When Schools Shape Demography: Socialist Schooling, Gender Norms and the Fertility Decline in East Germany*

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Abstract

Egalitarian gender norms that conflict with traditional male-breadwinner institutions are increasingly hypothesized as a key driver of declining fertility. This paper examines the long-run demographic consequences of socialist schooling in the former German Democratic Republic, where promoting gender equality and women's full labor-force participation was a core educational objective. Leveraging school-entry cutoffs around reunification—which abruptly replaced socialist curricula and work-family infrastructure with West Germany's male-breadwinner model—I find that one additional year of socialist schooling reduced fertility by 0.07 children among cohorts making fertility choices under West German institutions. Consistent with a norm-transmission mechanism, treated individuals express more egalitarian gender attitudes, and treated women have higher labor-force participation, without corresponding differences in educational attainment. Fertility effects are substantially attenuated in regions that retained greater access to childcare after reunification, suggesting that egalitarian norms suppress fertility primarily in the absence of institutional support for combining work and family.

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1 Introduction

Fertility rates are declining worldwide, with profound implications for long-run economic growth and the fiscal sustainability of welfare states (Jones, 2022). While economic factors are well-established determinants of fertility (Becker, 1960; Chatterjee and Vogl, 2018; Cumming and Dettling, 2024), cultural change—particularly the evolution of gender norms—is increasingly theorized as a key driver of modern demographic transitions (Doepke et al., 2023; Kearney and Levine, 2025). Across countries, fertility is lowest precisely where egalitarian gender attitudes are widespread but institutional support for working mothers remains limited—suggesting that it is not progressive norms alone but their misalignment with traditional institutions that may depress fertility. Yet establishing causality has proven elusive because cultural evolution and institutional change typically occur simultaneously and endogenously.

This paper provides causal evidence that socialist schooling—which for four decades promoted gender-egalitarian work identities as a core educational objective—had long-run demographic consequences in post-reunification Germany, with a pattern of results consistent with a norm–institution mismatch mechanism. The German Democratic Republic embedded gender equality throughout its centralized curriculum (Jugendgesetz der DDR, 1974, §1–2; see also Anweiler, 1988), while simultaneously building comprehensive work–family infrastructure: universal childcare, year-long paid parental leave, and employment guarantees. In 1990, reunification abruptly replaced this environment with West Germany's traditional male-breadwinner model. A population socialized into egalitarian work identities suddenly faced institutions structurally ill-equipped to accommodate them, and East Germany's total fertility rate collapsed from 1.52 to 0.77 within five years—among the steepest peacetime declines ever recorded.

To understand the determinants of this decline, I first fielded a descriptive survey of 900 Germans aged 56–66, stratified by childhood region, to document how East Germans perceived the constraints on their own fertility. Four patterns emerge and together motivate the causal design that follows. First, work–family feasibility is the dominant perceived constraint. Among East Germans who report changing their fertility plans after reunification, 73 percent cite deteriorating work–family compatibility as an important reason and 58 percent cite inadequate childcare, while financial insecurity is cited far less often and displays negligible East–West differences. Second, the perceived career–fertility trade-off is sharply gendered. Among women, 64 percent of East Germans report that children would have strongly constrained their careers, compared with 35 percent of West Germans; among men, the corresponding shares are nearly identical across regions. This asymmetry suggests a mechanism operating through women's work identities rather than diffuse economic shocks. Third, East Germans rate post-reunification childcare as far less adequate than West

Germans—1.7 versus 3.0 on a 0–5 scale—despite objectively higher coverage in the East, indicating an expectations wedge: socialist socialization instilled higher reference points, so that the reunification-induced reductions in provision were perceived as a binding constraint. Fourth, respondents trace these work–family expectations disproportionately to schooling. When asked where their views on work and family originated, most channels—parents, peers, media—exhibit little regional variation. Schooling is the exception: 47 versus 23 percent of East and West Germans cite school and teachers as strongly formative, with East Germans recalling substantially stronger school-transmitted emphasis on continuous maternal employment and gender-egalitarian norms. Moreover, respondents' attribution is concentrated in upper-grade ideological subjects such as civics, consistent with historical evidence that explicit work–family and gender-equality content was introduced primarily in grades 7–10 (Anweiler, 1988; Kim, 2003).[1]

Building on these descriptive patterns, I turn to the quasi-experimental design that isolates the causal effect of socialist schooling on fertility among cohorts entering adulthood under West German institutions. East Germany mandated that children turning six by May 31 enter school that September; those born on or after June 1 waited another year. When reunification replaced socialist curricula with West German materials virtually overnight (Fischer, 1992), this birth-timing cutoff generated quasi-random variation in ideological exposure: among cohorts still in school at reunification (born 1974–1983), May-born students had completed one additional year of socialist schooling relative to their June-born peers. To separate the effect of socialist content from generic age-at-school-entry effects, I use a difference-in-differences design. The first difference compares May- and June-born students within exposed cohorts; the second removes the baseline cutoff effect using earlier East German cohorts (born 1970–1973) who completed their schooling before reunification.

The quasi-experimental analysis primarily relies on the 2018–2019 German Microcensus, a mandatory annual household survey covering one percent of the population. With over 800,000 individuals per wave, it provides sufficient statistical power to detect effects within narrow birth-month windows, and observing individuals nearly three decades after reunification ensures that outcomes largely reflect completed fertility.

To validate treatment assignment and examine mechanisms, I complement the Microcensus with additional panel and attitudinal datasets that record birthplace, gender norms, and contemporaneous economic expectations.[2] These data allow me to replicate the main

1. Cross-country evidence using World Values Survey data shows that the pattern described by East German respondents is not unique to the reunification setting: egalitarian norms are associated with lower fertility primarily where institutions fail to support dual-earner parenthood as proxied by childcare availability.

2. These include the German Socio-Economic Panel (SOEP), the National Educational Panel Study (NEPS), the Family Research and Demographic Analysis survey (FReDA), the German Longitudinal Election Study (GLES), the Shell Youth Study, and the DJI Youth Survey.

estimates using alternative exposure definitions and to test whether schooling shifted gender attitudes, work orientations, and perceived constraints.

The results show that socialist schooling had long-run demographic consequences. Each additional year of exposure reduces fertility by approximately 0.07 children among cohorts who spent their adult lives under West German institutions. A meaningful share operates through the extensive margin: treated individuals are 2.3 percentage points less likely to have a child at all. They also report lower ideal family sizes, indicating that socialist schooling shifted underlying preferences over family formation.

Several pieces of evidence support a causal interpretation. There is no discontinuity at the May–June cutoff among placebo cohorts who completed schooling before reunification, indicating that the estimates do not reflect generic school-entry timing effects. The fertility discontinuity appears only for cohorts whose schooling overlapped with the curricular break, consistent with exposure to socialist content driving the effect.

The results are stable across specifications. The estimates are virtually unchanged when adding state fixed effects, state-specific birth-year trends, and controls for labor-market conditions at graduation. They are also robust to alternative fertility measures—including children in the family unit rather than the household and mother-specific counts of children ever born—and replicate in independent datasets that assign East German schooling based on birthplace rather than current residence, addressing potential concerns about migration and treatment misclassification. Because identifying variation occurs at the cohort-by-month level, I complement conventional clustered standard errors with inference procedures designed for limited numbers of clusters: wild cluster bootstrap and randomization-based inference under local randomization around the cutoff. Both approaches yield p-values below 0.05. Finally, treatment status is unrelated to labor-market conditions at graduation, and post-reunification surveys reveal no discontinuities in financial concerns or future outlook around the cutoff. Taken together, it indicates that the estimated fertility response reflects differential exposure to curriculum content rather than coincidental economic shocks.

