2), pp. 99–115. https://doi.org/10.1177/095892870101100201.
- Leopold, T. and Schneider, T. (2011) 'Family Events and the Timing of Intergenerational Transfers', *Social Forces*, 90(2), pp. 595–616. https://doi.org/10.1093/sf/sor030.
- Lersch, P.M., Jacob, M. and Hank, K. (2017) 'Parenthood, Gender, and Personal Wealth', *European Sociological Review*, 33(3), pp. 410–422. https://doi.org/10.1093/esr/jcx046.

- Loxton, A. (2019) 'Gender Differences in Inter Vivos Transfers'. Rochester, NY. https://doi.org/10.2139/ssrn.3342730.
- Lusardi, A. and Mitchell, O.S. (2008) 'Planning and Financial Literacy: How Do Women Fare?', *American Economic Review*, 98(2), pp. 413–417. https://doi.org/10.1257/aer.98.2.413.
- Luy, M. *et al.* (2015) 'Life Expectancy by Education, Income and Occupation in Germany: Estimations Using the Longitudinal Survival Method', *Comparative Population Studies*, 40(4). https://doi.org/10.12765/CPoS-2015-16.
- Mandel, H., Lazarus, A. and Shaby, M. (2020) 'Economic Exchange or Gender Identities? Housework Division and Wives' Economic Dependency in Different Contexts', *European Sociological Review*, 36(6), pp. 831–851. https://doi.org/10.1093/esr/jcaa023.
- Mika, T. (2022) 'The Declining Pension Wealth of Employment for the Birth Cohorts 1935–1974 in Germany', *Statistics, Politics and Policy*, 13(1), pp. 97–117. https://doi.org/10.1515/spp-2021-0022.
- Mika, T. and Czaplicki, C. (2017) 'Fertility and Women's Old-Age Income in Germany', in M. Kreyenfeld and D. Konietzka (eds) *Childlessness in Europe: Contexts, Causes, and Consequences*. Berlin/Heidelberg: Springer, pp. 331–349.
- Möhring, K. (2018) 'Is there a motherhood penalty in retirement income in Europe?: The role of lifecourse and institutional characteristics', *Ageing and Society*, 38(12), pp. 2560–2589. https://doi.org/10.1017/S0144686X17000812.
- Möhring, K. and Weiland, A.P. (2022) 'Couples' Life Courses and Women's Income in Later Life:
  A Multichannel Sequence Analysis of Linked Lives in Germany', *European Sociological Review*, 38(3), pp. 371–388. https://doi.org/10.1093/esr/jcab048.

- Muckenhuber, M., Rehm, M. and Schnetzer, M. (2022) 'A Tale of Integration? The Migrant Wealth Gap in Austria', *European Journal of Population*, 38(2), pp. 163–190. https://doi.org/10.1007/s10680-021-09604-1.
- Nordblom, K. and Ohlsson, H. (2011) 'Bequests, gifts, and education: links between intergenerational transfers', *Empirical Economics*, 40(2), pp. 343–358. https://doi.org/10.1007/s00181-010-0344-0.
- Nutz, T. (2022) 'In sole or joint names? The role of employment and marriage biographies for married women's asset ownership in later life', *Research in Social Stratification and Mobility*, 79, p. 100690. https://doi.org/10.1016/j.rssm.2022.100690.
- Nutz, T. and Gritti, D. (2022) 'Dyadic employment biographies and within-couple wealth inequality in Britain and Western Germany', *Journal of Marriage and Family*, 84(2), pp. 552– 569. https://doi.org/10.1111/jomf.12811.
- Nutz, T. and Lersch, P.M. (2021) 'Gendered employment trajectories and individual wealth at older ages in Eastern and Western Germany', *Advances in Life Course Research*, 47, p. 100374. https://doi.org/10.1016/j.alcr.2020.100374.
- Nutz, T., Nelles, A. and Lersch, P.M. (2022) 'Who Opts Out? The Customisation of Marriage in the German Matrimonial Property Regime', *European Journal of Population*, 38(3), pp. 353– 375. https://doi.org/10.1007/s10680-022-09613-8.
- OECD (2013) OECD Guidelines for Micro Statistics on Household Wealth. Paris: Organisation for Economic Co-operation and Development. https://www.oecdilibrary.org/economics/guidelines-for-micro-statistics-on-household-wealth\_9789264194878en (Accessed: 8 November 2023).

