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# **Married Mothers' Bargaining Power and their Accrual of Pension Entitlements: Evidence from East and West Germany**

Andreas Weiland\*

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## **Abstract**

This study investigates how married mothers’ relative bargaining power before the birth of their first child affects their subsequent accumulation of pension entitlements in East vs. West Germany. I use a novel data linkage between the German sample of the “Survey of Health, Ageing and Retirement in Europe” and administrative records from the German pension insurance (SHARE-RV) to analyze monthly life-course data on married mothers from East (N = 226) and West Germany (N = 586) who were born between 1925 and 1967. Applying random effects growth curve models and mediation analyses, I find that women’s relative bargaining power before parenthood is linked to their subsequent accumulation of pension entitlements in West (but not East) Germany. The results support the notion that bargaining power early in couples’ linked lives has long-term consequences for women’s pension income. Moreover, the results indicate that negotiations within the couple are constricted by the extent to which the institutional context supports or hinders the reconciliation of women’s work–family conflict.

*Keywords: Sociology, Pension, Gender, Family dynamics, Decision making, Longitudinal data analysis*

## Introduction

In 2018, women in Germany earned 20.9% less than men, on average, and received 35.46% less in pension payments (Deutsche Rentenversicherung Bund, 2019; Eurostat, 2020). Previous research has identified the interplay between women's family and employment biographies as a crucial determinant of the size of their pension (Madero-Cabib & Fasang, 2016). The German public pension insurance scheme (*Gesetzliche Rentenversicherung*) provides 63% of the average old-age income, awarding pension benefits equivalent to individuals' lifelong payroll-tax contributions. Given this emphasis on individuals' previous work history, women with children are likely to accrue smaller individual pensions. Since they frequently assume the role of 'primary caregiver' (Lewis, 1992), they face a trade-off between work and care obligations, which makes them more likely to work part time or to take career breaks (Fasang, Aisenbrey, & Schömann, 2013; Leitner, 2001). From a comparative perspective, either a higher degree of redistribution in pension systems or women's labor market integration can mitigate the adverse effects of motherhood on pension wealth. Countries such as Denmark, Sweden or former socialist Czech Republic and East Germany, that support dual-earner couples and facilitate opportunities for women to reconcile their work and care obligations, e.g. through the provision of public childcare, have a lower 'motherhood penalty' in retirement (Möhring, 2015, 2018; Sefton, Evandrou, Falkingham, & Vlachantoni, 2011). As a consequence, there is notable regional variation in gender-specific pension differentials in West (ca. 40% in 2018) and East Germany (ca. 19% in 2018), which highlights the legacy of historically diverging gender regimes and reconciliation policies (Deutsche Rentenversicherung Bund, 2019; Trappe, Pollmann-Schult, & Schmitt, 2015).

The link between motherhood and pension deficits is highly relevant, as it undermines women's economic autonomy and limits their life choices and increases the risk of individual old-age

poverty. This risk extends to the household level, when spouses' old-age incomes are insufficient to support them both (Ginn & Arber, 1999; Madero-Cabib & Fasang, 2016).

Even though couples' work/care arrangements may create pension deficits for mothers, previous research on pension incomes does not account for couples' linked lives in their analytical framework (Elder, 1998; Han & Moen, 1999). A bargaining perspective construes human capital as a spouse's relative bargaining power in household negotiations and in the debate over the division of paid and unpaid labor within the couple (Lundberg & Pollak, 1993). A substantial body of research highlights the association between relative bargaining power, which women hold within the couple around significant events such as marriage or childbirth, and their subsequent engagement in paid and unpaid labor (Bennett, 2013; Blossfeld & Drobnič, 2001; Kühhirt, 2012). Yet prior studies have not sufficiently explored 1) the extent to which these negotiations have long-term consequences for mothers' pension incomes or 2) how this relationship varies across different institutional contexts.

I synthesize research perspectives on negotiations over women's labor market engagement and financial well-being in old age to explore the following research question: *How is women's relative bargaining power within the couple before parenthood linked to their subsequent accumulation of pension entitlements in East and West Germany?*

The article proceeds as follows. Section 2 elaborates on the theoretical background of the gendered accumulation of pension claims in the German context, as well as competing explanations for the division of paid and unpaid labor in married couples. Section 3 offers a linked-lives perspective on the negotiation of women's trajectories into retirement, accounting for the restrictions that the respective contexts of East and West Germany may impose on within-couple bargaining. I base my analysis on a novel linkage between monthly life-course data from the

administrative records of the German public pension insurance scheme and survey data from the Survey of Health, Ageing and Retirement in Europe (SHARE) (Section 4). In Section 5, I present the results of applying random effects growth curve models and subsequent mediation analysis to samples of 98,275 (N=226) and 240,672 (N=586) biography-months of married mothers in East and West Germany, respectively. The article concludes with a summary and discussion of the results as well as the study's limitations and potential avenues for future research.

## **Background**

### **The gendered accumulation of pension entitlements in Germany**

Retirement incomes in Germany are largely based on a public pension system which emphasizes the role of employment and contributions over the life course (Leisering, 2003). The statutory public pension is a pay-as-you-go based social insurance; it constitutes the main source of income for the majority of pensioners.<sup>1</sup> Employed individuals contribute a payroll tax amounting to 18.7% of their gross income, split equally between the employer and employee. Individuals accumulate pension entitlements that are equivalent to their contributions, which the German pension insurance measures and records as pension earning points (PEP). One point represents contributions equivalent to those of the average income of all pension insurance members in a given year. Individual monthly pension benefits are determined by multiplying the sum of their PEP at retirement entry by the set current pension value,<sup>2</sup> as well as factors accounting for retirement age<sup>3</sup> and the type of pension (e.g. old-age, disability, widower). Here, the public pension

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<sup>1</sup> While participation in the public pension insurance scheme is voluntary for the self-employed, public servants are insured in a separate pension scheme.

<sup>2</sup> As of July 1, 2020, the set current pension value amounts to €33.23 for East German and €34.19 for West German pensions.

<sup>3</sup> The statutory retirement age is 65 for those born before 1947. In order to facilitate the transition to a statutory retirement age of 67 by birth cohort 1964, the retirement age increased incrementally in steps of one month for each

insurance assumes a standard biography of 45 years of continuous full-time employment, with yearly contributions equivalent to one PEP (Leitner, 2001). The system acknowledges childrearing by (usually)<sup>4</sup> rewarding mothers with two PEP for each child born before 1992 (three PEP if born afterwards). For contribution periods from 1992 on, mothers are further eligible for a top-off of up to 50% on below-average contributions until their youngest child reaches the age of ten; this especially revalues periods of maternal part-time work (Frericks, Maier, & Graaf, 2008). If couples divorce, spouses' respective pension claims accumulated during their marriage are pooled and equally split between both parties. Widows receive a pension of up to 55% of their spouse's claims if widowhood occurs after age 47 or if they are responsible for a minor; these benefits cease upon remarriage (Jankowski, 2011). Occupational and private pension provisions play a supplementary role and similarly award higher returns for continuous (full-time) employment. Coverage of occupational pension schemes is not universal and is usually limited to permanent contracts. Private pension schemes are becoming more important, although they require a steady flow of extra income (Ebbinghaus, 2011; Ebbinghaus & Neugschwender, 2011). Old-age incomes in the East (formerly socialist German Democratic Republic) were mainly based on a pay-as-you-go public pension, which was part of a comprehensive social security institution. Even when combined with voluntary supplementary insurance,<sup>5</sup> the overall level of benefits was relatively low due to a lack of inflation adjustment. Following German reunification, East German pension claims were transferred to the (formerly West German) public pension insurance. In an attempt to converge pension levels, pension contributions were retrospectively rescaled to the West German

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birth year up to 1959 and steps of two months for subsequent birth years. In the GDR, the statutory retirement age was 60 for women and 65 for men.

<sup>4</sup> Per default, the public pension insurance assumes that mothers are the main providers of care and thus eligible for the bonus in pension entitlements. In deviating cases, parents may request a transfer of PEP to the father.

<sup>5</sup> Similar to the West German system, the GDR's pension system was characterized by a certain degree of institutional heterogeneity, such as separate pension insurance schemes for public servants.

wage level, taking into account the respective yearly ratio of average incomes in West and East Germany (German Social Code VI Annex 10; (Rasner, 2014)).

The difference in pension allowance between men and women in Germany is substantial. Not only do gender-specific wage inequalities associated with the vertical and horizontal segregation of careers extend into retirement. Moreover, mothers are more likely to interrupt their employment, exit the labor market, or engage in part-time and marginal employment in an attempt to reconcile their work and family responsibilities (Evandrou & Glaser, 2003; Krüger & Levy, 2001; Sefton et al., 2011). Further, childrearing fosters a cumulative disadvantage in mothers' employment biographies as foregone work experience negatively affects their re-entry into (full-time) employment and their subsequent wages (Aisenbrey, Evertsson, & Grunow, 2009; Anderson, Binder, & Krause, 2003; Waldfogel, 1997). Despite the PEP top-ups for women during their childrearing years, a considerable 'motherhood penalty' remains compared to the average benefits men and childless women receive (A. Fasang, Aisenbrey, & Schömann, 2013; Frericks et al., 2008; Mika & Czaplicki, 2017; Möhring, 2015). Mothers' employment patterns make them less likely to access occupational pensions, and they generally accumulate less assets (Ginn & Arber, 2018; Lersch, Jacob, & Hank, 2017).

While East and West Germany represented demographically and culturally distinct regions before their separation post-World War II (Klüsener & Goldstein, 2016), the Cold War era facilitated opposing gender regimes and generated considerably different employment biographies for women in East vs. West Germany. In an attempt to maximize the productivity of its smaller labor force, socialist East Germany promoted the equal labor force participation of both genders. By gradually expanding public childcare in the 1960s and 1970s, reconciliation measures such as flexible working hours and taking leave in case of ill children, as well as the creation of a highly

qualified female labor force, full-time employment became the norm – and the expectation – for women after having children. In West Germany, women’s educational attainment and labor force participation has increased since the 1970s, yet maternal part-time employment remained common as extensive parental leave regulations, shortage of public childcare and joint taxation catered to a male breadwinner or ‘1.5-earner’ model. Following German reunification in 1990 and the adoption of the West’s institutional structure in the East, the employment biographies of younger cohorts in East and West Germany are still distinct but slowly converging (Rosenfeld, Trappe, & Gornick, 2004; Trappe et al., 2015). Considering the current cohort of pensions, average public pension benefits in 2018 amounted to €1173 for men and €954 for women in East Germany as opposed to €1100 for men and €658 for women in West Germany (Deutsche Rentenversicherung Bund, 2019). In line with these findings, the motherhood penalty on pensions is far less pronounced in East Germany (Mika & Czaplicki, 2017).

### **Women’s employment biographies from a couples’ perspective**

Women’s employment biographies and financial well-being are linked with those of their spouses (Han & Moen 1999). A couple context may mitigate inequalities, for instance when women assume the role of main breadwinner if their spouse becomes unemployed (e.g. (Ehlert, 2015) or when pooled resources supplement individual income deficits in later life (Sefton et al. 2011). However, this set-up may also perpetuate gender inequalities (Krüger & Levy 2001). For example, women are more likely to forego pension benefits as they co-enter retirement early with their spouses (O’Rand & Farkas, 2002). Further, time spent on unpaid household and care work cannot be spent in paid employment (Kühhirt & Ludwig, 2012). Thus, women are more likely to take career breaks and accumulate smaller pensions due to engaging in (the majority of) unpaid work and care within the household (Ginn & Arber 1999).

Yet, even in households where the male is the main breadwinner, some women pursue more continuous careers than others do. Previous research finds that women with higher human capital (i.e. earnings potential in terms of educational attainment, work experience and previous incomes) are more likely to remain in the labor market (Hynes & Clarkberg, 2005) and to have higher retirement incomes (Fasang, 2012). Further studies emphasize that this variation also depends on the relative difference between spouses' respective human capital (Blossfeld & Drobnič, 2001; Gronau, 1977). This indicates that women's share of the household work or the extent of their labor market engagement may be subject to decision-making processes within the household (Heinz, 2003). While such decisions continue to represent a black box, competing approaches highlight the influence of specialization, bargaining processes and gender norms (Bennett 2013; (Himmelweit, Santos, Sevilla, & Sofer, 2013)).