The pattern of evidence is consistent with a norm–institution mismatch channel centered on gender-egalitarian work identities. Exposure to socialist schooling increases gender-egalitarian attitudes and raises women's labor-force participation by roughly 2 percentage points, while leaving human-capital outcomes largely unchanged. These causal estimates align closely with the descriptive survey patterns: quasi-random variation in schooling shifts precisely the attitudes and expectations that East Germans retrospectively identify as central to their fertility decisions. The effects also track the structure of the curriculum. They are largest in upper grades, where subjects such as civics explicitly promoted women's economic independence (Kim, 2003), and absent in early grades where ideological content was minimal—an exposure gradient that speaks against generic disruption. Most diagnostically,

the fertility effect attenuates sharply with post-reunification childcare availability, falling to near zero in regions where institutional support for working mothers remained comparatively strong. The demographic consequences of socialist schooling thus appear to depend on whether post-reunification institutions could accommodate the work identities it had instilled.

This paper makes three main contributions. First, it provides within-country evidence consistent with the norm–institution mismatch mechanism emphasized in recent syntheses of the modern fertility decline (Doepke et al., 2023; Bloom, Kuhn, and Prettner, 2024; Kearney and Levine, 2025). A central argument in this literature is that the fertility consequences of changing gender roles depend on institutions governing the work–family trade-off, in particular public childcare and related supports for working parents (Del Boca and Sauer, 2009; Bauernschuster, Hener, and Rainer, 2016; Olivetti and Petrongolo, 2017). My setting offers a test of this hypothesis by combining quasi-random exposure to state-directed schooling with an abrupt institutional reversal. This allows me to ask whether the demographic consequences of egalitarian socialization depend on the policy environment in which family choices are made. I find that one additional year of socialist schooling reduced fertility for cohorts making fertility choices under West German institutions, and that this effect is concentrated in regions where post-reunification childcare availability was lowest, consistent with institutional complementarity.[3]

Second, I contribute to the literature on the formation and persistence of gender norms. A growing body of work has documented how mass media, edutainment, and school-based programs can shift gender norms (Jensen and Oster, 2009; La Ferrara, Chong, and Duryea, 2012; Kearney and Levine, 2015; Banerjee, La Ferrara, and Orozco, 2019; Dhar, Jain, and Jayachandran, 2022; Edmonds, Feigenberg, and Leight, 2023); I complement this evidence by showing that state-directed curricular content can durably shift both beliefs and behavior. More than three decades after reunification, treated individuals hold more gender-egalitarian attitudes and treated women exhibit higher labor-force participation. These estimates provide direct evidence that socialist education contributed to the long-run East–West divide in gender attitudes and maternal employment that persists to this day (Bauernschuster and Rainer, 2012; Campa and Serafinelli, 2019; Jessen, 2022; Boelmann, Raute, and Schönberg, 2025). The persistence and magnitude of these effects align with recent evidence showing that even relatively modest educational interventions can produce long-run shifts in gender norms. A twenty-hour classroom program in India increased adolescents'

3. Within the German reunification episode, Chevalier and Marie (2017) document negative selection among mothers during the early-1990s fertility collapse; my results complement their evidence by highlighting a mechanism that can contribute to such compositional change, namely heterogeneous fertility responses to work–family constraints among cohorts differentially exposed to egalitarian socialization.

support for gender equality with impacts lasting into adulthood (Dhar, Jain, and Jayachandran, 2022), and Japan's desegregation of home-economics instruction altered fertility timing and the division of household labor decades later (Hara and Rodrıguez-Planas, 2025).

Third, I add to research on the long-run effects of curricular reforms and on the legacy of socialism by providing evidence that ideological content transmitted through schooling can generate sizeable and durable demographic consequences. Prior work documents the effects of the overall socialist regime on political preferences and labor-market behavior (e.g., Alesina and Fuchs-Schündeln, 2007; Fuchs-Schündeln and Schündeln, 2020; Lippmann, Georgieff, and Senik, 2020; Laudenbach, Malmendier, and Niessen-Ruenzi, Forthcoming), and a related literature shows that school curricula can have lasting effects on preferences and behavior—including financial decision-making (Bernheim, Garrett, and Maki, 2001), identity formation (Clots-Figueras and Masella, 2013), political and economic attitudes (Cantoni and Yuchtman, 2013; Cantoni et al., 2017; Braghieri and Eichmeyer, 2024), science attitudes (Arold, 2024), religiosity (Arold, Woessmann, and Zierow, Forthcoming), and labor-market outcomes (Costa-Font, Garcıa-Hombrados, and Nicińska, 2024; Li, Luo, and Wang, 2025; Meriläinen and Mitrunen, 2025). Within this setting, the closest paper is Fuchs-Schündeln and Masella (2016), who also exploit school-entry cutoffs around reunification to study the effects of changes in East German education. Comparing East and West German cohorts born 1971–1977 in a difference-in-differences framework, they focus on educational attainment and labor-market outcomes, documenting reductions in male wages and college enrollment.[4] I complement their analysis by shifting attention to later cohorts born 1974–1983 who were still in compulsory schooling at reunification and by examining long-run demographic outcomes. Methodologically, I use month-of-birth variation within East Germany and earlier East German cohorts as an internal comparison group to net out generic age-in-grade effects. This within–East Germany design abstracts from institutional differences between East and West German schooling systems—including West Germany's different cutoff date and non-trivial rates of early and delayed enrollment (Rüdiger, Kormann, and Peez, 1976).

Taken together, the findings carry implications beyond the post-socialist context. Many high-income countries have experienced rapid shifts toward dual-earner norms while the institutions governing the work–family trade-off have adapted more slowly. In such environments, policies that operate primarily through household resources (e.g., transfers and tax incentives) may have limited effects if the binding constraint is the compatibility of employment and parenthood. The East German experience instead highlights the role of

4. They further distinguish between two margins: for cohorts born 1971–1973, reunification primarily relaxes non-meritocratic access restrictions to academic tracks and apprenticeships, whereas for cohorts born 1974–1977 it mainly reduces exposure to socialist teaching content and style.

institutional adaptation: aligning childcare and related supports for working parents with prevailing work identities may be a prerequisite for reversing fertility declines.

The remainder of the paper proceeds as follows. Section 2 presents descriptive survey and cross-country evidence motivating the norm–institution mismatch mechanism. Section 3 describes the institutional context and the GDR schooling system. Section 4 introduces the data. Section 5 outlines the identification strategy. Section 6 presents the results. Section 7 concludes.

2 Descriptive Evidence: Gender Norms, Institutions, and Fertility

When reunification abruptly replaced East Germany's socialist institutional environment with West Germany's male-breadwinner framework in 1990, fertility collapsed. The total fertility rate fell from 1.52 to 0.77 within five years—among the steepest peacetime declines on record (Figure E.1)—while West German fertility remained stable at approximately 1.4, ruling out a common demographic trend. Understanding what drove this collapse requires knowing how East Germans perceived the constraints on their own fertility, and why those constraints were so much more severe than in the West.