- Rasner, A. (2014) 'Gender pension gap in Eastern and Western Germany', DIW Economic Bulletin, 4(11), pp. 42–50.
- Rehm, M., Schneebaum, A. and Schuster, B. (2022) 'Intra-Couple Wealth Inequality: What's Socio-Demographics Got to Do with it?', *European Journal of Population*, 38(4), pp. 681– 720. https://doi.org/10.1007/s10680-022-09633-4.
- Rosenfeld, R.A., Trappe, H. and Gornick, J.C. (2004) 'Gender and work in Germany: Before and after reunification', *Annual Review of Sociology*, 30, pp. 103–124. https://doi.org/10.1146/annurev.soc.30.012703.110531.
- Roth, A. and Slotwinski, M. (2019) 'Gender Norms and Income Misreporting within Households'. Rochester, NY. https://doi.org/10.2139/ssrn.3338624.
- Rubin, D.B. (1987) Multiple Imputation for Nonresponse in Surveys. 1st edn. New York, NY.: John Wiley & Sons, Ltd. https://doi.org/10.1002/9780470316696.
- Schwartz, C.R. (2013) 'Trends and variation in assortative mating: Causes and consequences', *Annual Review of Sociology*, 39, pp. 451–470.
- Seeleib-Kaiser, M. (2016) 'The End of the Conservative German Welfare State Model', Social Policy & Administration, 50(2), pp. 219–240. https://doi.org/10.1111/spol.12212.
- Sefton, T. *et al.* (2011) 'The relationship between women's work histories and incomes in later life in the UK, US and West Germany', *Journal of European Social Policy*, 21(1), pp. 20–36. https://doi.org/10.1177/0958928710380475.
- Sierminska, E., Piazzalunga, D. and Grabka, M. (2018) 'Transitioning Towards More Equality? Wealth Gender Differences and the Changing Role of Explanatory Factors Over Time.' Rochester, NY. https://doi.org/10.2139/ssrn.3289078.

- Simonson, J., Gordo, L.R. and Titova, N. (2011) 'Changing employment patterns of women in Germany: How do baby boomers differ from older cohorts? A comparison using sequence analysis', *Advances in Life Course Research*, 16(2), pp. 65–82.
- Sobotka, T. and Toulemon, L. (2008) 'Overview Chapter 4: Changing family and partnership behaviour: Common trends and persistent diversity across Europe', *Demographic Research*, 19, pp. 85–138. http://www.jstor.org/stable/26349247.
- Spilerman, S. (2000) 'Wealth and Stratification Processes', Annual Review of Sociology, 26(1), pp. 497–524. https://doi.org/10.1146/annurev.soc.26.1.497.
- Trappe, H. (2006) 'After the Fall of the Wall', in M. Diewald, A. Goedicke, and K.U. Mayer (eds) Life Courses in the Transformation of East Germany. Stanford University Press, pp. 116–139. https://doi.org/10.1515/9780804779456-009.
- Trappe, H., Pollmann-Schult, M. and Schmitt, C. (2015) 'The rise and decline of the male breadwinner model: Institutional underpinnings and future expectations', *European Sociological Review*, 31(2), pp. 230–242. https://doi.org/10.1093/esr/jcv015.
- Weiland, A. (2022) 'Married Mothers' Bargaining Power and Their Accrual of Pension Entitlements: Evidence From East and West Germany', Work, Aging and Retirement, 8(3), pp. 241–263. https://doi.org/10.1093/workar/waab009.
- Wolff, E.N. (2015) 'U.S. Pensions in the 2000s: The Lost Decade?', *Review of Income and Wealth*, 61(4), pp. 599–629. https://doi.org/10.1111/roiw.12123.
- Xie, Y. *et al.* (2003) 'Economic Potential and Entry into Marriage and Cohabitation', *Demography*, 40(2), pp. 351–367. https://doi.org/10.2307/3180805.