New household economics and bargaining approaches focus on the distribution of human capital between spouses. The new household economics approach explains the gendered division of unpaid household work and paid employment in the context of spouses' specializing in one or the other according to their relative (dis-)advantage in human capital: Thus, the spouse expected to achieve a larger income should focus on paid employment, thereby maximizing the shared utility function of the couple. While previous research supports the notion that spouses' relative human capital is linked to their respective engagement in household work and paid employment (Hofäcker, Stoilova, & Riebling, 2013), it also implies a less than clear-cut specialization and separate utility functions of spouses (Blossfeld & Drobnič, 2001; Lundberg & Ward-Batts, 2000). Bargaining approaches instead emphasize spouses' separate utility functions, and thus consider motives beyond the maximization of household income, such as individual financial autonomy or employment as a means of self-realization and participation. Such approaches treat decisions

within the couple as subject to negotiations, the outcomes of which cater to spouses' individual utility functions according to their relative bargaining power. Here, the distribution of relative bargaining power within the couple may be understood in terms of the difference between spouses' respective human capital  $h$  (Blood & Wolfe, 1960; Browning, Bourguignon, Chiappori, & Lechene, 1994; Himmelweit et al., 2013). Based on the assumption that neither spouse prefers to engage in unpaid household labor (Gershuny, 2013), the time dedicated to paid employment increases along with relative power, whereas time in unpaid housework decreases (Lundberg & Pollak, 1993). Previous research provides ample support for negotiations within the household: where women have higher relative bargaining power, they are less likely to quit working to care for children, work more hours and their share of household and care work drops not only in Germany, but also in the US and Sweden (Brines, 1994; Cunningham, 2007; Evertsson & Nermo, 2007; Kühhirt, 2012; Presser, 1994; Voßemer & Heyne, 2019).

Despite evidence in favor of within-household negotiations, women with a comparative advantage in bargaining power may still engage in the majority of unpaid household work. Here, further research supports an interplay with gender norms and institutional context (Kan, 2007, 2008).<sup>6</sup> Using a purely income-based conceptualization of relative resources, Nitsche and Grunow (Nitsche & Grunow, 2016) argue that gender role values, rather than relative resources, explain the share of housework each half of a German couple undertakes. This study does not differentiate between the diverging institutional and normative legacies of East and West Germany, even though women in the former performed a significantly smaller share of housework than those in the latter (Geist, 2009). Among West German couples, Kühhirt (Kühhirt, 2012) finds that spouses

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<sup>6</sup> Differences may occur not only along the gender-normative nature of specific household tasks but further depend on the respective day of the week (e.g. Chesley and Flood (2017); Voßemer and Heyne (2019)).

negotiate their share of the household and care work after parenthood, albeit to a limited extent. Against the background of a normative and institutional default of male breadwinning, a gendered division prevails. In a similar vein, German, as well as Australian and American women who achieve incomes similar to or exceeding those of their spouse may even compensate for this inconsistency with the norm of male breadwinning by doing more than their share of the household work; their Swedish counterparts do not exhibit this behavior (Bittman, England, Sayer, Folbre, & Matheson, 2003; Evertsson & Neramo, 2004; Hook, 2017; Procher, Ritter, & Vance, 2018). Overall, this supports a perspective in which women's share of paid employment appears up for negotiation, but within the bounds of cultural and institutional limitations considering how they balance their work–family responsibilities.

## **Analytical Framework**

### **Within-couple negotiations over women's accumulation of pension entitlements**

Figure 1 provides a theoretical framework of spouses' employment trajectories from the time they got together until retirement. The size of an individual's public pension benefits in retirement depends on pension entitlements determined by the number of years they worked and their respective payroll contributions. Women's attempts to reconcile paid employment with household and care work are conditional on their relative bargaining power within the couple, as well as the institutional context (Moen, 2003). At point T1, spouses' lives become linked as they become a couple and might form a union through cohabitation and/or marriage. T2 denotes the birth of the first child. At this point the total amount of unpaid work to be divided within the couple increases, since childrearing tasks add to unpaid household work (Baxter, Hewitt, & Haynes, 2008; Kühhirt, 2012). I focus on negotiations preceding the birth of the first child, since a trade-off between unpaid work and women's subsequent employment history is most likely at this point.

**[Figure 1 here]**

At T2, spouses may negotiate the extent of women's employment following childbirth. Such decisions are not necessarily explicit negotiations between two opposing parties. Instead, spouses' different levels of bargaining power may serve as the background of this decision-making process, implying which option is viable and which is not (Agarwal, 1997). However, based on how bargaining approaches are conceptualized, I use the term negotiations. I make three assumptions related to these within-couple negotiations: First, both spouses favor paid labor over unpaid household labor because it determines their bargaining power in future conflicts, represents social participation and involvement, and may lead to a higher household income. Second, although long-term implications regarding spouses' retirement income may play a role in such negotiations, I expect that the accrual of pension entitlements is mainly a side effect of couples' decisions regarding their care and employment arrangements. Third, I assume that couples' general arrangement on the division of labor after the birth of the first child remains valid for subsequent children.<sup>7</sup>

Couples' negotiations are likely to vary based on whether they uphold traditional gender role values emphasizing a woman's role as the primary caregiver. Generally, negotiations within the couple may revolve around a combination of the following questions: a) will the mother re-enter the labor market and, if yes, b) when and c) to what extent? Subsequently, the extent of maternal employment may require a shift in the couple's division of household and care tasks. In this case, these additional questions arise: Does the couple balance these responsibilities by d) drawing on (public) childcare or informal care by relatives or e) reorganizing (the remaining) unpaid

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<sup>7</sup> To my knowledge, previous research does not look at (re-)negotiations of couples' division of labor near second or subsequent births. In order to capture changes in pension point accumulation after subsequent births, I control for changes in the number of children across the observation window.

household and care work (more) equally between them? Given the context of traditional gender role orientations that emphasize household and care work as women's primary domain, as well as gender-specific wage differences, negotiations may not necessarily occur on an equal playing field. I argue that negotiations in this setting suffer from an *a priori* power asymmetry that allocates the majority of household and care tasks to women regardless of their bargaining power. Consequently, negotiations in practice do not solely focus on the *actual division* of a couple's household tasks. Instead, spouses may further deliberate whether her labor market re-entry is feasible, and to what degree women balancing of household plus care work vs. paid employment is possible without neglecting either – but especially not the former.

I conceptualize spouses' relative bargaining power in negotiations at T2 as their respective human capital, in terms of previous educational attainment and work experience (Doss, 2003). Women equipped with human capital that is equal to or even greater than that of their spouse hold more bargaining power than those with a considerably smaller share of human capital within the couple. Consequently, they are in a more favorable position when negotiating the conditions and extent of their labor market engagement after parenthood, which may encompass the time of their labor-market re-entry as well as their working hours and career prospects. I develop two hypotheses about how relative bargaining power affects the course of these negotiations.

*Bargaining Hypothesis:* The greater the share of relative bargaining power a woman holds within the couple before the birth of their first child, the more pension entitlements she will accumulate, on average, between the birth of the first child and retirement.

In order to test whether the relationship between women's relative bargaining power and their accumulation of PEP follows the expected path dependency via the extent of their maternal employment, I formulate the following hypothesis:

*Mediation Hypothesis:* The number of months that women spend in employment between the birth of the first child and retirement mediates the relationship between her share of relative bargaining power within the couple before the birth of the first child and her subsequent accumulation of pension entitlements.

While I expect that women's subsequent employment trajectories mediate the relationship between relative bargaining power and PEP accrual, selection into second and further births may prove a complementary explanation. Consequently, women with higher relative bargaining power might be less likely to have more than one child due to a stronger focus on their careers, thus further reducing the overall potential for a work–family conflict. However, women with lower relative bargaining resources might exhibit lower labor market attachment, against the background of increased fertility. I therefore also test the degree to which relative bargaining resources are associated with fertility trajectories after the birth of the first child.

### **Bounded bargaining: East versus West Germany**

Couples' negotiations are embedded in an institutional and cultural context, which limits the range of viable outcomes (Doss, 2003). For instance, tax and family policies, the labor market, the availability and price of public childcare provision, as well as cultural norms shape maternal employment and negotiations on the division of paid and unpaid labor (Boeckmann, Misra, & Budig, 2015; Moen & Wethington, 1992; Wanrooy, 2013). Thus, the role of relative bargaining power may vary across contexts as the opportunity structure for maternal employment limits the potential outcomes of within-couple negotiations (Evertsson & Neramo, 2004; Schober, 2013; Wood, Kil, & Marynissen, 2018).

Before their reunification in 1990, East and West Germany represented diverging gender regimes: the former supported a dual-earner and the latter a male breadwinner model for couples.

Covering birth cohorts 1925–1967, women in this study spent the majority of their working lives (or at their least formative years and early careers) in opposing contexts. In former socialist East Germany, public childcare provision expanded gradually from the 1960s, and a focus on female labor market integration created normative expectations of maternal full-time employment. This historical legacy persists: along with a greater availability of public childcare for children under three, the extent and acceptance of maternal employment remain considerably higher in East than in West Germany (Boeckmann et al., 2015; Cooke, 2006b; Hummelsheim & Hirschle, 2010). In West Germany, female labor market participation increased substantially from the 1970s. However, women often work part-time or exit the labor market after having children in the institutional background of joint taxation, extensive parental leave and the under provision of public childcare (Trappe et al., 2015).

At this point, the following scenarios regarding the respective roles of bargaining resources for the accrual of women’s pension entitlements in East and West Germany appear plausible. In East Germany, women’s relative bargaining power may be related to their accumulation of PEP, because the measures in place designed to keep them in full-time employment impose no upper limit on negotiations surrounding the extent of maternal employment. Vice versa, cultural expectations and institutional support may render maternal full-time employment the norm for the majority of women regardless of their level of bargaining power within the couple. In West Germany, the ‘male breadwinner’ model based on women’s role as the primary caregiver is a persistent obstacle to maternal employment and related negotiations. Yet, the lack of institutional support for maternal full-time employment coincides with a comparatively high prevalence of part-time employment in West Germany. In this context, women in West Germany may negotiate the

extent of their employment after having children within the boundaries of the reconciliation opportunities available to them.

## **Method**

### **Data**

The analyses are based on SHARE-RV Release 7.0.0 (Forschungsdatenzentrum Der Rentenversicherung & Max-Planck-Institut Für Sozialrecht Und Sozialpolitik, 2019), a data linkage between the German sample of the SHARE survey data (Börsch-Supan et al., 2013) with administrative records on respondents' life courses from the German pension insurance (*Versichertenkontenstichprobe*). The administrative records provide a maximum of 624 monthly measurements of individuals' employment status and their associated PEP, from January of the year of their 14<sup>th</sup> birthday until December of the year they turn 65. Through identifier variables for couples and their respective spouses included in the SHARE data, researchers can link those records and pursue a multi-actor approach.

### **Sample**

The analytical sample is based on the monthly records from the longitudinal administrative data of women who provided their most recent interview between SHARE Waves 4 and 7 (2011–2017) and were at least 50 years or older at the time of the interview (2,177 observations). Further, I limit the analytical sample to women with at least one child (1,895 observations). Of these, 70% are currently married, 8.4% are divorced and 15.8% are widowed; the rest were either never married (1.4%) or lack information on marital status. 1,129 observations have a record linkage that allows combining information on women's biographies before parenthood with those of their opposite-sex spouses. Due to the nature of the data, an unambiguous linkage with their spouses' life-course

records is only feasible for continuously married women. Therefore, I exclude unmarried couples as well as those in which either spouse has been previously divorced or widowed. I account for both, couples with pre-marital and marital births as long as spouses' eventually marry. Especially in the GDR, postponement of marriage was common, since non-married (first-time) mothers were granted access to additional benefits for up to one year (Dorbritz, 2008). The sample is further restricted to couples that married and had children before the age of 40; since the youngest observations in SHARE are 50 years old, this guarantees a minimum observation window of 10 years after parenthood and preserves the notion of linked lives between spouses. This selection process yields an analytical sample of 812 observations (East Germany:  $n=226$ ; West Germany:  $n=586$ ) covering the birth cohorts 1925–1967.

Depending on the year of birth and region, maternal leave policies vary. In West Germany, it is 6 weeks for births before 1965 and 8 weeks for those after. In East Germany, it is 14 weeks for births before 1972, 18 weeks between 1972 and 1976, 24 weeks after 1976 and 8 weeks after reunification in 1990 (Kreyenfeld, 2004). The observation window of the unbalanced panel spans from the first month after maternal leave (i.e. as soon as maternal employment is legal) to the first month of the year in which individuals turn 60 (biography month 553). Analyses draw on  $n=98,275$  person-months with an average of 434.8 months per person for East Germany and  $n=240,672$  with an average of 410.7 person-months in West Germany (see Table 1).