This section presents two bodies of evidence that discipline the causal analysis. First, I report results from an original survey of 900 Germans that identifies the margins respondents themselves consider central to their fertility decisions and traces those margins to specific socialization channels. Second, I show that the pattern described by East German respondents—egalitarian norms depressing fertility where institutional support is lacking—replicates in cross-country data, establishing it as a broader regularity rather than a post-socialist peculiarity. Neither body of evidence establishes causality; that task falls to the quasi-experimental design in Section 5. Their role is to motivate why socialist schooling is a plausible and consequential mechanism to examine, and to generate the specific auxiliary predictions that the causal analysis then tests.

2.1 Survey Evidence: Perceived Constraints and the Role of Schooling

To examine perceived fertility constraints and their origins, I fielded a survey of 900 Germans aged 56–66 (birth cohorts 1960–1970), stratified by childhood region (600 East, 300 West), conducted in February 2026 through Talk Online. The survey was designed to minimize backward rationalization: all questions on schooling and socialization precede any questions about reunification or family planning, and all retrospective items include an explicit "cannot assess / do not remember" option. Module ordering and full question wording in English and the original German appear in Appendices B and C.

Retrospective self-reports carry well-known limitations: recall may be selective, post-hoc rationalization may color responses, and individuals may lack insight into the true determinants of their choices. I therefore interpret these data as documenting perceived constraints and reference points. Their value lies in revealing which margins respondents themselves emphasize and which differ most sharply between East and West, thereby disciplining which mechanisms deserve the most attention in the causal analysis. Summary statistics appear in Appendix Table B.1; full results by childhood region are in Appendix Tables B.2 and B.3. Four patterns stand out.

Finding 1: Work–family feasibility, not financial hardship, is the dominant perceived constraint. Among East Germans, 69 percent report that reunification affected their family planning, compared with 11 percent of West Germans ($p < 0.001$). Among those reporting an effect, 73 percent cite deteriorating work–family compatibility as a key reason, and 46 percent identify it as the single most important factor. Loss of childcare ranks second (58 percent cite; 27 percent most important). Financial and economic uncertainty ranks substantially lower (37 percent cite; 13 percent most important). The same ranking emerges when respondents rate—independently of reunification—how strongly various factors constrained their fertility over the life course (0–5 scale): work–family incompatibility receives the highest mean rating among East Germans (3.6), followed by inadequate childcare (3.3), while financial insecurity (2.7) and housing (2.4) rank lower and display negligible East–West gaps ($\Delta \approx 0$, $p = 0.94$). Work–family incompatibility, by contrast, exhibits a gap of 1.0 scale points relative to West Germans ($p < 0.001$), and childcare a gap of 0.6 ($p < 0.001$). The dominance of the work–family margin over financial concerns is inconsistent with accounts that attribute the fertility collapse primarily to reunification-induced economic insecurity.

Finding 2: The perceived career–fertility trade-off is sharply gendered. Among women, 64 percent of East Germans report that additional children would have strongly or very strongly constrained their careers, compared with 35 percent of West Germans. Among men, the corresponding shares are nearly identical across regions (21 versus 20 percent). This asymmetry is difficult to reconcile with a diffuse economic shock that affected both sexes; it points instead toward a mechanism operating specifically through women's work identities.

Finding 3: East Germans perceive childcare as less adequate despite objectively higher coverage. When asked how well post-1990 childcare provision matched their own expectations (0–5 scale), East Germans report a mean adequacy score of 1.7 versus 3.0 among West Germans ($p < 0.001$)—despite East German states retaining substantially higher childcare coverage throughout the 1990s. Because the question is framed relative to respondents' own benchmarks, the pattern is consistent with an expectations wedge: socialization under near-universal GDR provision set reference points that post-reunification institutions could not

meet, transforming an objectively substantial childcare supply into a subjectively binding constraint.

Finding 4: Schooling is the exceptional socialization channel. When asked where their work–family expectations originated, most socialization channels—parents, peers, media, workplace—exhibit little regional variation. Schooling is the exception: 47 percent of East Germans cite school and teachers as strongly formative, compared with 23 percent of West Germans ($p < 0.001$), and East Germans recall substantially stronger school-transmitted emphasis on continuous maternal employment and gender-egalitarian norms (mean school-transmitted norm scores of 4.1–4.3 versus 1.9–2.2 in the West, all $p < 0.001$). Among East Germans who identify schooling as important, attribution concentrates in upper-grade ideological subjects—*Staatsbürgerkunde* and *Polytechnischer Unterricht* are cited by 68 and 47 percent respectively—consistent with historical accounts that explicit work–family content was introduced primarily from grade 7 onward (Anweiler, 1988; Kim, 2003). No other socialization channel produces an East–West gap of comparable magnitude.

2.2 The Norm–Institution Mismatch Beyond Germany

The pattern described by East German respondents is not unique to the reunification context. Using World Values Survey data for more than 100 countries covering over 90 percent of the world population, Figure F.1 documents a cross-country correlation of −0.28 between total fertility rates and the share of citizens rejecting male labor-market priority—a relationship that holds for stated ideal fertility and within-country changes over time (Appendix Tables F.2 and F.3). Crucially, this relationship varies with institutional context in exactly the way the survey suggests. Stratifying countries by whether national law mandates public childcare provision, the association between egalitarian attitudes and fertility is small and statistically insignificant where such mandates exist, but approximately twice as large and highly significant where they do not (Appendix Table F.1; the same holds for ideal fertility in Appendix Table F.4). The norm–institution mismatch the survey highlights is thus not a peculiarity of the post-socialist transition: egalitarian norms are associated with lower fertility precisely where institutions fail to support dual-earner parenthood.

2.3 From Descriptive Patterns to Causal Analysis

The survey and cross-country evidence together point toward a specific interpretation. Socialist schooling may have instilled gender-egalitarian work identities that generated high reference points for combining employment and family; when reunification removed the institutional infrastructure supporting those identities, East German women perceived a sharper career–fertility trade-off than either East German men or West Germans of either

sex. The cross-country pattern corroborates the mechanism from a different angle: the negative association between egalitarian norms and fertility is largest precisely where work–family institutions are weakest, the same configuration East German respondents identify as central to their own experience.

The evidence is descriptive and retrospective, and each finding individually admits alternative readings. But the pattern as a whole—the dominance of work–family over financial concerns, the gender asymmetry, the expectations wedge, and the distinctive role of upper-grade schooling among socialization channels—is difficult to account for without assigning an important role to the work identities that socialist education may have transmitted.

If this interpretation is correct, several patterns should appear in the quasi-experimental data. Individuals more exposed to socialist schooling should hold more egalitarian gender attitudes, and women among them should exhibit higher labor-force participation—the behavioral counterpart of the work orientations East German respondents identify as central to their fertility decisions. Effects should be largest in upper grades, where explicitly gender-egalitarian content entered the curriculum, and absent in early grades where it was minimal. Most diagnostically, any fertility effect should attenuate where post-reunification childcare remained more accessible, since institutional support lowers the opportunity cost of children for women with stronger work orientations—a prediction less easily reconciled with human-capital or generic disruption accounts. Appendix A formalizes these predictions in a theoretical framework in which exposure to work–family-related schooling content shifts the relative valuation of market work, while institutions determine the time cost of combining work and parenthood.

