From Gender Gaps to Income Gaps: The Long-Run Effects of First Family Transitions

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Abstract

While much is known about the wage consequences of family formation—especially motherhood penalties and male marriage premiums—how these interrelated issues unfold within couples and shape family-level economic outcomes over time remains underexplored. Using longitudinal data from six countries (the U.S., U.K., Australia, Switzerland, Germany, and South Korea), I employ an event study with couple and individual fixed effects to estimate income trajectories surrounding first family transitions. I find that while in all countries within-couple earnings inequality widens after the birth of a first child to a couple, this divergence is driven almost exclusively by reductions in maternal labor supply rather than male marriage or fatherhood premiums. The translation of these labor market shocks into household income losses varies substantially by institutional context. In the U.K., Germany, Australia, and Switzerland, childbirth causes persistent declines in pre-tax household income. However, tax and transfer systems in the U.K. and Germany provide substantial income loss buffering, whereas Australia and Switzerland offer less support to couples with children. In the U.S., aggregate estimates suggest income stability, but this masks significant educational heterogeneity: households with lower-educated mothers suffer large income penalties, while those with higher-educated mothers do not. In South Korea, apparent income stability is driven by strong negative selection into marriage for women, where high female marital earnings penalties confound motherhood penalties. The results highlight the interaction between gendered labor market "child penalties", long-term household income dynamics, and the insurance value of welfare state design.

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1 INTRODUCTION

How do first family transitions (such as first marriage and the transition to parenthood) alter household income trajectories, and what role do institutional contexts play in buffering these effects? While much is known about the wage consequences of family formation—especially motherhood penalties and male marriage premiums— we know less about how these transitions unfold within couples and ultimately shape households' long-term economic standing, and how these patterns vary across institutional settings. First family formation transitions (e.g., first marriage; first childbirth) are pivotal life-course transitions that shape not only individual labor-market trajectories but also households' long-term economic well-being. Because these events often occur during a critical period of human capital formation and career progression, they have crucial implications for lifetime earnings, income, and wealth accumulation, thereby influencing both intra- and intergenerational mobility.

Sociological research has long shown that labor market returns to family events are deeply gendered. Marriage is generally found to be positively associated with men's wages (Lundberg and Rose 2000), but not necessarily with women's (Cheng 2016). Parenthood, however, has been shown to impose particularly steep penalties on mothers' earnings and career progression (Abendroth, Huffman, and Treas 2014; Aisenbrey and Fasang 2017; Budig and England 2001; Gangl and Ziefle 2009), while leaving fathers' outcomes unaffected (Kleven, Landais, and Leite-Mariante 2024; Mari 2019), with some studies showing even a possible earnings premium for fatherhood (Killewald and Gough 2013). However, these findings overwhelmingly focus on short-term or point-in-time estimates of individual wages. They seldom examine how family transitions reshape households' long-run economic position, especially through interactions between partners' labor-market responses and institutional support systems.

Three key gaps emerge. In dual-earner contexts, family economic standing increasingly depends on how couples allocate time between care and paid work. However, the literature's

focus on individuals obscures these dynamics, overlooking the family as a primary site where inequalities are generated and reproduced. Second, the bulk of the scholarship on family wage gaps takes a within-group static approach (Cheng 2016) to family events, focusing on average wage differences between those with and without a given status within a specific gender group (e.g., married *versus* unmarried men; mothers *versus* childless women). This approach neglects how status effects accumulate (or dissipate) differently over time across gender groups. Hence, this static within-group framing obscures the gendered temporal dynamics through which family events alter labor supply, earnings, and ultimately shape household income. Third, although there is extensive cross-national comparative literature on the relationship between work-family policies and women's labor market outcomes (Hegewisch and Gornick 2011), much less attention has been given to how institutional variation shapes cross-national differences in household incomes following family transitions, and how these trajectories diverge by social class. Because household income underpins not only individual material well-being but also the intergenerational transmission of advantage, investigating cross-national variation in how family transitions shape income trajectories across social classes is critical to understanding broader patterns of the reproduction of inequality.

This article advances a *trajectory-altering life course framework* that conceptualizes first family transitions (first marriage and first childbirth) not solely as individual-level, static events, but as pivotal life course transitions that restructure within-couple earnings distributions, ultimately altering household income trajectories. These shifts are a direct function of two forces: 1) labor market's gendered returns to family events; 2) the buffering mechanisms of welfare states. This framework aims to bridge the two logically interrelated literatures, but that have largely developed in parallel, on family earnings gaps and on gender inequality in labor market outcomes. I apply this framework to answer how first family transitions impact household income trajectories by education across countries.

To comprehensively answer this question, I analyze three interrelated outcomes following first family transitions: 1) women's share of couples' earnings; 2) household income; and

3) individual earnings. Women's share of couples' earnings captures how couples negotiate family and labor market trade-offs following childbirth across different institutional contexts. Household income captures changes in total economic resources available to the family, the unit most directly tied to living standards and, in many cases, welfare state policies. Finally, individual earnings capture the direct labor market consequences of the transition to marriage and parenthood for men and women separately, highlighting gendered penalties/premiums associated with first family transitions. Examining only one outcome risks obscuring the dynamics at play. Earnings shares alone cannot capture the absolute economic well-being of families; household income can conceal within-couple gender inequality dynamics; individual earnings overlook the pooling of resources that shape family well-being. By bringing these perspectives together, this study identifies how first family formation transitions alters economic trajectories at the level of partners, individuals, and households, ultimately shaping long-run wellbeing.

The empirical strategy uses harmonized household panel survey for six countries (U.S., U.K., Australia, Switzerland, Germany, and South Korea). To address the three research questions, the methodological approach combines descriptive and causal inference strategies, with an emphasis on longitudinal panel methods that tracks individuals and couples before and after first family transitions. First, I use a couple-level event study to estimate changes to women's share of couple earnings surrounding first childbirth. Then, I analyze changes in pre- and post-tax household income to test how welfare systems buffer income shocks after childbirth. Finally, to unpack the mechanisms driving cross-national differences in household income trajectories, I estimate the earnings returns to family events separately by gender and country. Here, I begin by comparing the binary average effects of first family transitions (marriage and parenthood) across four models—pooled OLS (POLS), conventional fixed effects (FE), fixed effects with group-specific slopes (FEGS), and with individual-specific slopes (FEIS). This approach provides a clear counterfactual (e.g., never-married or childless individuals) and helps to disentangle selection effects—arising from between-group differences

in the probability of family events—from the causal effect of the family event itself. I then implement stacked event studies to disentangle the potential confounding between marriage and parenthood effects. Combined, these estimation strategies allow for robust tests of whether family transitions are trajectory-altering, as theorized, or whether apparent effects reflect pre-existing heterogeneity in men's and women's earnings levels or slopes.

The findings reveal that women's share of couple earnings declines across all countries following the birth of a first child to the couple, though to varying degrees. This widening within-couple inequality is not, however, equally translated into decreasing household incomes. In the U.K., Germany, Australia, and Switzerland, I find that childbirth triggers sharp and persistent declines in pre-tax household incomes. These losses primarily reflect motherhood penalties that are not mitigated by a corresponding male premium to fatherhood. Where household incomes recover over time, this occurs mainly through government systems of taxes and transfers rather than labor market related adjustments. In the U.S. and in South Korea, I find no evidence to support the hypothesis that the transition to parenthood alters household incomes. Closer examination, however, reveals important class-based heterogeneity in the U.S.—only households where mothers have at most a college degree experience long-term pre-tax income losses. In South Korea findings show that South Korean women are the only group observed to experience a significant marital earnings penalty, highlighting women's forgone long-term earnings, complicating the conclusion that households experience an income premium for childbirth. In none of the countries do I find that welfare systems compensate families for the additional financial needs of an expanding household. Even strong redistributive regimes act only as mitigators. Combined, these findings highlight how family income trajectories are inextricably linked to gender inequalities in labor market outcomes.

By analyzing first family transitions as trajectory-altering life course events, this study makes three main contributions to the social stratification literature. First, adopting an integrative lens that treats the family and the individual as inseparable units of analysis advances our understanding of the mechanisms that reproduce social inequality. Second, the

within-household, longitudinal, and cross-national empirical design offers robust evidence on how institutional contexts shape the relationship between family events and long-term economic inequality. Third, it demonstrates how gender, labor markets, and welfare states jointly shape household income trajectories.

2 THE FAMILY AS A KEY UNIT OF STRATIFICATION

Throughout most of the twentieth century, social stratification research focused on the family as the core unit of analysis. A family's class position was commonly equated with that of the male head (Goldthorpe 1983), resulting in a significant neglect of women's class positions within social stratification and class analyses (Acker 1973). The emergence of the New Household Economics in the 1960s provided the theoretical underpinning for this ubiquitous male-breadwinner family structure of the time. Firmly anchored on international trade theories of the first half of the twentieth century, this neoclassical economic model posited that to maximize family well-being, partners would allocate their time between market and home production, given principles of comparative advantage and opportunity cost.

Both the conventional approach to social stratification in the sociological literature and the New Household Economic models were criticized for naturalizing gender inequality as economic efficiency, portraying women's lower earnings as evidence of specialization rather than constraint (Acker 1973; Garnsey 1978). The sociological feminist critique of these approaches emphasized the need to understand the individual class positions of men and women. This critique paved the way for new empirical and theoretical models of gender inequality in labor market outcomes (Acker 1973; Delphy 2016; Garnsey 1978), and the individual has since become the preferred unit of analysis in social stratification research, consolidating gender and work as a central pillar of the contemporary social stratification literature (Sorensen 1994). Scholars have then shown that within-couple earnings inequality

impacts female autonomy (Urbina 2020), domestic violence (Aizer 2010; Atkinson, Greenstein, and Lang 2005), and differences in sons' and daughters' health outcomes (Duflo 2000). The abandonment of the family as the core unit of analysis did come at the expense of greatly separating concerns related to family inequality from those with gender earnings gap (Cha, Weeden, and Schnabel 2023). While the individual class position of men and women is essential to understanding inequalities at the intersection of gender and work, the long-term personal dynamics of labor market inequalities cannot be realistically uncoupled from those of the family. Decisions on how many hours to dedicate to paid work, when to take time off from the labor market, and how to allocate one's economic resources are a complex interplay of the characteristics of the individual, their family, and country-specific institutional contexts (laws, policies, culture, macroeconomic factors).

3 MECHANISMS LINKING FAMILY TRANSITIONS AND EARNINGS TRAJECTORIES

The rise of dual-earner households since the 1970s is widely viewed as one of the most significant social transformations of the past half-century (Hochschild and Machung 2012). This shift prompted growing scholarly attention to how family events shape labor market outcomes. Even as marriage rates have declined, most adults form partnerships at some point, making within-couple negotiations over paid and unpaid work central to contemporary inequality. The empirical research on family wage gaps can be summarized around three general explanations for the relationship between family status and labor market outcomes: 1) Supply-side changes; 2) Demand-side responses; and 3) Selection. Each has been shown to operate differently across educational groups and institutional contexts.

Supply-side theories emphasize how marriage and parenthood affect labor supply and human capital investments. Following the household specialization models, in predominantly male-breadwinner contexts, marriage and parenthood are theorized to prompt men to increase

paid labor or educational investments, boosting productivity and wages, while women reduce labor force attachment, suppressing wage growth. Empirical evidence is mixed. Killewald et. al. (2013) find marital wage premiums for both U.S. men and women—though men's are larger and amplified by fatherhood, while women face motherhood penalties. Cheng (2016) documents cumulative wage advantages for men and growing penalties for women over 20 years of marriage. However, wage growth is found to predate marriage for both genders—suggesting anticipation rather than causation (Dougherty 2006). Educational heterogeneity is also found across countries. Evidence suggests that higher-educated women maintain stronger labor-market attachment and shorter employment interruptions, whereas lower-educated women experience prolonged exits and slower wage recovery (Budig and England 2001; Gangl and Ziefle 2009; Abendroth, Huffman, and Treas 2014).

Demand-side theories attribute wage penalties by family status as largely driven by skill deterioration and employer discrimination (Cheng 2016; Weisshaar 2018). Parenthood, particularly for women, is associated with perceptions of reduced commitment and productivity. A recent study of 134 countries (Kleven, Landais, and Leite-Mariante 2024) finds that parenthood substantially reduces women's employment but not men's. The relative contribution of marriage and parenthood to gender inequality varies by development. At low levels, gender gaps are driven by education and marriage, but as development rises, child penalties dominate, while marriage penalties converge to zero. Thus, while there is evidence that women adjust labor market behavior post-childbirth, this alone does not fully account for motherhood penalties. Gangl et. al. (2009) find motherhood wage penalties of 9–18% in the U.S., U.K., and Germany—fully explained by reduced labor force attachment in the U.S. and U.K., but not in Germany, where a residual penalty remains. Furthermore, women are penalized not only for actual motherhood (Correll, Benard, and Paik 2007) but also by employer expectations regarding future childbearing (Hutt Cabello 2023), highlighting statistical discrimination. In contrast, fatherhood may be rewarded, as employers perceive fathers as more committed and productive (Correll, Benard, and Paik 2007). These findings

underscore that wage effects tied to family status stem not only from behavior but also from employer expectations, reinforcing the importance of theorizing family penalties as structurally embedded.

Selection based perspectives challenge causal interpretations by emphasizing that wage differences by family status may reflect pre-existing inequalities in earnings trajectories rather than causal effects. For example, high-earning men may be more attractive both as employees and partners, leading to higher marriage rates among men on strong wage trajectories. Similarly, high-achieving women may delay or forego motherhood to avoid career penalties. When selection on pre-marital earnings growth is accounted for, marriage premiums often disappear in the U.S. and U.K. but persist in Germany and Switzerland (Ludwig and Brüderl 2018; McDonald 2020; Pollmann-Schult 2011; Schechtl and Kapelle 2023). Fatherhood premiums also disappear in the U.K. and Germany once selection is accounted for (Mari 2019). In short, selection-based perspectives suggest that wage differentials around marriage and parenthood often reflect pre-existing differences, not causal effects—an insight critical for understanding the cumulative dynamics of within-family inequality across different welfare state arrangements.

4 FAMILY TRANSITIONS AND HOUSEHOLD INCOMES

The extensive literature on family earnings gaps suggests that gender inequality that emerges from family events, particularly the transition to parenthood, has long-lasting effects on families' economic well-being. While many studies analyze how family income impacts child development (Wagmiller, Lennon, Kuang, Alberti, and Aber 2006), only a handful of studies (Aassve, Mazzuco, and Mencarini 2005; Gonalons-Pons and Marinescu 2024; Sigle-Rushton and Waldfogel 2007; Stanczyk 2020) have investigated how childbirth reshapes family incomes, especially in cross-national perspective. Despite the clear connection between family wage

gaps and gender inequality, these issues are often analyzed separately, leaving the mechanisms that link them under-theorized. A recent study (Cha, Weeden, and Schnabel 2023), however, shows that roughly two-thirds of the U.S. gender wage gap stems from inequality in family wage gaps, underscoring the need for an integrated approach.

Increasingly schoalars have begun to examine within-couple inequality following childbirth. Using longitudinal EU-SILC data (2004-2008), Sani (2015) estimates individual-level fixed effects models for eight European countries and finds that women's share of couple net earnings declines post-childbirth (not restricted to firstborn), except in Southern Europe. The penalty disappears when family benefits and non-labor income are considered, underscoring the role of redistribution. Musick et al. (2020) extend this analysis using longer panels and an event study model of the transition to first childbirth for the U.S., U.K., and Germany. They find persistent declines in women's share of couple earnings after first birth—largest in Germany, moderate in the U.K., and smallest in the U.S.—driven mainly by reduced maternal work hours. Educational and policy differences shape these patterns: college-educated mothers fare better in Germany, show no consistent advantage in the U.K., and fare about the same or slightly worse than less-educated mothers in the U.S. Public transfers also follow distinct trajectories—rising sharply after childbirth in Germany and the U.K., especially among less-educated couples, but remaining negligible in the U.S.—illustrating how welfare-state design and education jointly structure within-couple inequality.

Even fewer studies analyze how family formation affects total household income. DiPrete et al. (2000), using the PSID (1981–1993) and GSOEP (1984–1996), analyze how different welfare states can mitigate negative "trigger" events—events that have the potential to cause changes in a household's future income trajectories (e.g., labor market and family transitions). Estimates from fixed effects models suggest that union formation increases household income for both genders, whereas childbirth results in sharp declines in earnings for German women. Comparing pre- and post-tax income reveals that German men gain more from union formation than U.S. men, partly due to tax incentives and marriage-related

benefits. Yet these policies also depress women's potential earnings by imposing secondary earner penalties, such that the gains from transfers do not offset labor market losses. In contrast, Light (2004) finds that women benefit more than men from union formation in the U.S. Using NLSY79 data, individual-level fixed effects estimates show that women gain roughly 50% in need-adjusted income when entering cohabiting or marital unions, while men show no statistically significant income change. Aassve et al. (2005), using data from several European countries, find that childbearing generally reduces women's material wellbeing. However, the magnitude varies: families in social-democratic welfare regimes (e.g., Denmark, Finland, the Netherlands) experience smaller penalties, while those in liberal regimes (e.g., U.K. and Ireland) face larger poverty risks. For example, childbirth increases the risk of poverty by 7.1 percentage points in Britain and Ireland. Findings for the U.S. (Stanczyk 2020) also shows that household income declines around childbirth, relative to the federal poverty threshold. These losses are primarily driven by mothers' reduced earnings and only partially offset by increases in fathers' earnings and public benefits. Gonalons-Pons and Marinescu (2024) further suggests that births have a negative impact on pre-tax household income for women without a college degree, and childcare costs exacerbate this effect, whereas the impact is not statistically significant for women with a college degree. The authors also show that partners' earnings and transfers do not compensate for motherhood earnings penalties.

While these studies provide valuable contributions to research on gender and family inequality, the existing scholarship still lacks an integrated theoretical framework linking gender inequality, family wage gaps, and family income dynamics over time. Much of the literature focuses on either individual earnings or family outcomes, but rarely combines them. This leaves a gap in understanding how family events impact long-run shifts in household resources. Given that most adults will enter co-residential unions at some point, long-term economic well-being is often inseparable from that of one's partner. Family-triggered income trajectories thus deserve closer examination as both a driver and a consequence of gender inequality—one that unfolds differently across institutional landscapes.

5 TRAJECTORY-ALTERING LIFE COURSE TRANSITIONS

Building on the principles of transitions and interlocking trajectories in life course theory (Elder 1985), and its recent application to studies on intergenerational mobility (Cheng and Song 2019), I propose a **trajectory-altering** approach to analyzing the long-term economic consequences of first family transitions. This framework builds on DiPrete et al. (2000) notion of trigger events, which conceptualizes changes to family dynamics and employment status as events with the potential to impact households' future income dynamics. An important distinction between trigger events, as they have typically been studied, such as unemployment or job change, and trajectory-altering life-course transitions lies in the permanence and irreversibility of the latter. For example, an unemployment spell can be a trigger event without permanently changing a worker's long-term earnings potential or social status if re-employment follows swiftly. However, transitions from single to married or from childless to parenthood permanently reconfigure an individual's social status, and likely their life-course trajectory. Subsequent union dissolutions or child abandonment represent subsequent states along the same altered trajectory, not a return to the original baseline. This perspective reframes the relationship between short-term shocks and long-run inequality by embedding transient trigger events within broader, cumulative life-course processes. For example, while divorce is itself a trajectory-altering event, it is also path dependent, unfolding within the relational and economic arrangements established by an earlier transition—marriage.

This perspective also resonates with Elder's (1985) life-course principles of timing, linked lives, and path dependency. The timing of these first family transitions is crucial because they commonly occur at critical points in workers' careers, a period in which disruptions to labor force attachment are more likely to have stronger long-term effects on employment outcomes. The principle of linked lives underscores that family transitions are inherently relational: the economic consequences of parenthood or partnership are jointly

produced through couples' interdependent labor-market and caregiving decisions. Finally, path dependency highlights how early, irreversible transitions anchor subsequent trajectories, producing cumulative advantages and disadvantages over time. These transitions, therefore, have enduring consequences not only for individual earnings but also for household income trajectories and, ultimately, for inter- and intragenerational inequality. By embedding subsequent trigger events within the enduring structures of partnership, parenthood, and institutional context, the trajectory-altering framework reinterprets inequality as a cumulative, path-dependent process that begins with the earliest family formations. The trajectory-altering framework thus situates short-term trigger events within a broader architecture of cumulative and nested life-course processes, emphasizing how earlier structural transitions condition the meaning and consequences of subsequent events. As such, first marriage and first childbirth are pivotal life course transitions because they shape both individuals' and families' income trajectories.

The literature on the labor market impact of family transitions is extensive. Nonetheless, few studies have considered the interlocking nature of gender inequality in labor market outcomes following family events. From a stratification perspective, these events alter economic standing through gender-differentiated labor market returns and through institutional contexts that buffer—or amplify—their effects. Household specialization theory predicts that men benefit from marriage and fatherhood, while women incur penalties. Because family formation typically coincides with critical stages of career building, such advantages and penalties are expected to accumulate over the life course, producing growing within-couple inequality. The **trajectory-altering approach** builds on this insight but emphasizes two additional processes: (1) the long-term, cumulative nature of these divergences, and (2) the role of welfare states in shaping cross-national variation in how family transitions affect household income.

[Figure 1 Here]

Figure 1 illustrates a parsimonious version of the **trajectory-altering** framework,

depicting expected average income patterns after marriage and childbirth, given household specialization theory in a predominantly male-breadwinner society. The x-axis marks time since the event; the y-axis, earnings. Trajectories differ by gender and family role. While women's earnings are expected to decline following family formation, men's remain stable or increase, leading to widening within-couple inequality over time. These patterns are expected to vary across countries. Institutional settings condition trajectories by moderating the extent of women's employment continuity, shaping men's labor market incentives, and redistributing household income through transfers and taxation.

6 RESEARCH QUESTIONS AND HYPOTHESES

This study is guided by one main research question: **How do first family transitions impact income trajectories?** Broadly speaking, I hypothesize that first family transitions, such as first marriage and childbirth, are trajectory-altering life transitions that trigger the redistribution of paid and unpaid work within couples, changing households' long-term income trajectories. I further expect that the extent to which these transitions affect incomes in the long-term will be a function of two main mechanisms: (1) gender inequalities in labor market outcomes following first family transitions, and (2) government systems of taxes and transfers that either buffer or amplify these expected income shocks of childbirth. Drawing on these general expectations, below I elaborate on the three specific research questions and related hypotheses that guide this study's empirical investigation. Hypotheses 1 and 2 address cross-national variation in couple-level income dynamics in the pooled country sample following the transition to parenthood. Hypothesis 3 concerns men's and women's separate earning trajectories following first family events.

How does within-couple earnings distribution change following family events? Given existing cross-national evidence that women's share of couples' earnings declines significantly after childbirth, I hypothesize that:

Hypothesis 1. *Women's share of couples' earnings declines following childbirth in all countries.*

How does first childbirth impact pre-tax and post-tax income trajectories? An important oversight of the neoclassical model of household specialization is its neglect of the social context in which couples make decisions. Cross-national analysis enables testing of how institutional environments shape family decisions and earnings dynamics. While the countries analyzed in this study share similarities (especially the liberal regimes), their welfare designs and gender norms diverge in meaningful ways that likely shape how first family formation events impact income trajectories. Esping-Andersen's (1990) typology remains foundational in comparative work. The U.S., U.K., Australia, and Switzerland are typically categorized as liberal regimes, with the U.S. as the ideal type. These regimes depend on means-tested benefits and modest universal transfers, highlighting individual responsibility (Esping-Andersen 1990).

However, important differences have emerged across these countries over the last two decades, particularly in what concerns their work-family reconciliation policies. The U.S. has been a global forerunner in advancing women's legal rights (Orloff 2009)—from abortion access in the 1970s to the Family and Medical Leave Act (FMLA) of 1993—but lags in material support. It has no federal paid leave, high childcare costs, limited abortion access, and enforcement of anti-discrimination protections often depends on expensive litigation. The primary income support programs for families are the Earned Income Tax Credit (EITC, 1975) and the Child Tax Credit (CTC, 1997). The EITC, targeted at low- to moderate-income workers, has been expanding since 1987 and is now one of the federal government's largest antipoverty programs. It has been shown to have a positive impact on single mothers' employment (Martin and Prasad 2014). The CTC primarily benefits higher-income families with the direct objective of offsetting child-rearing costs. The other liberal regimes have moved more towards dual-earner support. In the U.K., policy shifted in 1997 with Labour's expansion of early childhood education and parental leave. Paid maternity leave was extended;

unpaid parental leave and short paid paternity leave were introduced. These reforms modestly improved employment among lone mothers, although impacts on dual-earner households remain mixed (Brewer and Hoynes 2019). Despite increasingly above-average OECD spending on families since the 1990s, the U.K.'s public investment in families has declined since 2010, while childcare costs remain high. Australia has also been expanding support for families, and since the mid-1990s, public spending on families has been above the OECD average. With the 2010 Paid Parental Leave Act, Australia instituted its first national government-funded paid parental leave scheme (18 weeks paid at the national minimum wage), although it was the second-to-last country in the OECD to do so. A two-week paid "daddy leave" was introduced in 2013. Switzerland introduced 14-week paid maternity leave in 2005 and two-week paternity leave in 2019. Increased federal childcare investment in the 2000s doubled formal care enrollment among children aged 0–2. Despite these shifts, Swiss labor markets are markedly gender segregated, and societal views still favor a heavily gender-normative family division between paid and unpaid work (Antonini, Pullman, Fuller, and Andres 2022). Germany is typically classified as a conservative-corporatist regime (Esping-Andersen 1990) and as an example of explicit familialism (Leitner 2003), long reinforcing male-breadwinner roles through lengthy maternity leaves, inadequate childcare provisions, and a tax system that tends to penalize secondary earners. However, in the 2000s, German social policy became increasingly dual-earner oriented, closely mirroring the Swedish work-family policy package (Gangl and Ziefle 2015). The 2007 introduction of parental benefit (Elterngeld) introduced parental leave at 67% replacement rates of pre-birth earnings, but capped at 12 months, and included separate "daddy quotas" of two months. Additionally, the 2008 Child and Youth Welfare Act (Kinderförderungsgesetz) stipulates that children over one have a legal right to formal childcare (Zoch and Schober 2018). As a relatively young welfare state compared to other OECD countries, Korea is rarely featured in the cross-national comparative literature. With public social spending at about 10% of the GDP, Korea's social expenditure sits well below the OECD average of roughly 20%. There is no consensus on where in the typical

welfare state typology South Korea would best fit or even if this typology translates well enough to East Asian countries. Until the early 2000s, Korea's family policies were primarily designed with maternity protection in mind, rather than gender equality. However, rapid declines in fertility rates and an aging population led to a focus on work-family reconciliation policies, mirroring the Swedish policy landscape (Kim and Lundqvist 2023).

Analyzing pre-tax income captures how couples' combined labor market earnings change following childbirth, independent of state intervention. This measure reflects the underlying earnings penalties, premiums, or neutrality associated with family transitions, before government taxes and transfers potentially alter household resources. Given the extensive literature documenting motherhood penalties and mixed results regarding fatherhood premiums, I hypothesize that:

> *Hypothesis 2a. Childbirth will have long-term negative impacts on pre-tax and government transfer household incomes in all countries, except for South Korea, which is more likely to follow the neoclassical household economic specialization model.*

To what extent can welfare states offset household income losses associated with childbirth, and how does this capacity vary cross-nationally? As outlined above, the countries analyzed, although sharing some similarities, have all varied in the ways in which they have promoted work-family reconciliation. I expect that countries that have more heavily invested in policies promoting dual-earner family arrangements over the last two decades (e.g., U.K., Germany) will be better able to buffer expected labor market income losses associated with childbirth than countries where families with children still rely more heavily on family or market-based provisions to support dual-earner arrangements (U.S., Switzerland).

> *Hypothesis 2b. Welfare states that have invested more heavily in promoting dual-earner family arrangements will better buffer market-income–related losses*

after childbirth.