### **Sample Limitations**

This study draws on a selective sample of the administrative pension records of mothers in stable marriages, which limits the generalizability of the results with regards to the following aspects. The results can only provide insights on the trajectories of women covered by the German public pension insurance, which applies to the majority of the cohorts 1925–1967. Women in self-

employment or belonging to a distinct class of civil servants (*beamte*) are likely underrepresented, because both groups are excluded from mandatory participation in the public pension insurance. Nor can the findings be generalized to divorced or widowed mothers. For the birth cohorts in this study, marriage represents the predominant marital status (Staatliche Zentralverwaltung für Statistik, 1971, 1989; Statistisches Bundesamt, 1971, 1989). However, for the birth cohorts 1953–1972, about 31% of marriages in East and 26% in West Germany dissolve by the time the youngest child is aged 15 (Andersson, 2002). Theoretically, couples' inability to resolve negotiations may result in marriage dissolution, which would mean that the sample only represents couples that eventually reach a workable arrangement. Further, selectivity on the survival of both spouses increases especially for older birth cohorts.<sup>8</sup> Scrutinizing the role of mothers' marital status, I present descriptive analyses of (continuously) married mothers' accrual of pension entitlements in reference to the trajectories of divorced (East Germany: n=47; West Germany: n=115) and widowed mothers (East Germany: n=84; West Germany: n=217). Highlighting the gender specificity of pension entitlement accumulation, I further provide comparisons to married fathers (East Germany: n=161; West Germany: n=490) (see Figure 2).

## **Measurement**

The main dependent variable is the monthly accumulated sum of women's PEP. German pension insurance awards PEP based on an individual's contributions: one PEP represents contributions equivalent to those of the average income of the insured population in a given year. PEP also indicate the mother's income level: 0.083 PEP are equal to contributions of the average income of the insured population in a given month. Thus, the measurement is already time equivalent by

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<sup>8</sup> Sensitivity analyses excluding observations born before 1945 yield similar results. All models in this study further control for birth cohort.

design. I utilize uncorrected pension points,<sup>9</sup> i.e. those before the revaluation taking into account childrearing periods, to capture mothers' raw accumulation of pension entitlements following the birth of their first child.

I operationalize women's bargaining power before having children as a combined measurement of relative earnings potential, drawing on both spouses' previous educational attainment and employment experience (Becker, 2009; Doss, 2003).<sup>10</sup> Educational attainment is an early career measure that captures access to different professions and income brackets. Focusing on education alone might underestimate the asymmetric power between partners due to a tendency for assortative mating (Grave & Schmidt, 2012). Combining education with employment experience generates for a more sensible instrument, as it also encompasses the evolution of individuals' human capital over time. Educational attainment is a linear measurement of respondents' (hypothetical) years of education; here, respondents' measured years of education are rescaled through region-specific regressions on their educational attainment and that of their parents, measured as International Standard Classification of Education (ISCED 1997).<sup>11</sup> This approach accounts for the distinct educational systems of East and West Germany and adjusts for potential measurement errors (Schneider, 2016). Women's educational attainment is divided by the sum of both spouses' respective attainment, resulting in a relative share, ranging between 0 and 1, i.e. 0–100% (Esping-Andersen & Schmitt, 2020). Similarly, I divide women's sum of months in employment before parenthood (1 for regular, 0.5. for part-time employment)<sup>12</sup> by the total sum

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<sup>9</sup> Sensitivity analyses employing corrected PEP as a response variable lead to similar conclusions (see Table A3).

<sup>10</sup> A combination of educational attainment and past earnings in terms of previously accumulated PEP serves as an alternative measurement of relative bargaining power (e.g. Brines (1994); Sorensen and McLanahan (1987)) and yields results similar to those in the main analysis. Results are available on request.

<sup>11</sup> Robustness checks employing a ratio of spouses' ISCED 1997 attainments yield similar results. However, a linearized measure of education is preferable for the construction of composite measurements (Schneider 2016)

<sup>12</sup> Previous studies suggest operationalizing part-time engagements as employment associated with contributions below 60% of average PEP in a given month (e.g. Söhn and Mika (2017)).

of employment experience before parenthood of both spouses. The average of both measures represents an operationalization of women's relative bargaining power, which ranges from 0 to 1: 0.1 indicates a woman holds 10% as opposed to her spouse holding 90% of bargaining power and 0.5 denotes equilibrium between spouses (see Table A1 and Table 1). Values more than 2.5 SD above or below the mean have been top and bottom coded, respectively, to minimize the effect of outliers. To isolate the effect of women's share of bargaining power, I control for couples' combined earning potential (Bittman et al., 2003) as the sum of their educational attainment and employment experience, both normalized by region to allow for comparison and reduce collinearity.

I include a number of additional measures to account for the age sensitivity of the main independent variable: women's age at marriage, the age gap between spouses and age at the birth of the first child in years. Controlling for initial differences in earning points, I include the months spent in employment before motherhood (0–1, normalized by region). Furthermore, I control for cohort (born <1940, 1940–1944, 1945–1949, 1950–1954, 1955–1959 and 1960–1967), as well as time-varying measurement for the number of children across the observation window (1 to  $\geq 4$ ), survey wave (4–7), and pension status (disability pensioner, old-age pensioner, no pensioner). To test the hypothesis that women's relative bargaining power is related to their accumulation of pension entitlements through their subsequent labor market attachment, I draw on women's cumulative months employed after the birth of their first child (1 for full-time, 0.5 for part-time employment) as a mediator variable.

**[Table 1 here]**

## **Method**

My analytical strategy proceeds in two steps. First, I apply random effects growth curve models separately for East and West Germany, estimating average trajectories of women’s individual growth in PEP over time. The method conceptualizes individual biography months on level 1 as nested into individuals at level 2 and accounts for serial correlation while allowing for unbalanced panel data. In contrast to fixed effects models, random effects models accommodate time-varying and time-constant covariates, which enables me to model growth contingent on a time-constant parameter such as women’s (pre-parenthood) relative bargaining power (Banerjee, 2009).<sup>13</sup>

$$\begin{aligned}
 PEP_{it} = & \alpha + \beta_1 month_{cit} + \beta_2 month_{cit}^2 + \beta_3 month_{cit}^3 + \delta Rel.Pow._i + \\
 & \vartheta_1 Rel.Pow._i * month_{cit} + \vartheta_2 Rel.Pow._i * month_{cit}^2 + \vartheta_3 Rel.Pow._i * month_{cit}^3 \\
 & + \sum \tau_j controls_{jit} + \mu_i + \varepsilon_{it}
 \end{aligned}$$

Women’s cumulative PEP after the birth of their first child  $PEP_{it}$  is a function of their age ( $\beta_1 month_{cit}$ ), which is operationalized as biography month and centered at month 313, i.e. at an age of about 40 years. I also include second- and third-order terms of biography month ( $\beta_2 month_{cit}^2 + \beta_3 month_{cit}^3$ ) to account for non-linearity and the potential volatility of trajectories against the background of (care-related) labor market exits and re-entries.<sup>14</sup>  $\delta Rel.Pow._i$  indicates the average between-individual differences in PEP at time 0 (i.e. biography month 313) by relative bargaining power. Interaction terms with biography month, as well as its second- and third-order terms, allow us to estimate monthly changes in growth curves conditional

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<sup>13</sup> As a robustness check for unobserved heterogeneity bias, I estimated separate fixed effects models for different baseline levels of the explanatory variable. Results are available on request (e.g. Brüderl, Kratz, and Bauer (2019)).

<sup>14</sup> I employed a categorical measurement of month as a robustness check for the underlying function of time (see Table A7). Against the background of the large number of parameters, the coefficients for biography months and their interactions with relative bargaining power are not consistently significant, but point in the same direction as the main analyses (see Figures A2 and A3). Predicted values of this robustness check exhibit a pattern that is similar to that of the age parametrization applied in the main analyses (compare Figures 3 and A4).

on women's relative bargaining power ( $\vartheta_1 Rel.Pow._i * month_{cit} + \vartheta_2 Rel.Pow._i * month_{cit}^2 + \vartheta_3 Rel.Pow._i * month_{cit}^3$ ). Lastly,  $\tau_j$  denotes coefficients for  $j$  time-varying and time-constant control variables (see the Measurement section).

In a second step, I assess whether the extent of women's employment after the birth of their first child mediates the relationship between their relative bargaining power and their accrual of earning points. I use the R-package *Mediate* (Tingley, Yamamoto, Hirose, Keele, & Imai, 2014) to distinguish between direct and indirect effects, thus quantifying the proportion, which follows the hypothesized mechanism. However, causal interpretations should be made cautiously, since the mediator may be correlated with other intervening factors not accounted for in this study (Lersch et al., 2017; Singer & Willett, 2003). I further apply growth-curve models to women's fertility, employing both a regular and squared term of bargaining power to determine whether women with strong or weak bargaining positions select on second- and higher-order fertility.

## **Results**

### **Pension earning point accumulation of married mothers in East and West Germany**

Women in East Germany have their first child, on average, at the age of 21.9 – about 2.4 years earlier than those in West Germany. This finding applies to spouses as well, since the age difference within couples is very similar (2.5 years in the East and 2.7 years in the West). West German women not only have their first child later; they also have more children – an average of 2 compared to about 1.9 in East Germany (see Table 1). This is in line with previous research reporting higher total fertility rates in view of fewer childless women in East Germany, but larger families (three or more children) in West Germany (Goldstein & Kreyenfeld, 2011).

Figure 2 (upper row, first and second column) depicts a baseline model of (continuously) married mothers' average predicted accumulation of PEP after the birth of their first child in East and West Germany (see also Table A2, Models 1a and 1b). In the main sample of this analysis, married mothers in East Germany exhibit a substantially higher rate of pension entitlements accrual after the birth of their first child than their West German counterparts. By age 40, married mothers in East Germany have accumulated, on average, about 12 as opposed to an average of 8.5 PEP in the West. This gap of about 3.5 PEP to around 7.4 by age 50, when East German mothers have accrued 19.3 PEP compared to 11.9 in West Germany. Given the low accumulation rate after motherhood in West Germany, employment before the birth of the first child is a highly significant predictor of their cumulative sum of PEP ( $p < 0.001$ ). In East Germany, this relationship is slightly negative, indicating that mothers' employment before the birth of their first child does not contribute much to their overall accumulation of pension rights across the life course (Table A2, Models 1a and 1b). Growth curves slightly plateau towards the end of the observation window, which suggests there may be cohort differences. The youngest birth cohort (1960–1967) displays a higher rate of pension entitlements accrual, but this cohort had not reached age 60 at the time the data was recorded, indicating that those estimations are mainly based on older cohorts with lower accumulation rates.

**[Figure 2 here]**

I further contrast the trajectories of married mothers with those of divorced and widowed mothers, as well as a sample of spouses, i.e. (continuously) married fathers (Figure 2). Among East German mothers, there is little variation in PEP accumulation trajectories by marital status. By age 50, married mothers have accrued about 19.3 PEP, compared to 18.5 for divorced (bottom row, third column) and 18.3 PEP for widowed mothers (upper row, third column). In West

Germany, widowed mothers accumulate the least PEP during their life course (upper row, fourth column) – around 9.8 by age 50 (about 2.1 less than married mothers). This finding is likely driven by cohort-specific differences in female labor market participation, since the trajectories are otherwise rather similar, but about 82% of widowed mothers in the sample were born before 1950. Divorced mothers exhibit the steepest accumulation rates, with around 15.1 PEP by age 50 (bottom row; fourth column). In line with previous research, the accumulation trajectories of married mothers and their spouses are substantially more similar in East than in West Germany at the age of 50 (bottom row, first column). In West Germany, married fathers have accrued on average about 28.7 PEP by age 50, resulting in a gap of 16.8 compared to married mothers (bottom row, second column). The gap in East Germany is 4.7 PEP, where married fathers have earned an average of 24 PEP. In line with these findings, spouses' combined earnings potential is a significant predictor of married mothers' PEP accumulation in East (but not West) Germany (Table A2, Models 1a and 1b).

### **Variation in accumulation trajectories by bargaining power**

Despite married mothers' different PEP trajectories in the East and West, relative bargaining power is distributed similarly across East Germany (mean 0.45, SD 0.10) and West Germany (mean 0.45, SD 0.12) (see Table 1, Figure A1). Table 2 details the relationship between relative bargaining power before motherhood and the accumulation of PEP before the birth of the first child (for full estimates see also Table A2, Models 2a and 2b).

### **[Table 2 here]**

In West Germany, the general growth in mothers' PEP of about 0.013 per month is significant ( $p < 0.01$ , Table 2), and well below the population average of 0.083 PEP per month. Figure 3 (right column) visualizes PEP trajectories by level of bargaining power in West Germany. Bargaining

power before the birth of the first child is not significantly associated with differences in PEP at biography month 313 (~40 years). Instead, mothers' trajectories are almost parallel until the center of the observation window, having accrued a total of 6–9 PEP. While there is no significant difference at age 40 in mothers' biographies, the interaction term between bargaining power and biography month indicates significantly different growth curves ( $p < 0.001$ ), which manifest in significant differences between age 40 and 60 (*Bargaining hypothesis*).