These predictions do not exhaust the possible channels through which socialist schooling may have affected fertility. The causal analysis in Section 6 first estimates the reduced-form effect and then evaluates whether the data display these auxiliary patterns, treating them as interpretive evidence rather than formal identification of a single mechanism.

3 Institutional Background

German reunification creates an unusually sharp setting to study how early-life socialization interacts with institutions. Before 1990, East and West Germany combined fundamentally different family-policy regimes with sharply contrasting educational mandates. Reunification then replaced East Germany's institutions and curricula at high speed, effectively terminating socialist schooling midstream for cohorts still enrolled. The key empirical leverage in this paper comes from three institutional facts documented in this section: (i) the GDR's strict school-entry cutoff quasi-randomly assigned otherwise similar children to different total years of socialist instruction at the moment this system ended; (ii) the ideological content

of the GDR curriculum intensified sharply in upper grades, generating a testable exposure gradient; and (iii) the institutional break at reunification was sufficiently abrupt that the cut-off cleanly separates cohorts by curricular content rather than by a gradual transition. This section describes (i) the divergence in gender regimes prior to 1990, (ii) the persistence of East–West attitudinal differences after formal institutional convergence, (iii) the organization and content of GDR schooling and the enrollment rule that generates identifying variation, and (iv) the abrupt institutional break at reunification.

3.1 Gender Regimes in East and West Germany

The two German states developed fundamentally different approaches to women's work and motherhood—differences that were not incidental but deliberately engineered through policy.

In the GDR, women's employment was both a constitutional right and a central ideological objective. This commitment was supported by near-universal public childcare and policies designed around continuous full-time employment. By the late 1980s, childcare covered roughly 95 percent of children aged 3–6 and over 80 percent of those under three; enterprises frequently provided on-site care; mothers were entitled to shortened working hours with dismissal protection; and one year of fully paid parental leave was introduced in 1976. These institutions mobilized female labor while seeking to dissolve women's economic dependence on the traditional male breadwinner (Kim, 2003). Female labor-force participation reached 91 percent by 1989, predominantly full-time and largely independent of motherhood status (Trappe, 1996).

West Germany, by contrast, maintained a policy environment that reinforced the male-breadwinner model. Childcare coverage for children under three remained below 3 percent. Joint taxation (*Ehegattensplitting*) and dependent-spouse benefits created strong disincentives for dual earning, and prevailing cultural norms stigmatized working mothers. Female employment stood at 56 percent in 1989 and was predominantly part-time among mothers (Rosenfeld, Trappe, and Gornick, 2004).[5]

These contrasting institutional environments are reflected in not only divergent behaviors but divergent expectations. Early post-reunification surveys show that East Germans were substantially less likely to endorse traditional male-breadwinner models or to believe that mothers of young children should not work (Appendix Figure E.2; Appendix Table E.1).

5. In addition to those policy choices, Becker, Mergele, and Woessmann (2020) document that some systematic differences between East and West Germany—spanning economic structures, political preferences, and gender roles—predate the separation itself. The empirical design in this paper exploits within-East Germany variation generated by birth timing around school-entry cutoffs, and is therefore silent on these longer-run East–West differences.

Strikingly, these attitudinal differences persisted across decades of shared media environments, federal policy, and institutional convergence (Appendix Figure E.3; Appendix Table E.1). The durability of this divide is consistent with evidence from developmental psychology that gender norms are particularly malleable during childhood and adolescence but become relatively stable thereafter (John et al., 2017), and motivates the causal analysis that follows.

3.2 The School System and Enrollment Cutoff

The GDR educational system provides the central source of identifying variation. It combined a centralized, ideologically explicit curriculum with rigid enrollment rules that generate quasi-random variation in the total years of that curriculum children received.

Curricular mandate. From the state's founding in 1949, gender equality was embedded as a foundational principle across curricula and pedagogical practice (Anweiler, 1988; Block and Fuchs, 1993). The 1974 Youth Law codified the mandate to cultivate "socialist personalities" with explicit emphasis on egalitarian gender values (Jugendgesetz der Deutschen Demokratischen Republik, 1974). Education served as the primary lever through which the state sought to dissolve women's economic dependence on the traditional family and integrate them into public and productive life (Kim, 2003).

All students attended the ten-year *Polytechnische Oberschule* (see Appendix Figure E.4 for an overview of the system's structure). Gender-egalitarian messages were not confined to one subject; they were integrated across disciplines: mathematics problems featured female engineers, literature emphasized women's economic contributions, and textbooks depicted women primarily in public rather than domestic roles (Schröter, 2002). Reinforcement extended to teacher selection and monitoring—Education Minister Margot Honecker's directive that "there is no non-political subject" formalized the expectation that all disciplines reinforce state-sanctioned norms.

West German schooling operated on fundamentally different principles. Official curricula emphasized fostering students' independent personality development (Kultus und Sport Baden-Württemberg, 1994), and the Beutelsbach Consensus established that students must be enabled to form their own opinions rather than be directed toward prescribed political or social objectives (Wehling, 1976).

The upper-grade intensification. Ideological content intensified systematically with grade level, and this gradient is central to the paper's mechanism evidence (see Appendix Table E.2 and Figure E.5 for detailed curriculum hours by grade and subject). Early grades (1–3) focused primarily on basic skills with limited explicit ideological content. Middle grades (4–6) introduced female role models in science and production. Upper grades (7–10) introduced *Staatsbürgerkunde* (civics) and *Polytechnischer Unterricht* (polytechnic education),

which explicitly framed women's labor-force participation and economic independence as achievements of socialism (Kim, 2003). This intensification was not incidental: it reflected a deliberate pedagogical sequence in which earlier exposure to egalitarian role models was followed by explicit political and economic framing of gender equality as a socialist value. If socialist schooling affected fertility through norm transmission, effects should therefore be largest for cohorts in grades 7–10 at reunification—where the curriculum was most explicit—and absent for cohorts still in early grades. Section 6 tests this prediction directly.

The enrollment cutoff. While West Germany exhibits non-trivial rates of early and delayed enrollment around school-entry cutoffs (Rüdiger, Kormann, and Peez, 1976), enforcement in the GDR was strict: children turning six by May 31 entered school that September, and those born on or after June 1 waited one year.[6] When reunification abruptly terminated socialist curricula, this cutoff generated quasi-random variation in total years of ideological exposure among cohorts still in school (born 1974–1983): May-born students had completed one additional year of socialist schooling relative to their June-born peers.

3.3 Reunification

The identification strategy depends on the break at reunification being sufficiently abrupt that cohorts separated by a single birth year faced genuinely different curricular regimes. The evidence strongly supports this.

Socialist teaching materials were replaced by West German textbooks by the 1990–1991 school year, and approximately 20 percent of teachers were dismissed, often for political reasons, accelerating the pedagogical break (Fischer, 1992). The shift was not a marginal reform but a directional reversal in stated educational aims—away from an explicitly state-directed model of socialization toward the West German Beutelsbach Consensus, which established that students must be enabled to form their own opinions rather than be directed toward prescribed social objectives (Wehling, 1976).