How do family income trajectories vary by mother's education? More highly educated mothers tend to have greater earnings potential and a stronger labor market attachment, which may enable them to mitigate earnings losses associated with family formation. Additionally, in families with highly educated women, parents may be better positioned to outsource childcare and choose the timing of childbirth.

Hypothesis 2c. Income penalties associated with childbirth will be smaller and shorter-lived for families with highly educated mothers.

How does marriage and parenthood affect men's and women's individual earnings? The effect of family transitions on a family's long-term economic standing will depend on how men's and women's earnings levels and potential growth are impacted by these transitions. In predominantly male-breadwinner societies, the household specialization model would predict a cumulative advantage of marriage and fatherhood on men's earnings, while women would experience a cumulative earnings disadvantage. However, increasing evidence, at least for the U.S., has shown that male marital premiums are largely driven by selection into marriage (i.e., men on higher earnings growth trajectories are more likely to marry) (Ludwig and Brüderl 2018). Additionally, evidence of a female marital premium provides further evidence against the household specialization hypothesis (Killewald and Gough 2013). Hence, I hypothesize the following:

Hypothesis 3a. Men's earnings returns to first marriage and first childbirth will be largely driven by differences in earnings levels and growth of to-be-married men. Only in more gender-normative South Korea do I expect to find a positive male earnings premium for first family transitions.

For women, the economic impact of family formation is expected to vary across institutional settings. In highly traditional contexts like South Korea, marriage itself may

reduce women's earnings, whereas in more egalitarian societies, wage penalties are expected to emerge primarily with motherhood. Regardless of national context, motherhood is expected to negatively impact women's earnings, even when accounting for pre-birth earnings trends.

> *Hypothesis 3b. In all countries, women will experience a motherhood penalty. Only in more gender-normative South Korea will women experience a negative marital earnings penalty, which will confound child penalties.*

7 DATA, SAMPLE, AND MEASURES

7.1 Data Sources

To create a cross-nationally harmonized micro-level panel dataset of marital and fertility history, I use household panel data from six countries: the U.S. Panel Study of Income Dynamics (PSID, 1998–2019), German Socio-Economic Panel (SOEP, 1998–2019), British Household Panel Study (BHPS, 1998–2008) and the United Kingdom Household Longitudinal Study (UKHLS, 2010–2018), the Swiss Household Panel (SHP, 1999–2019), the Australian Household Income Dynamics (HILDA, 2001–2018), and the Korean Labor and Income Panel Study (KLIPS, 1998–2018). This newly created cross-nationally harmonized panel dataset was then merged with the Cross-national Equivalent File (CNEF), maintained by the Department of Human Sciences at Ohio State University. Based on definitions created by the CNEF efforts, each country-specific team elaborates algorithms to standardize variables, accommodating the varying scopes of the original survey questions. This leads to uniformly defined metrics across surveys, of which disposable household income, labor earnings, and employment characteristics are of particular relevance to this study.

7.2 Sample Restrictions

I restrict the sample to individuals whom I can observe at entry into their first-time co-residential partnerships (married or cohabiting) and who did not have children before entering these partnerships. Consequently, those who have their first child outside of a co-residential union are excluded from the analysis. Unlike previous research, these restrictions apply to both female and male partners (Musick, Bea, and Gonalons-Pons 2020). Given differences in data coverage across surveys, the sample is restricted to couples who entered co-residential partnerships from 2001 onward. The sample is further restricted to heads of household and their partners, as some surveys (e.g., PSID) only collect labor market information on these individuals. Because this research examines the impact of first-time life course transitions on a family's economic standing, similar to recent studies on within-couple earnings dynamics (Musick, Bea, and Gonalons-Pons 2020) I exclude person-years observed after union dissolution. Following previous research (Killewald and Gough 2013), I also exclude individuals who had children or co-residential unions before the age of 18 due to concerns with the representability of this group's labor market experiences. Additionally, individuals first observed after the age of 45 or who experience a first marriage after this age are excluded, given that individuals who remain never-married after this age might behave differently than others (Cheng 2016). Unfortunately, due to limited sample size, same-sex partners are also excluded from the analysis.

The couple-level analysis is restricted to couples with non-missing earnings and information on the number of hours worked by both individuals. Finally, the fixed-effects estimation requires that our units of analysis be observed across at least two different years, thus excluding couples or individuals with only one year of observation.[1] Although these restrictions substantially reduce the sample size, they are nonetheless necessary to provide

[1] In the Fixed Effects Individual Slope models, the sample size is further reduced, as at least four years of data are necessary for these models, which include an individual intercept and slope

robust and cross-nationally comparable estimates of the long-term effect of family formation on within-family inequality.

7.3 Measures

7.3.1 Dependent Variables

This study explores the effects of family formation on three key measures: 1) Women's share of couples' labor market outcomes, 2) Household incomes; 3) Individual annual earnings.

Women's share of couple's labor market outcomes. Following Musick et. al. (2020), the dependent variables are defined as women's share of couples' combined: a) Earnings; b) Hourly Earnings; c) Annual number of hours worked.

Household income. models analyze three measures for income[2]: a) Logarithm of Pre-tax government income. This variable is the sum of the total household income from labor earnings, private transfers, asset income, and private pensions of the head, partner, and other family members; b) Logarithm of Post-tax government income[3]. This variable captures the combined household income after taxes and government transfers of all individuals in the household. Public transfers include child benefits, social assistance, government student assistance, unemployment assistance, and transfers from other public institutions (for example of accident insurance or maternity leave); c) The differences in the log of Pre-Tax minus the log of Post-Tax incomes. This measure provides information on the state-level of redistribution across countries and time. As it is a difference in logs, it approximately captures the percentage change in incomes, with more negative values indicating higher levels

[2]I rely on the CNEF harmonization efforts for indicators of income and work. However, the CNEF does not harmonize income and earnings in terms of the survey-reference year. For example, earnings information in some surveys reflects the previous survey-year (e.g., SOEP, PSID), in others the present survey-year (e.g., KLIPS, SHP, BHPS, UKHLS), while in others it is the previous fiscal year (e.g., HILDA). To maximize cross-national comparability, I rearranged the data so that variables best reflect the current survey-year

[3]Although the PSID has collected retrospective data on earnings and work hours since becoming biennial in 1997, CNEF does not include this information in its data files. I used NBER's TAXSIM program to estimate household disposable income for missing years. For the estimation, I assumed demographic variables at the time of the interview reflect those of the previous year.

of redistribution from government transfers.

Individual Annual Earnings. Annual earnings capture total labor earnings, including wages and salaries from all employment (primary and secondary jobs, self-employment, etc), plus income from bonuses, overtime, and profit-sharing[4].

The dominant approach in the family earnings gap literature is to analyze the logarithm of hourly wages, which had the advantage of modeling percentage changes in returns to work output, hence serving as a proxy of worker productivity (Cha, Weeden, and Schnabel 2023; Cheng 2016; Killewald and Gough 2013; Killewald and Lundberg 2017). However, the log specification excludes individuals with zero earnings, which is a non-trivial limitation given this study's objective to understand the mechanism linking family transitions and household income trajectories. A central mechanism behind the motherhood penalty and related family earnings gaps is labor force withdrawal or substantial reductions in hours following marriage and childbirth (Kleven, Landais, and Leite-Mariante 2024). Excluding those with zero or near-zero earnings risks underestimating the full impact of family events, precisely because the decision to exit paid work is part of the penalty itself. For this reason, following recent work (Kleven, Landais, and Søgaard 2019), I estimate annual earnings in **levels** rather than logs, which allows me to retain observations with zero earnings and thus indirectly capture the extensive-margin effects of family transitions. This choice ensures that the analysis provides a more comprehensive picture of the earnings consequences of family transitions, rather than just wage changes among those who remain continuously employed. To address concerns that results may be sensitive to skewness in the earnings distribution or to outliers at the top, I also present supplementary analyses with the more traditional specification of logged outcomes (restricted to positive earners), showing that core findings are robust to alternative functional forms (Figure S_C1 and S_C2)

[4]When BHPS became UKHLS, individual annual earnings became monthly earnings. There is no information on the total number of weeks worked in a year, but they ask about usual weekly work hours. I use this information to derive annual earnings and annual hours.

To compare real earnings and income over time within countries, values are inflation-adjusted using the Consumer Price Index (CPI). Further, to compare real amounts across countries over time Purchasing Power Parity (PPP) deflators are used. Adjustments are based on 2017 real-values, and deflators were collected from the World Bank Development Indicators. To mitigate the influence of outliers, the dependent variables were top-coded at the 99.9th percentile of their respective country-year distributions.

7.3.2 Independent Variables

Marital and Fertility Histories. To measure the effect of the transition to marriage and childbirth on an individual's labor market trajectories, I use information on fertility and union histories available in various formats in each individual survey. The PSID began collecting a comprehensive retrospective marriage and fertility history of household heads and their partners in 1985 (PSID 2021). From 1986 onwards, childbirth and adoption history have been collected for all individuals of childbearing age[5]. The BHPS and UKHLS provide different data files that consolidate marital, cohabitation, and fertility files based on both retrospective information and subsequently updated panel information (Pronzato 2010; University of Essex and of Southampton 2022). The SOEP provides consistent and continuous fertility, marital, and partnership histories for women aged 16 or older. Men's fertility histories have been collected since 2001 (Hamjediers, Schmelzer, and Geschke 2019; Schmitt 2019). HILDA provides detailed retrospective data on marital and fertility histories. The SHP and the KLIPS conducted biographical data collection in specific waves only. The SHP administered a retrospective biographical questionnaire in 2000, 2002, and 2013. The KLIPS captured the complete lifetime histories of all respondents in waves 1 and 2 (1998 and 1999); from wave 3 onward, only status changes (e.g., divorce) of respondents were updated, while the full-time history of new respondents was captured.

[5] 12-44 until 2013 and 15-44 from 2014 ownard (PSID 2021)

I imputed missing family histories using observed household events that required a "clean" pre-event history. For marriage, the procedure uses the first observed year the respondent transitions from always single to living with a partner. When a reported year of first marriage is later than the observed co-residence start, I replace it with the earlier observed co-residence year only when the partner IDs match[6]. Fertility information, when missing, is first imputed using the generated birth year of the eldest observed co-resident child. When no child is available, the first year an infant appears in the household roster used [7].

Having established individuals in first co-residential partnerships, I create indicators of time from marriage and childbirth to the couple. The measure is divided into dummies from five years or less before childbirth and 15 years or more. Zero denotes the year the child was born, and two years before childbirth (-2) is the reference category. In individual-level models that analyze the separate effects over time of the transition to marriage and parenthood, years since the first marriage (or coresidential union) are defined in the same manner.

Other control variables. All models include controls for year and age dummies for men and women to account for time- and lifecycle-related trends.

8 ANALYTICAL STRATEGY

To answer the three sets of hypotheses elaborated in this study, the empirical strategy is divided into three steps. Following recent research on family inequalities, all three strategies leverage the advantages of fixed effects estimations and an event study design (Kleven, Landais, and Leite-Mariante 2024; Musick, Bea, and Gonalons-Pons 2020; Torche and Rauf 2021).

[6]Individuals who cohabited with one partner and then went on to marry a different one were dropped from the final analysis to ensure the focus on stable (or formal) first union.

[7]An infant observation is used only if the respondent's pre-birth household history is clean (no earlier children observed and at least one valid pre-birth observation)

8.1 Within-Couple Inequality

To test Hypothesis 1, I investigate changes in within-couple inequality in labor market outcomes before and after the birth of a couple's first child. Following recent research (Musick, Bea, and Gonalons-Pons 2020), Equation 1 below represents within-couple changes in women's share of couple earnings before and after first childbirth using a couple-fixed-effects event-study model

$$Y_{Cjt} = \sum_{e=-5}^{15} \beta_e D_{Cjt}^{T.Childbirth} + \sum_{e=-5}^{15} \delta_e D_{Cjt}^{T.Childbirth} \times I_j + X'_{Cjt}\gamma + \alpha_C + \varepsilon_{Cjt}, \tag{1}$$

Where Y_{Cjt} denotes women's share of total couple earnings for couple C in country j at year t. $D_{Cjt}^{T.Childbirth}$ is a set of dummy variables for event-time bins e indicating years since first childbirth, with two years before birth omitted as the reference category. The coefficients β_e capture pooled effects across countries, while δ_e measure country-specific deviations via the interaction term of time from birth and country ($D_{Cjt}^{T.Childbirth} \times I_j$). X'_{Cjt} is a vector of time-varying controls with coefficient vector γ. The term α_C captures the time-invariant couple fixed effect. ε_{Cjt} is the idiosyncratic error clustered at the couple level. FE panel estimators control for both observed and unobserved time-constant heterogeneity. Consequently, unlike the OLS estimator applied to non-repeated observations, unobserved couple-specific heterogeneity can be correlated with the explanatory variables without biasing the estimates of the regression coefficients. In other words, unlike cross-sectional estimates, FE estimators on the effects of children on within-couple inequality will not be biased if couples who eventually have kids differ from those who don't on unobserved time-constant characteristics (e.g., childhood socioeconomic background, or couples' religious beliefs). However, the part of the idiosyncratic error that varies across time (ε_{kct}) must still be exogenous, which means that it must not be correlated with explanatory variables, not only contemporaneously, but also with past and future values of covariates and errors (Best and Wolf 2014). That is, for unbiased FE estimates, conditional on covariates, it must be the case

that individuals do not experience other changes that impact their within-couple dynamic other than the family event under analysis (i.e., childbirth). When this strict exogeneity assumption holds, the fixed effects estimator is unbiased.

8.2 Household Income Inequality

To investigate how childbirth affects household income trajectories and how tax and transfer systems buffer these effects, I estimate three event-study models that are identical in structure to Equation 1 but differ in the dependent variable. Specifically, Equation 1 replaces women's share of couple earnings with three measures of logged household income: (1) pre-tax household income, reflecting total market income from labor and private sources; (2) post-tax and transfer household income, capturing total disposable income after government redistribution; and (3) the difference between logged pre- and post-tax income, which provides a direct measure of the redistributive effect of the state. The difference model captures the extent to which governments' tax and transfer systems buffer the expected income loss after childbirth. If the coefficients in this model are negative, it suggests that taxes and transfers provide **greater** income support post-childbirth. If the coefficients are positive or close to zero, it suggests a weak degree of redistribution.

8.3 Men's and Women's Individual Earnings Trajectory

To test the mechanisms driving changes in household income trajectories across countries set out in hypotheses 3, I test the earnings returns to family events in separate gender and country samples. The empirical strategy in this section is divided into two main parts. First, I compare estimates of the binary average effects of first family transitions (marriage; parenthood) across four models: pooled OLS (POLS), conventional fixed effects (FE), fixed effects with group-specific slopes (FEGS), and fixed effects with individual-specific slopes (FEIS). The binary approach enables the implementation of a clear counterfactual group, consisting of those who have never or have not yet experienced the family transition of interest

(e.g., the never-married or childless), against which to benchmark the average effect of family transitions. Second, I return to the event study models to trace earnings trajectories before and after the family transition to test the "stickiness" of the effect of the family transition on men's and women's earnings trajectories. That is, the event study tests whether the effect of marriage or parenthood is temporary or long-lasting. Combined, these estimation strategies allow for robust tests of whether family transitions are trajectory-altering, as theorized, or whether apparent effects reflect pre-existing heterogeneity in men's and women's earnings levels and/or slopes.

8.3.1 The Average Effect of Family Transitions.

Pooled Ordinary Least Squares (POLS) provides a descriptive benchmark of earnings returns to family transitions.

$$Y_{itgj} = \beta_0 + \beta D_{it} + \beta_1 PotExp_{it} + \beta_2 PotExp_{it}^2 + X_{it}'\theta + \varepsilon_{it}, \tag{2}$$

Where, Y_{itgj} on Equation 2 is earnings for individual i at time t of gender g in country j. D_{it} identifies the key independent variable, a dummy for first family transition (i.e., either first marriage or childbirth). Exp_{it} and Exp_{it}^2 capture individual-level differences in potential experience to control for non-linear earnings trajectories associated with labor market experience across individuals. X_{it}' is the vector of covariates. Although informing much of the public debates on labor market returns to family events, POLS conflates selection into marriage/parenthood. That is, POLS does not control for stable characteristics across individuals that might fundamentally explain both higher (or lower) earnings and family transitions. For example, there might family background characteristics or stable personality traits that account for a higher likelihood of being both "more attractive" in marriage and labor markets.

Fixed Effects (FE) compares individuals to themselves before and after marriage

or parenthood ($\beta_{D_{it}}$). As in the POLS and following previous research on family status inequality using FE (Cheng 2016; Killewald and Gough 2013; Killewald and Lundberg 2017), to address potential bias arising from heterogeneity in earnings trajectories, I include the term $\gamma_1 Exp_{it} + \gamma_2 Exp_{it}^2$ which in the FE model captures within-individual nonlinear wage growth[8]. Equation 3 below importantly adds the term α_i, which denotes controls for all within-individual time-invariant characteristics, addressing bias from unobserved stable traits that arise from POLS. FE thus gets closer to isolating the "trajectory-altering" effect of family events. However, for unbiased estimates, the strict exogeneity assumption must hold. This means that the idiosyncratic error term cannot be correlated with the independent variables across all time periods: $E[\epsilon_{it}|X_i, \alpha_i] = 0$. Strict exogeneity of covariates will be violated if the parallel trends assumption does not hold. This assumption stipulates that, absent treatment (e.g., marriage), the treated (e.g., married) and control group (unmarried) would have followed the same trend over time. Any deviation from this constant trend after the treatment is attributed to the treatment effect. This is a strong assumption that will be violated if the steepness of earnings trajectories varies across treatment groups. For example, if individuals with steeper earnings trajectories are more likely to get married, FE estimates would be biased (**?**).

$$Y_{itgj} = \beta D_{it} + \gamma_1 PotExp_{it} + \gamma_2 PotExp_{it}^2 + X_{it}'\theta + \alpha_i + \varepsilon_{ijt}, \tag{3}$$

Fixed Effects with Group-Specific Slopes (FEGS) relaxes the parallel-trends assumption by allowing men and women who eventually marry or become parents to have different pre-event slopes than those who do not (Ludwig and Brüderl 2018). By adding an interaction term between the groups that experience the family transition and those that don't, FEGS

[8]Drawing on Cheng (2016), potential experience is calculated as age minus 14 for those with less than a high school degree, age minus 18 for those with a high school degree, and age minus 22 for those with more than a high school degree. High school is used as reference, given that that is how the CNEF provides harmonized information on educational attainment.

models how individuals who eventually experience the event (e.g., marriage) may have a different earnings growth rate than those who do. The model can be expressed as:

$$\begin{aligned} Y_{ijtg} =& \beta D_{it} + \varphi_1 PotExp_{it} + \varphi_2 PotExp_{it}^2 + \psi_1 PotExp_{it} \times EverD_i \\ &+ \psi_2 PotExp_{it}^2 \times EverD_i + X_{it}'\theta + \alpha_i + \varepsilon_{ijt}, \end{aligned} \tag{4}$$

Where the interaction term between those who have ever experienced the family transition ($EverD_i$) and potential experience ($PotExp_{it}$) and its square term controls for different earnings trajectories across groups, rather than just differences in earnings levels, as in the FE model. Unlike FE, which relies on parallel trends, FEGS permits differences in earnings growth between treatment groups, provided these differences can be captured by group-specific trends. That is the FEGS in essence substitutes the parallel trends assumption in FE model for a common trends assumption (Ludwig and Brüderl 2018). If family transitions are indeed selective on earnings growth, the estimated effect of the transition should be attenuated in the FEGS model relative to the FE model. As the FEGS still depends on a common trends assumption, hence, estimates would still be biased if individual deviations from group-specific slopes of work experience were systematically related to the timing of the family transition. For example, if women who have lower earnings growth are more likely to become mothers.

Fixed Effects Individual Slopes (FEIS) further relaxes the common trends assumptions by allowing each individual to have not only their own intercept, as in FE, but also their own slope (Rüttenauer and Kapelle 2024):

$$Y_{itgj} = \beta D_{it} + \rho_{1i} PotExp_{it} + \rho_{2i} PotExp_{it}^2 + X_{it}'\theta + \alpha_i + \varepsilon_{ijt}, \tag{5}$$

The steepness of earnings trajectories across individuals is captured by terms ρ_{1i} and ρ_{2i} in Equation 5. The FEIS estimator has at least two caveats. First, it is substantially more data-hungry than FE estimator, given that it requires a minimum number of $k+1$ person-years,

where k is equal to the number of individual slope parameters plus an individual intercept. Consequently, to guarantee a balanced sample across models, all estimations in the section are restricted to individuals with at least four years of observation. Second, FEIS has been argued to provide a conservative test of treatment effects (Meer and West 2016). Torche et. al. (2021) argue that by modeling individual-level trajectories pre- and post-treatment, FEIS may partially absorb the treatment effect in the presence of temporal variation, hence, while FEIS are more likely to yield null results, statistically significant estimates are also more likely robust to a causal interpretation.

8.3.2 The Joint Effect of First Family Transitions on Men's and Women's Earnings Trajectory.

The models above (POLS, FE, FEGS, FEIS) capture binary changes in earnings following family transitions. Given that marriage and parenthood are often closely tied events, I follow recent research to test if marriage penalties confound child penalties (Kleven, Landais, and Leite-Mariante 2024), by conducting a stacked event study, as specified below:

$$Y_{itgj} = \sum_{e=-5}^{5} \beta_e^M D_{it}^{M,e} + \sum_{e=-5}^{5} \beta_e^C D_{it}^{C,e} + X_{it}'\gamma + \alpha_i + \varepsilon_{it}, \tag{6}$$

Models are estimated separately for each country and for men and women here. Y_{itgj} are annual earnings (US$PPP)[9] for individual i at time t of gender g in country j. The term $\sum_{e=-5}^{5} \beta_e^M D_{it}^{M,e}$ represents dummies for years since first co-residential partnership began. Similarly, $\sum_{e=-5}^{5} \beta_e^C D_{it}^{C,e}$ captures time from the birth of the first child to the individual. Time since first family event (marriage or parenthood) is recoded as: 5 or more years pre-event; 3-4 years pre-event; 1-2 years pre-event (baseline category); Marital year; 1-2 years post-event; 3-4 post-event; 5 or more years post-event. The models include controls for number of

[9]Annual earnings are inflation adjusted using the country's Consumer Price Index and then adjusted for Purchasing Power Parity (PPP) for cross-national comparability. Reference year is 2017.

children in household, education, year and age. Hence, the coefficient β_e represents the change in earnings compared to the reference category. The term α_i captures the time-invariant individual fixed effect. ε_{it} is the unobserved time-varying error. While providing a robust test of the combined relationship of first family transitions, this estimation strategy can only be performed for couples where the year of first marriage and childbirth do not coincide. This reduces the sample size, substantially so in some countries.

8.3.3 A Note on Causal Inference

Causal inference is inherently challenging in the absence of randomization. As it's not feasible—or ethical—to randomly assign marriage and parenthood, the multi-method strategy adopted in this study was designed to provide a comprehensive and rigorous analytical framework for understanding cross-national differences in the long-term impact of family events. By testing robustness across model specifications and assessing the sensitivity of estimates to alternative functional forms, this study provides important insights not only into the extent of the impact of childbirth on income trajectories but also on the underlying mechanisms driving this relationship.

9 EMPIRICAL RESULTS

9.1 Descriptive Statistics

Figure 2 illustrates trends in employment status for men and women, based on the time elapsed from first marriage (Panel A) and first childbirth (Panel B). Patterns for men and women are vastly different. Men's employment status does not appear to vary as a function of time in first marriage, except for a sharp, but short-lived dip in full-time employment in Germany in the year of and following marriage. In Part A of the Supplementary data analyses (Figure S_A1), I replicate this figure, but restricting it to those who have never had children within the observation window. The short-term observed dip for German men disappears

when fathers are excluded. Women's labor force attachment appears to be influenced by changes in marital status in some, but not all, countries. In Germany, Switzerland, and South Korea there is a pronounced dip in full-time employment in the years following marriage, with part-time becoming the most popular category over time in the first two countries and not working in the latter. When restricting the sample to only those never observed as parents, the relationship between marriage and labor force attachment is only still observed in South Korea.

[Figure 2 Here]

Men's employment patterns following childbirth are rather stable in all countries. However, for women, childbirth appears to trigger long-term labor force attachment adjustments. Before childbirth, full-time employment is the most common status among women across countries. In Australia and the U.K., women's full-time employment declines markedly in the year preceding childbirth, likely reflecting anticipatory adjustments in labor force participation or due to pregnancy itself, given that pre-trends in full-time employment are rather flat before then. The U.S. is the only country where, despite a pronounced decrease in full-time employment in the year of childbirth, full-time employment remains the most popular category throughout time. In South Korea, the rise in non-employment begins two years before childbirth, suggesting a stronger link to marriage transitions. South Korea is also the only country where, after childbirth, non-employment surpasses employment and remains persistently high. The U.S. is the only country where, despite a pronounced decrease in full-time employment in the first year the child is born, full-time employment remains the most popular category throughout time.

These descriptive patterns reveal enduring gender asymmetries in employment trajectories surrounding first family formation. Women's labor force attachment—particularly full-time participation—declines sharply around childbirth and shows no evidence of recovery to pre-birth levels even fifteen years after the first birth. Marriage, on the other hand, seems to have little association with women's labor force attachment, apart from South Korea. In

contrast, men's employment patterns seem to bear no long-term association with first family transitions.

9.2 The Long-Term Effects of Parenthood on Within-Couple Inequality in Labor Market Outcomes

To assess how the divergent descriptive employment trajectories observed in the section above translate into longer-term within-couple inequality in labor market outcomes.

Figure 3 summarizes the results from the event study with couple-level fixed effects estimates, as presented in Equation 1. The Figure plots the predicted estimates of women's share of couples' earnings (Panel A), hourly earnings (Panel B), and the annual number of hours worked (Panel C) for the interaction between time since the couple's first childbirth and country, while holding other characteristics at their observed values. Hollowed markers denote coefficients that do not meet conventional statistical significance thresholds ($p > 0.05$). The reference category is two years before birth (x-axis = -2). Models control for the ages of both partners and year dummies.

[Figure 3 Here]

Figure 3, shows a significant, substantially negative, and persistent effect of first childbirth on wife's share of couple-level labor market outcomes across all six countries analyzed. Consistent with Hypothesis 1, across countries, women's share of couples' earnings drops sharply following the couple's transition to parenthood, though the timing and extent of this decline differ across nations. In the U.S., Australia, and South Korea, women's earnings share begins to decrease a year before birth. These could be due to anticipatory adjustments in labor supply caused by pregnancy or the effects of marriage, which in many cases is closely connected to childbirth. The most significant drop in women's earnings share occurs in the year of and immediately following childbirth. These declines are especially steep in the first year following childbirth in Germany (-27) and Australia (-16). Importantly, across all

countries, her earnings share not only remains significantly below pre-birth levels, but there is also no sign of recovery over time.

Are these within-couple inequality patterns observed in earnings a result of changes in couple inequality in hourly earnings or labor force attachment? Comparing Panel B (Hourly Earnings) and Panel C (Hours), the wife's share of hours worked generally shows a steeper and more persistent decline than her share of hourly earnings. This suggests that the primary driver of the reduced annual earnings share (Panel A) is a reduction in labor supply (hours worked), aligning with traditional gendered parental division of labor, rather than solely a decrease in her wage rate. The consistent, albeit smaller, drop in hourly earnings share (Panel B) is likely driven by the motherhood penalty, which also operates through wage penalties (e.g., career interruptions, reduced promotion opportunities, switching to lower-paying but more flexible jobs). These patterns confirm that childbirth acts as a trajectory-altering event for women's economic position within couples. However, the mechanisms underlying this shift differ across contexts. Apart from South Korea, where women's share of couples' hourly earnings falls significantly after childbirth (Panel B), the main driver of increasing within-couple inequality stems from reductions in women's labor force attachment (Panel C). Across countries, the contours of declining earnings shares in Panel A closely mirror those in annual hours worked (Panel C), underscoring that diminished paid work time, rather than wage rate changes, explains most of the within-couple gendered divergence in post-birth earnings trajectory.