Yabiku, S.T. (2000) 'Family history and pensions: The relationships between marriage, divorce, children, and private pension coverage', *Journal of Aging Studies*, 14(3), pp. 293–312. https://doi.org/10.1016/S0890-4065(00)08023-3.

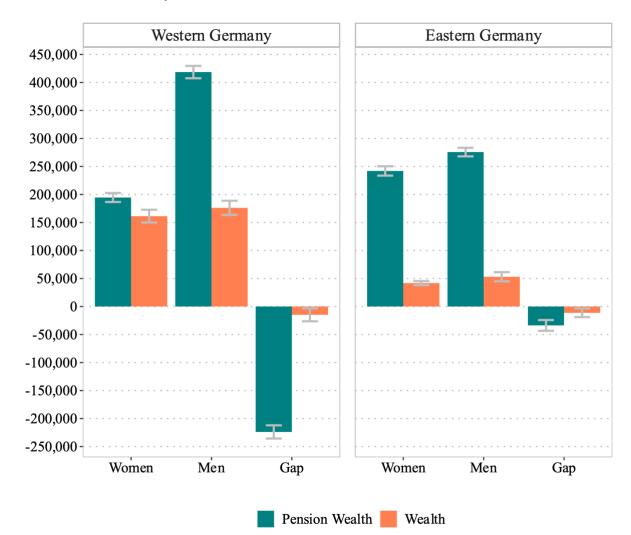
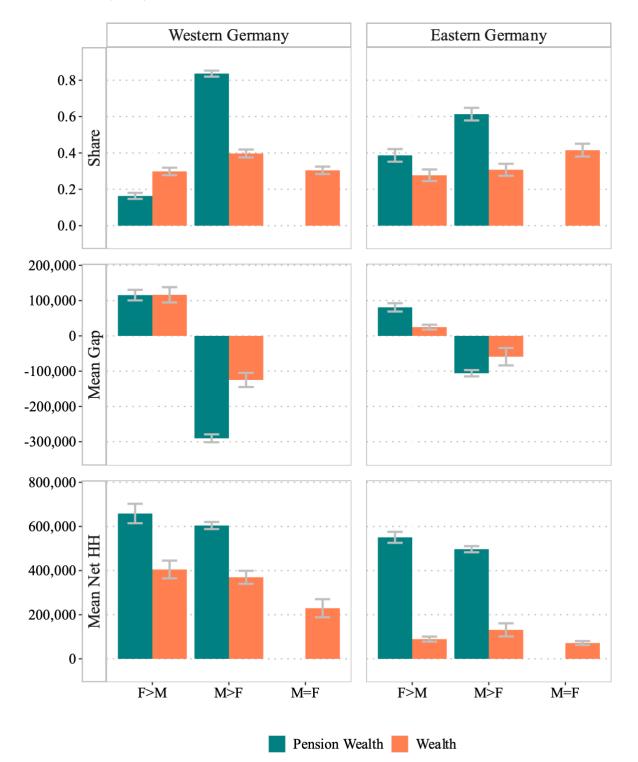


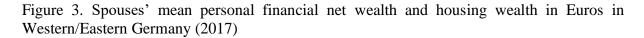
Figure 1. Spouses' mean personal pension wealth and personal net wealth in Euros in Western/Eastern Germany (2017)