By age 60, mothers with a bargaining power over 0.4 (i.e. 40%) hold, on average, 9–12 PEP, whereas those with less than 40% bargaining power within the household have accrued fewer than 9 PEP. Here, each difference of 0.1, i.e. 10 percentage points in bargaining power, equals an increased accumulation of ca. 0.003 PEP per month. At about 0.041 PEP across a year, this translates into half an additional month of contributions equivalent to the average of the pension insurance population. At a current pension value of €34.19, the gap in monthly pension income for each 10-percentage-point difference in bargaining power increases by approximately €14 every 10 years. Employing corrected PEP with an *ex post* revaluation of part-time work during childrearing periods by the German pension insurance, this gap increases to roughly €16 (see Table A3).

In East Germany, the main term on general growth in mothers' PEP of about 0.075 per month is significant ( $p < 0.001$ , Table 2) and about six times higher than in West Germany. Neither the main effect of relative bargaining power nor the interaction terms predict significantly different growth curves in PEP accumulation (Table 2). Accumulation trajectories by bargaining power are mostly parallel, before exhibiting a (non-significant) reverse trend of women with less bargaining power accumulating more PEP in later life (Figure 3, left column); this can likely be attributed to the comparatively small number of observations in East Germany (see also Figure A1).

**[Figure 3 here]**

Table 3 shows whether (and to what degree) mothers' employment after the birth of their first child mediates the relationship between bargaining power and PEP accumulation (see Table A4 for full models). Here, Model 1 estimates growth curves on mother's PEP accumulation by bargaining power (equivalent to Table 2), Model 2 adds the mediator of months in employment after the birth of their first child, and Model 3 tests whether bargaining power is linked to differences in the extent of maternal employment across the life-course. Model 2a indicates that, when controlling for the extent of employment ( $p < 0.001$ ), East German mothers with more bargaining power accumulate fewer PEP ( $p < 0.05$ ). However, bargaining power is not associated with significant differences in the extent of employment after the birth of the first child of East German mothers (Model 3a). In West Germany, the interaction between month and bargaining power becomes substantially smaller (0.034 to 0.020,  $p < 0.001$ ), and general monthly growth becomes insignificant, when controlling for the length of employment (Model 2b,  $p < 0.001$ ). In Model 3b the main term for mothers' bargaining power indicates no significant difference by month 313 (age 40) in the months spent in employment after the birth of the first child. Analogous to the findings on PEP accumulation, however, monthly growth in the extent of employment is conditional on bargaining power and only diverges significantly after the age of 40. Here, each 0.1 difference in mothers' relative bargaining power translates to an average monthly difference of close to 0.2 months spent in employment. The combination of (1) the interaction term of bargaining power and the reduction of growth (Model 2b) and (2) the growth in employment after motherhood conditional on bargaining power indicates a mediating relationship (*Mediation hypothesis*).

**[Table 3 here]**

Table 4 presents a decomposition of the interaction term of bargaining power and growth. The total effect amounts to 0.034, with an effect size of 0.014 mediated through the extent of

employment after motherhood. Accordingly, approximately 41% of the growth differences in PEP accumulation by bargaining power in West Germany is mediated by the extent of employment after motherhood ( $p < 0.001$ ). Against the background of these findings, I test whether the relationship among women's bargaining power, employment after motherhood, and PEP accumulation during the life course results from selectivity into second and higher-order births. In order to account for selective fertility at either end of the bargaining power distribution, I also include a squared term for bargaining power. Neither in East, nor in West Germany is bargaining power related to significantly more or less births after the first child (full results reported in Appendix Table A5).

**[Table 4 here]**

## **Summary and Discussion**

This study examines the accrual of pension entitlements across the life-course of married mothers in East and West Germany by applying a theoretical perspective where maternal employment is linked to bargaining processes within couples. Analyses were based on a data-linkage between monthly administrative life-course records of German pension data and survey data from the Survey of Health Ageing and Retirement with a sample of  $N=226$  East and  $N=586$  West German mothers. Employing a series of random effects growth curve models, the results generally show that mothers in the East German context accumulate considerably more pension entitlements than their West German counterparts. The main finding is that bargaining power before motherhood is positively linked to women's subsequent accrual of pension rights in West (but not East) Germany. These results are discussed in further detail below.

In line with past studies (Mika & Czaplicki, 2017), I observe pronounced differences in the pension entitlements accrued by married mothers in East and West Germany. By age 60, married mothers in East Germany accumulate, on average, about 20 PEP compared to 12.2 PEP in West Germany. Given the current pension value (as of July 2020) of €33.23 in East and €34.19 in West Germany, this equals a raw monthly pension difference of about €247. The respectively small and large gaps between spouses' individual PEP in East and West Germany resemble the historically diverging legacies of 'dual earner' and 'male breadwinner' regimes. Accordingly, spouses' combined earnings potential before parenthood serves as a significant predictor of mothers' pension entitlements accrual in East (but not West) Germany. Vice versa, the length of a mother's employment before the birth of her first child represents a significant share of her accrued PEP at retirement in West Germany, because women generally work fewer hours/years after having children. Given the high degree of labor market integration of women and mothers in East Germany, marital status does not reveal substantial differences in accrued pension entitlements. By contrast, divorced mothers in West Germany have earned more pension entitlements than their widowed or (continuously) married counterparts. While this may partly be explained by the benefits resulting from the split of spouses' sum of pension claims upon divorce (*Scheidungslastenausgleich*), it further underlines the lack of support for maternal (full-time) employment in married couples.

The accumulation of pension entitlements is independent from (married) mothers' bargaining power in East Germany. Former socialist East Germany not only provided extensive opportunities to reconcile work and family responsibilities; it also perpetuated a normative expectation of full-time employment after having children (Trappe et al., 2015). Thus, maternal full-time employment may not have been subject to negotiation within the household. Plotting growth curves reveals a

slight negative relationship between bargaining power and pension entitlements accrual, which becomes significant after controlling for the extent of employment after the birth of the first child. This might indicate that mothers with lower relative bargaining power are more likely to take up higher-paid occupations, which would also entail higher pension contributions. However, this finding should be cautiously interpreted given the comparatively small number of East German cases, which makes the results susceptible to outliers at either end of the bargaining power distribution. Partly contradicting this explanation, wages and pension contributions in former socialist East Germany were far less stratified than in West Germany (Hegelich, 2004). This may – in addition to the norm of full-time employment – prove a complementary explanation for the lack of differential growth curves by bargaining power.

I find support for the hypothesis that bargaining power before motherhood is positively linked to mothers' accumulation of PEP across the life course in West Germany, yet the relationship is nuanced. At age 40, I do not observe significant differences in mothers' pension claims by bargaining power; however, between ages 40 and 45, differences in PEP accrual become significantly distinct. Mediation analyses support the hypothesis that differences in maternal employment after age 40 mediate the relationship between bargaining power and PEP accumulation by about 41%. The remaining percentage might be mediated by differences in wages and working hours, and possibly the timing of birth(s). Conversely, selection into second and higher-order births by bargaining power plays no role.

This finding suggests that the immediate post-birth biographies of West German mothers are rather homogenous, characterized by little employment given the lengthy parental leave policies and insufficient public childcare provision. Differences only manifest with increasing age – of the mothers and their children. Thus, the impact of bargaining power appears to be 'delayed' until

decreasing care obligations open opportunities for maternal employment. For each additional 10% of bargaining power within the couple, mothers accumulate 0.003 PEP per month more, which equals about 4% of the average monthly PEP in Germany. For instance, mothers with an average bargaining power of 0.45 accumulate about €35 more in monthly pensions after 10 years than those with a bargaining power of 0.2. This effect is not negligible, considering the average pension income of coupled women with one child is around €770 per month (Mika & Czaplicki, 2017),<sup>15</sup> but is still comparatively small. Even as their children grow up and care obligations decrease, mothers in West Germany have very limited room for employment decisions; with higher bargaining power, mothers spend more months in part-time work as opposed to no employment, but maternal full-time employment remains an exception. A possible explanation for this is the joint taxation of incomes, which taxes second earner incomes disproportionately high. Moreover, women still perform the vast majority of household work. In line with these findings, previous studies link women's relative bargaining power to only small decreases in their housework hours in Germany (Esping-Andersen & Schmitt, 2020).

This study suffers from a number of limitations. Due to data restrictions, it draws on a selective sample of continuously married mothers aged 50 or older. Therefore, the results only represent couples whose negotiations eventually result in agreement, and do not extend to mothers with atypical partnership biographies. For instance, I cannot rule out the possibility that comparatively high bargaining power of women is linked to an increased probability of divorce (Cooke, 2006a), and descriptive analyses show that divorced mothers earn considerably more pension entitlements in West Germany. Furthermore, the administrative data do not provide any measures of

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<sup>15</sup> The original estimate of €713 provided by Mika & Czaplicki (2017) refers to the base year 2013 and was adjusted by an inflation rate of 8.11% between 2013 and 2020.

occupational sector, working hours, wages or gender role orientations during the life course, which would have been helpful in painting a more detailed picture of couples' arrangements. With a sample of n=586 observations for West and n=226 for East Germany, one should consider that the regression results - especially for the latter - are susceptible to larger standard errors and potential bias. Lastly, it remains unclear to what degree the results extend to future pensioner cohorts, as the biographies of East and West German mothers are steadily converging.

### **Conclusion and future research avenues**

This study contributes to previous research in a number of ways. Using a novel source of monthly administrative data, I find that mothers' bargaining resources before the birth of their first child have long-term consequences for their individual retirement income in West but not in East Germany. The life-course perspective on retirement applied in this study extends the observation window of previous research on within-couple bargaining. It further highlights how bargaining processes may vary across different institutional and cultural contexts. Whereas the dual earner orientation of East Germany renders negotiations on maternal employment obsolete, married mothers' accumulation of pension entitlements may be subject to within-couple negotiations in West Germany. Differences among the latter mostly stem from the extent of their part-time employment in the second half of their careers, which simultaneously accentuates the limited agency of West German mothers. The results of this study underline how the couples' context may determine gender inequalities in retirement from the early stages of women's life course, as well as the role that adequate reconciliation opportunities can play in mitigating these inequalities.

There are at least three promising avenues for future research. First, it would be interesting to explore how pension accumulation relates to the interplay of both relative bargaining values and gender ideology before parenthood, as well as possibly spouses' respective (gender-specific) wage

differentials. Second, the research scope could be extended to additional pension systems, as well as occupational and private pension incomes. Third, future research could explore additional life-course events beyond the current focus on bargaining power before parenthood, such as cohabitation, marriage or the birth of additional children, and attempt to apply a dynamic bargaining framework assuming constant negotiations across the linked life course.

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## Appendix

[Figure A1 here]

[Table A1 here]

[Table A2 here]

[Table A3 here]

[Table A4 here]

**[Table A5 here]**

**[Table A6 here]**

## Tables

**Table 1 Sample descriptives**

	East Germany		West Germany	
	Mean	SD	Mean	SD
Cumulative PEP	12.40	4.08	8.95	5.09
PEP at age 60	19.96	7.12	12.23	7.49
Rel. bargaining power	.45	.10	.45	.12
Combined earnings potential (normalized)	.50	.12	.39	.10
Empl. after first child	140.76	47.87	60.57	55.04
Empl. before first child (normalized)	.28	.20	.27	.19
Person months	434.85	42.18	410.70	60.25
Age at marriage	22.86	4.18	23.64	4.23
Age at first birth	21.92	3.03	24.30	4.32
Age difference	2.51	3.25	2.74	3.52
Wave				
Wave 4	.05	.23	.06	.23
Wave 5	.07	.25	.12	.32
Wave 6	.10	.30	.10	.30
Wave 7	.78	.41	.72	.45
Number of children (time-var.)	1.85	.71	2.00	.81
Cohort				
<1940	.11	.31	.15	.36
1940 - 1944	.15	.35	.16	.37
1945 - 1949	.17	.38	.16	.36
1950 - 1954	.22	.42	.21	.41
1955 - 1959	.16	.37	.16	.37
1960 - 1967	.19	.39	.17	.37
Pension status				
Disability pensioner	.03	.17	.04	.19
Old-age pensioner	.59	.49	.58	.49
No pensioner	.38	.49	.39	.49
n	98,275		240,672	
N	226		586	

Source: SHARE-RV(7.0.0.), own computations.