Do within-couple inequality dynamics following the first childbirth differ given mother's education? In supplementary analysis (Figure S_B1), I present the predicted change in women's share of couples' earnings given the interaction of time from first childbirth, mother's education, and country, while holding other characteristics at their observed values. The findings confirm the universal pattern of a steep, persistent decline in the wife's share of couple-level labor outcomes following first childbirth, yet maternal education introduces significant heterogeneity that is highly conditional on both the country and the outcome

measure. While annual earnings trajectories generally track each other across educational groups in most countries, the protective buffer of higher education is most explicitly observed in Switzerland (CHE), where the drop in the annual earnings share (Panel A), though persistent, is substantially less pronounced for women with more than a high school degree. The cross-national variation is most salient in hourly earnings (Panel B). Contrary to the general trend, in the U.S. and the U.K., the decline in wives' hourly earnings share is statistically significant and persistent only for women with more than a high school degree, while the lower-educated group shows no statistically significant post-birth change. In Switzerland, conversely, only the lower-educated group experiences significant and persistent declines, while the more educated group's estimates remain close to zero or even show a temporary positive uptick in the year of birth. Germany also shows that the steepest declines primarily affect women with high school or less education, with declines among the more educated becoming insignificant after the initial two years. Meanwhile, trajectories in Australia and South Korea show greater alignment across educational groups for hourly earnings. Finally, regarding annual hours worked (Panel C), trajectories closely track across countries, but in Switzerland, Germany, and South Korea there is evidence that the reduction in the relative hours worked share is less severe for more educated women.

The patterns observed in Figure 3 and in the supplementary data analysis are based on women's share of couple labor market outcomes. Consequently, changes in men's patterns might drive these findings. For example, it is possible that the decrease in women's share of annual hours worked around childbirth could be explained by changes in their partners' labor market behaviors. Men who anticipate becoming fathers might, for example, see the need to invest more time in paid work given the expected increase in household expenditure, as would be expected in a male-breadwinner household specialization framework. However, the descriptive patterns observed in Figure 2 suggest that this is likely not the case, as there is no indication of an association between the timing of childbirth and changes in men's labor force attachment. I will investigate this question in more detail in the next sections.

9.3 The Effect of Parenthood on Household Income Trajectories

Figure 4 presents event study estimates of changes in pre-tax and post-tax incomes (Panel A), and the difference between them (Panel B), over the period surrounding the birth of the first child to couples in first-time co-residential unions. Models estimate changes in within-household income over time, net of time-invariant characteristics and other controls specified in Equation 1.

[Figure 4 Here]

Pre-tax income trajectories (diamond markers) illustrate how incomes change following childbirth driven by shifts in couples' labor market earnings dynamics. Pre-tax income declines significantly following childbirth in the U.K., Australia, Switzerland, and Germany, though the magnitude and persistence of these declines vary. The steepest immediate reduction occurs in Australia (-30%) and Germany (-27%). The United Kingdom and Switzerland also experience pronounced declines that continue throughout the post-birth period. By contrast, in the U.S. and South Korea, in general, there is no evidence that childbirth impacts pre-tax household incomes. These results lend partial support for Hypothesis 2a, which predicted that, apart from South Korea, childbirth would negatively impact pre-tax household incomes. However, different from what was expected, I do not find evidence that childbirth impacts pre-tax incomes in the U.S.

The post-tax income trajectories (triangle markers) show how government redistribution—through taxes and transfers—cushion or amplify these underlying changes. In contexts where pre-tax incomes decline, post-tax trajectories reveal if governments buffer or offset these losses. The difference model (Pre-Tax – Post-Tax) (Panel B) offers the clearest summary measure of redistribution, with more negative values signaling stronger redistributive intervention. That is, a negative value here confirms that net transfers increase or net taxes decrease relative to the pre-birth period. The U.K. exhibits some of the most negative values throughout most of the observation window, suggesting that tax and transfer policies provide substantial

compensation for the observed substantial pre-tax income losses following childbirth. British households lose approximately one-quarter to one-third of their pre-tax income compared to two years earlier. Once government policies of taxes and transfers are accounted for, the income loss decreases to approximately 10-15% in the first years following the transition to parenthood. While still representing a substantial decrease in incomes, post-tax income losses in the U.K. and Germany are substantially lower than in Australia and Switzerland, which hover around 20-25% in the years following parenthood. Panel B further confirms that redistributive efforts are much more modest, particularly in Switzerland, than in the U.K., Germany, and Australia.

A noteworthy pattern emerges in the U.S. and South Korea. In both countries, the pre-tax and post-tax income trajectories show no statistically significant deviations from the pre-birth baseline. Point estimates tend to remain close to zero, particularly in the first years after childbirth, suggesting that neither earnings nor net household income change markedly. However, Panel B reveals that the difference between pre- and post-tax income is statistically significant and consistently negative. This pattern suggests that modest redistributive transfers or tax adjustments occur after childbirth, even though they do not produce detectable shifts in overall post-tax income levels. Instead, these redistributive flows become visible only in the gap between pre- and post-tax income, indicating that both countries provide limited but measurable income smoothing around the transition to parenthood.

To further investigate the possible mechanisms driving these results, in supplementary data analyses (Part D - (Figure S_D1), I compare four estimators of the average effect of childbirth—POLS, FE, FEGS, and FEIS. The results show that, apart from the U.S., the four estimators produce broadly similar negative (positive, in the case of South Korea) and significant point estimates, which suggests that selection—either on levels or on slopes—is not the primary driver of the observed effects of childbirth on pre-tax household incomes. However, for the U.S., the three conventional estimators (POLS, FE, FEGS) all yield near-zero effects,

whereas FEIS produces a negative, statistically significant estimate. This suggests that couples in the U.S. who transition to parenthood are positively selected on their pre-birth income growth rate. That is, the near-zero coefficients from the conventional estimators (POLS, FE, FEGS) suggest a null average effect of childbirth on U.S. pre-tax household income, but the statistically significant and negative FEIS coefficient (-0.119, $p < 0.001$) indicates that this apparent stability is misleading, instead reflecting positive selection on income growth that masks an underlying, negative income shock corrected by the slope-controlling FEIS model.

Consistent with Hypothesis 2b, the results show clear welfare-state variation in the extent to which market-income losses after childbirth are buffered. In the U.K. and Germany—both of which have expanded dual-earner family policies through parental leave, childcare, and child allowances in the twentieth century—pre-tax incomes drop sharply around childbirth, but post-tax trajectories recover more quickly. These patterns indicate that redistributive mechanisms in these countries provide meaningful compensation for the increased financial needs of new families. Australia displays a smaller version of this dynamic, with modest post-tax recovery relative to pre-tax declines, reflecting its later and more market-oriented adoption of work–family supports. Switzerland shows only limited buffering, consistent with its comparatively modest redistributive approach. Despite very different approaches to work-family reconciliation policies in the U.S. and South Korea, Pre-tax income trajectories show little or no detectable change, and post-tax incomes remain similarly flat in the event study models. However, supplementary analyses Part D (Figure S_D1) reveal a negative imapct of childbirth on incomes in the U.S., once childless couples are included as the reference group and income growth is accounted for. For South Korea, these models reveal a positive average effect of children on incomes.

9.3.1 Educational Heterogeneities

Figure 10 plots predicted changes in household incomes following childbirth based on estimates from three-way interactions between time from birth, country and mother's education. Panel A

shows long-term income changes in pre-tax incomes, Panel B summarizes trends in disposable (post-tax and transfers) household income following first childbirth, while panel C shows the redistribution effect from the difference in pre- and post-tax income models. Patterns reveal substantial educational heterogeneity in income dynamics following childbirth across countries.

[Figure 10 Here]

In the U.S., we now see a statistically significant and substantial drop in pre-tax income following the transition to parenthood, but only in households where the mother has at most a high school degree (diamond marker). For households where the mother has more than a high school degree (triangle marker), point estimates hover near zero throughout most of the observation window and are not statistically significant.

In the United Kingdom and Germany, both education groups experience similar declines in pre-tax income following childbirth. However, the post-tax trajectories differ in their persistence. In the U.K., most post-tax estimates are not statistically significant, suggesting that redistribution offsets much of the initial market-income loss for both groups. In Germany, post-tax income declines are significant only through year 2 for mothers with more than a high school degree, but persist up to six years post-childbirth among mothers with at most a high school degree. This pattern indicates that German redistribution narrows—but does not eliminate—education-based gaps in household income recovery.

Panel C shows that redistributive effects are broadly similar across education groups in most countries, with the notable exception of Australia, where tax-and-transfer adjustments more strongly benefit households with lower-educated mothers. This partly explains the positive post-tax income growth observed for this group, although their pre-tax trajectories are also positive, suggesting that households with lower-educated mothers in Australia may experience unique earnings dynamics. The difference model shows further confirms that in Australia the state redistribution system acts to buffer in the long-term labor market earnings-related child penalties, particularly for households with mothers with lower levels

of education. In contrast, Switzerland's state system of taxes and transfers, similar to the aggregate model (Figure 4), has a minimal impact on buffering the negative income trajectory caused by children or minimizing class-based widening inequalities resulting from children.

In South Korea, neither pre-tax nor post-tax income changes are consistently statistically significant for either education group, reflecting considerable uncertainty around income trajectories in the years following childbirth. A statistically significant positive post-tax uptick beginning around year 7 suggests some improvement in disposable income in the longer term for households with mother with more than a high school degree.

In the U.K., all education groups experience sharp pre-tax income losses, but these are overall smallest for families with college-educated mothers. In Australia and Switzerland, all educational groups face a pre- and post-tax income penalty after childbirth, but the losses tend to be more severe and longer lasting for households with lower levels of maternal education. However, Overall, these findings provide mixed support for Hypothesis 2c, which posited that family income losses following childbirth would be smaller for highly educated mothers. In most countries, households with more highly educated mothers experience smaller and less sustained drops in pre-tax household income following childbirth. However, the protective role of education is strongest in liberal market-based systems (the U.S. and, to some extent, Switzerland) and more gender-normative contexts (South Korea). In countries that have invested more in work-family reconciliation policies over the past two decades (Germany, the United Kingdom, and to some extent, Australia), taxes and state transfers more effectively mitigate income losses following childbirth, particularly for households with less-educated mothers.

9.4 Parenthood and Marriage: Penalties and/or Premiums?

Figure 6 compares the average effect of the transitions to marriage (Panel A) and parenthood (Panel B) on annual earnings across four different statistical models. As expected, and consistent with cross-sectional estimates of the marital wage premium between married and

single men, the POLS model estimates a large a statistically significant male marital earnings premium in all countries. Once controlling for individual-level time-invariant characteristics and observing within-individual variation across time, the FE models reveal that the male marital earnings premium reduces notably (e.g., Australia, U.S., Switzerland, Korea) or fails to reach statistical significance. While the FE models control for differences in earnings levels across the married and the never-married, estimates might still be biased if the two groups differ in the rate of earnings growth. By including individual specific slopes, the FEIS models control not only for person's baseline earnings but also accounts for how the married and never-married might have very different earnings trajectories. The FEIS models fail not only to reach statistical significance in all countries apart from South Korea, point estimates are very close to zero in most countries. For women There isn't as a consistent pattern across countries in earnings returns to marriage. Only in Australia and U.K., is there a statistically significant female marital earnings premium even after accounting for individual differences in slopes (FEIS). South Korea is the only country where point estimates are negative, statistically significant, and do not very substantially across all models. This suggests that selection of women with lower earnings or in lower-earnings trajectory into marriage is not the main driver of the negative female marital earnings premium in Korea.

[Figure 6 Here]

Turning our attention to Panel B, we see that for men, once controlling for within-individual unobserved heterogeneity, the transition to fatherhood does not have a statistically significant impact on average earnings. Interestingly, only in Germany and once controlling for differences in earnings levels and slopes does a statistically significant ($p < 0.05$) fatherhood penalty emerge. Motherhood, on the other hand, across all models, has a negative and robust effect on women's earnings. Hence, consistent with hypothesis 3a, the evidence here suggests that male marital premiums to family transitions observed in cross-sectional data are mainly driven by differences in earnings levels and earnings growth between the married and never-married. I generally do not find evidence that men incur a marital or parenthood

earnings premium. As hypothesized, only in more gender-normative South Korea do I find a statistically significant change in men's earnings following marriage. For women, results corroborate Hypothesis 3b, which posits that while mothers in all countries would experience a motherhood penalty, the penalties would be smaller in countries where women also experience a marital penalty. Indeed, results show that in South Korea, where women experience a marital earnings penalty, motherhood penalties appear to be less severe. Parenthood is in many cases an event closely tied to marriage. Consequently, it is possible that marriage penalties may confound parenthood penalties. To test this, Figure 7 present results from a stacked event study to examine the combined effects of marriage and parenthood and to observe if these effects are long-lived or long-lasting.

As hypothesized, once the combined effect of marriage is controlled for, there is no significant effect of motherhood on women's earnings in South Korea, indicating that only in that context do female marital penalties confound motherhood penalties.

[Figure 7 Here]

10 CONCLUSION AND DISCUSSION

How do first family transitions alter household income trajectories, and how do institutional contexts buffer these effects? There is an extensive literature on individual-level wage returns to marriage and parenthood—especially male marital premiums and motherhood penalties—less is known about how these interrelated processes affect household-level income trajectories over the long run. This study advances a Family-Triggered Stratification Trajectory framework to conceptualize marriage and childbirth not as discrete individual events, but as trajectory altering life course transitions that initiate long-term shifts in household income trajectories, the magnitude and persistence of which are shaped by institutional context.

Integrating parallel strands of research on individual-level family earnings gaps and gender inequality, this study provides an important contribution to the social stratification

scholarship by identifying the impact of first family transitions, which tend to coincide with a crucial time of human capital formation in individuals' life cycle and, hence, has crucial implications for lifetime earnings and income. Leveraging the growing availability and maturity of longitudinal datasets across countries with different welfare state arrangements, the empirical findings in this study show that first family transitions——especially the transition to parenthood—— restructure the distribution of earnings within couples, triggering long-run shifts in household income that are a direct function of gendered labor market returns and the buffering capacities of welfare states.

Empirical findings reveal that women's share of couple earnings declines following childbirth across all countries, albeit to varying degrees. Consistent with past studies, the most substantial reductions are observed in Germany, with the most moderate reductions in the U.S. and U.K. (Musick, Bea, and Gonalons-Pons 2020). The observed trends in within-couple earnings inequality following parenthood largely stem from changes to women's share of annual work hours and, to a lesser extent, hourly wages, underscoring that both reductions in labor supply and wage dynamics contribute to the post-birth divergence in couple-level earnings.

Are these growing within-couple disparities due to women's penalties or men's premiums? Apart from marriage in Germany, I do not find that men receive significant marriage or parenthood premiums, particularly when selection on earnings growth is controlled for. These findings stand in contrast to the assumptions of household specialization models and challenge the notion of a universal male breadwinner premium. Rather, findings suggest that the central mechanism driving post-childbirth inequality within couples is a gendered penalty imposed on mothers' labor market trajectories. Stacked event study models provide further robustness, demonstrating that marriage penalties do not confound childhood penalties, except, as expected, in the case of South Korea.

How does the transition to parenthood impact total household incomes? Results of the event study models of childbirth on household income show that in the UK, Australia,

Switzerland, and Germany, income penalties are substantial and sustained. However, in South Korea and the US, I do not find evidence of a statistically significant effect of childbirth on incomes. It is important to note that while I do not find evidence of average declining incomes in the U.S. and South Korea, I also do not find evidence of a positive effect of childbirth on incomes, suggesting that families with children are still likely more financially strained than at pre-childbirth levels, given the added economic needs of a growing household.

What role do states play in mediating the economic consequences of childbirth? Comparing pre- and post-tax income trajectories highlights the role that state-level redistributive policies play in mediating the economic consequences of childbirth for families. Findings show that states that have invested more heavily in public spending on families in the twenty-first Century did a better job at buffering market-income-related losses after childbirth. In Germany, while pre-tax income losses are initially steep, redistributive policies largely offset long-term losses. The U.K. provides even stronger long-term post-tax support, yet its steep and prolonged pre-tax losses for mothers mean that redistribution is insufficient to offset earnings penalties. In contrast, the U.S. provides virtually no redistribution: disposable income tracks pre-tax income almost exactly, indicating that U.S. families are largely left to rely on market earnings. Despite efforts at mirroring the Swedish work-fmaily reconciliation policy framework in couple decades, I do not find an average compensatory effect of post-tax and transfers systems in South Korea. This is particularly important considering that South Korea is also the only country where I find evidence that women experience sustained marital earnings penalties. This likely reflects an institutional environment that, despite many efforts to promote gender equality, given concerns with alarmingly low levels of fertility, continues to rely heavily on a male breadwinning culture, with caregiving seen as a women's duty (Kim and Kim 2020). Hence, the apparent income stability for South Korean families after childbirth conceals women's foregone earnings and long-term earnings potential. Taken together, these findings underscore the importance of both gendered labor market dynamics and state redistribution in shaping family income trajectories. Countries that rely solely on market

earnings (e.g., the US) while incentivizing stronger labor force attachment of both men and women leave families more vulnerable to income shocks (e.g., recessions, sick family members, bereavement). Meanwhile, countries with stronger redistributive mechanisms demonstrate how welfare states can mitigate the long-term economic risks of childbirth, albeit unevenly and often insufficiently, highlighting the challenge of addressing household income losses without institutional and market structures that target individual-level gendered inequalities.

Do family income trajectories following first childbirth vary by mother's education? Findings suggest that maternal education moderates the impact of childbirth on household income, but in ways that vary across policy contexts. In the U.S. and South Korea——where public expenditure on families has tended to be lower than in the other countries analyzed——only mothers with higher levels of education experience income gains after childbirth, while less educated mothers see no improvement. This suggests that private resources are crucial in mitigating income shocks in these contexts. Switzerland, despite recent investments in childcare and paid leave, exhibits similarly limited redistributive effects across educational groups, indicating the possible persistence of gendered norms and more minimal state intervention. In contrast, Germany, the UK, and Australia offer more substantial buffering through tax-and-transfer systems, particularly benefiting lower-educated mothers. Hence, the empirical results suggest that while higher education protects against income losses in minimal welfare contexts, stronger welfare states reduce educational disparities in post-childbirth income trajectories through redistributive policy.

While this study primarily focuses on within-family inequality dynamics, these findings offer broader insights for understanding income inequality across families. Rising educational and labor market resemblance between men and women (England and Folbre 2010), alongside increased assortative mating (Mare 1991), have raised concerns about the potential compounding of advantage in highly educated dual-earner households. Although some studies have found weak links between assortative mating and rising inequality when looking at educational attainment (Breen and Salazar 2011), couple resemblance in earnings has been

shown to contribute substantially to household income inequality in the U.S. (Schwartz 2013). The current findings suggest that, in the U.S. and similar weaker redistributive regimes, childbirth may reinforce these dynamics, given the finding that only families with more educated mothers exhibit long-term positive post-birth income growth. This raises important questions about how child penalties interact with broader macroeconomic inequality trends. Childcare costs are a central piece of this puzzle. One of the largest— and most immediate for dual-earner couples— expenses after childbirth, childcare, shapes parents' long-term labor market attachment. Evidence for the US. shows that access to universal pre-kindergarten significantly raises parental earnings, with effects that persist over time (Humphries, Neilson, Ye, and Zimmerman 2024). Additionally, rising costs of childcare are particularly detrimental for the incomes of mothers without a college degree (Gonalons-Pons and Marinescu 2024). Taken together, these findings underscore that post-childbirth income trajectories are not only a function of parental characteristics, but also of institutional structures—especially the availability and affordability of public childcare and the generosity of income supports for families.

This study advances our knowledge of social stratification in various ways. By adopting an integrative lens that treats individuals and families as inseparable units of analysis, it enables a clearer understanding of the mechanisms that reproduce social inequality. The household specialization model—long the dominant framework for explaining within-couple inequality after marriage and parenthood——was developed primarily in reference to U.S. family arrangements of the 1960s (Grossbard-Shechtman 2001). Yet, with the rise of dual-earner households across industrialized countries since the 1970s (Sørensen 2003), there is a pressing need to revisit and expand these theoretical models (Oppenheimer 1997). The cross-national and longitudinal comparative research design carried out in this study illuminates how cross-national contexts shape household income trajectories. By combining long-run panel data from household surveys with recent analytical developments in the literature on family and gender inequality, this study's empirical analysis can provide more robust

statistical estimations that can better speak to the causes and consequences of family events and, consequently, provide a clearer understanding of the mechanisms that underpin the social stratification generating process.

This study is not, however, without limitations. First, it focuses exclusively on different-sex couples in first unions and excludes same-sex couples and non-union childbearing. This is a notable limitation given that alternative family forms are increasingly common. Recent work using administrative data shows that work-family dynamics in same-sex couples following childbirth differ in important ways from those of different-sex couples (Evertsson, Moberg, and van der Vleuten 2025; Jaspers, Mazrekaj, and Machado 2024). Second, I focus on the transition to first co-residential partnerships and childbirth to a couple. Consequently, individuals in second- or higher-order unions, or those who had children outside of unions (e.g., single mothers), are excluded from the analysis. Hence, the results reported here are not representative of this group, which, although still representing the minority of family arrangements, has been growing over the past few decades and may, in some countries, quickly become the standard family type. Third, although a common approach in the literature, maternal education is an imperfect indicator of socioeconomic status, particularly when used in cross-national comparisons. Unfortunately, sample size constraints do not allow for a comprehensive analysis of social class. As longitudinal surveys and administrative data become increasingly available, examining how different groups experience family-triggered income shocks under various policy regimes is an important avenue for future research.

A key interest of this paper is to understand the buffering effects of welfare states on household income inequality. Unlike the bulk of the literature at the intersection of gender inequality and policy studies, I do not focus on measuring the impact of a specific social policy or tax system. While understanding the effects of specific policies is important, here I argue, in line with Diprete and McManus (2000), that the effect of the combination of various social policies on family's long-term income trajectories, particularly following parenthood, is on its own right an essential unit of analysis in the social stratification literature, one with

the potential to shape both intra- and intergenerational mobility.

The empirical findings show that the degree to which welfare regimes buffer or exacerbate economic shocks following childbirth is not merely a function of redistribution, but of whether policies are structured to address the magnitude and gendered nature of pre-tax losses. In settings where state support is minimal or poorly targeted—such as the U.S.—family income stability hinges almost entirely on market earnings, leaving families, particularly disadvantaged ones, more vulnerable to socioeconomic shocks. In contrast, countries with stronger redistributive mechanisms demonstrate how welfare states can mitigate the long-term economic risks of childbirth, albeit unevenly and often insufficiently, highlighting the challenge of addressing household income losses without institutional and market structures that target individual-level gendered inequalities. The empirical investigation and framework proposed here, by conceptualizing first family transitions as trajectory-altering life course events, highlights how state-level and labor market structures shape individual outcomes in gendered ways that reverberate to family-level inequality. As countries increasingly grapple with a looming demographic crisis of an ageing population combined with low fertility rates, this study highlights how concerns with family income inequality cannot be uncoupled from those with gender inequalities in labor markets. In other words, addressing family income inequality after childbirth will require policy solutions that move beyond compensating losses to structurally transforming the conditions that produce them.

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FIGURES

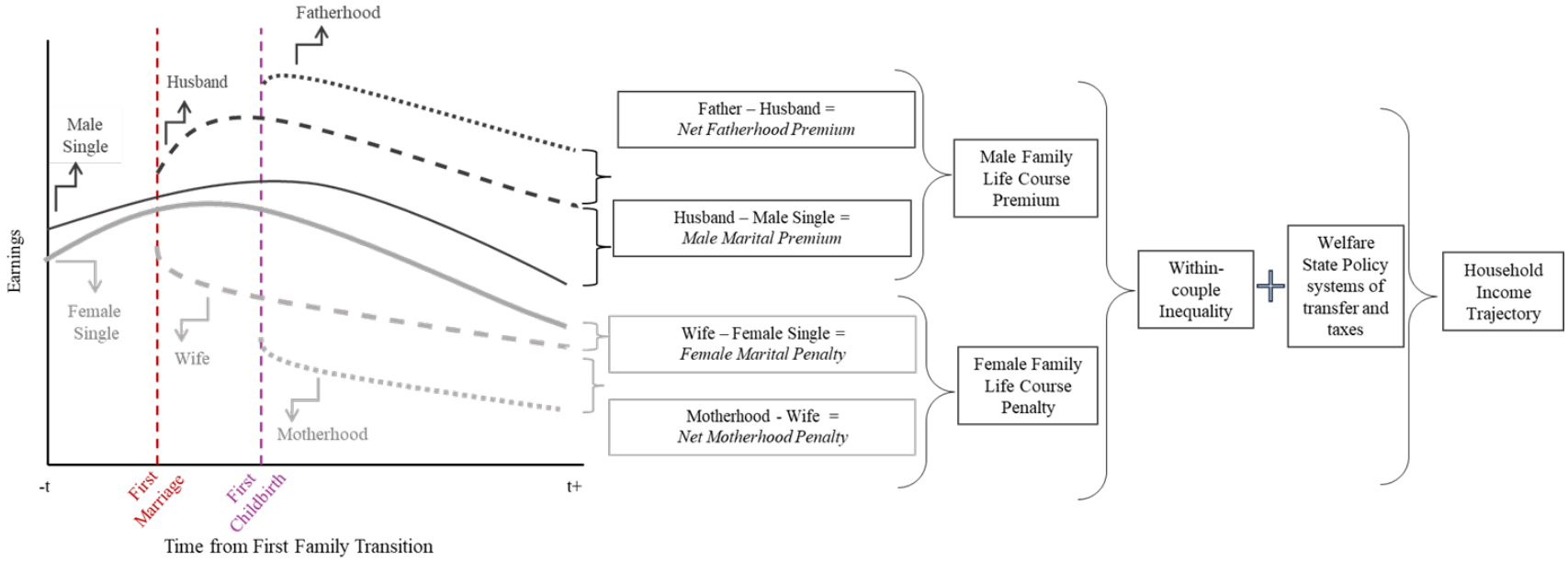


Figure 1: Illustration of the Trajectory-Altering Framework

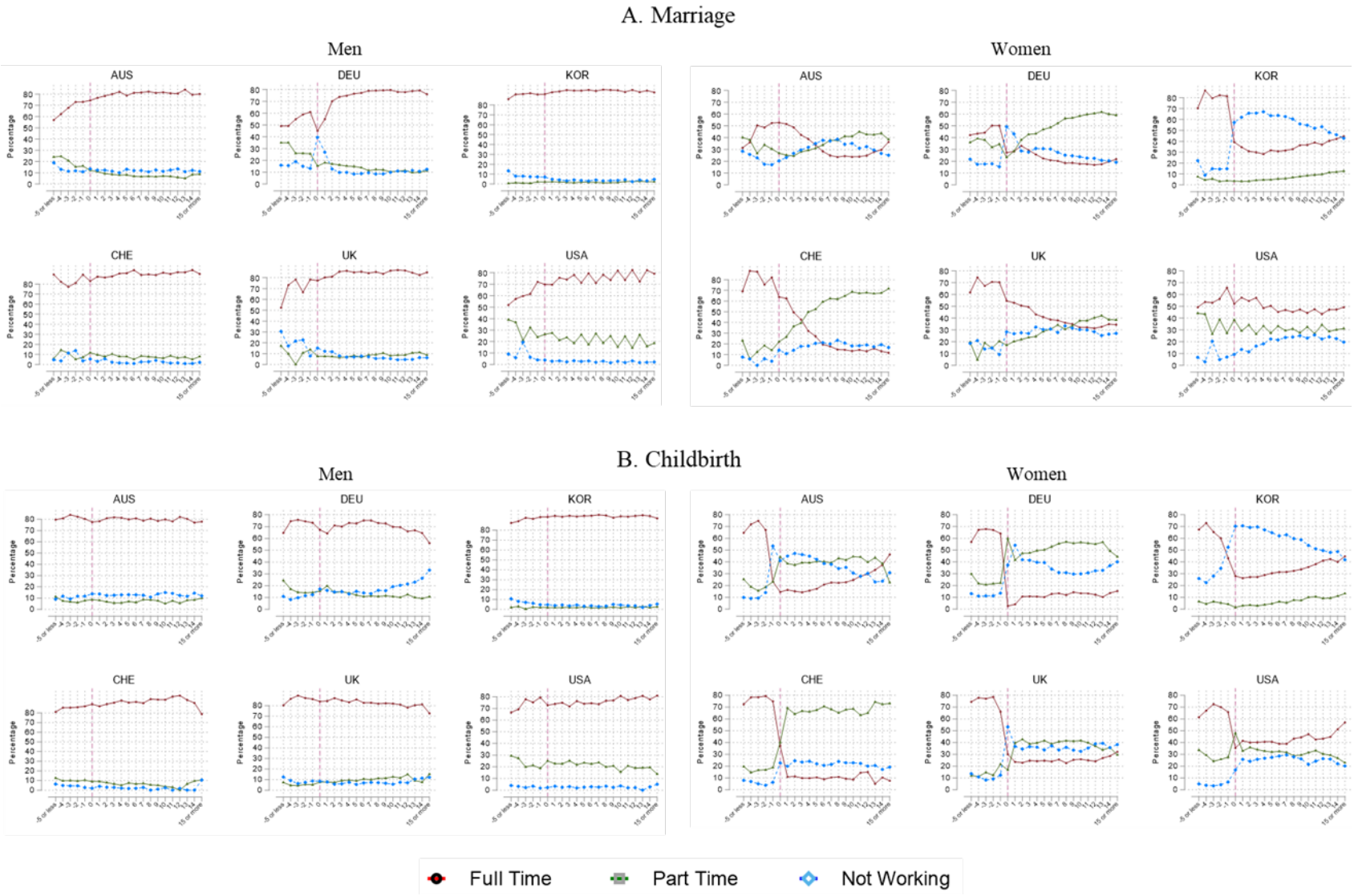


Figure 2: Employment Status for Men and Women, by Time from First Marriage (Panel A) and First Childbirth (Panel B)