Work–family infrastructure changed with comparable speed. Childcare coverage for children under three collapsed as subsidies disappeared and facilities closed or were converted, halving from over 80 percent to around 30–50 percent within a few years. West German family policies replaced GDR provisions, including changes in parental leave and tax incentives that strengthened the economic attractiveness of single-earner household specialization relative to the GDR model. Because these changes were externally imposed and politically determined rather than demand-driven, reunification constitutes a particularly sharp and exogenous institutional break for cohorts entering adulthood in the 1990s.

6. Kindergarten operated separately through voluntary enrollment (Höltershinken, Hoffmann, and Prüfer, 1997).

4 Data

This section describes the primary data sources, the construction of the analysis samples, and the supplementary surveys used for robustness and mechanism analyses.

4.1 German Microcensus

The main analysis uses the 2018–2019 German Microcensus, a mandatory annual survey covering one percent of the population.[7] Because participation is compulsory, the Microcensus achieves response rates above 97 percent, reducing concerns about selective nonresponse (Federal Statistical Office, 2019).[8] I pool two adjacent cross-sections to increase statistical power for detecting effects within narrow birth-month windows while flexibly controlling for age and cohort.

The baseline outcome is the number of biological or adopted children residing in the household. Results are robust to alternative fertility measures available in the Microcensus, including the number of children in the family unit and, for women, the number of children ever born.

The Microcensus records respondents' current state of residence but does not contain birthplace or childhood location. I therefore assign East German schooling based on residence in the former GDR states. The maintained assumption is that internal migration is unrelated to birth timing around the May 31 cutoff. Section 6.2 validates this using complementary datasets that contain migration histories and by re-estimating the main results with treatment assigned based on birthplace.

The analysis focuses on individuals born 1970–1983 and observed in 2018–2019, when fertility largely reflects completed family size. The regressions restrict attention to individuals born in May or June to implement the cutoff design. Cohorts born 1974–1983 constitute the exposed group (still in school at reunification), while cohorts born 1970–1973 serve as placebo cohorts who completed schooling before the curriculum change. The pooled Microcensus contains approximately 5,400 observations in the exposed East German May/June sample. Appendix Table D.2 reports summary statistics.

4.2 Supplementary Data Sources

I draw on three nationally representative panel surveys for robustness and mechanism analyses: the German Socio-Economic Panel (SOEP), which has followed more than 30,000

7. Research Data Center of the Federal Statistical Office and Statistical Offices of the Federal States of Germany, DOI: 10.21242/12211.2018.00.00.1.1.1 and 10.21242/12211.2019.00.00.1.1.1.

8. https://www.destatis.de/DE/Methoden/Qualitaet/Qualitaetsberichte/Bevoelkerung/mikrozensus-2019.pdf?__blob=publicationFile&v=4

adults since 1984 (Goebel et al., 2019); the National Educational Panel Study (NEPS), which tracks roughly 12,000 adults with detailed educational trajectories (Blossfeld and Von Maurice, 2011); and the Family Research and Demographic Analysis survey (FReDA), a biannual panel launched in 2021 with about 38,000 respondents aged 18–49 (Bujard et al., 2023). These surveys serve two purposes. First, they allow treatment assignment based on birthplace rather than current residence. Second, they contain measures of gender norms, work orientations, and fertility preferences that are used to evaluate mechanisms.

For additional mechanism tests, I use three attitudinal datasets. The German Longitudinal Election Study (GLES) provides repeated information on gender-egalitarian policy preferences (Rattinger et al., 2015). Two surveys conducted shortly after reunification capture contemporaneous attitudes around the institutional shock: the Shell Youth Study (1991) documents optimism and economic outlook among adolescents and young adults aged 12–25 (Fischer et al., 1999), and the DJI Youth Survey (1992) measures financial concerns and nostalgia for the GDR among individuals aged 16–29. These data allow me to test whether treated cohorts differed from controls in economic pessimism or post-reunification distress at the time when curricula and institutions changed. Appendix D provides further details on each dataset and variable construction.

5 Identification Strategy

5.1 Treatment Assignment

The empirical design exploits the interaction of (i) East Germany's strict school-entry cutoff and (ii) the abrupt termination of socialist curricula at reunification. The GDR required children who turned six on or before May 31 to start school that September, while children born on or after June 1 entered one year later. For cohorts still in compulsory schooling when reunification replaced GDR teaching materials with West German curricula (Fischer, 1992) (birth years 1974–1983), being born in May (rather than June) therefore implied being one grade ahead in 1990 and receiving one additional year of socialist schooling before the curricular regime ended.

Throughout, I restrict the estimation sample to individuals born in May or June. This keeps comparisons local to the cutoff and minimizes confounding from seasonality in month of birth. I focus on East German cohorts for whom the school-entry rule governed exposure to socialist curricula.

5.2 Empirical Specifications

As a transparent first step, I estimate the May–June discontinuity among the cohorts exposed to the curricular break:

$$Y_{ic} = \alpha_0 + \alpha_1 \text{May}_i + \gamma_c + X_{ic}'\theta + \varepsilon_{ic}, \tag{1}$$

where Y_{ic} denotes fertility of individual i in birth cohort c, May_i is an indicator for being born in May (relative to June), γ_c are year of birth fixed effects, and X_{ic} includes a female indicator and flexible age controls.[9] The coefficient α_1 captures the effect of one additional year of exposure to socialist schooling. Standard errors are clustered at the cohort–month-of-birth level, the level at which treatment varies.[10]

A potential concern to interpretation is that the May–June cutoff affects not only curriculum exposure but also relative age at school entry, introducing age-in-grade differences unrelated to curriculum content. To address this, I augment equation (1) with a second difference, using earlier East German cohorts (born 1970–1973) as a control group. These cohorts completed compulsory schooling before reunification, so the May–June cutoff shifted age-at-entry but left socialist curriculum exposure unchanged. The difference-in-differences specification is:

$$Y_{ic} = \delta_0 + \delta_1 \text{May}_i \times \text{Cohort74–83}_c + \delta_2 \text{May}_i + \delta_3 \text{Cohort74–83}_c + \gamma_c + X_{ic}'\theta + u_{ic}, \tag{2}$$

where Cohort74–83_c indicates the cohorts still in school during reunification. The parameter of interest, δ_1, recovers the causal effect of one additional year of socialist schooling on fertility, under the assumption that—absent differential curricular exposure—the May–June fertility gap would be stable across adjacent cohorts.

6 Results

This section examines whether exposure to socialist schooling causally affected fertility among cohorts making fertility choices under West German institutions. I begin with graphical evidence before proceeding to regression estimates. I then assess robustness and turn to mechanism analysis, asking whether the pattern of evidence is consistent with the norm–institution mismatch channel described in Section 2.

9. I pool two waves of the German Microcensus (2018–2019), which allows me to identify age and birth cohort effects simultaneously while focusing on completed or near-completed fertility.

10. Because the effective number of clusters is limited, I complement cluster-robust inference with the wild cluster bootstrap and randomization-based inference around the cutoff.

6.1 Main Effects on Fertility

Figure 1 plots the number of children by birth cohort for East Germans born in May (treated) and June (controls). For placebo cohorts who completed schooling before reunification (1970–1973), fertility trends are nearly identical. Beginning with the 1974 cohort—the first for which the cutoff changes exposure to socialist curricula—May-born cohorts exhibit persistently lower fertility than June-born cohorts.