**Table 2 Random effects growth curve models of PEP by East and West Germany**

	East Germany b/se		West Germany b/se	
Month	0.075 (0.01)	***	0.013 (0.01)	**
Month <sup>2</sup>	-0.000 (0.00)	*	-0.000 (0.00)	***
Month <sup>3</sup>	-0.000 (0.00)	***	0.000 (0.00)	
Rel. bargaining power	-3.63 (3.27)		1.41 (1.66)	
Rel. bargaining power*month	-0.031 (0.02)		0.034 (0.01)	***
Rel. bargaining power*month <sup>2</sup>	0.000 (0.00)		0.000 (0.00)	
Rel. bargaining power*month <sup>3</sup>	-0.000 (0.00)		-0.000 (0.00)	***
Constant	9.88 (4.58)	*	3.87 (2.13)	
n	98275		240672	
N	226		586	

\* p<.05, \*\* p<.01, \*\*\* p<.001. Cluster-robust standard errors applied. Controlled for cohort, wave, pension status, number of children, employment-experience before first child, combined earnings potential, age at marriage, age at first birth and age difference between spouses (For full models see Table A2). Source: SHARE-RV(7.0.0.), own computations.

**Table 3 Mediation analysis**

	East Germany		West Germany			
	Model 1a - Cum. PEP	Model 2a - Cum. PEP	Model 3a – Empl. post first child	Model 1b- Cum. PEP	Model 2b - Cum. PEP	Model 3b - Empl. post first child
	b/se	b/se	b/se	b/se	b/se	b/se
Month	0.075 (0.01)	*** 0.024 (0.01)	*** 0.78 (0.09)	*** 0.013 (0.00)	** -0.000 (0.00)	*** 0.22 (0.05)
Month <sup>2</sup>	-0.000 (0.00)	* -0.000 (0.00)	** -0.000 (0.00)	-0.000 (0.00)	*** -0.000 (0.00)	*** 0.000 (0.00)
Month <sup>3</sup>	-0.000 (0.00)	*** -0.000 (0.00)	*** -0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)
Rel. bargaining power	-3.63 (3.27)	-2.43 (2.45)	-18.2 (37.26)	1.41 (1.66)	0.12 (1.02)	21.6 (19.72)
Rel. bargaining power*month	-0.031 (0.02)	-0.023 (0.01)	* -0.11 (0.19)	0.034 (0.01)	*** 0.020 (0.00)	*** 0.23 (0.11)
Rel. bargaining power*month <sup>2</sup>	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	-0.000 (0.00)	0.000 (0.00)
Rel. bargaining power*month <sup>3</sup>	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	-0.000 (0.00)	*** -0.000 (0.00)	*** 0.000 (0.00)
Employment post first child		0.066 (0.00)	***		0.059 (0.00)	***
Constant	9.88 (4.58)	* -10.5 (3.17)	*** 309.1 (49.31)	*** 3.87 (2.13)	-6.92 (1.26)	*** 182.1 (27.02)
n	98275	98275	98275	240672	240672	240672
N	226	226	226	586	586	586

\* p<.05, \*\* p<.01, \*\*\* p<.001. Cluster-robust standard errors applied. Controlled for cohort, wave, pension status, number of children, employment-experience before first child, combined earnings potential, age at marriage, age at first birth and age difference between spouses (For full models see Table A4). Source: SHARE-RV(7.0.0.), own computations.

**Table 4 Decomposition of monthly growth in PEP by bargaining power in West Germany**

Total effect	0.034
	[0.015; 0.052]
Direct effect	0.020***
	[0.019; 0.021]
Indirect effect mediated by employment post first child	0.014***
	[0.013; 0.02]
Proportion of effect mediated	0.414***
	[0.39; 0.44]

\* p<.05, \*\* p<.01, \*\*\* p<.001. Cluster-robust standard errors applied.  
95% CI's in brackets. Source: SHARE-RV(7.0.0.), own computations.

**Table A1 Distribution of within-couple bargaining power**

	East Germany				West Germany			
	Men		Women		Men		Women	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Years of education (rescaled)	13.32	1.59	13.23	1.61	13.18	2.11	12.02	1.88
Months in employment before first birth	74.11	44.75	50.38	36.89	93.13	55.86	71.59	51.12
Rel. bargaining power	.55	.10	.45	.10	.55	.12	.45	.12

Source: SHARE-RV(7.0.0.), own computations.

**Table A2 Random effects growth curve models of PEP by East and West Germany (Full models)**

	East Germany				West Germany			
	Model 1a		Model 2a		Model 1b		Model 2b	
	b/se		b/se		b/se		b/se	
Month	0.061 (0.00)	***	0.075 (0.01)	***	0.028 (0.00)	***	0.013 (0.00)	**
Month <sup>2</sup>	-0.000 (0.00)	***	-0.000 (0.00)	*	-0.000 (0.00)	***	-0.000 (0.00)	***
Month <sup>3</sup>	-0.000 (0.00)	***	-0.000 (0.00)	***	-0.000 (0.00)	***	0.000 (0.00)	
Rel. bargaining power			-3.63 (3.27)				1.41 (1.66)	
Rel. bargaining power*month			-0.031 (0.02)				0.034 (0.01)	***
Rel. bargaining power*month <sup>2</sup>			0.000 (0.00)				0.000 (0.00)	
Rel. bargaining power*month <sup>3</sup>			0.000 (0.00)				-0.000 (0.00)	***
Combined earnings potential (normal.)	10.3 (2.77)	***	9.90 (2.84)	***	3.92 (2.78)		4.47 (2.83)	
Employment before first birth (normal.)	-4.45 (2.26)	*	-3.27 (2.82)		13.1 (1.31)	***	12.4 (1.55)	***
Age at marriage	0.023 (0.06)		0.029 (0.06)		0.16 (0.06)	**	0.15 (0.06)	**
Age at first birth	0.053 (0.18)		0.040 (0.19)		-0.19 (0.08)	*	-0.20 (0.08)	**
Age difference	-0.096 (0.07)		-0.13 (0.09)		-0.096 (0.05)	*	-0.079 (0.05)	
Cohort (Ref. < 1940)								
1940-1944	1.65 (1.07)		1.77 (1.08)		-0.099 (0.59)		-0.16 (0.59)	
1945-1949	-0.058 (1.07)		0.051 (1.08)		1.48 (0.62)	*	1.34 (0.63)	*
1950-1954	0.065 (1.06)		0.18 (1.08)		1.38 (0.60)	*	1.19 (0.62)	
1955-1959	0.67 (1.61)		0.72 (1.62)		3.96 (0.80)	***	3.70 (0.84)	***
1960-1967	-0.13 (1.57)		-0.12 (1.58)		3.68 (0.83)	***	3.41 (0.84)	***
Children (Ref. 1)								
2	0.54 (0.39)		0.56 (0.39)		0.30 (0.28)		0.17 (0.28)	
3	-1.42 (0.75)		-1.08 (0.72)		-0.23 (0.46)		-0.45 (0.46)	
4	-3.10 (1.82)		-3.38 (1.79)		-0.37 (0.84)		-0.55 (0.83)	
Wave (Ref. 4)								
5	-0.70 (1.72)		-0.57 (1.79)		-0.26 (0.96)		-0.18 (0.97)	

Table A2 continued

6	-0.55 (1.46)	-0.44 (1.49)	-1.22 (0.97)	-1.23 (0.98)
7	-1.59 (1.46)	-1.46 (1.51)	-0.81 (0.85)	-0.77 (0.86)
Pensioner status (Ref. Disability pensioner)				
Old-age pensioner	-0.085 (1.57)	-0.22 (1.56)	0.51 (0.94)	0.39 (0.95)
No pensioner	-0.35 (1.17)	-0.41 (1.15)	-1.15 (0.81)	-1.16 (0.82)
Constant	8.31 * (3.91)	9.88 * (4.58)	4.01 * (2.02)	3.87 (2.13)
n	98275	98275	240672	240672
N	226	226	586	586

\* p<.05, \*\* p<.01, \*\*\* p<.001. Cluster-robust standard errors applied. Source: SHARE-RV(7.0.0.), own computations.

**Table A3 Random effects growth curve models of corrected PEP by East and West Germany**

	East Germany		West Germany		
	Model 1a	Model 2a	Model 1b	Model 2b	
	b/se	b/se	b/se	b/se	
Month	0.069 (0.00)	0.086 (0.01)	0.028 (0.00)	0.011 (0.00)	*
Month <sup>2</sup>	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	-0.000 (0.00)	
Month <sup>3</sup>	-0.000 (0.00)	-0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	**
Rel. bargaining power		-4.43 (4.10)		3.05 (1.78)	
Rel. bargaining power*month		-0.039 (0.02)		0.038 (0.01)	***
Rel. bargaining power*month <sup>2</sup>		-0.000 (0.00)		0.000 (0.00)	
Rel. bargaining power*month <sup>3</sup>		-0.000 (0.00)		-0.000 (0.00)	*
Combined earnings potential (normal.)	15.9 (3.45)	15.4 (3.56)	4.29 (3.22)	5.42 (3.25)	
Employment before first birth (normal.)	-2.66 (2.73)	-0.91 (3.29)	18.9 (1.50)	17.4 (1.73)	***
Age at marriage	0.058 (0.08)	0.067 (0.08)	0.15 (0.07)	0.14 (0.07)	*
Age at first birth	-0.24 (0.22)	-0.26 (0.23)	-0.41 (0.09)	-0.42 (0.09)	***
Age difference	-0.14 (0.10)	-0.20 (0.12)	-0.15 (0.06)	-0.11 (0.06)	*
Cohort (Ref. < 1940)					
1940-1944	2.69 (1.36)	2.87 (1.36)	0.12 (0.72)	-0.006 (0.71)	
1945-1949	0.094 (1.37)	0.25 (1.37)	1.35 (0.72)	1.09 (0.74)	
1950-1954	0.90 (1.34)	1.07 (1.35)	1.68 (0.71)	1.31 (0.73)	
1955-1959	0.75 (2.04)	0.82 (2.03)	4.64 (0.95)	4.12 (0.99)	***
1960-1967	-0.079 (1.95)	-0.057 (1.95)	4.38 (0.97)	3.87 (0.98)	***
Children (Ref. 1)					
2	1.67 (0.56)	1.69 (0.55)	0.79 (0.33)	0.61 (0.33)	*
3	0.34 (0.99)	0.78 (0.94)	0.55 (0.55)	0.24 (0.54)	
4	-1.78 (2.60)	-2.15 (2.54)	0.80 (1.03)	0.57 (1.02)	

Table A3 continued

Wave (Ref. 4)							
5	0.18		0.37		-0.45		-0.29
	(2.09)		(2.16)		(1.07)		(1.09)
6	0.43		0.59		-1.64		-1.67
	(1.75)		(1.76)		(1.07)		(1.07)
7	-0.50		-0.31		-1.06		-0.99
	(1.63)		(1.68)		(0.93)		(0.94)
Pensioner status (Ref. Disability pensioner)							
Old-age pensioner	-0.094		-0.31		0.33		0.11
	(2.30)		(2.28)		(1.09)		(1.10)
No pensioner	0.74		0.65		-1.46		-1.48
	(1.75)		(1.72)		(0.93)		(0.94)
Constant	12.2	*	14.2	*	9.86	***	9.27
	(4.87)		(5.75)		(2.33)		(2.42)
n	98275		98275		240672		240672
N	226		226		586		586

\* p<.05, \*\* p<.01, \*\*\* p<.001. Cluster-robust standard errors applied. Source: SHARE-RV(7.0.0.), own computations.