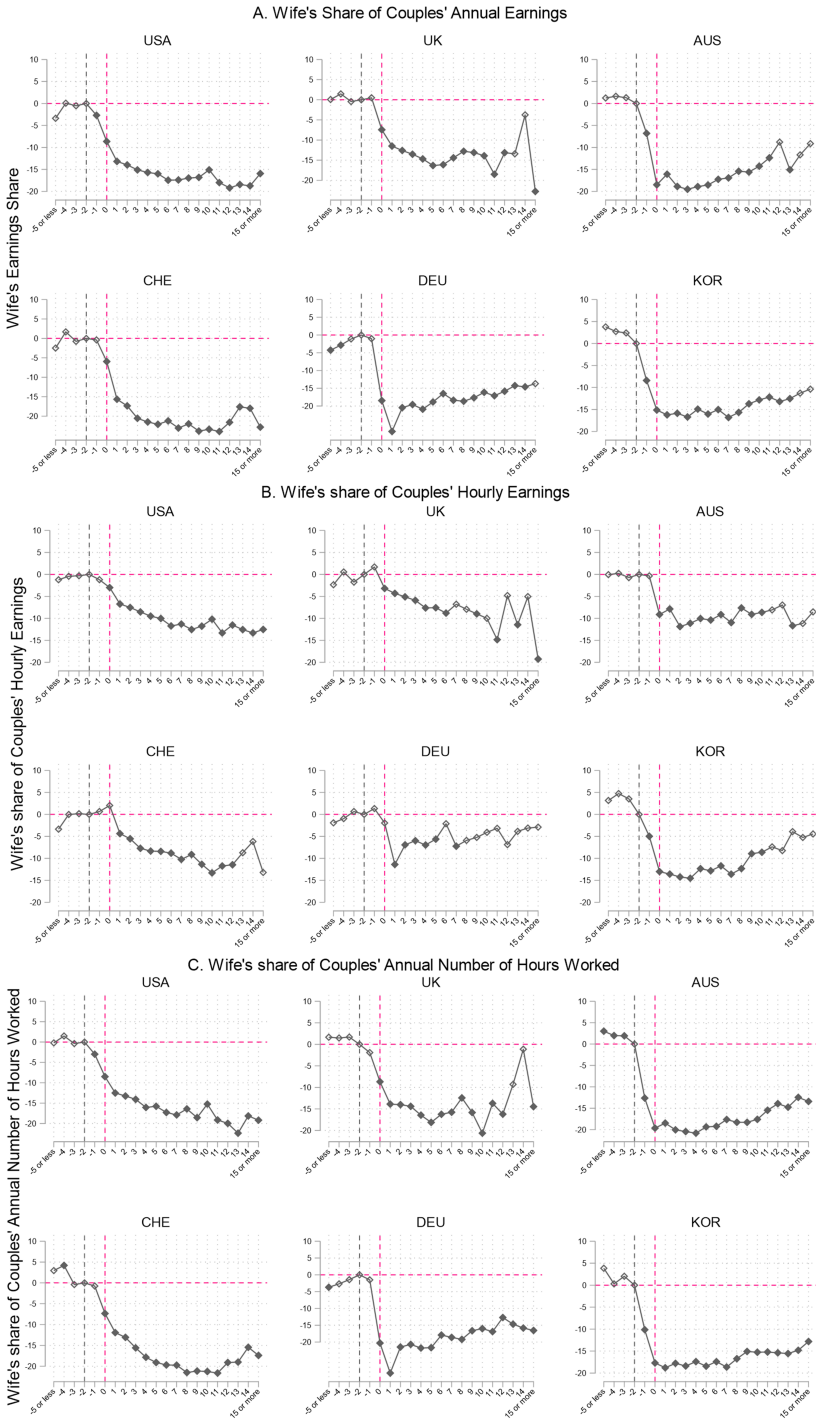


Figure 3: Predicted Change in Wife's Share of Couples' Earnings (A), Hourly Earnings (B), and Annual Hours Worked (C) by Country

Source: CNEF(1970-2019), HILDA(2001–2018), SOEP(1998–2019), KLIPS(1998–2018); SHP (1999–2019); BHPS(1998–2008), UKHLS (2010–2018), PSID(1998–2019).

Note: Pooled data. Estimates show predicted change in women's share of couples' earnings (a), hourly earnings (b), and number of annual hours worked (c) given the interaction of time from first childbirth to the couple and country while holding other characteristics at their observed values. The reference category is two years before birth (x-axis = -2). The controls include women's and men's ages and years. Hollow markers indicate estimates that are not significant at conventional levels ($p < 0.5$; $p < .01$; $p < .001$). Full regression tables in Appendix Table A2.

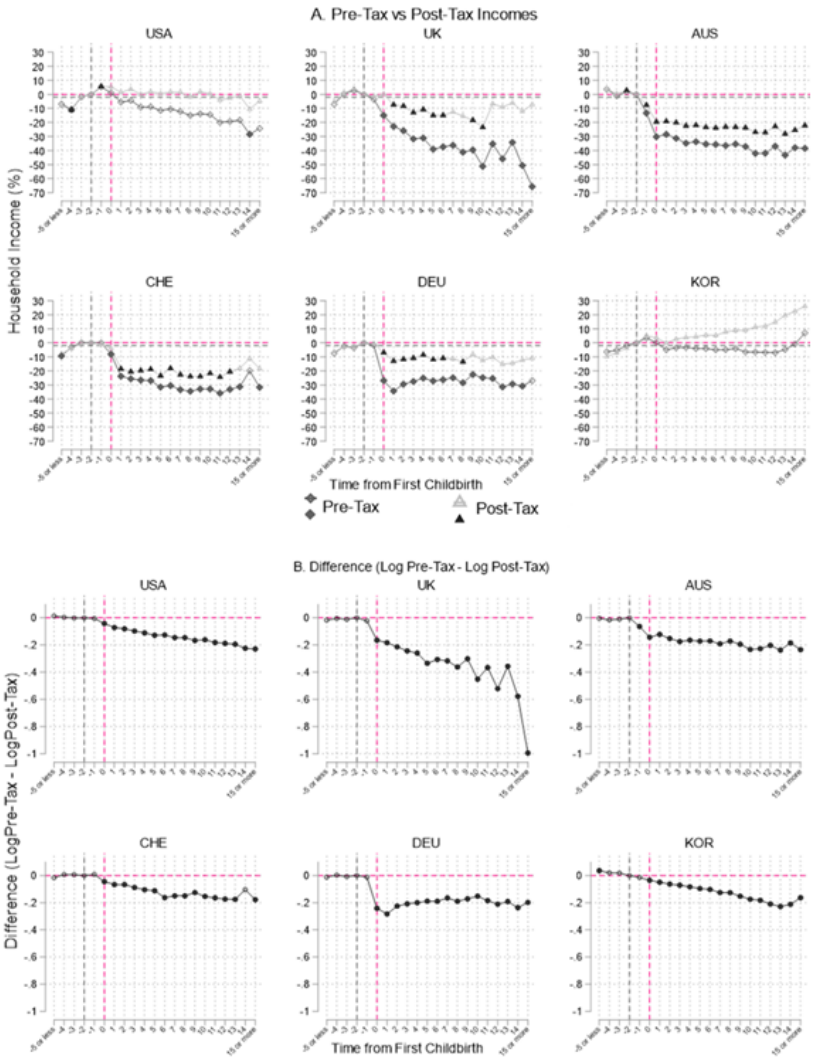


Figure 4: Predicted Change in Pre-Tax and Post-Tax Income (A), and Difference Pre–Post (B) by Time since Birth of First Child.

Source: CNEF(1970-2019), HILDA(2001–2018), SOEP(1998–2019), KLIPS(1998–2018); SHP (1999–2019); BHPS(1998–2008), UKHLS (2010–2018), PSID(1998–2019).

Note: Pooled data 2001-2019. Estimates show the predicted change in household's income given the interaction of time from first birth to couples and country while holding other characteristics at their observed values. The sample is restricted to couples in first-time partnerships without children before entering the partnership and who are observed at least once before the birth of the first child. The reference category is two years before birth (x-axis = -2 - as specified in Equation 2). The controls include women's and men's age, and year. Hollow markers indicate estimates that are not significant at conventional levels ($p<0.5$.; $p<.01$; $p<.001$). Full regression tables in Appendix Table A3.

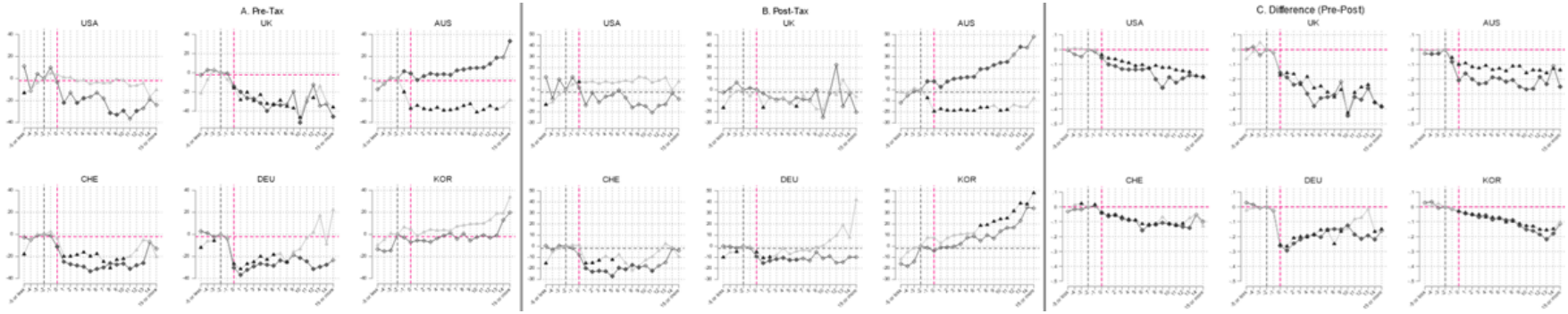


Figure 5: Predicted Change in Pre-Tax (A), Post-Tax(B), and Difference Pre - Post (C) Household Income by Time since Birth of First Child and Mom's Education

Source: CNEF(1970-2019), HILDA(2001–2018), SOEP(1998–2019), KLIPS(1998–2018); SHP (1999–2019); BHPS(1998–2008), UKHLS (2010–2018), PSID(1998–2019). *Source:* CNEF(1970-2019), HILDA(2001–2018), SOEP(1998–2019), KLIPS(1998–2018); SHP (1999–2019); BHPS(1998–2008), UKHLS (2010–2018), PSID(1998–2019).

Note: Pooled data 2001-2019. Estimates on the figure show the predicted change in household's income given the interaction of time from first birth to couples, mom's education, and country while holding other characteristics at their observed values. The sample is restricted to couples in first-time partnerships without children before entering the partnership. The reference category is two years before birth (x-axis = -2). The controls include women's and men's age, and year. Hollow markers indicate estimates that are not significant at conventional levels ($p<0.5$.; $p<.01$; $p<.001$) . Full regression tables in Appendix Table A4.

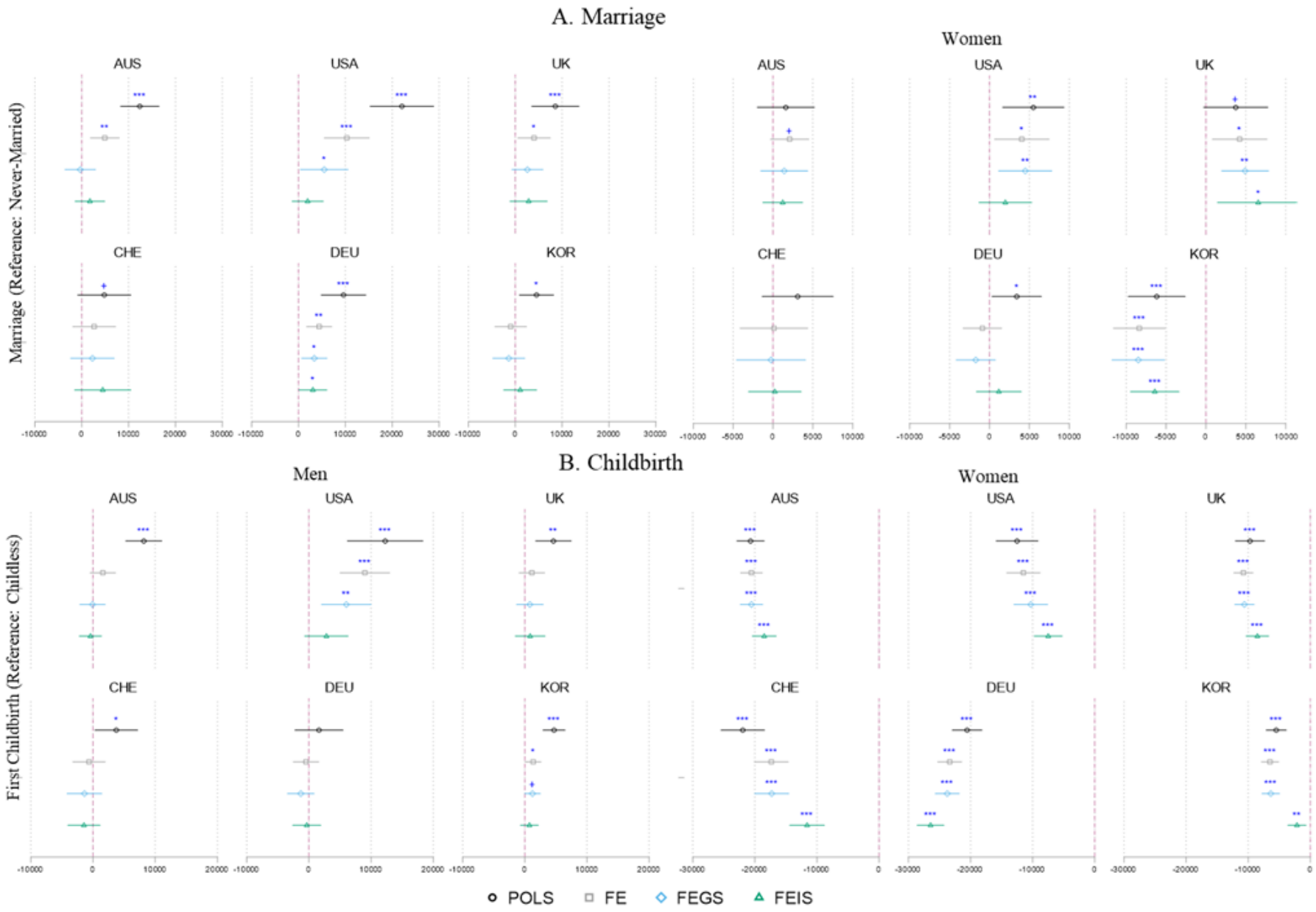


Figure 6: Comparison of Average Annual Earnings (2017PPP) Returns to Marriage and Parenthood Across Models by Country and Gender

Source: CNEF(1970-2019), HILDA(2001–2018), SOEP(1998–2019), KLIPS(1998–2018); SHP (1999–2019); BHPS(1998–2008), UKHLS (2010–2018), PSID(1998–2019).

Note: Coefficients show the average effect of marriage/childbirth estimated by conventional individual Fixed Effects (FE) and Fixed Effects Individual Slopes (FEIS) separately for men(A) and women(B), and each country. The reference category consists of individuals who are not yet married (parents) or have never been married (those who have had children) within the observation window. Both models include controls for potential experience and its square term, as well as age and year dummies. Marriage models include controls for the total number of children in the household. Childbirth models include controls for cohabitation status (living alone, with partner but reporting single-status, and living with partner reporting marriage as marital status). Appendix Table **??**. +p<0.1. *p < .05; **p < .01; ***p < .001

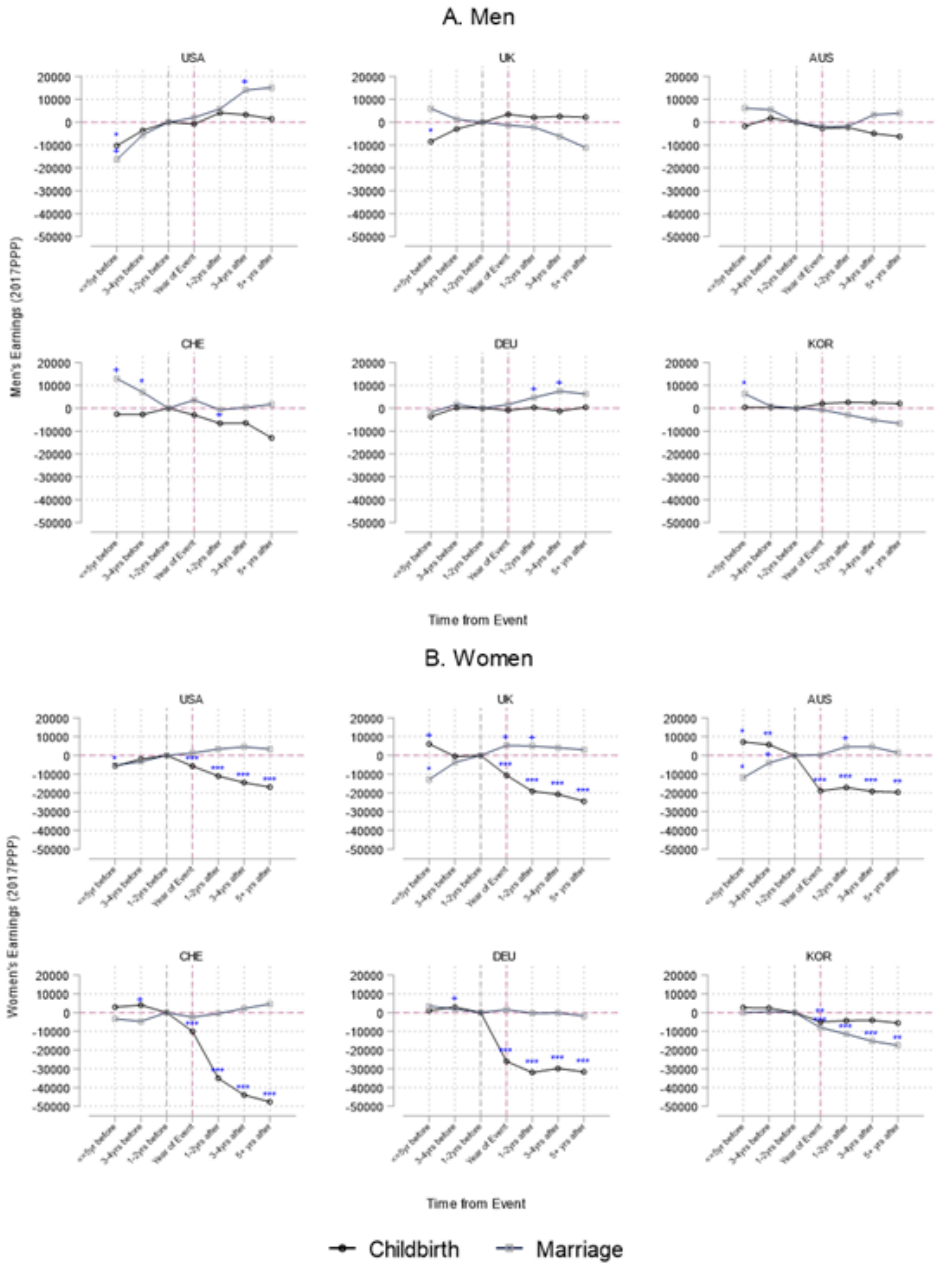


Figure 7: Joint Event Studies of First Marriage and First Childbirth by Country and Gender

Source: CNEF(1970-2019), HILDA(2001–2018), SOEP(1998–2019), KLIPS(1998–2018); SHP (1999–2019); BHPS(1998–2008), UKHLS (2010–2018), PSID(1998–2019).

Note: Estimates of the Joint Event Study model on separate country and gender samples. Outcome is measured in annual earnings (2017PPP). Reference category is -1 (one year prior to the family event). Models include controls for age and year. Full regression tables in Appendix Table A6 **??**.

$p < .05$; $^{**}p < .01$; $^{***}p < .001$

APPENDIX

Table A1. Couple-Level Analytic Sample Descriptive Characteristics.

Descriptive (Couple-Level)	Type	AUS	DEU	KOR	CHE	U.K.	U.S.	TOTAL
		HILDA	SOEP	KLIPS	SHP	BHPS/ UKHLS	PSID	
Analytic Couple-Level Sample	Couples	1,076	816	806	439	658	864	4,659
	Couple-Years	9,302	5,497	7,063	3,612	4,283	8,068	37,825
Total Number of Couples with imputed data on year of first marriage	Couples	235	186	800	422	247	40	1,930
	Couple-Years	1,266	883	7,007	3,447	1,284	201	14,088
Total Number of Couples within the analytic sample with modified data on year of first marriage (modifications were carried out when observed year of co-residential union differs from reported year of marriage to the same partner)	Couples	532	469	0	5	174	317	1,497
	Couple-Years	5,053	3,672	0	64	1,212	3,100	13,101
Total Number of Couples with imputed data on year of first childbirth	Couples	222	35	806	399	408	34	1,904
	Couple-Years	1,541	71	7,063	3,101	2,357	181	14,314
Couples transitioning to second and higher order births within observation window	Couples	578	221	470	230	290	506	2,295
	Couple-Years	3,223	1,004	3,061	1,228	1,012	2,915	12,443
Total Number of Couples Cohabiting (not legally married) in year of childbirth	Couples	32	181	0	13	98	56	380
Total number of couples whose unions eventually dissolved within the observation window	Couples	150	40	21	91	77	93	472
	Couple-Years	832	255	138	515	306	629	2,675
Average years couples observed for	Couples	8.6	6.7	8.8	8.2	6.5	9.3	8.1

† Missing information on the first marriage and the first childbirth was imputed from directly observed panel information. For respondents observed in the panel since before age 30—ensuring observation through the period when first unions and births typically occur—missing first-marriage years were replaced with the first observed transition into co-residence or legal marriage. When only one partner's date was available, it was applied to the couple if both records referred to the same first union. Missing first-birth years were similarly replaced with the first year an infant appeared in the household for respondents observed before age 30 and without prior evidence of children. This procedure primarily affected Australia, Switzerland, and Korea, where retrospective histories on marital and fertility timing were incomplete, and to a lesser extent the U.K.; all replacements were restricted to first unions and validated against reported dates where available.