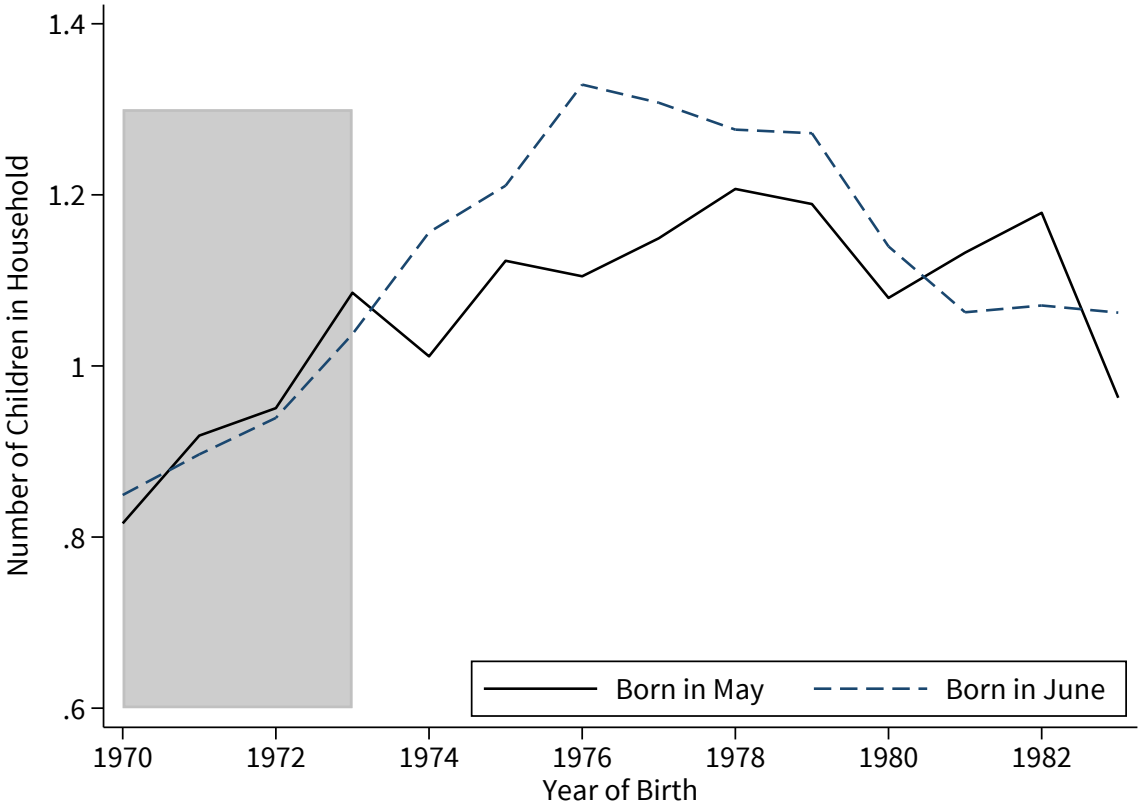


Figure 1. Fertility by Birth Cohort: May vs. June Births in East Germany

Sources. The figure plots birth cohort means of the number of children residing in the household for East German respondents born in May (solid line) and June (dashed line). The shaded cohorts (1970–1973) completed compulsory schooling before reunification and serve as placebo cohorts. For cohorts 1974–1983, the May 31 school-entry cutoff implies May-born students were one grade ahead in 1990 and thus received one additional year of socialist schooling before the curricular break. Lines connect cohort means. Data are drawn from the German Microcensus 2018–2019.

Table 1 quantifies the discontinuity. In the baseline regression discontinuity specification for cohorts 1974–1983, one additional year of exposure to socialist schooling reduces fertility by 0.072 children (SE = 0.019) and lowers the probability of having any child by 2.3 percentage points (SE = 0.005). A difference-in-differences specification that uses earlier cohorts as controls yields a very similar estimate (−0.080, SE = 0.023; Appendix Table F.13), alleviating concerns that the cutoff operates through relative age at school entry.

Exposure intensity matters. Ideological content in the GDR intensified with grade, and explicitly gender-egalitarian instruction was concentrated in grades 7–10 (Kim, 2003). Con-

Table 1. Main Effects of Socialist Schooling on Fertility

	Number of Children	Having at least one child
May-born (treated)	-0.072***	-0.023***
	(0.019)	(0.005)
WCB *p*-value	0.023	0.001
Observations	5,407	5,407

Notes. This table presents regression discontinuity estimates comparing fertility outcomes between May-born and June-born individuals in East Germany. Each column reports coefficients from a separate regression for the outcome indicated in the column header. Sample includes East German cohorts born 1974-1983, drawn from the German Microcensus 2018-2019. All specifications include age fixed effects, birth year fixed effects, and a female indicator. Standard errors are clustered at the cohort–month-of-birth level. Reported *p*-values are based on wild cluster bootstrap procedures using Webb weights (Roodman et al., 2019), with 999 iterations. As a complementary check, I implement randomization-based inference following Cattaneo, Frandsen, and Titiunik (2015), which tests the sharp null hypothesis of no discontinuity under the assumption of local random assignment around the cutoff. This procedure yields *p*-values of 0.011 and 0.077, respectively. Note that this procedure does not allow for covariate adjustment, as inference is conducted within the selected bandwidth window (Cattaneo, Titiunik, and Vazquez-Bare, 2016). Significance: $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

sistent with this gradient, Figure 2 shows that the fertility response is largest for students in grades 7–10 at reunification (about −0.14 children), smaller in grades 4–6 (about −0.07), and close to zero in grades 1–3, where political content was limited.

These reductions in realized fertility are mirrored in stated preferences: treated cohorts report a lower ideal number of children (Appendix Table F.19), though the limited sample size yields less precise estimates that warrant cautious interpretation.

6.2 Robustness

Multiple tests support the causal interpretation. First, placebo estimates using earlier cohorts (1970–1973) show no discontinuity at the May–June cutoff, confirming that effects reflect curriculum content rather than school-entry timing per se (Table F.12). Second, treatment assignment is unrelated to labor market conditions at graduation—youth unemployment, overall unemployment, and employment rates are balanced across the threshold (Table F.6). Third, post-reunification surveys reveal no differences in financial concerns, future outlook, or nostalgia between treated and control individuals, weighing against differential economic anxiety as a mechanism (Appendix Tables F.7 and F.8).

The estimates are robust to alternative specifications. The main coefficient remains stable when controlling for state fixed effects, state-specific birth year trends, or labor market conditions at graduation (Panels B–D, Table F.5). Expanding the bandwidth to two months yields a slightly smaller but still highly significant estimate, consistent with slight treatment dilution from including individuals farther from the cutoff (Panel E).[11] The results are equally robust to alternative fertility measures, including children in the family rather

11. Appendix Table F.14 replicates these robustness tests for the difference-in-differences specification, with very similar results. The same holds for heterogeneity by grade (Appendix Figure F.2).