**Table A4 Full estimation results for mediation analysis**

	East Germany			West Germany		
	Model 1a - Cum. PEP	Model 2a - Cum. PEP	Model 3a - Empl. post first child	Model 1b- Cum. PEP	Model 2b - Cum. PEP	Model 3b - Empl. post first child
	b/se	b/se	b/se	b/se	b/se	b/se
Month	0.075 (0.01)	*** 0.024 (0.01)	*** 0.78 (0.09)	*** 0.013 (0.00)	** -0.000 (0.00)	*** 0.22 (0.05)
Month <sup>2</sup>	-0.000 (0.00)	* -0.000 (0.00)	** -0.000 (0.00)	*** -0.000 (0.00)	*** -0.000 (0.00)	0.000 (0.00)
Month <sup>3</sup>	-0.000 (0.00)	*** -0.000 (0.00)	*** -0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)
Rel. bargaining power	-3.63 (3.27)	-2.43 (2.45)	-18.2 (37.26)	1.41 (1.66)	0.12 (1.02)	21.6 (19.72)
Rel. bargaining power*month	-0.031 (0.02)	-0.023 (0.01)	* -0.11 (0.19)	0.034 (0.01)	*** 0.020 (0.00)	*** 0.23 (0.11)
Rel. bargaining power*month <sup>2</sup>	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	-0.000 (0.00)	0.000 (0.00)
Rel. bargaining power*month <sup>3</sup>	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	-0.000 (0.00)	*** -0.000 (0.00)	*** 0.000 (0.00)
Combined earnings potential (normal.)	9.90 (2.84)	*** 3.60 (1.64)	* 95.8 (33.70)	** 4.47 (2.83)	2.42 (1.76)	34.4 (38.53)
Employment before first birth (normal.)	-3.27 (2.82)	-0.58 (1.70)	-40.9 (26.80)	12.4 (1.55)	*** 11.2 (1.09)	*** 19.2 (17.49)
Age at marriage	0.029 (0.06)	0.012 (0.04)	0.27 (0.66)	0.15 (0.06)	** 0.099 (0.04)	** 0.92 (0.71)
Age at first birth	0.040 (0.19)	0.66 (0.12)	*** -9.34 (1.91)	*** -0.20 (0.08)	** 0.22 (0.05)	*** -7.06 (0.89)
Age difference	-0.13 (0.09)	-0.048 (0.05)	-1.32 (0.97)	-0.079 (0.05)	0.006 (0.03)	-1.42 (0.64)
Cohort (Ref. < 1940)						
1940-1944	1.77 (1.08)	-0.32 (0.62)	31.8 (11.51)	** -0.16 (0.59)	-0.40 (0.35)	3.91 (7.90)
1945-1949	0.051 (1.08)	-0.70 (0.62)	11.4 (12.35)	1.34 (0.63)	* 0.20 (0.38)	19.3 (8.21)
1950-1954	0.18	-0.25	6.54	1.19	-0.21	23.7

Table A4 continued

	(1.08)	(0.62)	(11.57)		(0.62)		(0.39)	(8.66)	
1955-1959	0.72	0.60	1.72		3.70	***	0.89	47.4	***
	(1.62)	(0.98)	(16.16)		(0.84)		(0.51)	(11.44)	
1960-1967	-0.12	0.83	-14.4		3.41	***	0.88	42.7	***
	(1.58)	(0.96)	(15.34)		(0.84)		(0.53)	(10.88)	
Children (Ref. 1)									
2	0.56	0.17	5.98		0.17		0.82	-11.0	**
	(0.39)	(0.23)	(4.50)		(0.28)		(0.11)	(3.90)	
3	-1.08	0.28	-20.7	*	-0.45		1.51	-33.1	***
	(0.72)	(0.42)	(8.69)		(0.46)		(0.19)	(6.55)	
4	-3.38	0.65	-61.3	*	-0.55		2.73	-55.3	***
	(1.79)	(0.92)	(24.13)		(0.83)		(0.43)	(11.58)	
Wave (Ref. 4)									
5	-0.57	-0.56	-0.11		-0.18		-0.15	-0.58	
	(1.79)	(1.13)	(16.24)		(0.97)		(0.52)	(13.16)	
6	-0.44	-0.80	5.42		-1.23		-0.51	-12.2	
	(1.49)	(1.01)	(13.30)		(0.98)		(0.53)	(12.89)	
7	-1.46	-1.24	-3.42		-0.77		-0.44	-5.72	
	(1.51)	(1.04)	(11.25)		(0.86)		(0.46)	(11.64)	
Pensioner status (Ref. Disability pensioner)									
Old-age pensioner	-0.22	0.15	-5.61		0.39		0.64	-4.23	
	(1.56)	(0.98)	(17.47)		(0.95)		(0.52)	(13.62)	
No pensioner	-0.41	0.0099	-6.34		-1.16		0.38	-26.1	*
	(1.15)	(0.72)	(16.02)		(0.82)		(0.44)	(11.38)	
Employment post first child		0.066		***			0.059		***
		(0.00)					(0.00)		
Constant	9.88	* -10.5	*** 309.1	***	3.87		-6.92	*** 182.1	***
	(4.58)	(3.17)	(49.31)		(2.13)		(1.26)	(27.02)	
n	98275	98275	98275		240672		240672	240672	
N	226	226	226		586		586	586	

\* p<.05, \*\* p<.01, \*\*\* p<.001, Cluster-robust standard errors applied. Source: SHARE-RV(7.0.0.), own computations.

**Table A5 Random effects growth curve models of fertility after first child**

	East Germany		West Germany	
	Model 1a	Model 2a	Model 1b	Model 2b
	b/se	b/se	b/se	b/se
Month	-0.000 (0.00)	-0.003 (0.00)	0.001 (0.00)	*** 0.000 (0.00)
Month <sup>2</sup>	-0.000 (0.00)	*** 0.000 (0.00)	-0.000 (0.00)	*** -0.000 (0.00)
Month <sup>3</sup>	0.000 (0.00)	*** 0.000 (0.00)	0.000 (0.00)	*** 0.000 (0.00)
Rel. bargaining power		2.15 (2.97)		-0.99 (1.93)
Rel. bargaining power <sup>2</sup>		-2.44 (3.25)		1.95 (1.89)
Rel. bargaining power*month		0.012 (0.01)		-0.000 (0.01)
Rel. bargaining power*month <sup>2</sup>		-0.000 (0.00)		-0.000 (0.00)
Rel. bargaining power*month <sup>3</sup>		-0.000 (0.00)		-0.000 (0.00)
Rel. bargaining power <sup>2</sup> *month		-0.011 (0.01)		0.0041 (0.01)
Rel. bargaining power <sup>2</sup> *month <sup>2</sup>		0.000 (0.00)		-0.000 (0.00)
Rel. bargaining power <sup>2</sup> *month <sup>3</sup>		0.000 (0.00)		0.000 (0.00)
Age at marriage	-0.013 (0.01)	-0.012 (0.01)	0.022 (0.01)	* 0.020 (0.01)
Age at first birth	-0.079 (0.02)	*** -0.083 (0.02)	*** -0.058 (0.01)	*** -0.062 (0.01)
Age difference	0.0012 (0.01)	-0.0028 (0.01)	0.010 (0.01)	0.015 (0.01)
Cohort (Ref. < 1940)				
1940-1944	-0.31 (0.18)	-0.29 (0.18)	-0.092 (0.10)	-0.12 (0.10)
1945-1949	-0.33 (0.16)	* -0.32 (0.16)	-0.30 (0.10)	** -0.34 (0.10)
1950-1954	-0.38 (0.17)	* -0.36 (0.17)	* -0.27 (0.10)	* -0.32 (0.11)
1955-1959	-0.52 (0.22)	* -0.50 (0.22)	* -0.20 (0.15)	-0.27 (0.15)
1960-1967	-0.73 (0.21)	*** -0.72 (0.22)	** -0.29 (0.13)	* -0.36 (0.14)
Combined earnings potential (normal.)	0.088 (0.42)	0.087 (0.44)	-1.34 (0.50)	** -1.08 (0.50)
Employment before first birth (normal.)	-0.17 (0.28)	-0.11 (0.35)	-0.13 (0.21)	-0.26 (0.26)
Wave (Ref. 4)				
5	0.21 (0.18)	0.23 (0.19)	0.035 (0.13)	0.056 (0.13)

*Table A5 continued*

6	0.11 (0.17)	0.13 (0.17)	0.083 (0.14)	0.075 (0.14)
7	0.25 (0.15)	0.27 (0.15)	0.19 (0.12)	0.19 (0.11)
Pensioner status (Ref. Disability pensioner)				
Old-age pensioner	-0.35 (0.16)	-0.36 (0.16)	-0.100 (0.16)	-0.14 (0.15)
No pensioner	-0.14 (0.09)	-0.16 (0.10)	0.017 (0.13)	0.0012 (0.13)
Constant	4.45 (0.45)	4.04 (0.87)	3.65 (0.31)	3.79 (0.58)
n	74186	74186	177018	177018
N	226	226	586	586

\* p<.05, \*\* p<.01, \*\*\* p<.001, Cluster-robust standard errors applied. Source: SHARE-RV(7.0.0.), own computations.

**Table A6 Random effects growth curve models of PEP by marital status in East and West Germany**

	East Germany						West Germany					
	Model 1a - Married fathers b/se		Model 2a - Divorced mothers b/se		Model 3a - Widowed mothers b/se		Model 1b - Married fathers b/se		Model 2b - Divorced mothers b/se		Model 3b - Widowed mothers b/se	
Month	0.072 (0.00)	***	0.062 (0.00)	***	0.055 (0.00)	***	0.094 (0.00)	***	0.042 (0.00)	***	0.024 (0.00)	***
Month <sup>2</sup>	-0.000 (0.00)	***	-0.000 (0.00)	***	-0.000 (0.00)	***	-0.000 (0.00)	***	-0.000 (0.00)	*	-0.000 (0.00)	***
Month <sup>3</sup>	-0.000 (0.00)	***	-0.000 (0.00)	***	-0.000 (0.00)	***	-0.000 (0.00)	***	-0.000 (0.00)	***	-0.000 (0.00)	
Employment before first birth (normal.)	6.09 (3.10)	*	9.56 (12.54)		3.11 (15.54)		9.46 (2.83)	***	13.6 (10.68)		22.1 (5.23)	***
Age at first birth	-0.34 (0.11)	**	0.049 (0.23)		0.18 (0.28)		-0.27 (0.10)	*	0.054 (0.20)		-0.075 (0.11)	
Cohort (Ref. < 1940)												
1940-1944	-3.20 (1.13)	**	-2.43 (1.49)		1.75 (1.70)		2.38 (1.19)	*	-3.82 (2.46)		0.76 (0.82)	
1945-1949	-3.05 (0.91)	***	-2.73 (1.55)		-0.75 (1.26)		2.56 (1.16)	*	-3.12 (2.70)		1.23 (1.39)	
1950-1954	-3.11 (1.13)	**	-3.35 (1.33)	*	0.72 (1.49)		0.94 (1.32)		-0.38 (2.72)		0.50 (1.03)	
1955-1959	-4.71 (1.85)	*	-6.69 (1.73)	***	-0.37 (2.64)		9.78 (2.34)	***	-2.33 (3.10)		2.76 (2.02)	
1960-1967	-3.26 (2.01)		-5.18 (1.95)	**	-0.77 (2.77)		8.51 (2.69)	**	-1.84 (3.17)		0.27 (1.73)	
Children (Ref. 1)												
2	0.096 (1.13)		-1.22 (0.87)		0.033 (0.80)		-1.10 (2.72)		0.13 (0.61)		0.089 (0.57)	
3	-3.50 (1.60)	*	-3.62 (1.44)	*	-0.17 (1.67)		-13.2 (2.07)	***	0.012 (0.96)		-0.80 (0.80)	
4	-0.38 (1.24)		-5.07 (2.28)	*	-3.20 (1.68)		0 (.)		-0.24 (1.17)		-1.28 (1.19)	

Table A6 continued

Wave (Ref. 4)								
5	-2.02 (1.64)	-8.50 (2.23)	***	0.45 (3.41)	0.84 (1.90)	5.59 (1.44)	***	1.04 (1.90)
6	-0.11 (1.79)	0.45 (1.97)		0.87 (2.04)	0.31 (1.89)	3.39 (1.35)	*	-0.100 (1.86)
7	-1.00 (1.61)	-1.22 (1.23)		0.11 (1.80)	-0.13 (1.57)	4.15 (1.33)	**	-0.0079 (1.71)
Pensioner status (Ref. Disability pensioner)								
Old-age pensioner	-0.69 (2.39)	-0.96 (1.17)		3.95 (1.90)	* 5.55 (2.20)	* -0.71 (2.09)		3.63 (2.69)
No pensioner	-1.72 (1.65)	4.27 (1.30)	**	2.13 (2.30)	-4.15 (1.96)	* -0.23 (1.67)		3.63 (2.19)
Constant	28.3 (4.01)	*** 15.2 (4.63)	**	4.80 (5.42)	17.1 (3.71)	*** 5.59 (4.62)		3.23 (4.12)
n	65461	20666		37756	186661	48122		95165
N	161	47		84	490	115		217

\* p<.05, \*\* p<.01, \*\*\* p<.001, Cluster-robust standard errors applied. Source: SHARE-RV(7.0.0.), own computations.