Table A2. Event Study of Women's Share of Couples Earnings (A), Hourly Earnings (B), and Annual Hours Worked (C), by Country

	A. Annual Earnings	**B. Hourly Earnings (Wages)**	**C. Annual Number of Hours Worked**
Time from First Childbirth (ref = -2)			
-5 or less	-3.373 (-1.799)	-1.213 (-0.741)	-0.202 (-0.134)
-4	0.070 (0.050)	-0.421 (-0.363)	1.490 (1.407)
-3	-0.520 (-0.545)	-0.299 (-0.297)	-0.371 (-0.439)
-2	0.000 (.)	0.000 (.)	0.000 (.)
-1	-2.681** (-3.176)	-1.200 (-1.498)	-2.974*** (-3.937)
0	-8.638*** (-7.917)	-2.990** (-2.922)	-8.490*** (-9.345)
1	-13.176*** (-9.101)	-6.734*** (-4.960)	-12.505*** (-9.918)
2	-13.966*** (-8.122)	-7.518*** (-4.798)	-13.246*** (-9.171)
3	-15.105*** (-7.383)	-8.534*** (-4.546)	-14.057*** (-8.178)
4	-15.685*** (-6.641)	-9.487*** (-4.342)	-16.046*** (-8.150)
5	-15.989*** (-5.990)	-10.025*** (-4.035)	-15.766*** (-7.089)
6	-17.438*** (-5.861)	-11.724*** (-4.264)	-17.279*** (-7.022)
7	-17.388*** (-5.285)	-11.291*** (-3.725)	-17.882*** (-6.449)
8	-16.953*** (-4.666)	-12.534*** (-3.709)	-16.411*** (-5.392)
9	-16.809*** (-4.199)	-11.768** (-3.136)	-18.545*** (-5.609)
10	-15.093*** (-3.462)	-10.184* (-2.515)	-15.225*** (-4.284)
11	-17.995*** (-3.824)	-13.309** (-3.029)	-19.138*** (-4.955)
12	-19.183*** (-3.729)	-11.513* (-2.356)	-19.961*** (-4.779)
13	-18.434*** (-3.363)	-12.554* (-2.404)	-22.359*** (-4.953)
14	-18.734** (-3.170)	-13.306* (-2.379)	-18.133*** (-3.823)
15 or more	-15.936* (-2.332)	-12.509* (-2.048)	-19.171*** (-3.397)

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Table A2 – Continued from previous page

Category (Ref: USA; -2)	A. Annual Earnings	B. Hourly Earnings (Wages)	C. Annual Number of Hours Worked
Interaction Effects: Country × Time from First Childbirth			
AUS # -5 or less	4.628*	1.171	3.218*
	(2.510)	(0.716)	(2.361)
AUS # -4	1.571	0.663	0.493
	(0.999)	(0.460)	(0.411)
AUS # -3	1.841	-0.423	2.302*
	(1.590)	(-0.336)	(2.414)
AUS # -2	0.000	0.000	0.000
	(.)	(.)	(.)
AUS # -1	-4.114***	0.863	-9.652***
	(-3.867)	(0.681)	(-9.289)
AUS # 0	-9.845***	-6.121***	-11.146***
	(-7.894)	(-4.718)	(-10.909)
AUS # 1	-2.903*	-1.115	-5.972***
	(-2.072)	(-0.737)	(-4.883)
AUS # 2	-4.907***	-4.344**	-6.798***
	(-3.300)	(-2.748)	(-5.341)
AUS # 3	-4.400**	-2.585	-6.391***
	(-2.737)	(-1.528)	(-4.660)
AUS # 4	-3.219	-0.552	-4.776***
	(-1.873)	(-0.299)	(-3.344)
AUS # 5	-2.535	-0.350	-3.589*
	(-1.366)	(-0.178)	(-2.368)
AUS # 6	0.193	2.585	-1.950
	(0.099)	(1.257)	(-1.186)
AUS # 7	0.458	0.339	0.247
	(0.223)	(0.159)	(0.137)
AUS # 8	1.540	4.915*	-1.873
	(0.700)	(2.153)	(-0.984)
AUS # 9	1.218	2.681	0.255
	(0.507)	(1.077)	(0.134)
AUS # 10	0.833	1.550	-2.370
	(0.319)	(0.597)	(-1.179)
AUS # 11	5.641*	5.237	3.673
	(2.000)	(1.835)	(1.679)
AUS # 12	10.401**	4.563	6.026*
	(3.015)	(1.241)	(2.530)
AUS # 13	3.370	0.883	7.604**
	(0.930)	(0.223)	(2.736)
AUS # 14	7.055	2.149	5.680
	(1.817)	(0.549)	(1.956)
AUS # 15 or more	6.813	3.984	5.761
	(1.479)	(0.849)	(1.481)
DEU # -5 or less	-0.882	-0.706	-3.492
	(-0.433)	(-0.403)	(-1.915)

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Table A2 – Continued from previous page

Category (Ref: USA; -2)	A. Annual Earnings	B. Hourly Earnings (Wages)	C. Annual Number of Hours Worked
DEU # -4	-2.915 (-1.720)	-0.532 (-0.334)	-4.164* (-2.425)
DEU # -3	-0.591 (-0.469)	0.957 (0.696)	-1.052 (-0.792)
DEU # -2	0.000 (.)	0.000 (.)	0.000 (.)
DEU # -1	1.659 (1.522)	2.538* (2.283)	1.485 (1.217)
DEU # 0	-9.833*** (-7.027)	1.038 (0.722)	-11.823*** (-7.929)
DEU # 1	-13.987*** (-8.454)	-4.656* (-2.551)	-16.732*** (-9.235)
DEU # 2	-6.490*** (-3.646)	0.591 (0.339)	-8.225*** (-4.276)
DEU # 3	-4.475* (-2.390)	2.552 (1.432)	-6.648** (-3.251)
DEU # 4	-5.207** (-2.590)	2.522 (1.294)	-5.736** (-2.676)
DEU # 5	-2.865 (-1.369)	4.399* (2.175)	-5.906** (-2.656)
DEU # 6	0.939 (0.407)	9.604*** (4.285)	-0.641 (-0.278)
DEU # 7	-0.978 (-0.435)	4.057 (1.951)	-0.733 (-0.281)
DEU # 8	-1.688 (-0.729)	6.618** (2.911)	-2.788 (-1.044)
DEU # 9	-0.863 (-0.343)	6.535* (2.476)	1.916 (0.683)
DEU # 10	-1.047 (-0.430)	6.109* (2.476)	-0.782 (-0.293)
DEU # 11	0.898 (0.337)	10.150*** (3.822)	2.244 (0.779)
DEU # 12	3.346 (1.080)	4.640 (1.418)	7.253* (2.087)
DEU # 13	4.176 (1.228)	8.699* (2.399)	7.687 (1.872)
DEU # 14	4.145 (0.920)	10.206* (2.551)	2.301 (0.545)
DEU # 15 or more	2.246 (0.313)	9.617 (1.959)	2.623 (0.437)
KOR # -5 or less	7.151 (1.893)	4.380 (1.116)	4.052 (1.033)
KOR # -4	2.658 (0.850)	5.162 (1.733)	-1.188 (-0.399)
KOR # -3	2.926 (1.418)	3.838 (1.645)	2.403 (1.177)

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Table A2 – Continued from previous page

Category (Ref: USA; -2)	A. Annual Earnings	B. Hourly Earnings (Wages)	C. Annual Number of Hours Worked
KOR # -2	0.000 (.)	0.000 (.)	0.000 (.)
KOR # -1	-5.718*** (-3.694)	-3.770* (-2.135)	-7.161*** (-4.506)
KOR # 0	-6.495*** (-3.876)	-10.024*** (-5.341)	-9.205*** (-5.495)
KOR # 1	-3.049 (-1.674)	-6.840*** (-3.417)	-6.284*** (-3.366)
KOR # 2	-1.906 (-1.013)	-6.716*** (-3.309)	-4.534* (-2.398)
KOR # 3	-1.601 (-0.833)	-5.988** (-2.894)	-4.330* (-2.205)
KOR # 4	0.761 (0.376)	-2.859 (-1.325)	-1.349 (-0.654)
KOR # 5	-0.056 (-0.027)	-2.799 (-1.276)	-2.664 (-1.292)
KOR # 6	2.417 (1.125)	0.013 (0.006)	-0.122 (-0.057)
KOR # 7	0.575 (0.264)	-2.295 (-0.975)	-0.748 (-0.329)
KOR # 8	1.296 (0.569)	0.208 (0.086)	-0.324 (-0.136)
KOR # 9	3.098 (1.261)	2.837 (1.069)	3.467 (1.382)
KOR # 10	2.270 (0.893)	1.576 (0.589)	-0.030 (-0.012)
KOR # 11	5.808* (2.098)	5.925* (2.000)	3.933 (1.420)
KOR # 12	5.986* (1.986)	3.277 (0.981)	4.577 (1.538)
KOR # 13	5.900 (1.798)	8.637* (2.247)	6.808* (2.038)
KOR # 14	7.450* (2.046)	8.057* (1.991)	3.324 (1.001)
KOR # 15 or more	5.564 (1.214)	8.058 (1.889)	6.361 (1.443)
CHE # -5 or less	0.893 (0.334)	-2.150 (-0.785)	3.166 (1.108)
CHE # -4	1.620 (0.863)	0.411 (0.224)	2.706 (1.328)
CHE # -3	-0.241 (-0.165)	0.463 (0.299)	-0.029 (-0.019)
CHE # -2	0.000 (.)	0.000 (.)	0.000 (.)
CHE # -1	2.290 (1.862)	1.860 (1.343)	2.228 (1.635)

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Table A2 – Continued from previous page

Category (Ref: USA; -2)	A. Annual Earnings	B. Hourly Earnings (Wages)	C. Annual Number of Hours Worked
CHE # 0	2.703 (1.945)	5.016** (3.240)	1.150 (0.699)
CHE # 1	-2.474 (-1.530)	2.362 (1.365)	0.588 (0.309)
CHE # 2	-3.385 (-1.950)	1.973 (1.081)	0.179 (0.093)
CHE # 3	-5.443** (-2.955)	0.819 (0.429)	-1.532 (-0.738)
CHE # 4	-5.806** (-3.130)	1.141 (0.560)	-1.792 (-0.822)
CHE # 5	-6.102** (-3.046)	1.615 (0.735)	-3.326 (-1.398)
CHE # 6	-3.775 (-1.852)	2.906 (1.187)	-2.409 (-1.028)
CHE # 7	-5.663** (-2.731)	1.062 (0.424)	-1.855 (-0.705)
CHE # 8	-5.023* (-2.184)	3.414 (1.358)	-5.091 (-1.799)
CHE # 9	-7.023** (-2.842)	0.417 (0.152)	-2.601 (-0.844)
CHE # 10	-8.277** (-3.200)	-3.116 (-1.100)	-6.020 (-1.863)
CHE # 11	-5.937* (-2.372)	1.581 (0.526)	-2.499 (-0.696)
CHE # 12	-2.397 (-0.823)	0.064 (0.017)	0.868 (0.237)
CHE # 13	0.834 (0.229)	3.839 (0.897)	3.366 (0.660)
CHE # 14	0.760 (0.171)	7.147 (1.529)	2.691 (0.499)
CHE # 15 or more	-6.884 (-1.552)	-0.694 (-0.140)	1.782 (0.339)
GBR # -5 or less	3.447 (1.629)	-1.137 (-0.585)	1.857 (1.023)
GBR # -4	1.395 (0.723)	0.978 (0.551)	-0.015 (-0.009)
GBR # -3	0.084 (0.061)	-1.456 (-1.018)	2.064 (1.537)
GBR # -2	0.000 (.)	0.000 (.)	0.000 (.)
GBR # -1	3.183* (2.571)	2.892* (2.405)	1.066 (0.865)
GBR # 0	1.196 (0.828)	-0.203 (-0.146)	-0.193 (-0.141)
GBR # 1	1.686 (1.125)	2.427 (1.606)	-1.369 (-0.955)

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Table A2 – Continued from previous page

Category (Ref: USA; -2)	A. Annual Earnings	B. Hourly Earnings (Wages)	C. Annual Number of Hours Worked
GBR # 2	1.372 (0.851)	2.417 (1.551)	-0.755 (-0.495)
GBR # 3	1.585 (0.924)	2.629 (1.583)	-0.340 (-0.199)
GBR # 4	1.003 (0.518)	1.869 (1.011)	-0.394 (-0.211)
GBR # 5	-0.329 (-0.170)	2.450 (1.275)	-2.360 (-1.254)
GBR # 6	1.324 (0.674)	2.927 (1.419)	1.047 (0.560)
GBR # 7	2.982 (1.230)	4.506 (1.830)	2.121 (0.920)
GBR # 8	4.163 (1.274)	4.599 (1.448)	3.974 (1.230)
GBR # 9	3.707 (1.148)	2.801 (0.836)	2.716 (0.987)
GBR # 10	1.198 (0.283)	0.195 (0.041)	-5.399* (-2.054)
GBR # 11	-0.503 (-0.183)	-1.529 (-0.531)	5.435 (1.898)
GBR # 12	6.049 (1.817)	6.717* (2.378)	3.744 (1.192)
GBR # 13	5.021 (0.883)	1.113 (0.269)	13.067* (2.346)
GBR # 14	14.992 (1.135)	8.270 (0.624)	17.005 (1.317)
GBR # 15 or more	-6.819 (-1.615)	-6.754 (-1.728)	4.706 (1.197)
Women's Age	✓	✓	✓
Men's Age	✓	✓	✓
Year	✓	✓	✓
Constant	44.513*** (5.145)	45.449*** (4.771)	38.349*** (3.382)
N couples N couple-years	4613 37529	4316 29646	35101 4495

Source: Fertility histories from the Australian Household Income Dynamics (HILDA, 2001–2018); German Socio-Economic Panel (SOEP, 1998–2019); Korean Labor and Income Panel Study (KLIPS, 1998–2018); the Swiss Household Panel (SHP, 1999–2019); British Household Panel Study (BHPS, 1998–2008) and the United Kingdom Household Longitudinal Study (UKHLS, 2010–2018); U.S. Panel Study of Income Dynamics (PSID, 1998–2019). Cross-National Equivalent Files (CNEF) for harmonized earnings and demographic variables.
Notes: Pooled data 2001-2019. Estimates show the predicted change in women's share of couple's annual earnings (A); hourly earnings (B); and annual number of hours worked (C) given the interaction of time from first birth to couples and country while holding other characteristics at their observed values. The sample is restricted to couples in first-time partnerships without children prior to entering the partnership, and who are observed at least once before the birth of their first child. The reference category is two years before birth (x-axis = -2 - as specified in Equation 1. The controls include women's and men's age and year. Statistical significance is tested using Stata's *lincom* command.
$^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$.

Table A3. Event Study of Time from Birth of First Child on Pre-Tax (A), Post-Tax(B), and Difference Pre–Post (C) Household Income.

	A. Pre-Taxes and Transfers Household Income (log)	**B. Post-Transfers and Taxes Household Income (log)**	**C. Difference in Log Pre-tax - Post-Tax Incomes**
Time from First Birth of First Child (ref = -2)			
-5 or less	-0.072	-0.085	0.013
	(-1.325)	(-1.806)	(0.948)
-4	-0.114*	-0.118*	0.004
	(-2.014)	(-2.216)	(0.432)
-3	-0.019	-0.018	-0.001
	(-0.577)	(-0.559)	(-0.137)
-2	0.000	0.000	0.000
	(.)	(.)	(.)
-1	0.050	0.055*	-0.004
	(1.819)	(2.066)	(-0.841)
0	0.011	0.052	-0.042***
	(0.317)	(1.686)	(-5.731)
1	-0.057	0.014	-0.071***
	(-1.284)	(0.360)	(-4.764)
2	-0.044	0.036	-0.080***
	(-0.948)	(0.867)	(-6.414)
3	-0.096	0.001	-0.097***
	(-1.764)	(0.016)	(-6.292)
4	-0.093	0.017	-0.111***
	(-1.530)	(0.329)	(-6.141)
5	-0.122	0.006	-0.128***
	(-1.778)	(0.104)	(-5.637)
6	-0.111	0.015	-0.126***
	(-1.471)	(0.243)	(-5.353)
7	-0.131	0.014	-0.145***
	(-1.545)	(0.208)	(-5.180)
8	-0.163	-0.018	-0.145***
	(-1.761)	(-0.234)	(-4.893)
9	-0.148	0.018	-0.167***
	(-1.477)	(0.220)	(-4.987)
10	-0.157	0.004	-0.161***
	(-1.458)	(0.049)	(-4.548)
11	-0.222	-0.041	-0.181***
	(-1.889)	(-0.428)	(-4.668)
12	-0.215	-0.027	-0.188***
	(-1.702)	(-0.261)	(-4.483)
13	-0.205	-0.011	-0.194***
	(-1.519)	(-0.098)	(-4.359)
14	-0.335*	-0.111	-0.224***
	(-2.238)	(-0.898)	(-4.751)
15 or more	-0.278	-0.049	-0.229***
	(-1.770)	(-0.381)	(-4.377)

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Table A3 – Continued from previous page

Category (Ref: USA; -2)	A. Annual Earnings	B. Hourly Earnings (Wages)	C. Annual Number of Hours Worked
Interaction Effects: Country × Time from First Childbirth			
AUS # -5 or less	0.107*	0.124**	-0.016
	(2.107)	(2.689)	(-1.423)
AUS # -4	0.103	0.122*	-0.019
	(1.754)	(2.204)	(-1.916)
AUS # -3	0.038	0.046	-0.008
	(1.066)	(1.322)	(-0.856)
AUS # -2	0.000	0.000	0.000
	(.)	(.)	(.)
AUS # -1	-0.193***	-0.134***	-0.059***
	(-6.497)	(-4.893)	(-7.236)
AUS # 0	-0.370***	-0.270***	-0.101***
	(-10.479)	(-9.000)	(-7.581)
AUS # 1	-0.278***	-0.228***	-0.051***
	(-6.800)	(-6.619)	(-3.448)
AUS # 2	-0.332***	-0.261***	-0.071***
	(-8.262)	(-7.644)	(-4.833)
AUS # 3	-0.331***	-0.254***	-0.077***
	(-7.616)	(-7.080)	(-4.185)
AUS # 4	-0.319***	-0.265***	-0.054***
	(-7.344)	(-7.306)	(-3.376)
AUS # 5	-0.316***	-0.273***	-0.043*
	(-6.934)	(-7.470)	(-2.436)
AUS # 6	-0.331***	-0.288***	-0.044**
	(-7.258)	(-7.524)	(-2.923)
AUS # 7	-0.324***	-0.278***	-0.046
	(-6.194)	(-7.030)	(-1.921)
AUS # 8	-0.274***	-0.248***	-0.026
	(-5.449)	(-5.983)	(-1.593)
AUS # 9	-0.317***	-0.289***	-0.028
	(-5.823)	(-6.819)	(-1.216)
AUS # 10	-0.390***	-0.318***	-0.071**
	(-6.459)	(-7.267)	(-2.689)
AUS # 11	-0.321***	-0.276***	-0.046
	(-4.975)	(-5.661)	(-1.676)
AUS # 12	-0.247***	-0.233***	-0.014
	(-3.746)	(-4.384)	(-0.631)
AUS # 13	-0.362***	-0.319***	-0.043
	(-4.349)	(-5.209)	(-1.270)
AUS # 14	-0.143	-0.183*	0.040
	(-1.370)	(-2.270)	(1.070)
AUS # 15 or more	-0.208**	-0.202**	-0.005
	(-2.669)	(-3.248)	(-0.175)
DEU # -5 or less	-0.005	0.020	-0.025
	(-0.098)	(0.420)	(-1.457)

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Table A3 – Continued from previous page

Category (Ref: USA; -2)	A. Annual Earnings	B. Hourly Earnings (Wages)	C. Annual Number of Hours Worked
DEU # -4	0.090 (1.501)	0.091 (1.650)	-0.001 (-0.051)
DEU # -3	-0.016 (-0.410)	-0.010 (-0.271)	-0.006 (-0.449)
DEU # -2	0.000 (.)	0.000 (.)	0.000 (.)
DEU # -1	-0.067* (-2.105)	-0.060* (-2.158)	-0.007 (-0.553)
DEU # 0	-0.323*** (-8.758)	-0.124*** (-4.131)	-0.200*** (-11.659)
DEU # 1	-0.363*** (-7.670)	-0.151*** (-4.266)	-0.211*** (-8.747)
DEU # 2	-0.304*** (-6.972)	-0.160*** (-4.630)	-0.144*** (-6.713)
DEU # 3	-0.225*** (-4.551)	-0.115** (-3.026)	-0.111*** (-4.295)
DEU # 4	-0.196*** (-4.089)	-0.107** (-2.843)	-0.089*** (-3.923)
DEU # 5	-0.194*** (-3.612)	-0.133*** (-3.427)	-0.060* (-2.201)
DEU # 6	-0.194*** (-3.594)	-0.131** (-3.159)	-0.063* (-2.443)
DEU # 7	-0.155** (-2.740)	-0.135** (-3.291)	-0.020 (-0.703)
DEU # 8	-0.171* (-2.544)	-0.126** (-2.827)	-0.045 (-1.200)
DEU # 9	-0.107 (-1.591)	-0.102* (-2.208)	-0.005 (-0.132)
DEU # 10	-0.128 (-1.803)	-0.138** (-2.832)	0.009 (0.243)
DEU # 11	-0.070 (-0.853)	-0.066 (-1.231)	-0.003 (-0.073)
DEU # 12	-0.161 (-1.860)	-0.138* (-2.341)	-0.023 (-0.473)
DEU # 13	-0.143 (-1.539)	-0.145* (-2.342)	0.002 (0.045)
DEU # 14	-0.032 (-0.357)	-0.021 (-0.275)	-0.012 (-0.265)
DEU # 15 or more	-0.034 (-0.278)	-0.065 (-0.692)	0.031 (0.450)
KOR # -5 or less	0.007 (0.079)	-0.016 (-0.196)	0.023 (1.896)
KOR # -4	0.060 (0.665)	0.044 (0.485)	0.016 (1.163)
KOR # -3	0.000 (0.002)	-0.019 (-0.281)	0.019 (1.569)

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Table A3 – Continued from previous page

Category (Ref: USA; -2)	A. Annual Earnings	B. Hourly Earnings (Wages)	C. Annual Number of Hours Worked
KOR # -2	0.000 (.)	0.000 (.)	0.000 (.)
KOR # -1	-0.015 (-0.323)	-0.006 (-0.115)	-0.010 (-1.099)
KOR # 0	-0.010 (-0.206)	-0.017 (-0.344)	0.007 (0.688)
KOR # 1	0.007 (0.128)	-0.015 (-0.293)	0.022 (1.539)
KOR # 2	0.009 (0.178)	-0.009 (-0.173)	0.018 (1.827)
KOR # 3	0.063 (1.178)	0.037 (0.706)	0.026* (2.429)
KOR # 4	0.052 (0.955)	0.025 (0.466)	0.027* (2.510)
KOR # 5	0.081 (1.462)	0.048 (0.917)	0.032* (2.298)
KOR # 6	0.060 (1.050)	0.036 (0.654)	0.024 (1.798)
KOR # 7	0.081 (1.389)	0.061 (1.112)	0.020 (1.304)
KOR # 8	0.122* (2.053)	0.103 (1.835)	0.019 (1.358)
KOR # 9	0.082 (1.306)	0.067 (1.142)	0.015 (0.881)
KOR # 10	0.090 (1.421)	0.103 (1.730)	-0.013 (-0.715)
KOR # 11	0.153* (2.176)	0.154* (2.379)	-0.001 (-0.035)
KOR # 12	0.143* (1.977)	0.164* (2.529)	-0.021 (-0.904)
KOR # 13	0.156* (1.972)	0.190** (2.738)	-0.034 (-1.118)
KOR # 14	0.327*** (3.489)	0.314*** (3.802)	0.013 (0.378)
KOR # 15 or more	0.346*** (4.019)	0.281*** (3.529)	0.066* (2.249)
CHE # -5 or less	-0.026 (-0.433)	0.003 (0.059)	-0.029* (-2.172)
CHE # -4	0.083 (1.321)	0.080 (1.282)	0.003 (0.290)
CHE # -3	0.019 (0.476)	0.012 (0.294)	0.007 (0.723)
CHE # -2	0.000 (.)	0.000 (.)	0.000 (.)
CHE # -1	-0.051 (-1.479)	-0.064 (-1.935)	0.013 (1.414)

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Table A3 – Continued from previous page

Category (Ref: USA; -2)	A. Annual Earnings	B. Hourly Earnings (Wages)	C. Annual Number of Hours Worked
CHE # 0	-0.095*	-0.092*	-0.003
	(-2.402)	(-2.557)	(-0.226)
CHE # 1	-0.214***	-0.219***	0.005
	(-4.779)	(-5.362)	(0.300)
CHE # 2	-0.251***	-0.265***	0.014
	(-5.745)	(-6.187)	(1.265)
CHE # 3	-0.211***	-0.220***	0.009
	(-4.415)	(-4.806)	(0.753)
CHE # 4	-0.220***	-0.226***	0.006
	(-4.695)	(-5.065)	(0.520)
CHE # 5	-0.256***	-0.273***	0.017
	(-4.759)	(-4.609)	(0.611)
CHE # 6	-0.252***	-0.216***	-0.036
	(-4.329)	(-4.579)	(-1.040)
CHE # 7	-0.275***	-0.271***	-0.004
	(-4.621)	(-4.729)	(-0.220)
CHE # 8	-0.259***	-0.255***	-0.004
	(-3.537)	(-3.523)	(-0.210)
CHE # 9	-0.249***	-0.291***	0.041
	(-3.985)	(-4.574)	(1.516)
CHE # 10	-0.241***	-0.249***	0.008
	(-4.026)	(-4.556)	(0.364)
CHE # 11	-0.221***	-0.238***	0.017
	(-3.300)	(-3.946)	(0.887)
CHE # 12	-0.187**	-0.202**	0.015
	(-2.612)	(-3.135)	(0.664)
CHE # 13	-0.170*	-0.189**	0.019
	(-2.170)	(-2.811)	(0.670)
CHE # 14	0.114	-0.007	0.121**
	(0.992)	(-0.078)	(2.591)
CHE # 15 or more	-0.103	-0.154	0.051
	(-0.804)	(-1.335)	(1.331)
GBR # -5 or less	-0.001	0.029	-0.030
	(-0.018)	(0.536)	(-0.853)
GBR # -4	0.117	0.125*	-0.008
	(1.745)	(2.039)	(-0.373)
GBR # -3	0.047	0.057	-0.010
	(0.945)	(1.297)	(-0.402)
GBR # -2	0.000	0.000	0.000
	(.)	(.)	(.)
GBR # -1	-0.086*	-0.069	-0.017
	(-2.030)	(-1.846)	(-1.016)
GBR # 0	-0.174***	-0.051	-0.123***
	(-3.781)	(-1.351)	(-5.416)
GBR # 1	-0.202***	-0.090*	-0.112***
	(-4.346)	(-2.252)	(-5.443)

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Table A3 – Continued from previous page

Category (Ref: USA; -2)	A. Annual Earnings	B. Hourly Earnings (Wages)	C. Annual Number of Hours Worked
GBR # 2	-0.255***	-0.123**	-0.132***
	(-5.260)	(-2.994)	(-6.297)
GBR # 3	-0.285***	-0.139**	-0.146***
	(-4.891)	(-2.947)	(-5.736)
GBR # 4	-0.279***	-0.131**	-0.149***
	(-4.847)	(-2.678)	(-5.784)
GBR # 5	-0.374***	-0.168***	-0.206***
	(-5.500)	(-3.671)	(-5.195)
GBR # 6	-0.357***	-0.177***	-0.180***
	(-6.283)	(-3.700)	(-6.326)
GBR # 7	-0.320***	-0.149**	-0.171***
	(-4.915)	(-2.728)	(-4.418)
GBR # 8	-0.367***	-0.151*	-0.217***
	(-4.514)	(-2.238)	(-3.548)
GBR # 9	-0.356***	-0.221**	-0.135*
	(-4.332)	(-3.200)	(-2.441)
GBR # 10	-0.562***	-0.272***	-0.290***
	(-4.858)	(-3.313)	(-4.065)
GBR # 11	-0.213	-0.028	-0.185**
	(-1.832)	(-0.304)	(-2.770)
GBR # 12	-0.401	-0.068	-0.333
	(-1.856)	(-0.859)	(-1.551)
GBR # 13	-0.214	-0.052	-0.162*
	(-1.391)	(-0.475)	(-2.343)
GBR # 14	-0.371	-0.018	-0.353*
	(-1.661)	(-0.187)	(-2.034)
GBR # 15 or more	-0.792*	-0.027	-0.766
	(-2.173)	(-0.243)	(-1.733)
Women's Age	✓	✓	✓
Men's Age	✓	✓	✓
Year	✓	✓	✓
Constant	9.966***	9.886***	0.080
	(45.998)	(56.481)	(1.056)
N couples	4659	4659	4659
N couple-years	37825	37825	37825

Source: Fertility histories from the Australian Household Income Dynamics (HILDA, 2001–2018); German Socio-Economic Panel (SOEP, 1998–2019); Korean Labor and Income Panel Study (KLIPS, 1998–2018); the Swiss Household Panel (SHP, 1999–2019); British Household Panel Study (BHPS, 1998–2008) and the United Kingdom Household Longitudinal Study (UKHLS, 2010–2018); U.S. Panel Study of Income Dynamics (PSID, 1998–2019). Cross-National Equivalent Files (CNEF) for harmonized earnings and demographic variables for each Panel.
Notes: Regression coefficients and couple-clustered robust standard errors (in parentheses). Estimation results from time-distributed fixed-effects models on pooled data. The sample is restricted to couples in first-time partnerships without children prior to entering the partnership, and who are observed at least once before the birth of their first child. The reference category is two years before birth (x-axis = -2). The controls include women's and men's age and year.
$^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$.