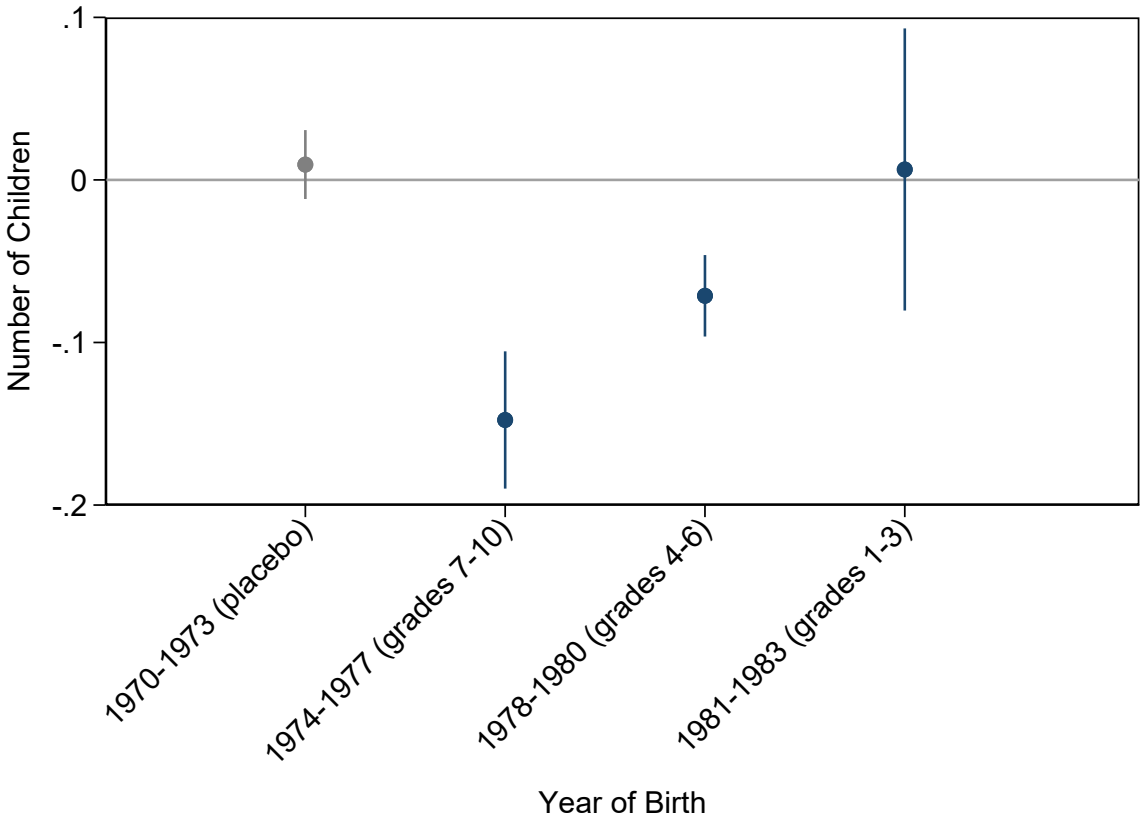


Figure 2. Fertility Effects by Grade at Reunification

Notes. Points are regression-discontinuity estimates (May vs. June) of the effect of one additional year of socialist schooling on the number of children. Estimates are shown for placebo cohorts (1970–1973) and for exposed cohorts grouped by grade in 1990: 1974–1977 (grades 7–10), 1978–1980 (grades 4–6), and 1981–1983 (grades 1–3). Error bars denote 95% confidence intervals based on standard errors clustered at the treatment–birth-year-group level. All specifications include age fixed effects, birth year fixed effects, and a female indicator. Data are drawn from the German Microcensus 2018–2019. See Appendix Table F.12 for point estimates.

than the household, the 2020 wave despite pandemic-related attrition, and mother-specific counts from the 2018 wave (Table F.11). To address the limited number of clusters, I employ two complementary inference procedures. The wild cluster bootstrap provides parametric inference robust to few clusters (Cameron, Gelbach, and Miller, 2008; Roodman et al., 2019), while randomization inference provides a nonparametric test of the sharp null under local randomization around the cutoff (Cattaneo, Frandsen, and Titiunik, 2015; Cattaneo, Titiunik, and Vazquez-Bare, 2016). Both yield p-values below 0.05 (Table 1).

Finally, cross-validation using three surveys that track both birthplace and current residence—the SOEP, NEPS, and FReDA—addresses potential measurement concerns from residence-based treatment assignment. Migration rates do not differ systematically around the cutoff, and birthplace-based estimates closely mirror those using current residence (Tables F.9 and F.10).

6.3 Why Does Socialist Schooling Reduce Fertility?

The preceding results establish that socialist schooling causally reduces fertility, with effects concentrating in upper grades and extending to stated preferences. This subsection asks *why*. Socialist schooling bundled multiple school inputs, and the design cannot separately isolate each component; the mechanism evidence is therefore interpretive. I evaluate whether the data display auxiliary patterns predicted by a norm–institution mismatch channel—and difficult to reconcile with leading alternatives. Specifically, socialist schooling strengthened dual-earner norms and work-oriented female identities, which translated into lower fertility after reunification when institutions supporting working mothers contracted.[12]

Assessing Alternative Explanations. Before turning to positive evidence for the norm–institution mismatch channel, I note four empirical patterns that constrain competing explanations. First, treated and control cohorts do not differ meaningfully in educational attainment: estimates on university completion and vocational training are small and insignificant (Table F.18), weakening human-capital accounts. Second, labor-market conditions at graduation and early post-reunification attitudes about the economy are balanced (Tables F.6, F.7, and F.8), weighing against differential economic pessimism. Third, the sharp exposure gradient by grade is difficult to reconcile with a generic disruption shock. Fourth, placebo cohorts who completed schooling entirely under the GDR curriculum show no May/June discontinuity (Table F.12), confirming that the cutoff identifies differential exposure to socialist content rather than school-entry timing per se. With these alternatives weakened, I now turn to direct evidence for the proposed channel.

Norm transmission: Gender attitudes. If socialist schooling operated through norm transmission, exposure should leave a durable imprint on gender-role beliefs. Table 2 shows that treated cohorts hold more egalitarian views decades later on dimensions explicitly targeted by GDR curricula. One additional year of socialist schooling shifts egalitarian family views—an index combining attitudes toward working mothers, female caregiving roles, and the perceived necessity of children for women's fulfillment—by 0.25 standard deviations (SE = 0.07; $p < 0.01$). Acceptance of maternal employment, combining two items on whether children suffer when mothers work, increases by 0.22 standard deviations (SE = 0.10; $p < 0.05$). Treated cohorts are also more supportive of equal household task division (+0.34 SD; SE = 0.19; $p < 0.10$) and place greater importance on career success (+0.20 SD; SE = 0.05; $p < 0.01$).[13] Treated cohorts also express stronger support for state gender-equality policies (Table F.17). While the attitude samples are considerably smaller than the

12. Appendix A presents an organizing framework that formalizes the norm–institution mismatch channel and derives its testable implications.

13. Table F.16 reports results for each constituent item separately; effects are consistent in sign across all individual measures.