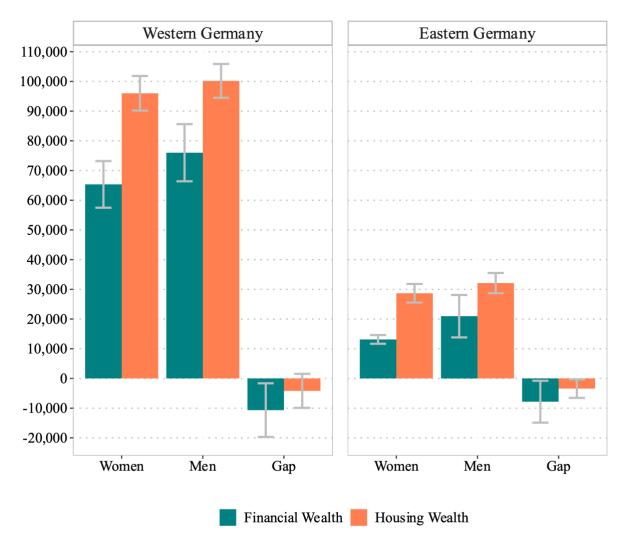
*Notes:* Grey bars indicate 95% confidence intervals. Own estimations based on data from the Socio-Economic Panel Survey v37. Weighted and imputed data. No controls included.

Figure 2. Constellations of intra-couple gaps in personal pension wealth and personal net wealth in Euros (2017)



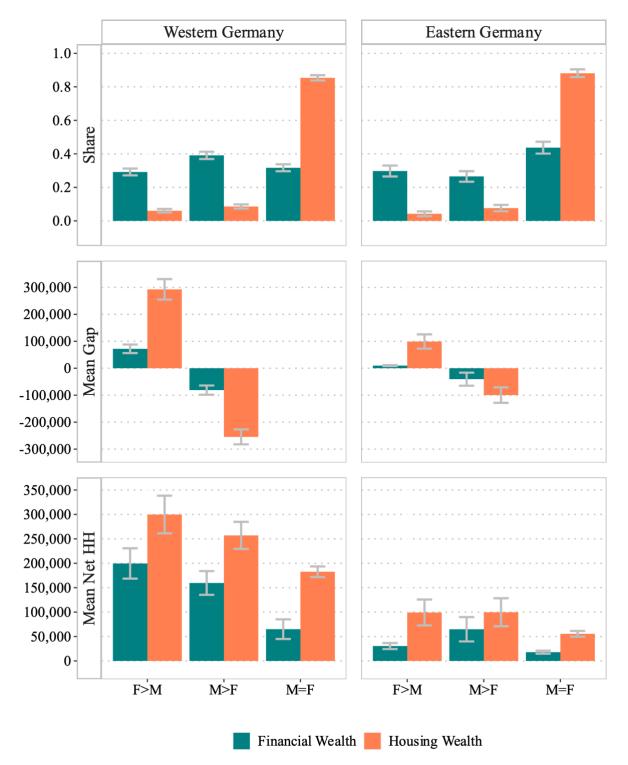
*Notes:* F= female spouse, M = male spouse, HH = Household. Grey bars indicate 95% confidence intervals. Own estimations based on data from the Socio-Economic Panel Survey v37. Weighted and imputed data. No controls included.





*Notes:* Grey bars indicate 95% confidence intervals. Own estimations based on data from the Socio-Economic Panel Survey v37. Weighted and imputed data. No controls included.

Figure 4. Constellations of intra-couple gaps in personal financial net wealth and housing wealth in Euros (2017)



*Notes:* F= female spouse, M = male spouse, HH = Household. Grey bars indicate 95% confidence intervals. Own estimations based on data from the Socio-Economic Panel Survey v37. Weighted and imputed data. No controls included.