Table A4. Event Study of Couple's Household Income, by Country and Mother's Education

	A. Pre-Taxes and Transfers Household Income (log)	B. Post-Transfers and Taxes Household Income (log)	C. Difference in Log Pre-tax - Post-Tax Incomes
Time from First Birth of First Child (ref = -2 × USA × H.S. ≤)			
-5 or less	0.106	0.110	-0.003
	(0.969)	(0.996)	(-0.150)
-4	-0.118	-0.085	-0.033
	(-0.935)	(-0.676)	(-1.248)
-3	0.042	0.090	-0.048
	(0.494)	(0.854)	(-1.191)
-2	0.000	0.000	0.000
	(.)	(.)	(.)
-1	0.095	0.109	-0.014
	(1.517)	(1.617)	(-0.795)
0	-0.033	0.021	-0.055*
	(-0.413)	(0.258)	(-2.459)
1	-0.249*	-0.149	-0.100***
	(-2.104)	(-1.303)	(-4.193)
2	-0.138	-0.027	-0.111***
	(-1.626)	(-0.322)	(-4.574)
3	-0.250**	-0.119	-0.131***
	(-2.705)	(-1.290)	(-4.920)
4	-0.197*	-0.062	-0.134***
	(-2.054)	(-0.659)	(-4.986)
5	-0.182	-0.047	-0.134***
	(-1.617)	(-0.438)	(-4.618)
6	-0.138	-0.004	-0.134***
	(-1.140)	(-0.033)	(-4.451)
7	-0.199	-0.074	-0.125***
	(-1.681)	(-0.661)	(-3.714)
8	-0.374*	-0.174	-0.200***
	(-2.347)	(-1.242)	(-4.674)
9	-0.398*	-0.141	-0.257***
	(-2.314)	(-1.056)	(-3.573)
10	-0.346*	-0.159	-0.186***
	(-2.194)	(-1.102)	(-4.251)
11	-0.453	-0.230	-0.223***
	(-1.942)	(-1.184)	(-3.516)
12	-0.349*	-0.154	-0.194***
	(-2.184)	(-1.083)	(-3.734)
13	-0.315	-0.141	-0.174**
	(-1.569)	(-0.787)	(-3.245)
14	-0.209	-0.031	-0.179
	(-0.682)	(-0.128)	(-1.881)
15 or more	-0.273	-0.087	-0.186*
	(-1.111)	(-0.423)	(-2.238)

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Table A4 – Continued from previous page

Category (Ref: USA; -2; H.S. ≤)	A. Pre-Taxes and Transfers Household Income (log)	B. Post-Transfers and Taxes Household Income (log)	C. Difference in Log Pre-tax - Post-Tax Incomes
Interaction Effects: Country × Time from First Childbirth (Ref: H.S. ≤)			
AUS # -5 or less	-0.047	-0.023	-0.023
	(-0.371)	(-0.188)	(-0.882)
AUS # -4	0.127	0.124	0.003
	(0.958)	(0.940)	(0.111)
AUS # -3	-0.030	-0.051	0.022
	(-0.329)	(-0.466)	(0.522)
AUS # -2	0.000	0.000	0.000
	(.)	(.)	(.)
AUS # -1	-0.267***	-0.199**	-0.068**
	(-4.096)	(-2.950)	(-3.075)
AUS # 0	-0.383***	-0.231**	-0.152***
	(-4.341)	(-2.846)	(-4.222)
AUS # 1	-0.131	-0.071	-0.061*
	(-1.114)	(-0.632)	(-2.199)
AUS # 2	-0.279***	-0.191*	-0.089*
	(-3.358)	(-2.526)	(-2.483)
AUS # 3	-0.241**	-0.140	-0.100*
	(-2.639)	(-1.751)	(-2.292)
AUS # 4	-0.284**	-0.193*	-0.091*
	(-3.231)	(-2.483)	(-2.291)
AUS # 5	-0.266**	-0.214*	-0.052
	(-2.787)	(-2.389)	(-1.722)
AUS # 6	-0.318**	-0.259**	-0.060*
	(-3.184)	(-2.644)	(-1.975)
AUS # 7	-0.295**	-0.204*	-0.091**
	(-3.203)	(-2.476)	(-2.691)
AUS # 8	-0.091	-0.086	-0.005
	(-0.684)	(-0.773)	(-0.124)
AUS # 9	-0.126	-0.133	0.007
	(-0.842)	(-1.364)	(0.091)
AUS # 10	-0.208	-0.127	-0.081
	(-1.585)	(-1.173)	(-1.592)
AUS # 11	-0.097	-0.055	-0.042
	(-0.453)	(-0.336)	(-0.560)
AUS # 12	-0.027	-0.037	0.010
	(-0.240)	(-0.405)	(0.200)
AUS # 13	-0.244	-0.185	-0.058
	(-1.286)	(-1.304)	(-0.727)
AUS # 14	-0.032	-0.100	0.068
	(-0.106)	(-0.467)	(0.588)
AUS # 15 or more	-0.224	-0.160	-0.064
	(-1.137)	(-1.044)	(-0.815)

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Table A4 – Continued from previous page

Category (Ref: USA; -2; H.S. $\leq$)	A. Pre-Taxes and Transfers Household Income (log)	B. Post-Transfers and Taxes Household Income (log)	C. Difference in Log Pre-tax - Post-Tax Incomes
DEU # -5 or less	-0.077 (-0.611)	-0.110 (-0.891)	0.032 (0.896)
DEU # -4	0.130 (0.975)	0.081 (0.622)	0.048 (1.386)
DEU # -3	-0.064 (-0.709)	-0.105 (-0.969)	0.041 (0.916)
DEU # -2	0.000 (.)	0.000 (.)	0.000 (.)
DEU # -1	-0.133* (-2.020)	-0.122 (-1.826)	-0.012 (-0.447)
DEU # 0	-0.326*** (-3.886)	-0.119 (-1.502)	-0.207*** (-6.191)
DEU # 1	-0.210 (-1.751)	-0.016 (-0.145)	-0.194*** (-5.417)
DEU # 2	-0.249** (-2.998)	-0.114 (-1.526)	-0.136*** (-3.424)
DEU # 3	-0.092 (-1.035)	-0.005 (-0.059)	-0.088* (-2.001)
DEU # 4	-0.111 (-1.330)	-0.049 (-0.632)	-0.063 (-1.740)
DEU # 5	-0.140 (-1.381)	-0.087 (-0.968)	-0.053 (-1.311)
DEU # 6	-0.196 (-1.914)	-0.126 (-1.286)	-0.069 (-1.942)
DEU # 7	-0.069 (-0.762)	-0.043 (-0.526)	-0.027 (-0.749)
DEU # 8	0.087 (0.634)	0.035 (0.316)	0.051 (1.098)
DEU # 9	0.191 (1.292)	0.086 (0.871)	0.105 (1.429)
DEU # 10	0.106 (0.847)	0.043 (0.404)	0.062 (1.357)
DEU # 11	0.172 (0.821)	0.136 (0.821)	0.037 (0.554)
DEU # 12	-0.028 (-0.255)	-0.008 (-0.083)	-0.020 (-0.420)
DEU # 13	-0.033 (-0.212)	-0.014 (-0.100)	-0.019 (-0.416)
DEU # 14	-0.113 (-0.411)	-0.072 (-0.351)	-0.041 (-0.429)
DEU # 15 or more	0.008 (0.035)	-0.016 (-0.102)	0.024 (0.233)
KOR # -5 or less	-0.250 (-1.634)	-0.283 (-1.852)	0.033 (1.299)

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Table A4 – Continued from previous page

Category (Ref: USA; -2; H.S. $\leq$)	A. Pre-Taxes and Transfers Household Income (log)	B. Post-Transfers and Taxes Household Income (log)	C. Difference in Log Pre-tax - Post-Tax Incomes
KOR # -4	-0.047 (-0.265)	-0.114 (-0.632)	0.067 (1.574)
KOR # -3	-0.199 (-1.303)	-0.240 (-1.431)	0.041 (0.965)
KOR # -2	0.000 (.)	0.000 (.)	0.000 (.)
KOR # -1	-0.122 (-1.157)	-0.122 (-1.123)	-0.000 (-0.015)
KOR # 0	-0.039 (-0.342)	-0.065 (-0.564)	0.026 (0.934)
KOR # 1	0.193 (1.361)	0.137 (0.992)	0.056 (1.942)
KOR # 2	0.079 (0.711)	0.019 (0.168)	0.060* (2.153)
KOR # 3	0.179 (1.572)	0.116 (1.023)	0.063* (2.118)
KOR # 4	0.161 (1.407)	0.083 (0.736)	0.077** (2.647)
KOR # 5	0.171 (1.393)	0.122 (1.006)	0.049 (1.658)
KOR # 6	0.151 (1.154)	0.090 (0.697)	0.061 (1.732)
KOR # 7	0.159 (1.313)	0.122 (1.053)	0.036 (1.093)
KOR # 8	0.381* (2.429)	0.270 (1.906)	0.111** (2.798)
KOR # 9	0.341* (2.078)	0.209 (1.626)	0.131 (1.907)
KOR # 10	0.321* (2.224)	0.286* (2.121)	0.034 (0.748)
KOR # 11	0.446* (1.970)	0.384* (2.035)	0.062 (0.907)
KOR # 12	0.319* (2.339)	0.310** (2.579)	0.008 (0.146)
KOR # 13	0.305 (1.647)	0.349* (2.173)	-0.044 (-0.612)
KOR # 14	0.333 (1.115)	0.333 (1.468)	-0.000 (-0.002)
KOR # 15 or more	0.455* (1.986)	0.383* (2.008)	0.072 (0.873)
CHE # -5 or less	-0.132 (-0.992)	-0.106 (-0.782)	-0.027 (-1.111)
CHE # -4	0.067 (0.479)	0.049 (0.347)	0.018 (0.579)

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Table A4 – Continued from previous page

Category (Ref: USA; -2; H.S. ≤)	A. Pre-Taxes and Transfers Household Income (log)	B. Post-Transfers and Taxes Household Income (log)	C. Difference in Log Pre-tax - Post-Tax Incomes
CHE # -3	-0.053 (-0.552)	-0.085 (-0.731)	0.031 (0.754)
CHE # -2	0.000 (.)	0.000 (.)	0.000 (.)
CHE # -1	-0.106 (-1.472)	-0.127 (-1.702)	0.021 (0.897)
CHE # 0	-0.084 (-0.966)	-0.101 (-1.166)	0.017 (0.660)
CHE # 1	-0.036 (-0.300)	-0.074 (-0.637)	0.037 (1.280)
CHE # 2	-0.177* (-2.080)	-0.235** (-2.782)	0.058* (2.196)
CHE # 3	-0.082 (-0.889)	-0.133 (-1.450)	0.051 (1.810)
CHE # 4	-0.150 (-1.692)	-0.195* (-2.216)	0.045 (1.693)
CHE # 5	-0.224* (-2.047)	-0.269* (-2.182)	0.044 (0.861)
CHE # 6	-0.238* (-2.013)	-0.214* (-2.069)	-0.024 (-0.379)
CHE # 7	-0.157 (-1.622)	-0.160 (-1.737)	0.003 (0.078)
CHE # 8	0.071 (0.508)	-0.013 (-0.109)	0.084 (1.884)
CHE # 9	0.078 (0.522)	-0.072 (-0.665)	0.150* (2.125)
CHE # 10	0.038 (0.308)	-0.034 (-0.302)	0.072 (1.815)
CHE # 11	0.080 (0.386)	-0.022 (-0.131)	0.102 (1.810)
CHE # 12	0.020 (0.185)	-0.040 (-0.408)	0.060 (1.421)
CHE # 13	0.015 (0.094)	-0.018 (-0.125)	0.033 (0.723)
CHE # 14	0.136 (0.459)	0.009 (0.043)	0.127 (1.220)
CHE # 15 or more	0.135 (0.569)	0.047 (0.265)	0.088 (1.002)
GBR # -5 or less	-0.130 (-0.975)	-0.134 (-1.050)	0.005 (0.116)
GBR # -4	0.148 (1.090)	0.096 (0.712)	0.052 (1.506)
GBR # -3	-0.014 (-0.133)	-0.024 (-0.211)	0.011 (0.195)

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Table A4 – Continued from previous page

Category (Ref: USA; -2; H.S. ≤)	A. Pre-Taxes and Transfers Household Income (log)	B. Post-Transfers and Taxes Household Income (log)	C. Difference in Log Pre-tax - Post-Tax Incomes
GBR # -2	0.000 (.)	0.000 (.)	0.000 (.)
GBR # -1	-0.099 (-1.431)	-0.093 (-1.307)	-0.007 (-0.248)
GBR # 0	-0.120 (-1.327)	-0.019 (-0.223)	-0.102** (-2.639)
GBR # 1	0.027 (0.231)	0.115 (1.023)	-0.088** (-2.649)
GBR # 2	-0.169 (-1.950)	-0.043 (-0.534)	-0.126*** (-3.628)
GBR # 3	-0.066 (-0.762)	0.027 (0.319)	-0.093** (-2.774)
GBR # 4	-0.183 (-1.899)	-0.020 (-0.215)	-0.163*** (-4.504)
GBR # 5	-0.325** (-2.603)	-0.079 (-0.818)	-0.246*** (-3.749)
GBR # 6	-0.262* (-2.383)	-0.068 (-0.640)	-0.194*** (-4.475)
GBR # 7	-0.213* (-1.966)	-0.017 (-0.173)	-0.195*** (-3.753)
GBR # 8	-0.027 (-0.108)	0.079 (0.446)	-0.105 (-1.093)
GBR # 9	0.182 (0.749)	0.141 (0.981)	0.040 (0.318)
GBR # 10	-0.386* (-2.376)	-0.127 (-0.749)	-0.259* (-2.245)
GBR # 11	0.100 (0.318)	0.196 (0.922)	-0.096 (-0.780)
GBR # 12	0.215 (0.914)	0.358 (1.492)	-0.143** (-2.851)
GBR # 13	-0.106 (-0.806)	-0.020 (-0.193)	-0.087 (-1.594)
GBR # 14	-0.184 (-1.153)	-0.006 (-0.056)	-0.178* (-2.396)
GBR # 15 or more	-0.337** (-2.730)	-0.138 (-1.542)	-0.199*** (-3.510)
Interaction Effects: Country × Education (Ref: -2 × H.S. ≤)			
USA # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
USA # H.S.+	-0.040 (-0.547)	-0.008 (-0.110)	-0.032 (-1.418)
AUS # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)

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Table A4 – Continued from previous page

Category (Ref: USA; -2; H.S. $\leq$)	A. Pre-Taxes and Transfers Household Income (log)	B. Post-Transfers and Taxes Household Income (log)	C. Difference in Log Pre-tax - Post-Tax Incomes
AUS # H.S.+	0.047 (0.481)	0.052 (0.605)	-0.006 (-0.137)
DEU # H.S.$\leq$	0.000 (.)	0.000 (.)	0.000 (.)
DEU # H.S.+	0.527*** (4.092)	0.300*** (3.400)	0.227** (2.634)
KOR # H.S.$\leq$	0.000 (.)	0.000 (.)	0.000 (.)
KOR # H.S.+	0.032 (0.215)	-0.018 (-0.120)	0.051 (1.636)
CHE # H.S.$\leq$	0.000 (.)	0.000 (.)	0.000 (.)
CHE # H.S.+	0.140 (1.182)	0.128 (1.059)	0.012 (0.410)
GBR # H.S.$\leq$	0.000 (.)	0.000 (.)	0.000 (.)
GBR # H.S.+	0.081 (0.663)	0.042 (0.387)	0.039 (0.721)
USA # H.S.$\leq$	0.000 (.)	0.000 (.)	0.000 (.)
USA # H.S.+	0.000 (.)	0.000 (.)	0.000 (.)
Interaction Effects: Time $\times$ Education (Ref: -2 $\times$ USA)			
-5 or less # H.S.$\leq$	0.000 (.)	0.000 (.)	0.000 (.)
-5 or less # H.S.+	-0.245 (-1.921)	-0.253* (-1.973)	0.008 (0.398)
-4 # H.S.$\leq$	0.000 (.)	0.000 (.)	0.000 (.)
-4 # H.S.+	0.008 (0.056)	-0.033 (-0.235)	0.041 (1.588)
-3 # H.S.$\leq$	0.000 (.)	0.000 (.)	0.000 (.)
-3 # H.S.+	-0.080 (-0.842)	-0.133 (-1.170)	0.054 (1.335)
-2 # H.S.$\leq$	0.000 (.)	0.000 (.)	0.000 (.)
-2 # H.S.+	0.000 (.)	0.000 (.)	0.000 (.)
-1 # H.S.$\leq$	0.000 (.)	0.000 (.)	0.000 (.)
-1 # H.S.+	-0.047 (-0.698)	-0.061 (-0.864)	0.014 (0.760)

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Table A4 – Continued from previous page

Category (Ref: USA; -2; H.S. ≤)	A. Pre-Taxes and Transfers Household Income (log)	B. Post-Transfers and Taxes Household Income (log)	C. Difference in Log Pre-tax - Post-Tax Incomes
0 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
0 # H.S.+	0.069 (0.836)	0.049 (0.590)	0.020 (0.906)
1 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
1 # H.S.+	0.258* (2.167)	0.217 (1.918)	0.041 (1.539)
2 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
2 # H.S.+	0.147 (1.802)	0.100 (1.252)	0.047* (2.015)
3 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
3 # H.S.+	0.227** (2.696)	0.174* (2.085)	0.053* (2.148)
4 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
4 # H.S.+	0.181* (2.196)	0.136 (1.673)	0.045 (1.906)
5 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
5 # H.S.+	0.132 (1.365)	0.107 (1.163)	0.026 (0.931)
6 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
6 # H.S.+	0.104 (1.053)	0.073 (0.735)	0.031 (1.336)
7 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
7 # H.S.+	0.156 (1.733)	0.155 (1.832)	0.002 (0.063)
8 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
8 # H.S.+	0.335* (2.501)	0.243* (2.118)	0.092** (2.647)
9 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
9 # H.S.+	0.391** (2.750)	0.254* (2.566)	0.137* (2.071)
10 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
10 # H.S.+	0.328** (2.842)	0.263* (2.462)	0.065* (2.155)

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Table A4 – Continued from previous page

Category (Ref: USA; -2; H.S. ≤)	A. Pre-Taxes and Transfers Household Income (log)	B. Post-Transfers and Taxes Household Income (log)	C. Difference in Log Pre-tax - Post-Tax Incomes
11 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
11 # H.S.+	0.382 (1.895)	0.296 (1.819)	0.086 (1.618)
12 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
12 # H.S.+	0.284** (2.744)	0.234* (2.575)	0.051 (1.373)
13 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
13 # H.S.+	0.271 (1.759)	0.247 (1.805)	0.024 (0.627)
14 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
14 # H.S.+	0.030 (0.110)	0.028 (0.135)	0.002 (0.026)
15 or more # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
15 or more # H.S.+	0.164 (0.872)	0.160 (1.051)	0.004 (0.064)
Triple Interaction Effects: Country × Time × Education			
AUS # -5 or less # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
AUS # -5 or less # H.S.+	0.160 (1.159)	0.144 (1.073)	0.016 (0.542)
AUS # -4 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
AUS # -4 # H.S.+	-0.057 (-0.382)	-0.037 (-0.256)	-0.019 (-0.654)
AUS # -3 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
AUS # -3 # H.S.+	0.081 (0.813)	0.110 (0.939)	-0.029 (-0.685)
AUS # -2 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
AUS # -2 # H.S.+	0.000 (.)	0.000 (.)	0.000 (.)
AUS # -1 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
AUS # -1 # H.S.+	0.090 (1.216)	0.075 (1.011)	0.014 (0.613)
AUS # 0 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)

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Table A4 – Continued from previous page

Category (Ref: USA; -2; H.S. ≤)	A. Pre-Taxes and Transfers Household Income (log)	B. Post-Transfers and Taxes Household Income (log)	C. Difference in Log Pre-tax - Post-Tax Incomes
AUS # 0 # H.S.+	0.031 (0.321)	-0.056 (-0.638)	0.087* (2.346)
AUS # 1 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
AUS # 1 # H.S.+	-0.159 (-1.259)	-0.186 (-1.582)	0.027 (0.862)
AUS # 2 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
AUS # 2 # H.S.+	-0.049 (-0.518)	-0.086 (-1.001)	0.037 (0.982)
AUS # 3 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
AUS # 3 # H.S.+	-0.071 (-0.686)	-0.125 (-1.390)	0.054 (1.160)
AUS # 4 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
AUS # 4 # H.S.+	-0.004 (-0.043)	-0.077 (-0.874)	0.073 (1.750)
AUS # 5 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
AUS # 5 # H.S.+	-0.025 (-0.224)	-0.050 (-0.508)	0.026 (0.680)
AUS # 6 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
AUS # 6 # H.S.+	0.016 (0.138)	-0.020 (-0.190)	0.036 (1.045)
AUS # 7 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
AUS # 7 # H.S.+	0.020 (0.181)	-0.051 (-0.541)	0.071 (1.492)
AUS # 8 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
AUS # 8 # H.S.+	-0.154 (-1.051)	-0.156 (-1.276)	0.002 (0.051)
AUS # 9 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
AUS # 9 # H.S.+	-0.130 (-0.811)	-0.132 (-1.223)	0.003 (0.035)
AUS # 10 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
AUS # 10 # H.S.+	-0.137 (-0.925)	-0.184 (-1.541)	0.046 (0.781)
AUS # 11 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)

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Table A4 – Continued from previous page

Category (Ref: USA; -2; H.S. ≤)	A. Pre-Taxes and Transfers Household Income (log)	B. Post-Transfers and Taxes Household Income (log)	C. Difference in Log Pre-tax - Post-Tax Incomes
AUS # 11 # H.S.+	-0.166 (-0.750)	-0.208 (-1.209)	0.041 (0.547)
AUS # 12 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
AUS # 12 # H.S.+	-0.194 (-1.439)	-0.188 (-1.697)	-0.006 (-0.106)
AUS # 13 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
AUS # 13 # H.S.+	-0.035 (-0.168)	-0.086 (-0.539)	0.051 (0.604)
AUS # 14 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
AUS # 14 # H.S.+	-0.086 (-0.267)	-0.066 (-0.286)	-0.020 (-0.165)
AUS # 15 or more # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
AUS # 15 or more # H.S.+	0.116 (0.546)	0.008 (0.048)	0.108 (1.309)
DEU # -5 or less # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
DEU # -5 or less # H.S.+	0.089 (0.621)	0.147 (1.084)	-0.058 (-1.412)
DEU # -4 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
DEU # -4 # H.S.+	-0.082 (-0.542)	-0.020 (-0.135)	-0.063 (-1.645)
DEU # -3 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
DEU # -3 # H.S.+	0.043 (0.424)	0.098 (0.844)	-0.055 (-1.203)
DEU # -2 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
DEU # -2 # H.S.+	0.000 (.)	0.000 (.)	0.000 (.)
DEU # -1 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
DEU # -1 # H.S.+	0.063 (0.836)	0.071 (0.951)	-0.008 (-0.265)
DEU # 0 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
DEU # 0 # H.S.+	-0.019 (-0.206)	-0.006 (-0.069)	-0.013 (-0.354)
DEU # 1 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)

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Table A4 – Continued from previous page

Category (Ref: USA; -2; H.S. ≤)	A. Pre-Taxes and Transfers Household Income (log)	B. Post-Transfers and Taxes Household Income (log)	C. Difference in Log Pre-tax - Post-Tax Incomes
DEU # 1 # H.S.+	-0.177 (-1.338)	-0.164 (-1.375)	-0.013 (-0.307)
DEU # 2 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
DEU # 2 # H.S.+	-0.071 (-0.716)	-0.062 (-0.711)	-0.009 (-0.209)
DEU # 3 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
DEU # 3 # H.S.+	-0.172 (-1.625)	-0.137 (-1.481)	-0.035 (-0.728)
DEU # 4 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
DEU # 4 # H.S.+	-0.096 (-0.950)	-0.045 (-0.504)	-0.050 (-1.211)
DEU # 5 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
DEU # 5 # H.S.+	-0.069 (-0.576)	-0.046 (-0.447)	-0.023 (-0.486)
DEU # 6 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
DEU # 6 # H.S.+	0.027 (0.224)	0.010 (0.088)	0.017 (0.395)
DEU # 7 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
DEU # 7 # H.S.+	-0.081 (-0.705)	-0.073 (-0.751)	-0.008 (-0.165)
DEU # 8 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
DEU # 8 # H.S.+	-0.339 (-1.917)	-0.147 (-1.143)	-0.192* (-2.253)
DEU # 9 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
DEU # 9 # H.S.+	-0.357* (-2.090)	-0.207 (-1.824)	-0.150 (-1.663)
DEU # 10 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
DEU # 10 # H.S.+	-0.229 (-1.444)	-0.144 (-1.154)	-0.085 (-1.150)
DEU # 11 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
DEU # 11 # H.S.+	-0.132 (-0.568)	-0.151 (-0.847)	0.019 (0.191)
DEU # 12 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)

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Table A4 – Continued from previous page

Category (Ref: USA; -2; H.S. ≤)	A. Pre-Taxes and Transfers Household Income (log)	B. Post-Transfers and Taxes Household Income (log)	C. Difference in Log Pre-tax - Post-Tax Incomes
DEU # 12 # H.S.+	0.113 (0.647)	0.021 (0.168)	0.091 (0.797)
DEU # 13 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
DEU # 13 # H.S.+	0.235 (1.084)	0.080 (0.477)	0.155 (0.947)
DEU # 14 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
DEU # 14 # H.S.+	0.201 (0.684)	0.150 (0.641)	0.051 (0.492)
DEU # 15 or more # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
DEU # 15 or more # H.S.+	0.302 (0.842)	0.294 (0.918)	0.008 (0.072)
KOR # -5 or less # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
KOR # -5 or less # H.S.+	0.286 (1.518)	0.302 (1.597)	-0.016 (-0.549)
KOR # -4 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
KOR # -4 # H.S.+	0.108 (0.520)	0.178 (0.847)	-0.070 (-1.586)
KOR # -3 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
KOR # -3 # H.S.+	0.244 (1.428)	0.268 (1.451)	-0.024 (-0.545)
KOR # -2 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
KOR # -2 # H.S.+	0.000 (.)	0.000 (.)	0.000 (.)
KOR # -1 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
KOR # -1 # H.S.+	0.138 (1.160)	0.148 (1.215)	-0.010 (-0.366)
KOR # 0 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
KOR # 0 # H.S.+	0.049 (0.386)	0.069 (0.541)	-0.020 (-0.680)
KOR # 1 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
KOR # 1 # H.S.+	-0.216 (-1.400)	-0.179 (-1.195)	-0.036 (-1.118)
KOR # 2 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)

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Table A4 – Continued from previous page

Category (Ref: USA; -2; H.S. ≤)	A. Pre-Taxes and Transfers Household Income (log)	B. Post-Transfers and Taxes Household Income (log)	C. Difference in Log Pre-tax - Post-Tax Incomes
KOR # 2 # H.S.+	-0.066 (-0.525)	-0.019 (-0.149)	-0.047 (-1.618)
KOR # 3 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
KOR # 3 # H.S.+	-0.112 (-0.873)	-0.076 (-0.596)	-0.036 (-1.173)
KOR # 4 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
KOR # 4 # H.S.+	-0.110 (-0.850)	-0.054 (-0.422)	-0.056 (-1.843)
KOR # 5 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
KOR # 5 # H.S.+	-0.083 (-0.604)	-0.072 (-0.537)	-0.010 (-0.318)
KOR # 6 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
KOR # 6 # H.S.+	-0.084 (-0.585)	-0.048 (-0.335)	-0.037 (-1.030)
KOR # 7 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
KOR # 7 # H.S.+	-0.044 (-0.324)	-0.031 (-0.235)	-0.013 (-0.373)
KOR # 8 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
KOR # 8 # H.S.+	-0.262 (-1.547)	-0.162 (-1.048)	-0.100* (-2.473)
KOR # 9 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
KOR # 9 # H.S.+	-0.244 (-1.380)	-0.120 (-0.829)	-0.124 (-1.789)
KOR # 10 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
KOR # 10 # H.S.+	-0.210 (-1.328)	-0.170 (-1.135)	-0.040 (-0.878)
KOR # 11 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
KOR # 11 # H.S.+	-0.279 (-1.189)	-0.224 (-1.124)	-0.055 (-0.815)
KOR # 12 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
KOR # 12 # H.S.+	-0.129 (-0.837)	-0.113 (-0.807)	-0.016 (-0.287)
KOR # 13 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)

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Table A4 – Continued from previous page

Category (Ref: USA; -2; H.S. ≤)	A. Pre-Taxes and Transfers Household Income (log)	B. Post-Transfers and Taxes Household Income (log)	C. Difference in Log Pre-tax - Post-Tax Incomes
KOR # 13 # H.S.+	-0.088 (-0.439)	-0.127 (-0.712)	0.039 (0.554)
KOR # 14 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
KOR # 14 # H.S.+	0.022 (0.070)	-0.007 (-0.029)	0.029 (0.262)
KOR # 15 or more # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
KOR # 15 or more # H.S.+	-0.053 (-0.222)	-0.062 (-0.305)	0.009 (0.107)
CHE # -5 or less # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
CHE # -5 or less # H.S.+	0.074 (0.481)	0.081 (0.526)	-0.007 (-0.232)
CHE # -4 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
CHE # -4 # H.S.+	0.005 (0.030)	0.016 (0.104)	-0.012 (-0.358)
CHE # -3 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
CHE # -3 # H.S.+	0.094 (0.881)	0.108 (0.870)	-0.014 (-0.330)
CHE # -2 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
CHE # -2 # H.S.+	0.000 (.)	0.000 (.)	0.000 (.)
CHE # -1 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
CHE # -1 # H.S.+	0.083 (1.023)	0.088 (1.065)	-0.005 (-0.214)
CHE # 0 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
CHE # 0 # H.S.+	0.015 (0.155)	0.038 (0.409)	-0.023 (-0.726)
CHE # 1 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
CHE # 1 # H.S.+	-0.195 (-1.501)	-0.162 (-1.307)	-0.033 (-0.951)
CHE # 2 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
CHE # 2 # H.S.+	-0.052 (-0.532)	-0.001 (-0.010)	-0.051 (-1.669)
CHE # 3 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)