**Table A7 Random effects growth curve models of PEP by East and West Germany utilizing a categorical measurement of month**

	East Germany		West Germany	
	b/se		b/se	
Month 51-553 (Ref. Month 313)	Monthly coefficients depicted in <i>Figure A2</i>			
Rel. bargaining power	-3.28 (3.76)		1.77 (1.94)	
Rel. bargaining power*month 51-553 (Ref. Month 313)	Monthly coefficients depicted in <i>Figure A3</i>			
Combined earnings potential (normal.)	9.91 (2.97)	***	4.44 (2.88)	
Employment before first birth (normal.)	-3.25 (2.29)		12.3 (1.45)	***
Age at marriage	0.028 (0.06)		0.15 (0.05)	**
Age at first birth	0.028 (0.15)		-0.20 (0.07)	**
Age difference	-0.14 (0.09)		-0.079 (0.06)	
Cohort (Ref. < 1940)				
1940-1944	1.74 (0.97)		-0.16 (0.60)	
1945-1949	0.038 (0.95)		1.34 (0.62)	*
1950-1954	0.16 (0.95)		1.19 (0.67)	
1955-1959	0.67 (1.52)		3.68 (0.93)	***
1960-1967	-0.21 (1.50)		3.38 (0.93)	***
Children (Ref. 1)				
2	0.42 (0.04)	***	0.11 (0.03)	***
3	-1.24 (0.07)	***	-0.53 (0.04)	***
>=4	-3.48 (0.12)	***	-0.59 (0.06)	***
Wave (Ref.4)				
5	-0.55 (1.42)		-0.19 (0.85)	
6	-0.43 (1.31)		-1.24 (0.87)	
7	-1.45 (1.13)		-0.77 (0.73)	

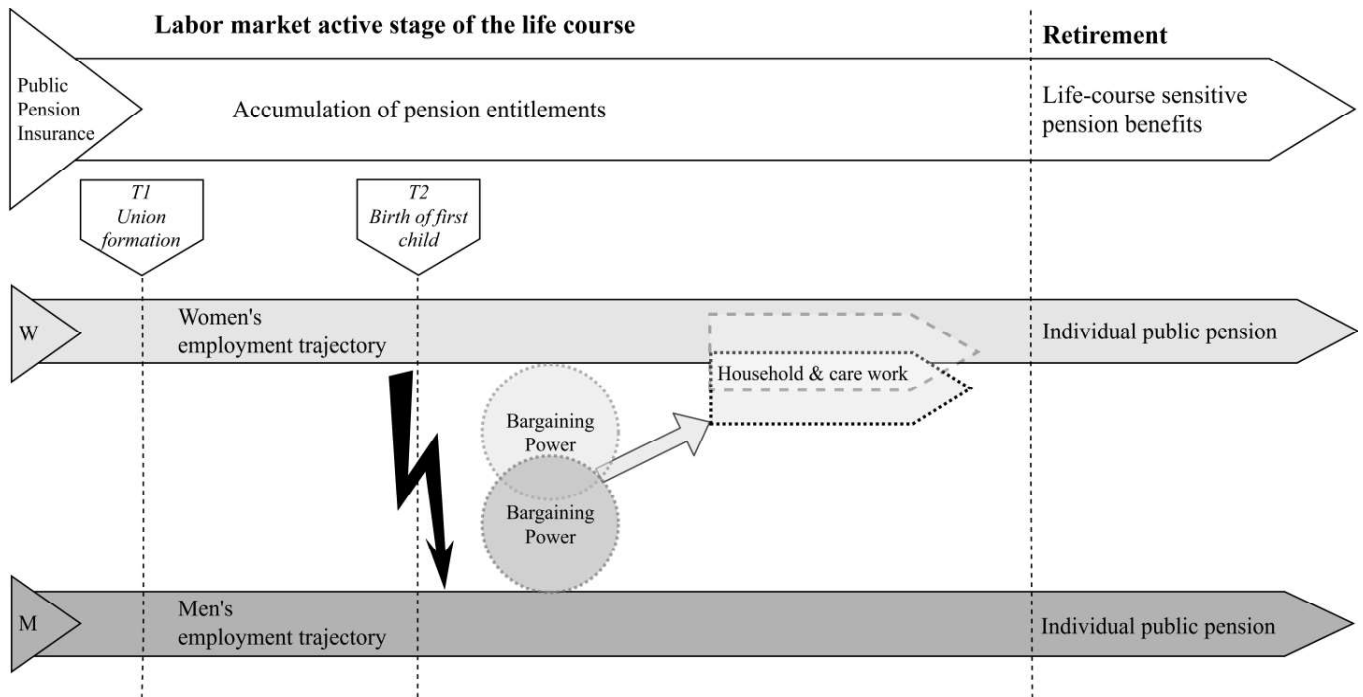
Table A7 continued

Pensioner status (Ref. Disability pensioner)		
Old-age pensioner	-0.29 (1.75)	0.38 (1.07)
No pensioner	-0.44 (1.41)	-1.16 (0.92)
n	98275	240672
N	226	586

\* p<.05, \*\* p<.01, \*\*\* p<.001. Cluster-robust standard errors applied. Source: SHARE-RV(7.0.0.), own computations.

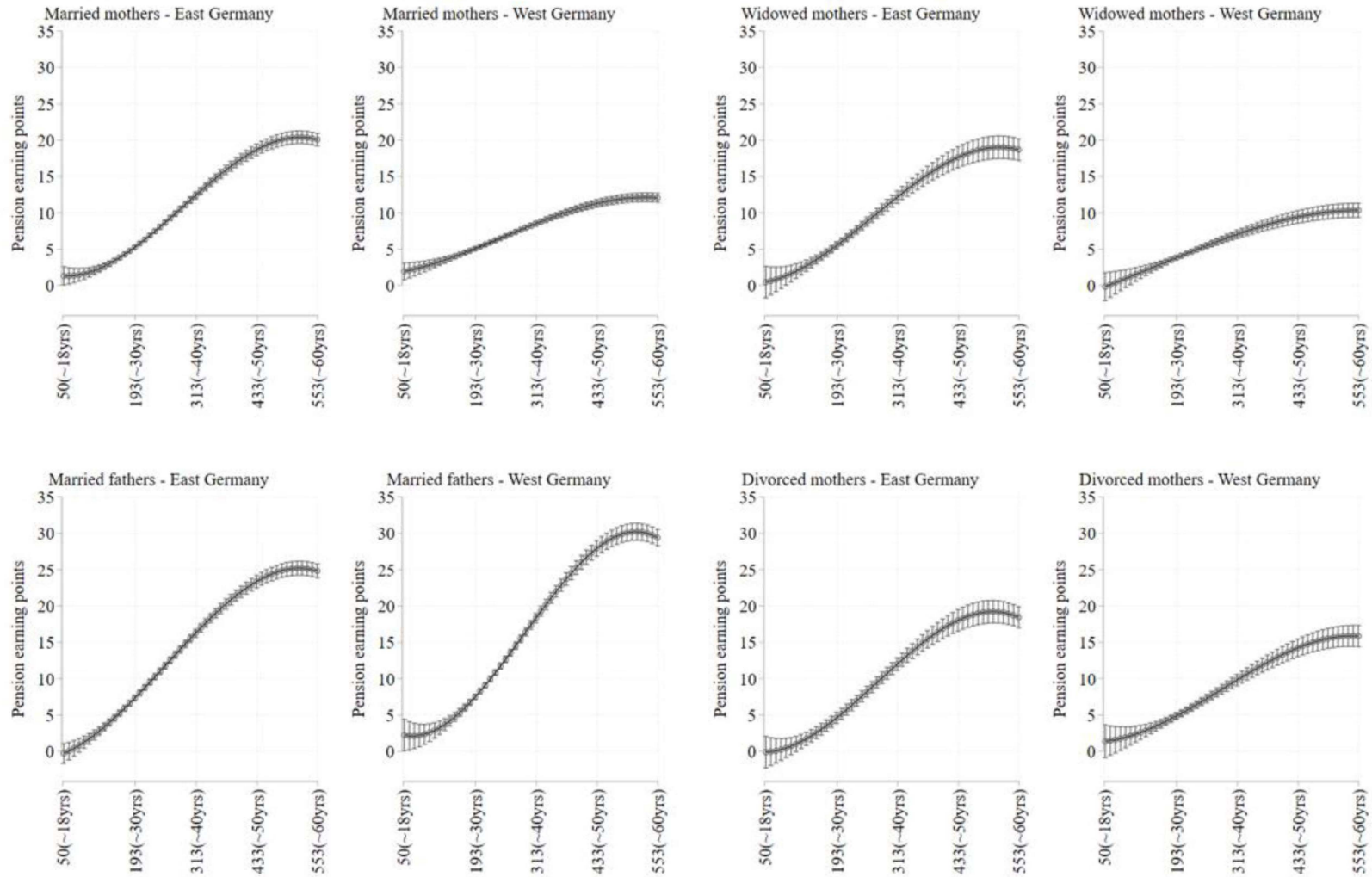
## Figures

Figure 1 Theoretical framework



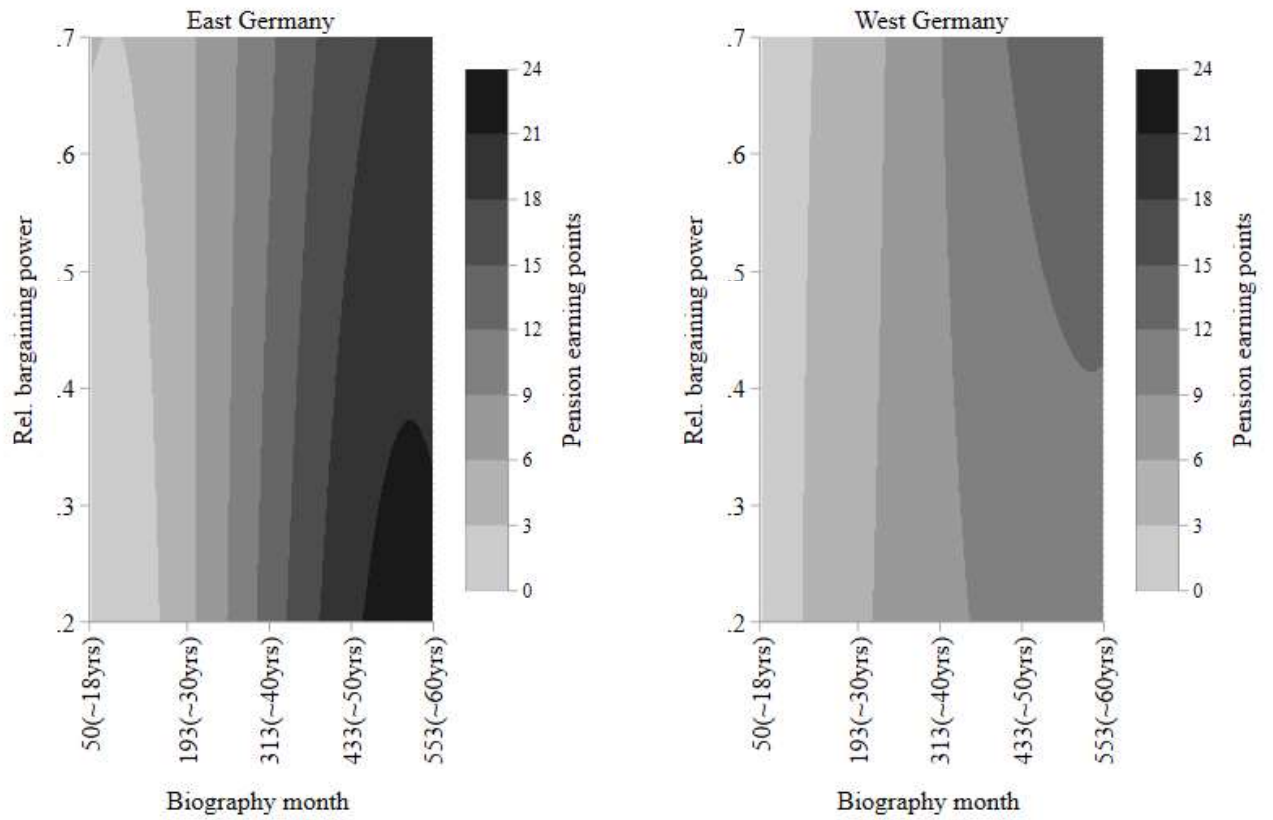
Source: Own illustration.