	Western G	ermany	Eastern Germany	
	(m1a)	(m2a)	(m1b)	(m2b)
Cohort (Ref. < 1930)				
1930-1939	-0.53	-0.71	0.47	-0.53
	(0.65)	(0.65)	(1.49)	(1.46)
1940-1949	-0.17	-1.04	1.12	0.06
	(0.77)	(0.77)	(1.62)	(1.65)
1950-1966	0.65	-0.76	$4.08^{+}$	2.11
	(1.03)	(1.02)	(2.21)	(2.13)
Number of children (Ref. 0)				
1	$-4.88^{*}$	-1.41	4.52	4.68
	(2.09)	(2.12)	(3.73)	(3.83)
2	-5.03*	-0.80	4.01	4.76
	(2.02)	(2.06)	(3.49)	(3.56
3 or more	-5.29**	-0.71	4.76	5.01
	(1.85)	(1.87)	(3.48)	(3.53)
Full-time work experience (in		$0.18^{***}$		0.08
years)		(0.04)		(0.08)
Difference in full-time work		0.05		0.13
experience		(0.04)		(0.06)
Part-time work experience (in		$0.07^{***}$		0.02
years)		(0.02)		(0.06
Unemployment experience (in		0.23		-0.06
years)		(0.19)		(0.30)
Difference in unemployment		-0.43***		-0.73**
experience		(0.11)		(0.18
Education (years)		$0.22^{+}$		0.37
		(0.12)		(0.30)
Difference in education		0.38***		$0.60^{**}$
		(0.09)		(0.17)
Observations	2331	2331	846	846

Table 1. Linear regression models for the intra-couple gap in personal pension wealth (IHS-transformed) by Western and Eastern Germany

*Notes*: Robust standard errors applied. All models are adjusted for age differences between spouses, years married, whether either spouse was previously married, the wives' age at first marriage, the wives' age at first birth, living in an urban area, each spouse's migration background, wife's parents' highest occupational prestige, the difference in spouses' parents' highest occupational prestige, the SOEP sample (ref.: origin sample), a flag for imputed pension data, and a year dummy to account for the financial crisis of 2008/2009 and a dummy to account for imputed wealth data. Full models in Table A4. Own estimations based on data from the Socio-Economic Panel Survey v37.  $^+ p < 0.10$ ,  $^* p < 0.05$ ,  $^{**} p < 0.01$ ,  $^{***} p < 0.001$ .

	Western G	ermany	Eastern G	Eastern Germany	
	(m1a)	(m2a)	(m1b)	(m2b)	
Cohort (Ref. < 1930)					
1930-1939	-0.27	-0.26	-0.46	-0.56	
	(0.87)	(0.86)	(1.13)	(1.15)	
1940-1949	0.17	0.10	1.21	1.22	
	(1.11)	(1.09)	(1.20)	(1.31)	
1950-1966	-0.35	-0.60	2.16	1.87	
	(1.34)	(1.33)	(1.65)	(1.74)	
Number of children (Ref. 0)					
1	-1.40	-1.01	2.09	2.10	
	(1.95)	(1.98)	(2.63)	(2.70)	
2	-1.80	-1.24	1.42	1.48	
	(1.90)	(1.91)	(2.48)	(2.53)	
3 or more	-1.69	-1.09	0.86	0.82	
	(1.85)	(1.85)	(2.35)	(2.41)	
Full-time work experience (in		0.03		-0.06	
years)		(0.04)		(0.05)	
Difference in full-time work		0.00		0.06	
experience		(0.03)		(0.04)	
Part-time work experience (in		0.03		-0.00	
years)		(0.02)		(0.04)	
Unemployment experience (in		-0.19		-0.26	
years)		(0.19)		(0.25)	
Difference in unemployment		-0.21*		-0.01	
experience		(0.09)		(0.15	
Education (years)		-0.07		0.03	
		(0.12)		(0.16)	
Difference in education		0.22*		0.12	
		(0.11)		(0.13)	
Observations	2331	2331	846	846	

Table 2. Linear regression models for the intra-couple gap in personal net wealth (IHS-	
transformed) by Western and Eastern Germany	

*Notes*: Robust standard errors applied. All models are adjusted for age differences between spouses, years married, whether either spouse was previously married, the wives' age at first marriage, the wives' age at first birth, living in an urban area, each spouse's migration background, wife's parents' highest occupational prestige, the difference in spouses' parents' highest occupational prestige, the SOEP sample (ref.: origin sample), a flag for imputed wealth data, and a year dummy to account for the financial crisis of 2008/2009 and a dummy to account for imputed wealth data. Full models in Table A5. Own estimations based on data from the Socio-Economic Panel Survey v37. p < 0.10, p < 0.05, p < 0.01, p < 0.001