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Table A4 – Continued from previous page

Category (Ref: USA; -2; H.S. ≤)	A. Pre-Taxes and Transfers Household Income (log)	B. Post-Transfers and Taxes Household Income (log)	C. Difference in Log Pre-tax - Post-Tax Incomes
CHE # 3 # H.S.+	-0.100 (-0.960)	-0.060 (-0.573)	-0.041 (-1.297)
CHE # 4 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
CHE # 4 # H.S.+	-0.011 (-0.108)	0.028 (0.276)	-0.039 (-1.291)
CHE # 5 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
CHE # 5 # H.S.+	0.055 (0.446)	0.080 (0.590)	-0.025 (-0.434)
CHE # 6 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
CHE # 6 # H.S.+	0.077 (0.591)	0.066 (0.547)	0.012 (0.172)
CHE # 7 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
CHE # 7 # H.S.+	-0.083 (-0.644)	-0.085 (-0.654)	0.002 (0.038)
CHE # 8 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
CHE # 8 # H.S.+	-0.394* (-2.105)	-0.301 (-1.667)	-0.094 (-1.929)
CHE # 9 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
CHE # 9 # H.S.+	-0.331* (-1.972)	-0.235 (-1.581)	-0.097 (-1.161)
CHE # 10 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
CHE # 10 # H.S.+	-0.269 (-1.873)	-0.203 (-1.496)	-0.065 (-1.543)
CHE # 11 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
CHE # 11 # H.S.+	-0.233 (-1.037)	-0.143 (-0.757)	-0.090 (-1.502)
CHE # 12 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
CHE # 12 # H.S.+	-0.106 (-0.709)	-0.078 (-0.563)	-0.028 (-0.606)
CHE # 13 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
CHE # 13 # H.S.+	-0.024 (-0.111)	-0.066 (-0.360)	0.042 (0.498)
CHE # 14 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)

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Table A4 – Continued from previous page

Category (Ref: USA; -2; H.S. ≤)	A. Pre-Taxes and Transfers Household Income (log)	B. Post-Transfers and Taxes Household Income (log)	C. Difference in Log Pre-tax - Post-Tax Incomes
CHE # 14 # H.S.+	-0.017 (-0.049)	-0.017 (-0.070)	0.000 (0.001)
CHE # 15 or more # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
CHE # 15 or more # H.S.+	-0.255 (-0.946)	-0.220 (-0.957)	-0.036 (-0.384)
GBR # -5 or less # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
GBR # -5 or less # H.S.+	0.031 (0.163)	0.101 (0.658)	-0.070 (-0.839)
GBR # -4 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
GBR # -4 # H.S.+	-0.112 (-0.632)	-0.037 (-0.234)	-0.075 (-0.959)
GBR # -3 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
GBR # -3 # H.S.+	0.088 (0.647)	0.056 (0.430)	0.032 (0.460)
GBR # -2 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
GBR # -2 # H.S.+	0.000 (.)	0.000 (.)	0.000 (.)
GBR # -1 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
GBR # -1 # H.S.+	-0.020 (-0.210)	-0.013 (-0.142)	-0.008 (-0.165)
GBR # 0 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
GBR # 0 # H.S.+	-0.088 (-0.756)	-0.053 (-0.534)	-0.035 (-0.574)
GBR # 1 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
GBR # 1 # H.S.+	-0.368** (-2.680)	-0.358** (-2.783)	-0.011 (-0.217)
GBR # 2 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
GBR # 2 # H.S.+	-0.068 (-0.583)	-0.093 (-0.934)	0.025 (0.421)
GBR # 3 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
GBR # 3 # H.S.+	-0.256 (-1.757)	-0.191 (-1.680)	-0.064 (-0.851)
GBR # 4 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)

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Table A4 – Continued from previous page

Category (Ref: USA; -2; H.S. ≤)	A. Pre-Taxes and Transfers Household Income (log)	B. Post-Transfers and Taxes Household Income (log)	C. Difference in Log Pre-tax - Post-Tax Incomes
GBR # 4 # H.S.+	-0.059 (-0.452)	-0.129 (-1.152)	0.070 (1.042)
GBR # 5 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
GBR # 5 # H.S.+	-0.012 (-0.081)	-0.108 (-0.936)	0.096 (1.213)
GBR # 6 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
GBR # 6 # H.S.+	-0.112 (-0.832)	-0.162 (-1.309)	0.050 (0.840)
GBR # 7 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
GBR # 7 # H.S.+	-0.081 (-0.566)	-0.114 (-0.910)	0.032 (0.407)
GBR # 8 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
GBR # 8 # H.S.+	-0.364 (-1.368)	-0.258 (-1.337)	-0.106 (-0.879)
GBR # 9 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
GBR # 9 # H.S.+	-0.634* (-2.446)	-0.443** (-2.685)	-0.191 (-1.361)
GBR # 10 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
GBR # 10 # H.S.+	-0.221 (-1.063)	-0.176 (-0.936)	-0.045 (-0.328)
GBR # 11 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
GBR # 11 # H.S.+	-0.324 (-0.953)	-0.267 (-1.113)	-0.057 (-0.397)
GBR # 12 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
GBR # 12 # H.S.+	-0.452 (-1.749)	-0.486 (-1.884)	0.033 (0.470)
GBR # 13 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
GBR # 13 # H.S.+	-0.106 (-0.806)	-0.020 (-0.193)	-0.087 (-1.594)
GBR # 14 # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)
GBR # 14 # H.S.+	-0.184 (-1.153)	-0.006 (-0.056)	-0.178* (-2.396)
GBR # 15 or more # H.S.≤	0.000 (.)	0.000 (.)	0.000 (.)

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Table A4 – Continued from previous page

Category (Ref: USA; -2; H.S. ≤)	A. Pre-Taxes and Transfers Household Income (log)	B. Post-Transfers and Taxes Household Income (log)	C. Difference in Log Pre-tax - Post-Tax Incomes
GBR # 15 or more # H.S.+	-0.337**	-0.138	-0.199***
	(-2.730)	(-1.542)	(-3.510)
Women's Age	✓	✓	✓
Men's Age	✓	✓	✓
Year	✓	✓	✓
Constant	9.797***	9.755***	0.042
	(43.935)	(51.019)	(0.583)
N couples	4459	4459	4459
N couple-years	36,255	36,255	36,255

Source: Fertility histories from the Australian Household Income Dynamics (HILDA, 2001–2018); German Socio-Economic Panel (SOEP, 1998–2019); Korean Labor and Income Panel Study (KLIPS, 1998–2018); the Swiss Household Panel (SHP, 1999–2019); British Household Panel Study (BHPS, 1998–2008) and the United Kingdom Household Longitudinal Study (UKHLS, 2010–2018); U.S. Panel Study of Income Dynamics (PSID, 1998–2019). Cross-National Equivalent Files (CNEF) for harmonized earnings and demographic variables for each Panel.
Notes: Regression coefficients and couple-clustered robust standard errors (in parentheses). Estimation results from time-distributed fixed-effects models on pooled data. The sample is restricted to couples in first-time partnerships without children prior to entering the partnership, and who are observed at least once before the birth of their first child. The full reference category is two years before birth × USA × H.S. ≤ (High School or less). The coefficients for USA, H.S. ≤, and the baseline time points (where applicable) are suppressed for brevity, representing the full triple reference group. The controls include women's and men's age and year.
$^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$.

Table A5. Comparison of Average Earnings Returns to Marriage and Parenthood Across Models by Country and Gender

	Men					Women			
	POLS	**FE**	**FEGS**	**FEIS**		**POLS**	**FE**	**FEGS**	**FEIS**
A. Marriage									
					AUS				
Marriage	12390.631***	4920.486**	−327.584	1740.079	**Marriage**	1610.173	2085.393	1408.888	1216.513
	(5.898)	(3.114)	(−0.196)	(1.076)		(0.881)	(1.692)	(0.938)	(0.954)
Constant	84695.353***	91962.719***	1.08e + 05***		**Constant**	82186.221***	80369.839***	83515.629***	
	(9.235)	(6.404)	(7.129)			(13.933)	(9.587)	(8.899)	
Person-Years	6894	6894	6894	6894	**Person-Years**	5323	5323	5323	5323
Persons		768	768	768	**Persons**		596	596	596
					U.S.				
Marriage	22073.309***	10307.567***	5489.590*	1945.788	**Marriage**	5505.494**	4058.281*	4483.820**	1987.249
	(6.379)	(4.193)	(2.105)	(1.142)		(2.805)	(2.324)	(2.626)	(1.176)
Constant	1.29e + 05***	53952.043***	62387.716***		**Constant**	90669.594***	59046.469***	58023.196***	
	(13.471)	(6.019)	(7.100)			(14.986)	(9.863)	(9.191)	
Person-Years	9425	9425	9425	9425	**Person-Years**	8244	8244	8244	8244
Persons		869	869	869	**Persons**		751	751	751
					U.K.				
Marriage	8552.619***	4016.265*	2585.735	2856.790	**Marriage**	3742.349	4228.373*	4909.356**	6552.992*
	(3.334)	(2.265)	(1.529)	(1.413)		(1.829)	(2.431)	(3.291)	(2.527)
Constant	27871.655**	28851.650*	31652.727*		**Constant**	53553.803***	56214.136***	56326.935***	
	(2.769)	(2.173)	(2.452)			(4.730)	(3.694)	(3.682)	
Person-Years	2094	2094	2094	2094	**Person-Years**	1652	1652	1652	1652
Persons		244	244	244	**Persons**		194	194	194
					CHE				
Marriage	4807.392	2653.630	2280.082	4476.866	**Marriage**	3095.528	122.263	−249.536	227.767
	(1.671)	(1.141)	(0.964)	(1.467)		(1.367)	(0.057)	(−0.113)	(0.136)
Constant	1.10e + 05***	1.79e + 05***	1.81e + 05***		**Constant**	86130.291***	96226.698***	98473.882***	
	(10.489)	(6.591)	(6.629)			(9.730)	(5.519)	(5.692)	
Person-Years	2162	2162	2162	2162	**Person-Years**	2600	2600	2600	2600
Persons		229	229	229	**Persons**		252	252	252
					DEU				
Marriage	9614.673***	4416.667**	3362.897*	3061.734*	**Marriage**	3418.945*	−887.840	−1718.634	1169.851
	(3.959)	(3.201)	(2.419)	(2.003)		(2.164)	(−0.720)	(−1.367)	(0.813)
Constant	1.10e + 05***	1.90e + 05***	1.93e + 05***		**Constant**	80058.003***	1.58e + 05***	1.61e + 05***	
	(12.419)	(10.391)	(10.867)			(12.895)	(13.286)	(13.073)	
Person-Years	7777	7777	7777	7777	**Person-Years**	5653	5653	5653	5653

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Table A5 – Continued from previous page

	Men					Women			
	POLS	**FE**	**FEGS**	**FEIS**		**POLS**	**FE**	**FEGS**	**FEIS**
Persons		894	894	894	**Persons**		673	673	673
					KOR				
Marriage	4539.112*	−972.593	−1384.877	1044.187	**Marriage**	−6176.714***	−8358.359***	−8483.696***	−6420.405***
	(2.435)	(−0.567)	(−0.796)	(0.582)		(−3.399)	(−5.067)	(−5.040)	(−4.157)
Constant	31583.139***	22012.230	19042.675		**Constant**	44710.984***	18983.036***	19150.015***	
	(3.973)	(1.245)	(1.067)			(7.785)	(3.568)	(3.579)	
Person-Years	2587	2587	2587	2587	**Person-Years**	1800	1800	1800	1800
Persons		249	249	249	**Persons**		193	193	193

B. Childbirth

	Men					Women			
	POLS	**FE**	**FEGS**	**FEIS**		**POLS**	**FE**	**FEGS**	**FEIS**
					AUS				
Childbirth	8167.022***	1568.975	−85.904	−416.971	**Childbirth**	$-2.07e+04$***	$-2.06e+04$***	$-2.06e+04$***	$-1.85e+04$***
	(5.509)	(1.497)	(−0.082)	(−0.456)		(−18.271)	(−22.956)	(−22.217)	(−18.724)
Constant	85795.274***	32784.104**	38375.978***		**Constant**	76483.570***	62819.749***	62706.403***	
	(9.889)	(3.081)	(3.705)			(16.687)	(11.056)	(11.050)	
Person-Years	15331	15331	15331	15331	**Person-Years**	14011	14011	14011	14011
Persons		1682	1682	1682	**Persons**		1558	1558	1558
					U.S.				
Childbirth	12263.428***	9002.848***	6016.490**	2810.786	**Childbirth**	$-1.25e+04$***	$-1.15e+04$***	$-1.03e+04$***	−7488.373***
	(3.954)	(4.403)	(2.947)	(1.577)		(−7.245)	(−8.347)	(−7.405)	(−6.482)
Constant	$1.18e+05$***	48723.576***	51814.144***		**Constant**	84335.945***	49216.744***	47749.224***	
	(16.538)	(7.578)	(8.140)			(17.780)	(11.427)	(10.854)	
Person-Years	13340	13340	13340	13340	**Person-Years**	12520	12520	12520	12520
Persons		1292	1292	1292	**Persons**		1194	1194	1194
					U.K.				
Childbirth	4600.581**	1142.085	813.390	855.315	**Childbirth**	−9716.411***	$-1.08e+04$***	$-1.06e+04$***	−8532.541***
	(3.145)	(1.082)	(0.742)	(0.700)		(−8.080)	(−13.573)	(−13.256)	(−9.126)
Constant	42056.961***	32360.441***	32367.952***		**Constant**	37681.938***	50452.717***	50914.979***	
	(8.250)	(4.385)	(4.373)			(11.320)	(7.365)	(7.334)	
Person-Years	6708	6708	6708	6708	**Person-Years**	6688	6688	6688	6688
Persons		847	847	847	**Persons**		846	846	846
					CHE				
Childbirth	3743.186*	−641.998	−1382.924	−1464.487	**Childbirth**	$-2.20e+04$***	$-1.74e+04$***	$-1.73e+04$***	$-1.16e+04$***
	(2.134)	(−0.483)	(−0.969)	(−1.106)		(−12.260)	(−12.469)	(−12.297)	(−8.130)

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Table A5 – Continued from previous page

	Men					Women			
	POLS	**FE**	**FEGS**	**FEIS**		**POLS**	**FE**	**FEGS**	**FEIS**
Constant	$1.09e+05^{***}$	77990.928^{***}	80214.322^{***}		**Constant**	$1.03e+05^{***}$	52911.171^{***}	55780.777^{***}	
	(12.774)	(8.657)	(8.957)			(7.807)	(5.658)	(5.791)	
Person-Years	4601	4601	4601	4601	**Person-Years**	5187	5187	5187	5187
Persons		487	487	487	**Persons**		510	510	510
					DEU				
Childbirth	1620.155	−468.000	−1308.917	−354.030	**Childbirth**	$-2.06e+04^{***}$	$-2.33e+04^{***}$	$-2.37e+04^{***}$	$-2.64e+04^{***}$
	(0.821)	(−0.444)	(−1.190)	(−0.306)		(−16.782)	(−23.493)	(−24.025)	(−23.951)
Constant	$1.24e+05^{***}$	$1.00e+05^{***}$	$1.03e+05^{***}$		**Constant**	76730.431^{***}	86962.981^{***}	89020.436^{***}	
	(19.662)	(13.133)	(13.609)			(17.926)	(17.270)	(17.298)	
Person-Years	12849	12849	12849	12849	**Person-Years**	11110	11110	11110	11110
Persons		1514	1514	1514	**Persons**		1327	1327	1327
					KOR				
Childbirth	4697.501^{***}	1348.446^{*}	1230.431	738.858	**Childbirth**	-5491.909^{***}	-6490.068^{***}	-6374.946^{***}	-2157.543^{**}
	(5.177)	(2.081)	(1.897)	(1.001)		(−6.651)	(−9.079)	(−8.720)	(−2.861)
Constant	44484.267^{***}	25454.207	24645.961		**Constant**	27711.346^{***}	18983.036^{***}	19150.015^{***}	
	(4.839)	(1.908)	(1.815)			(4.340)	(3.568)	(3.579)	
Person-Years	8780	8780	8780	8780	**Person-Years**	8746	8746	8746	8746
Persons		829	829	829	**Persons**		861	861	861

Source: Fertility histories from the Australian Household Income Dynamics (HILDA, 2001–2018); German Socio-Economic Panel (SOEP, 1998–2019); Korean Labor and Income Panel Study (KLIPS, 1998–2018); the Swiss Household Panel (SHP, 1999–2019); British Household Panel Study (BHPS, 1998–2008) and the United Kingdom Household Longitudinal Study (UKHLS, 2010–2018); U.S. Panel Study of Income Dynamics (PSID, 1998–2019). Cross-National Equivalent Files (CNEF) for harmonized earnings and demographic variables for each Panel.
*Note:*Coefficients show the average effect of marriage/childbirth estimated by conventional individual Fixed Effects (FE) and Fixed Effects Individual Slopes (FEIS) separately for men(A) and women(B), and each country. The reference category is individuals who are not yet married (parents) or have never been married (had children) within the observation window. Both models include controls for potential experience and its square term, age, and year dummies. Marriage models include controls for the total number of children in the household. Childbirth models includes controls for cohabitation status (living alone, with partner but reporting single-status, and living with partner reporting marriage as marital status.
+p<0.1. *p < .05; **p < .01; ***p < .001

Table A6. Fixed Effects Regression Results for Marriage and Childbirth on Log Earnings: Men and Women, by Country

	U.S.	U.K.	AUS	DEU	CHE	KOR
Men						
Time from First Marriage (Reference: 1-2 years pre-marriage)						
5+ years pre-marriage	−1.64e + 04	5964.991	6149.188	−1878.999	12948.485	6312.605*
	(−1.895)	(1.136)	(0.828)	(−0.377)	(1.915)	(2.363)
3-4 years pre-marriage	−5527.056	1300.559	5459.759	1700.398	6993.995*	912.784
	(−1.158)	(0.355)	(1.572)	(0.773)	(2.168)	(0.560)
1-2 years pre-marriage	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)
Year of marriage	2016.354	−1301.274	−1919.768	1653.470	3578.174	−703.563
	(0.725)	(−0.572)	(−0.908)	(0.971)	(1.090)	(−0.425)
1-2 years since marriage	5785.717	−2218.998	−1785.550	4673.611	−687.046	−2926.490
	(1.232)	(−0.619)	(−0.532)	(1.676)	(−0.163)	(−1.084)
3-4 years since marriage	14021.887	−6191.499	3207.632	7433.611	359.313	−5192.351
	(1.856)	(−1.329)	(0.640)	(1.718)	(0.063)	(−1.170)
5+ years since marriage	15123.009	−1.11e + 04	3937.782	6239.459	1725.053	−6640.129
	(1.433)	(−1.607)	(0.620)	(1.150)	(0.221)	(−1.360)
Time from First Childbirth (Reference: 1-2 years pre-childbirth)						
5+ years pre-childbirth	−1.03e + 04*	−8452.214*	−1738.842	−3624.845	−2598.470	404.182
	(−2.157)	(−2.120)	(−0.388)	(−1.059)	(−0.611)	(0.173)
3-4 years pre-childbirth	−3635.626	−2972.115	1802.777	209.919	−2727.146	315.327
	(−1.254)	(−0.900)	(0.811)	(0.120)	(−0.889)	(0.214)
1-2 years pre-childbirth	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)
Year of childbirth	−803.618	3430.077	−2774.678	−884.325	−2955.865	2011.291
	(−0.361)	(1.330)	(−1.353)	(−0.485)	(−1.162)	(1.006)
1-2 years since childbirth	4101.769	2061.906	−2342.311	294.921	−6595.957	2600.235
	(1.013)	(0.607)	(−0.680)	(0.099)	(−1.774)	(0.960)
3-4 years since childbirth	3260.688	2534.134	−4973.312	−1221.287	−6428.864	2434.571
	(0.491)	(0.483)	(−0.862)	(−0.271)	(−0.990)	(0.554)
5+ years since childbirth	1458.481	2170.639	−6272.413	432.559	−1.30e + 04	2049.550
	(0.188)	(0.400)	(−0.802)	(0.062)	(−1.396)	(0.429)
Constant	59261.660***	25122.580	4900.507	22995.469**	−1406.379	−1.12e + 04***
	(3.868)	(1.777)	(0.466)	(2.649)	(−0.128)	(−3.606)
Number of persons	290	72	181	190	88	176
Number of person-years	3709	650	1838	1885	841	2090
Women						
Time from First Marriage (Reference: 1-2 years pre-marriage)						
5+ years pre-marriage	−5301.173	−1.28e + 04*	−1.19e + 04*	3438.853	−3378.799	48.029
	(−1.164)	(−2.290)	(−2.591)	(0.799)	(−0.405)	(0.013)
3-4 years pre-marriage	−3318.154	−3719.719	−3986.320	1902.192	−4693.614	540.123
	(−1.508)	(−1.272)	(−1.817)	(0.898)	(−1.181)	(0.244)
1-2 years pre-marriage	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)

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Table A6 – Continued from previous page

	US	UK	AUS	DEU	CHE	KOR
Year of marriage	1213.413	5309.893	271.498	1604.000	−2446.359	−7994.862***
	(0.717)	(1.745)	(0.182)	(1.023)	(−0.973)	(−4.838)
1-2 years since marriage	3424.767	4999.507	4629.240	−316.227	−530.530	$-1.15e+04$***
	(1.329)	(1.724)	(1.943)	(−0.117)	(−0.141)	(−4.258)
3-4 years since marriage	4602.562	4117.297	4605.720	−209.508	2180.218	$-1.52e+04$***
	(1.085)	(1.064)	(1.173)	(−0.054)	(0.380)	(−3.933)
5+ years since marriage	3418.364	3029.893	1402.296	−1778.872	4597.644	$-1.75e+04$**
	(0.671)	(0.539)	(0.226)	(−0.332)	(0.599)	(−3.386)
Time from First Childbirth (Reference: 1-2 years pre-childbirth)						
5+ years pre-childbirth	−5734.228*	6132.766	7178.293*	1008.922	2919.409	2626.975
	(−2.234)	(1.739)	(2.375)	(0.328)	(0.644)	(0.873)
3-4 years pre-childbirth	−1916.402	−506.366	5771.370**	2958.921	3984.742	2400.387
	(−1.139)	(−0.222)	(3.341)	(1.770)	(1.767)	(1.457)
1-2 years pre-childbirth	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)
Year of childbirth	−5714.215***	$-1.06e+04$***	$-1.89e+04$***	$-2.60e+04$***	$-1.00e+04$***	−4908.282**
	(−3.436)	(−3.492)	(−9.835)	(−13.310)	(−4.162)	(−2.749)
1-2 years since childbirth	$-1.10e+04$***	$-1.91e+04$***	$-1.71e+04$***	$-3.20e+04$***	$-3.51e+04$***	−4293.665
	(−4.256)	(−5.876)	(−5.725)	(−12.575)	(−9.852)	(−1.659)
3-4 years since childbirth	$-1.45e+04$***	$-2.07e+04$***	$-1.92e+04$***	$-2.98e+04$***	$-4.40e+04$***	−4099.659
	(−4.365)	(−4.830)	(−4.600)	(−9.563)	(−8.775)	(−1.198)
5+ years since childbirth	$-1.69e+04$***	$-2.45e+04$***	$-1.96e+04$**	$-3.17e+04$***	$-4.77e+04$***	−5567.700
	(−3.628)	(−4.071)	(−3.197)	(−6.790)	(−6.654)	(−1.264)
Constant	25364.849***	10192.349	30.662	1765.218	6902.394	13555.214***
	(3.410)	(0.718)	(0.002)	(0.263)	(0.765)	(3.507)
Number of persons	281	88	169	187	96	93
Number of person-years	3373	726	1625	1662	940	1090

Source: Fertility histories from the Australian Household Income Dynamics (HILDA, 2001–2018); German Socio-Economic Panel (SOEP, 1998–2019); Korean Labor and Income Panel Study (KLIPS, 1998–2018); the Swiss Household Panel (SHP, 1999–2019); British Household Panel Study (BHPS, 1998–2008) and the United Kingdom Household Longitudinal Study (UKHLS, 2010–2018); U.S. Panel Study of Income Dynamics (PSID, 1998–2019). Cross-National Equivalent Files (CNEF) for harmonized earnings and demographic variables for each Panel.

Notes: Regression coefficients and individual-clustered robust standard errors (in parentheses). Estimation results from joint event study models on **unpooled** data. Reference category is -1, one year prior to the family event. The controls include women's and men's age and year.

$^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$.

SUPPLEMENTARY DATA ANALYSES

PART A: Descriptive Employment Patterns for Childless Men and Women

Table A1. Sequential Sample Restriction Summary

Exclusion Step	Obs.	AUS	DEU	KOR	CHE	GBR	USA
Baseline	Person (M)	11,994	32,791	10,125	9,259	33,230	10,526
	PY (M)	99,534	173,945	83,375	59,777	179,853	110,231
	Person (F)	12,593	33,659	10,576	9,818	36,420	11,332
	PY (F)	106,307	189,199	86,256	64,811	204,432	130,948
EXCLUSIONS (Sequential Drops)							
1. First marriage < age 18	Person (M)	86	45	14	34	436	127
	PY (M)	557	284	106	141	2,194	1,050
	Person (F)	444	381	103	146	2,042	513
	PY (F)	3,668	2,462	905	601	11,127	5,595
2. First marriage > age 45	Person (M)	84	1,656	687	16	334	103
	PY (M)	857	4,428	1,762	215	2,053	1,203
	Person (F)	43	1,054	702	7	190	94
	PY (F)	409	2,607	1,556	33	1,088	1,239
3. Partner's first marriage < age 18	Person (M)	830	1,194	95	226	2,159	911
	PY (M)	5,597	7,076	758	1,149	11,625	7,749
	Person (F)	329	480	14	68	1,041	370
	PY (F)	2,131	3,093	113	417	5,299	3,165
4. Partner's first marriage > age 45	Person (M)	46	113	24	21	101	38
	PY (M)	241	465	79	79	582	217
	Person (F)	134	781	296	64	245	143
	PY (F)	936	2,592	1,276	387	1,311	940
5. First child born < age 18	Person (M)	110	264	4	59	490	339
	PY (M)	758	1,424	21	495	2,223	3,025
	Person (F)	210	698	41	78	818	887
	PY (F)	1,698	2,847	266	596	4,279	10,395
6. Partner's first child born < age 18	Person (M)	145	489	25	53	618	534
	PY (M)	746	1,710	201	280	2,787	3,881
	Person (F)	64	130	3	39	225	179
	PY (F)	316	577	20	242	820	1,230
7. Same-sex couples	Person (M)	129	121	0	70	273	31
	PY (M)	824	745	0	511	1,521	207
	Person (F)	0	159	0	56	222	72
	PY (F)	0	967	0	382	1,198	528
8. First marriage < 2000	Person (M)	4,574	11,259	3,693	2,274	12,398	3,800
	PY (M)	44,294	84,237	44,988	19,579	83,611	48,895
	Person (F)	5,212	13,203	3,963	2,689	16,489	4,156
	PY (F)	51,544	98,363	49,029	23,577	110,271	57,888
9. First marriage > 2019	Person (M)	0	95	0	0	2	69
	PY (M)	0	325	0	0	12	443
	Person (F)	0	78	0	0	3	72
	PY (F)	0	345	0	0	5	446
10. Partner's first marriage < 2000	Person (M)	622	1,341	66	525	3,940	516
	PY (M)	3,952	6,308	510	3,437	18,167	3,907
	Person (F)	465	1,041	76	355	2,080	527
	PY (F)	2,892	4,865	587	2,145	9,723	3,924

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Table A1. Sequential Sample Restriction Summary (continued)

Exclusion Step	Obs.	AUS	DEU	KOR	CHE	GBR	USA
11. Partner's first marriage > 2019	Person (M)	0	47	0	0	0	8
	PY (M)	0	162	0	0	0	26
	Person (F)	0	50	0	0	0	12
	PY (F)	0	179	0	0	0	38
12. First child born < 2000	Person (M)	516	1,805	705	1,941	1,536	478
	PY (M)	3,507	7,524	4,125	12,868	5,585	4,451
	Person (F)	639	2,635	1,438	2,202	2,329	638
	PY (F)	4,705	12,073	6,043	15,056	9,101	8,362
13. First child born > 2019	Person (M)	0	67	0	0	0	88
	PY (M)	0	246	0	0	0	483
	Person (F)	0	70	0	0	0	86
	PY (F)	0	235	0	0	0	562
14. Partner's first child born < 2000	Person (M)	53	202	504	118	141	102
	PY (M)	290	806	1,361	488	675	763
	Person (F)	49	171	10	95	142	146
	PY (F)	342	713	52	304	711	1,065
15. Partner's first child born > 2019	Person (M)	0	8	0	0	0	9
	PY (M)	0	11	0	0	0	34
	Person (F)	0	9	0	0	0	4
	PY (F)	0	19	0	0	0	12
16. Inconsistent marriage year (Partner > Ego)	Person (M)	156	357	217	11	622	152
	PY (M)	926	1,543	1,666	44	3,252	1,115
	Person (F)	192	387	226	11	651	145
	PY (F)	1,147	1,793	1,316	42	3,670	1,054
17. Inconsistent marriage year (Partner < Ego)	Person (M)	140	345	0	12	651	160
	PY (M)	1,120	1,565	0	63	3,290	1,266
	Person (F)	142	295	0	12	623	163
	PY (F)	1,119	1,458	0	39	3,138	1,377
18. Missing Marriage Year Information	Person (M)	867	3,490	501	1,615	3,575	501
	PY (M)	4,225	11,042	2,151	8,271	12,183	3,052
	Person (F)	819	3,583	469	1,678	3,731	513
	PY (F)	4,300	12,799	1,904	8,359	13,642	3,510
19. Inconsistent childbirth year (Partner > Ego)	Person (M)	27	78	29	4	74	101
	PY (M)	301	396	333	40	447	831
	Person (F)	59	79	258	2	73	143
	PY (F)	628	485	1,376	8	442	1,383
20. Inconsistent childbirth year (Partner < Ego)	Person (M)	63	79	260	3	84	138
	PY (M)	668	410	1,544	22	509	1,182
	Person (F)	30	77	28	3	78	103
	PY (F)	258	397	289	17	486	948
21. Missing Childbirth Year Information	Person (M)	132	127	23	100	81	272
	PY (M)	756	414	149	494	254	1,872
	Person (F)	250	599	616	125	477	419
	PY (F)	1,458	2,671	1,934	584	1,808	3,607
22. Inconsistent marriage reporting	Person (M)	386	36	177	42	112	7
	PY (M)	4,649	224	1,576	411	1,076	56
	Person (F)	399	26	147	32	116	6
	PY (F)	4,970	145	1,344	269	1,137	59
23. Marital status is Widowed/Divorced/Separated	Person (M)	98	183	64	23	90	113

Continued on next page...