**Figure 2 Predicted accumulation of PEP by marital status in East and West Germany**



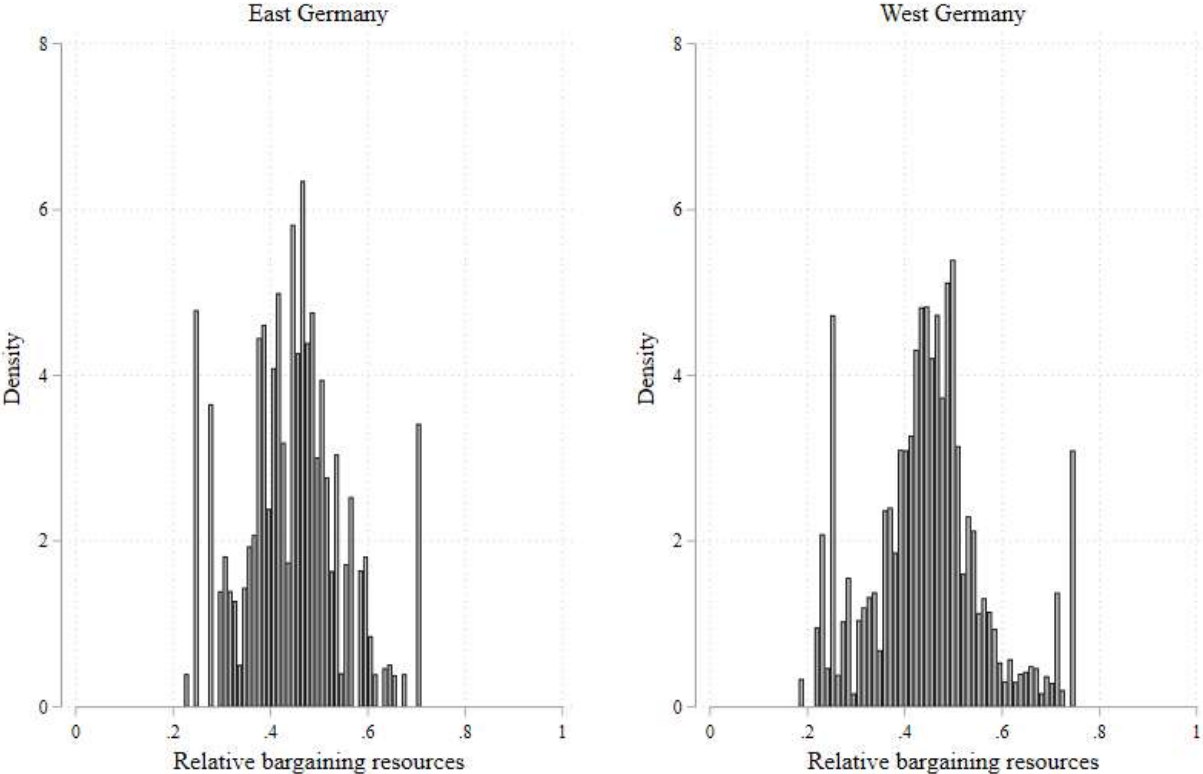
Source: SHARE-RV(7.0.0.), own computations. For full estimates, see Table A2 and Table A6.

**Figure 3 Married mothers' predicted accumulation of PEP by relative bargaining power in East and West Germany**



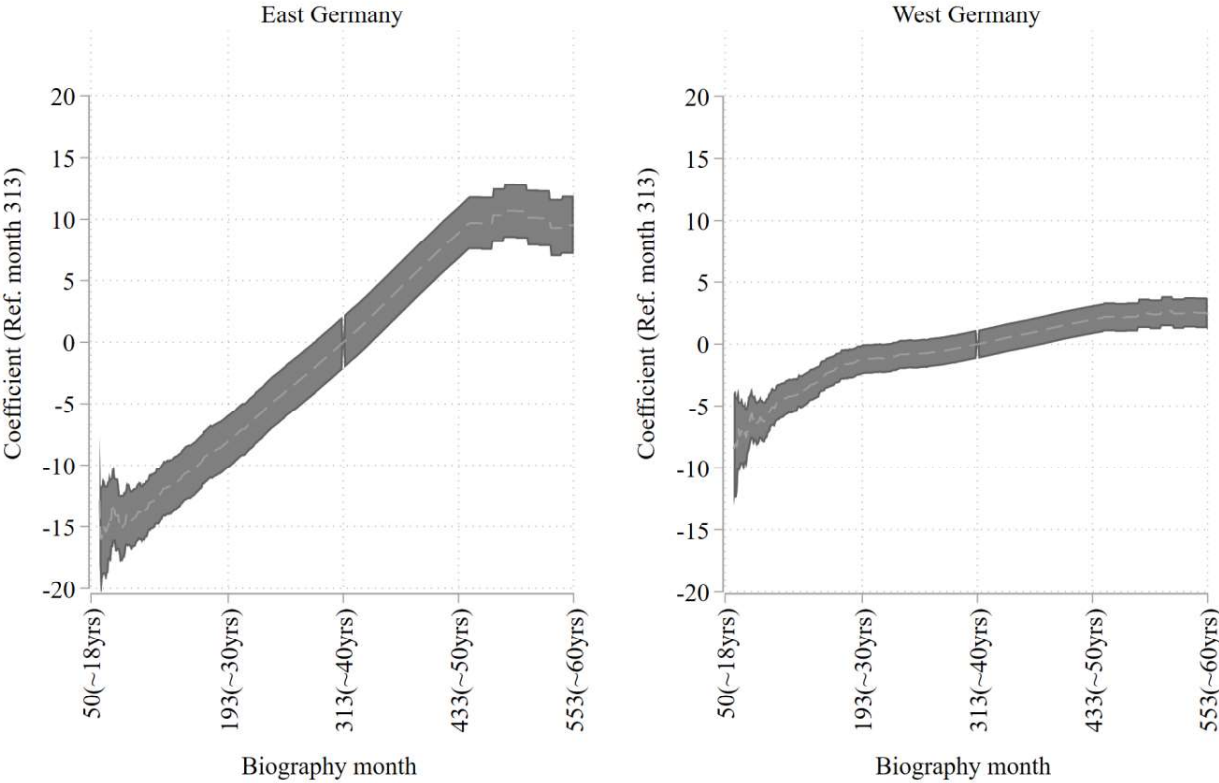
Source: SHARE-RV(7.0.0), own computations. For full estimates, see Table 2; Table A2.

Figure A1 Distribution of relative bargaining power in East and West Germany



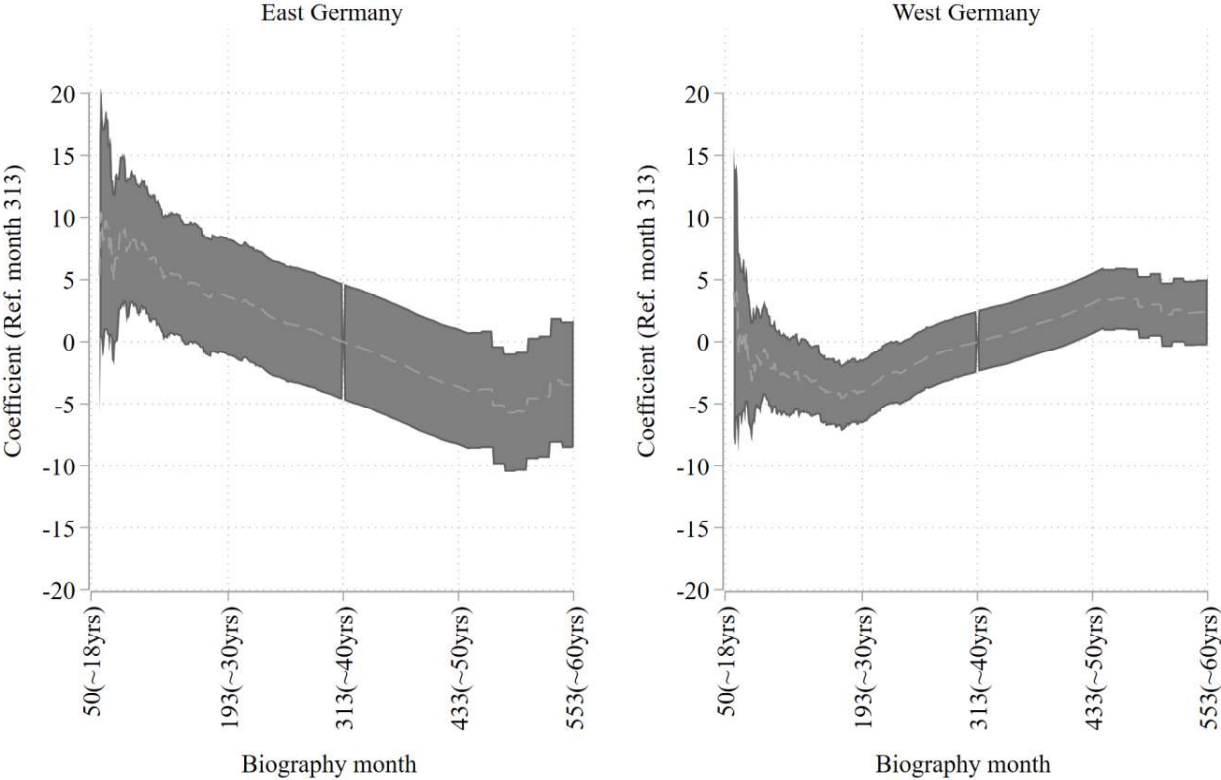
Source: SHARE-RV(7.0.0.), own computations.

Figure A2 Coefficients of a categorical measurement of month in East and West Germany



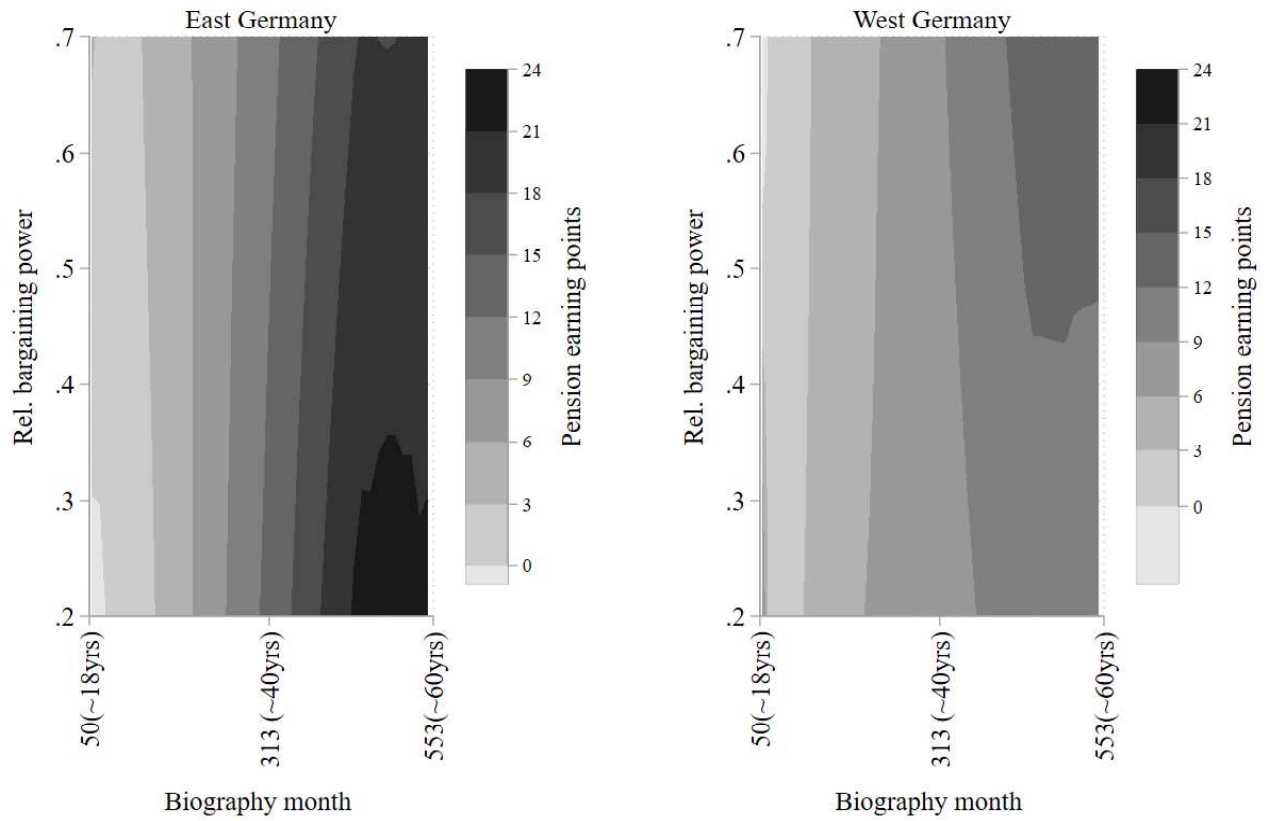
Note: Refers to table A7. 95% CI's depicted. Source: SHARE-RV(7.0.0.), own computations.

**Figure A3 Coefficients of interaction terms between a categorical measurement of month and relative bargaining power**



Note: Refers to table A7. 95% CI's depicted. Source: SHARE-RV(7.0.0), own computations.

**Figure A4 Married mothers' predicted accumulation of PEP by relative bargaining power in East and West Germany utilizing a categorical measurement of month**



Source: SHARE-RV(7.0.0), own computations. For full estimates, see Table A7; Figures A2 and A3.