Table A1. Sequential Sample Restriction Summary (continued)

Exclusion Step	Obs.	AUS	DEU	KOR	CHE	GBR	USA
	PY (M)	322	517	276	71	240	468
	Person (F)	112	248	53	33	110	159
	PY (F)	432	792	272	96	307	788
24. Person-years after union dissolution (Obs. drop only)	Person (M)	0	0	0	0	0	0
	PY (M)	1,140	155	66	968	1,189	135
	Person (F)	0	0	0	0	0	0
	PY (F)	1,569	192	50	933	1,352	231
25. Not first marriage (order > 1)	Person (M)	18	98	0	15	30	20
	PY (M)	56	611	0	63	82	144
	Person (F)	21	130	3	4	49	18
	PY (F)	70	721	16	21	142	119
26. Inconsistent cohabitation	Person (M)	1	193	0	0	0	43
	PY (M)	2	1,229	0	0	0	321
	Person (F)	0	0	0	0	0	0
	PY (F)	0	0	0	0	0	0
27. Inconsistent child report	Person (M)	31	5	0	8	123	10
	PY (M)	275	36	0	88	959	134
	Person (F)	33	1	1	9	125	9
	PY (F)	274	6	19	93	992	137
28. Missing marital/fertility histories	Person (M)	151	326	1,731	1,311	3,250	15
	PY (M)	284	980	7,444	3,931	9,835	119
	Person (F)	126	201	331	1,304	2,476	11
	PY (F)	214	628	2,085	4,015	6,993	82
Final Sample (Full)	Person (M)	3,631	9,631	1,652	934	2,995	2,654
	PY (M)	23,187	39,724	15,925	6,069	15,502	23,369
	Person (F)	3,380	7,871	2,136	925	2,999	2,470
	PY (F)	21,227	34,523	17,120	6,595	15,390	22,097
Analytic Samples (Subsets)							
Final Sample: Marriage Event (Observed 1yr pre-marriage)	Person (M)	460	423	193	147	188	458
	PY (M)	3,684	3,868	2,415	1,226	1,473	5,927
	Person (F)	368	383	123	149	169	420
	PY (F)	2,872	3,207	1,404	1,278	1,245	5,151
Final Sample: Childbirth Event (Observed 1yr pre-birth)	Person (M)	1,008	887	818	402	684	903
	PY (M)	10,357	7,756	9,024	3,478	5,045	10,712
	Person (F)	1,020	923	801	396	702	910
	PY (F)	9,971	7,785	8,553	3,587	5,163	10,637
Final Sample: Combined Events (Observed 1yr pre-marriage & pre-birth)	Person (M)	181	193	176	88	72	291
	PY (M)	1,994	2,228	2,274	875	685	4,122
	Person (F)	169	191	93	96	89	281
	PY (F)	1,765	1,988	1,191	962	773	3,759

Notes: (M) = Male; (F) = Female; PY = Person-Years ;"Partner > EGO" indicates the partner reported a later year for the event than the respondent. "Partner < EGO" indicates the partner reported an earlier year.

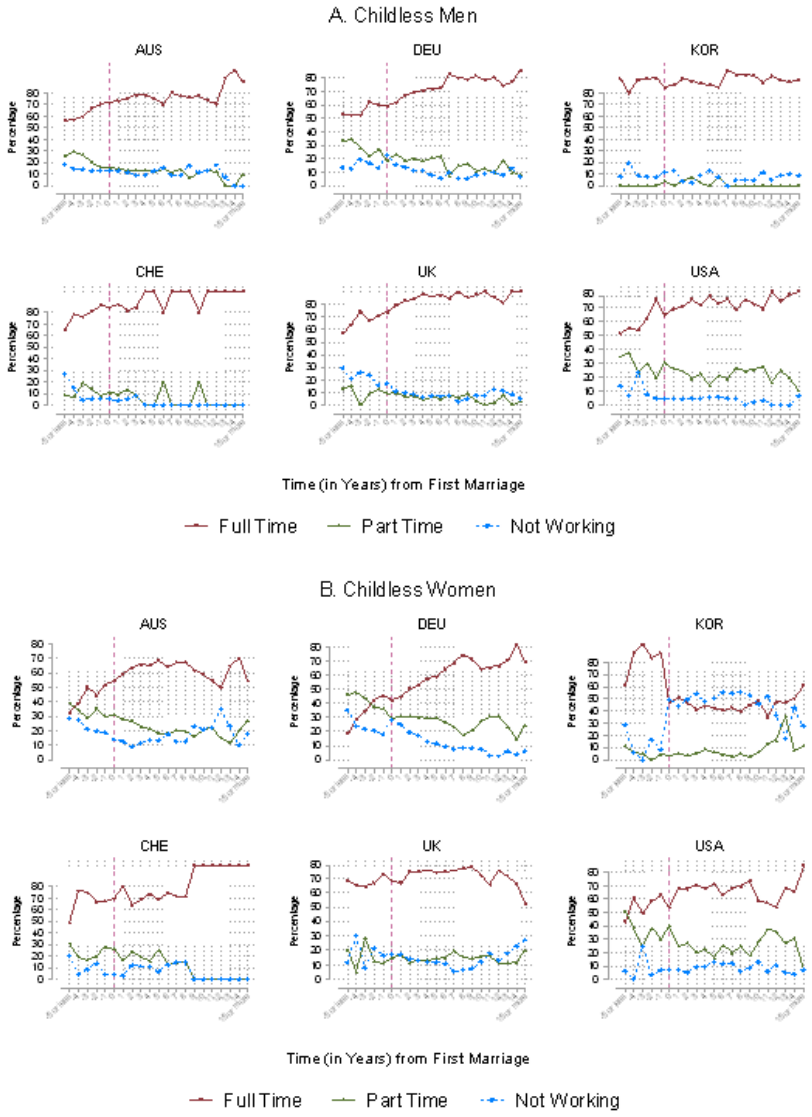


Figure S_A1: Employment Status of *childless* Men and Women, by Time from First Marriage

PART B: Women's Share of Earnings, Wages, and Hours by Her Education

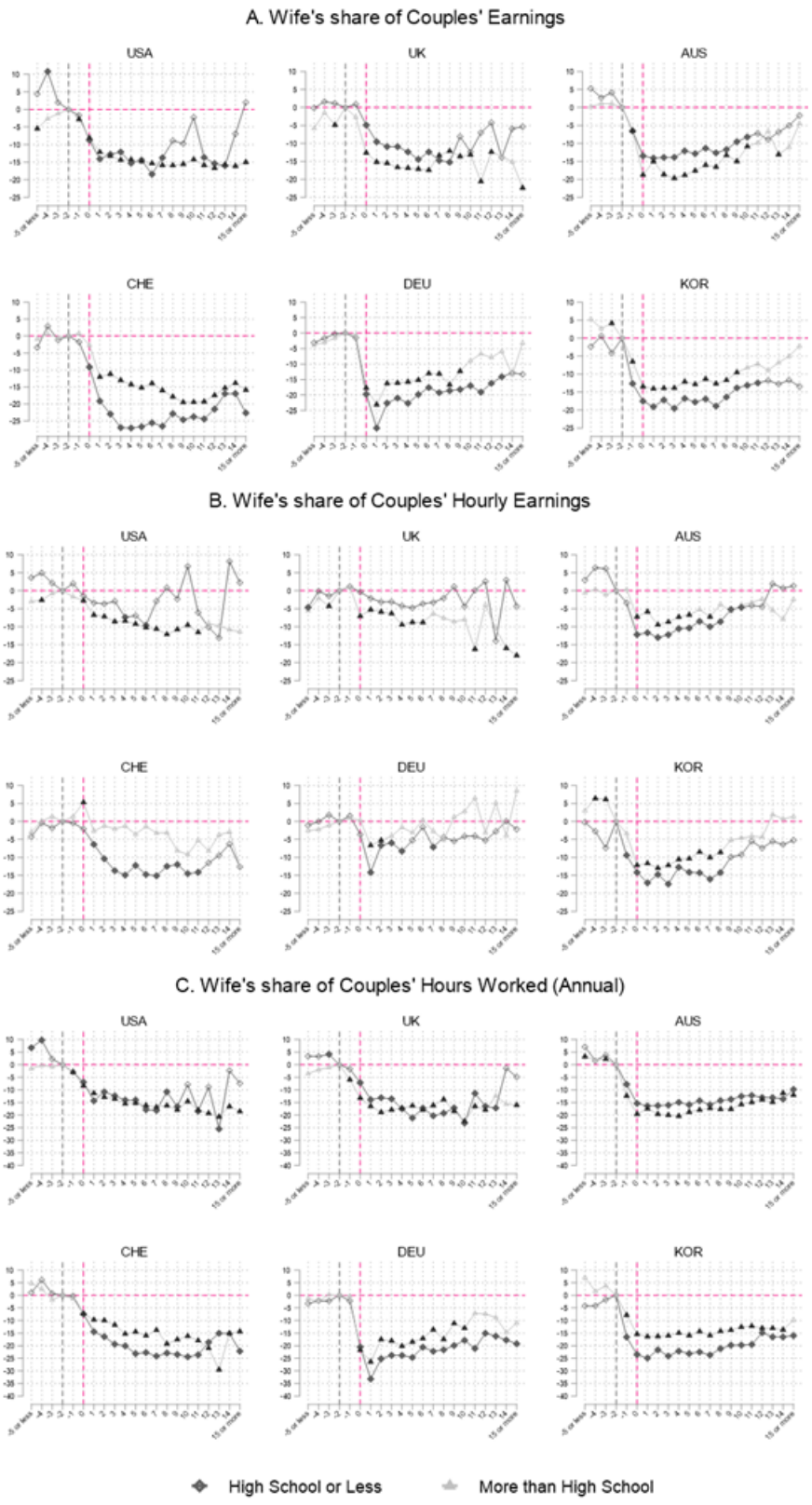


Figure S_B1: Predicted Change in Wife's Share of Couples' Earnings (A), Hourly Earnings (B) and Annual number of hours worked (C) by Country and Education

PART C: Testing Marital and Parenthood Effects on Men's and Women's Labor Market Outcomes – Unpooled country-level models

Figure S_C1 and S_C2 replicate Figures 6 and 7, respectively, but substitute the dependent variable from annual earnings (US$ PPP) to the more standard log-earnings specification.

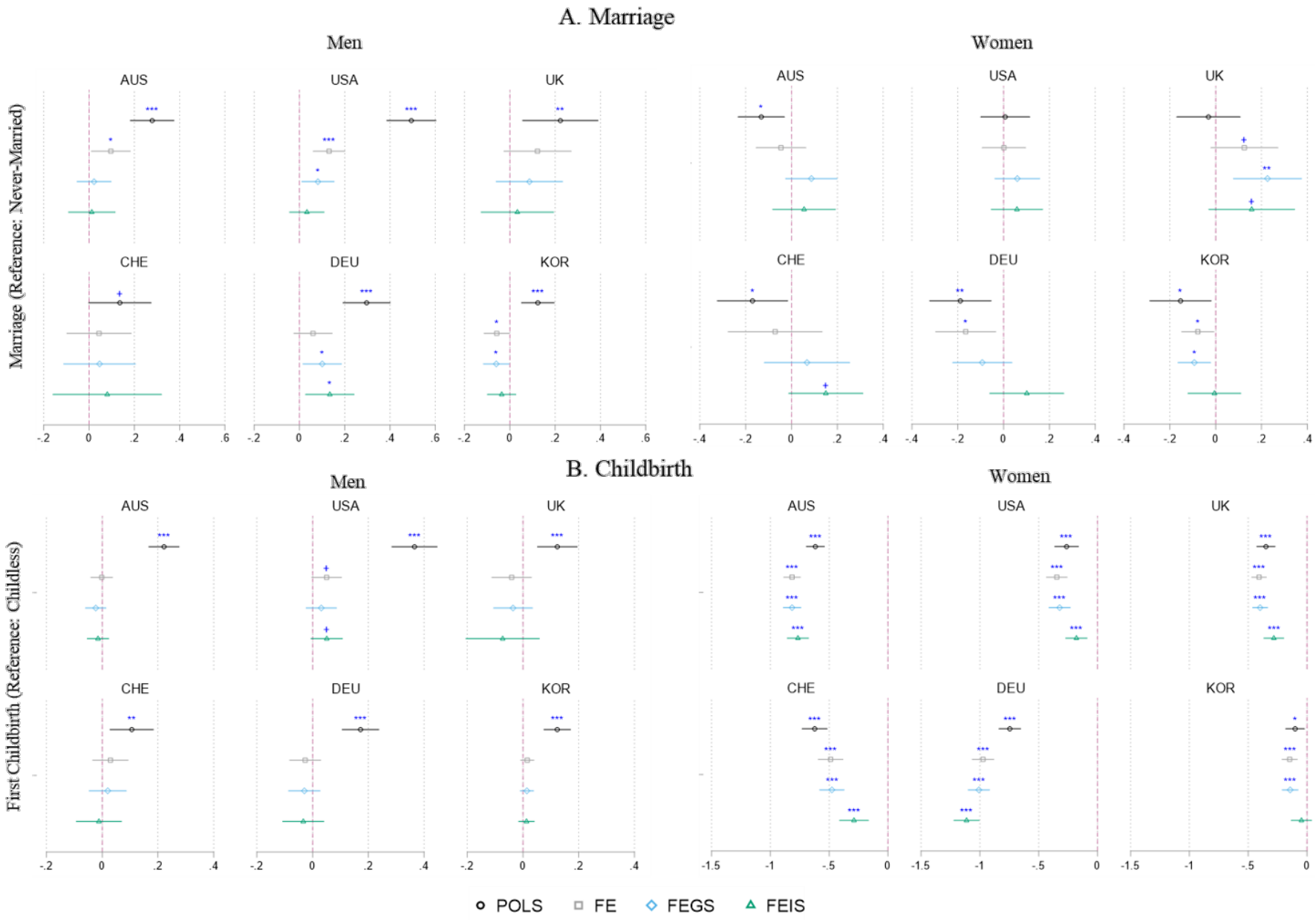


Figure S_C1: Comparison of Average LOG Annual Earnings Returns to Marriage and Parenthood Across Models by Country and Gender

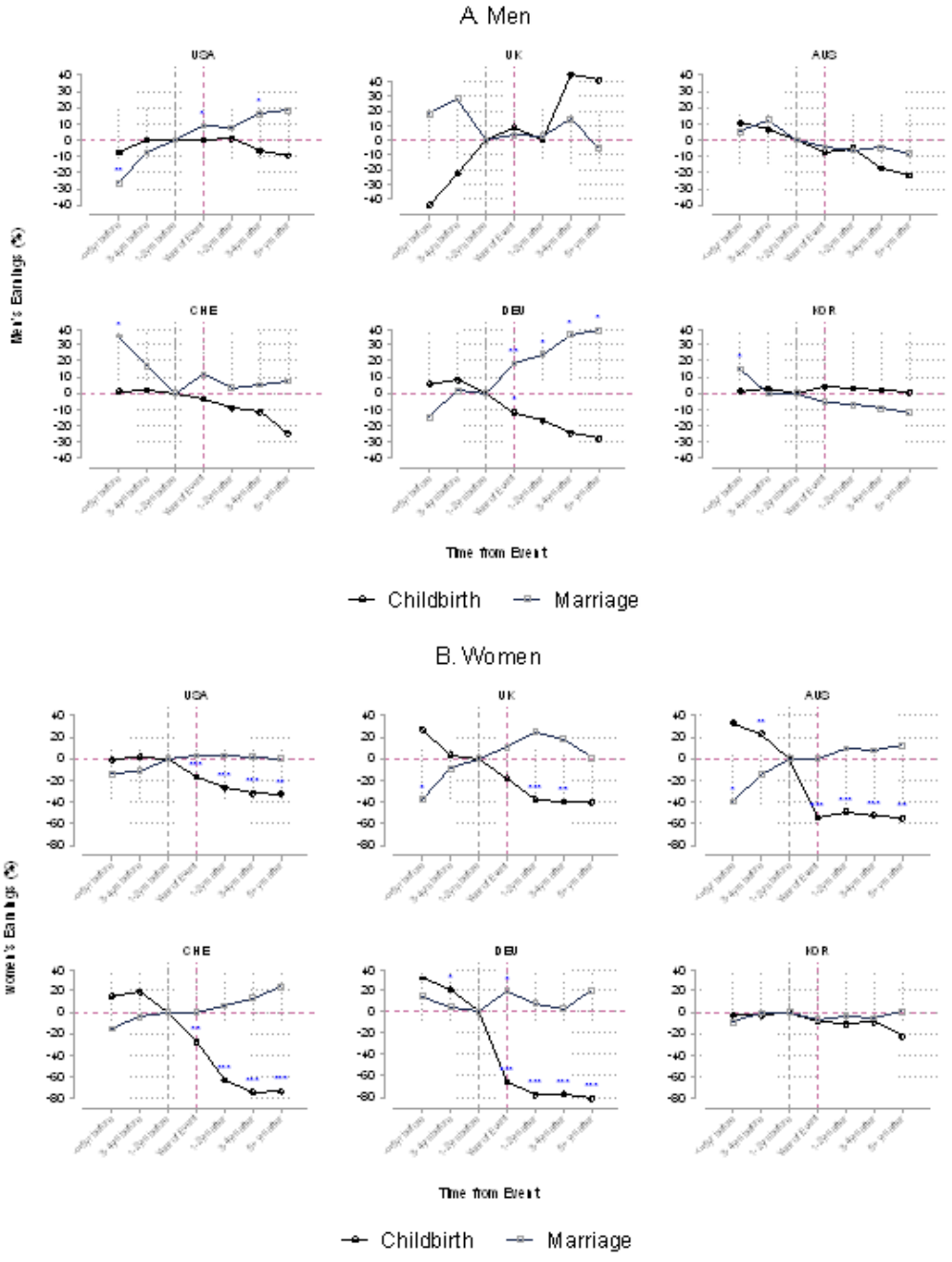


Figure S_C2: Joint Event Studies of First Marriage and First Childbirth by Country and Gender

Source: CNEF(1970-2019), HILDA(2001–2018), SOEP(1998–2019), KLIPS(1998–2018); SHP (1999–2019); BHPS(1998–2008), UKHLS (2010–2018), PSID(1998–2019).

Note: Estimates of the Joint Event Study model on separate country and gender samples. Outcome is measured in annual log earnings. Reference category is -1 (one year prior to the family event). Models include controls for age and year. Full regression tables in Appendix Table A6 **??**.

$p < .05$; $^{**}p < .01$; $^{***}p < .001$

PART D: Comparison of Average Income Returns Childbirth Across Models

This appendix performs two complementary sets of checks designed to assess whether couple-level selection on income levels or pre-birth income trends can account for the event-study patterns shown in the main text, in particular, the muted average USA result. As in the event study models, the sample is restricted to couples observed at least once before the birth of their first child (this excludes observations with no pre-birth history). However, unlike the event study, the analytic sample includes couples who never had kids.Hence, the reference category is couples who have not yet or have never had kids. Household income is measured in logs.

Similar to 6, Figure S_D1 compares the estimated average binary effect of first birth on pre-tax household income across four alternative estimators that embody different assumptions about selection and pre-trend heterogeneity.

- **POLS (pooled OLS)** — simple pooled model using the binary birth indicator (no couple fixed effects). This is sensitive to between-couple differences in levels and trends.
- **FE (within fixed effects)** — couple fixed effects that remove time-invariant between-couple heterogeneity but not differences in trends.
- **FEGS (fixed effects with group-specific slopes)** — FE that additionally allows groups (groups being defined by whether a couple ever has children) to have distinct time slopes, controling for systematic group-level trend differences that could bias FE estimates.
- **FEIS (fixed effects with individual-specific slopes)**. This estimator allows each couple to have its own linear time trend (through the inclusion of individual-specific slope terms). In practice, I implement FEIS by permitting couple-specific linear trends

in men's potential experience (and its square) to vary; standard errors are clustered at the couple level.

I estimate the four models country by country and plot the point estimate and confidence interval for the birth indicator for each estimator (POLS, FE, FEGS, FEIS). If the pooled and FE estimates are similar, selection on pre-treatment levels is unlikely to explain the FE result. If the FEIS estimate differs notably (and in particular becomes more negative) relative to conventional FE and POLS, this indicates that differential pre-birth trends (positive selection into parenthood) are present and that standard FE models understate the adverse effect of childbirth because they do not remove individual-specific trends.

In Germany, the United Kingdom, Switzerland, and Australia, all four estimators (POLS, FE, FEGS, and FEIS) produce similarly negative and generally statistically significant coefficients, indicating that the income penalty associated with childbirth is not driven by selection either on time-constant couple-level unobservable characteristics or on income growth. In these settings, conventional FE tends to capture most of the relevant heterogeneity, and FEIS produces estimates similar in magnitude and precision. South Korea remains the only country with consistently positive estimates across all model types. Across POLS, FE, and FEGS, the coefficient on the first-birth indicator is consistently large, positive, and statistically significant (0.258–0.282, all $p < 0.001$), indicating a substantial average increase in households pre-tax incomes following the transition to parenthood. The FEIS estimate remains positive and statistically significant (0.157, $p < 0.05$), though smaller in magnitude. This suggests that part of the positive income returns to parenthood in South Korea in driven by pre-birth income growth.However, the fact that the coefficient remains positive and significant even after allowing for individual-specific slopes indicates that the income gains associated with childbirth in South Korea are not solely an artefact of selection on pre-birth income growth.

The U.S. stands in sharp contrast to the other countries analyzed. Across the first three estimators (POLS, FE, FEGS), the coefficient on the first-birth indicator is small,

near zero, and statistically indistinguishable from zero. The FEIS estimate, however, is markedly different: a coefficient of -0.119^{***}, which corresponds to an 11–12% decline in pre-tax household income associated with the transition to parenthood ($\exp(-0.119)\text{-}1 \approx$ -11.2%). This pattern is indicative of positive selection on pre-birth income growth among U.S. couples who become parents. Specifically, future parents appear to be on steeper upward income trajectories prior to childbirth than non-parents (or later parents—couples who will still have children, but did have not within the study's observation-window). Because conventional FE only corrects for fixed (time-invariant) differences and not differences in *growth rates*, standard FE and FEGS estimates are biased upward: the positive pre-birth trend mechanically offsets the causal negative shock associated with childbirth, producing an attenuated and statistically insignificant estimate. FEIS corrects this by granting each couple its own pre-birth trend; once these individual-specific trends are controlled for, the underlying negative effect of childbirth becomes visible and statistically robust. The FEIS estimates reveal that the absence of an effect in simpler models is not evidence of no consequence; rather, it indicates that positive pre-birth trends masked a meaningful negative shock.

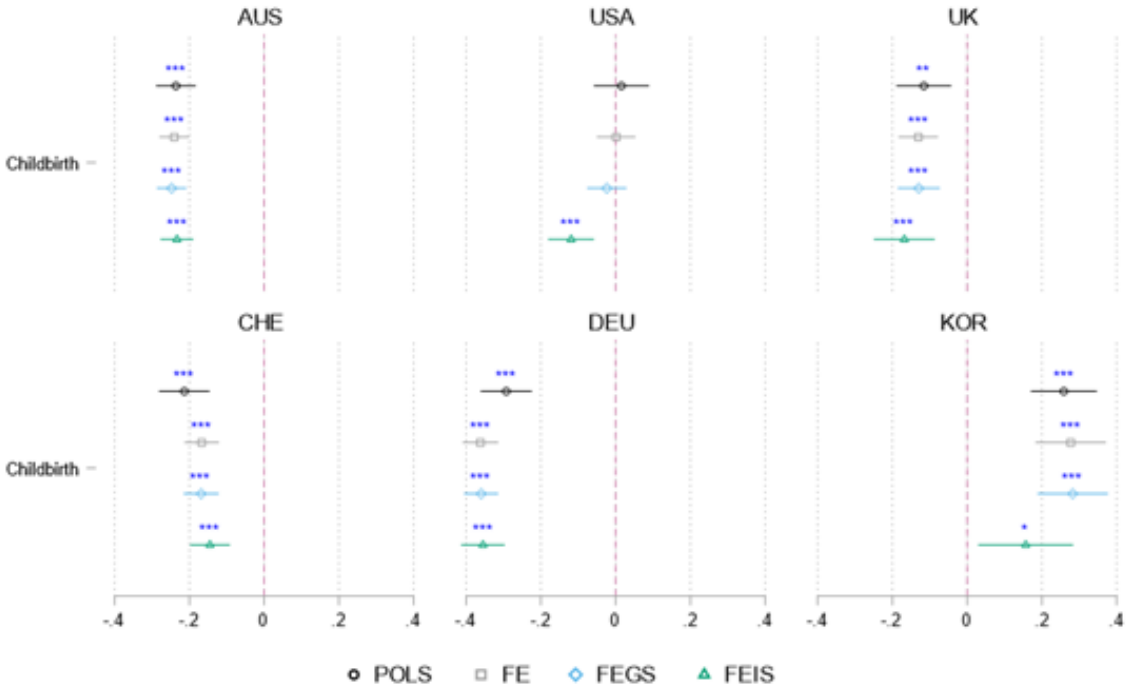


Figure S_D1: Comparison of the Average Change in Pre-Tax Income (log) Following Childbirth