Table 2. Socialist Schooling and Gender-Role Attitudes

	Egalitarian Family Views	Acceptance of Maternal Employment	Equal Household Division	Career Orientation
May-born (treated)	0.246***	0.216**	0.341*	0.197***
	(0.068)	(0.099)	(0.187)	(0.052)
Observations	435	128	119	544
Data source	FReDA	SOEP	NEPS	SOEP

Notes. Regression discontinuity estimates comparing gender-role attitudes between May-born (treated) and June-born (control) East Germans, birth cohorts 1974–1983. All outcomes are standardized to have mean zero and unit standard deviation. Positive coefficients indicate more egalitarian attitudes in all columns. *Egalitarian Family Views* is the equally weighted average of three standardized items from FReDA, each coded so that higher values indicate more egalitarian views: whether a working mother can maintain a warm relationship with her child, whether women should be primary caregivers (reversed), and whether women need children for fulfillment (reversed). *Acceptance of Maternal Employment* is the equally weighted average of two standardized items from SOEP measuring agreement that maternal employment harms children under age 3 and under age 6 (both reversed so that higher values indicate more egalitarian views). *Equal Household Division* is the standardized measure of support for an equal division of household tasks (NEPS). *Career Orientation* is the standardized measure of the importance placed on career success (SOEP). Table F.16 reports results for each constituent item separately. All specifications include age and birth year fixed effects, a gender indicator, and survey wave fixed effects where applicable. Standard errors clustered at the cohort–month-of-birth level in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Microcensus, the consistent direction across four independent measures drawn from three separate surveys, each aligned with dimensions explicitly targeted by the GDR curriculum, lends them interpretive weight.

Norm transmission: Female Labor Supply. Behavioral outcomes move in the same direction. Table 3 shows that treated women are 2.4 percentage points more likely to participate in the labor force (SE = 1.2; $p < 0.10$), while men's labor force participation is unchanged. Combined with the negligible effects on human capital (Table F.18), this pattern is consistent with a shift in preferences or norms rather than productivity.

Table 3. Socialist Schooling and Labor Force Participation

Labor force participation rate:	**All**	**Women**	**Men**
May-born (treated)	0.016***	0.024*	0.009
	(0.005)	(0.012)	(0.008)
Observations	5,407	2,637	2,770

Notes. Regression discontinuity estimates comparing labor force participation between May-born (treated) and June-born (control) individuals. Each column reports coefficients from a separate regression for the outcome indicated in the column header. Sample includes East German cohorts born 1974-1983, drawn from the German Microcensus 2018-2019. All specifications include age and birth year fixed effects. The pooled specification includes a gender indicator. Standard errors are clustered at the cohort–month-of-birth level. Significance: $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Institutional Complementarity. The most diagnostic test concerns institutional environment. If the fertility effect operates through norm–institution mismatch, it should attenuate where post-reunification institutions remained more supportive of working mothers—a

prediction that human-capital, disruption, or generic cohort-shock explanations do not naturally generate.

I test this by interacting treatment with cross-state variation in childcare coverage for children under three in 1994, which ranged from 28.7 percent in Berlin to 54.1 percent in Brandenburg. This variation was predominantly supply-driven, reflecting fiscal constraints and political decisions rather than declining demand (Deutsches Jugendinstitut, 2002; Borchardt, 2023).[14]

Table 4. Heterogeneity by Institutional Support: Fertility Effects by Childcare Availability

	Number of Children
May-born (treated)	-0.493**
	(0.209)
Childcare availability (in %)	0.003
	(0.004)
May-born (treated) ×	0.011*
Childcare availability (in %)	(0.006)
Implied effect at:	
25th percentile childcare (32.8%)	-0.127***
	(0.024)
75th percentile childcare (42.9%)	-0.015
	(0.045)
Observations	5,407

Notes. This table examines heterogeneity in fertility effects by institutional support, proxied by childcare availability. Childcare availability is measured as the percentage of available slots for children under age 3 by state in 1994: Berlin (28.7%), Brandenburg (54.1%), Mecklenburg-Vorpommern (39.0%), Saxony (32.8%), Saxony-Anhalt (42.9%), and Thuringia (36.4%) (Deutsches Jugendinstitut, 2002). The interaction term captures whether fertility responses differ by levels of childcare provision. Implied effects are calculated at the 25th (32.8%) and 75th (42.9%) percentiles of the 1994 childcare distribution. The sample includes East German cohorts born between 1974 and 1983, drawn from the 2018–2019 German Microcensus. Standard errors are clustered at the cohort–month-of-birth level. Significance: $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table 4 reports the results. The negative fertility effect attenuates with childcare availability: the interaction is positive and significant (+0.011, SE = 0.006, $p < 0.10$), implying a treatment effect of −0.127 children in low-coverage states (25th percentile, 32.8%; SE = 0.024, $p < 0.01$) but near zero in high-coverage states (75th percentile, 42.9%; SE = 0.045, $p = 0.74$). Estimates are nearly identical using 1998 coverage (Appendix Table F.20). The pattern is consistent with the mismatch account: where post-reunification institutions pre-

14. Following reunification, childcare provision in East Germany declined from approximately 80% coverage in 1990, primarily due to facility closures and reductions in public funding. The resulting regional variation largely reflected differences in fiscal capacity and political decision-making (Deutsches Jugendinstitut, 2002; Borchardt, 2023).

served greater capacity to accommodate working mothers, the fertility effect of socialist schooling is substantially attenuated.[15]

Taken together, the mechanism evidence points to a coherent interpretation. Socialist schooling strengthened dual-earner norms and work-oriented female identities whose demographic consequences depended on the institutional environment: fertility fell most where post-reunification institutions provided less support for combining work and childrearing. This pattern echoes the cross-country evidence in Section 2 and connects to the expectations wedge identified in the survey data—East Germans perceive childcare as less adequate despite objectively higher coverage, plausibly because socialization under near-universal GDR provision set benchmarks that post-reunification institutions could not meet.

7 Conclusion

This paper estimates the long-run fertility effects of socialist schooling in the former GDR. German reunification abruptly replaced socialist curricula and work-family institutions with West Germany's male-breadwinner framework. Exploiting the GDR's May 31 school-entry cutoff, I find that one additional year of socialist schooling reduced fertility by about 0.07 children among cohorts who entered adulthood after reunification.

Three patterns in the data point toward norm transmission interacting with the post-reunification institutional environment as an important part of the explanation. First, effects mirror the curriculum's intensity: they are concentrated among cohorts in higher grades at reunification, when ideological content was most explicit, and are absent among cohorts in early grades, where it was minimal—a pattern more difficult to reconcile with a generic schooling-disruption channel. Second, the evidence points to values rather than skills: treated individuals report more egalitarian gender attitudes and treated women exhibit higher labor-force participation, while educational attainment and other human-capital outcomes change little. Third, the fertility effect is substantially attenuated in regions with greater childcare availability after reunification, implying that egalitarian norms translate into lower fertility primarily when institutions make combining work and family costly.

Two broader implications follow. First, the results provide micro-level evidence for the norm–institution mismatch hypothesis central to recent accounts of the modern fertility de-

15. Two caveats temper this conclusion. First, the identifying variation comes from only six East German states. Second, although the early-1990s contraction in childcare was predominantly supply-driven, childcare coverage is an equilibrium outcome, and one cannot fully rule out that demand-side differences across states contribute to the observed heterogeneity. The pattern should therefore be read as suggestive rather than definitive.

cline (Doepke et al., 2023; Kearney and Levine, 2025): it is not progressive norms alone but their misalignment with traditional institutions that depresses fertility. The East German experience provides a rare setting in which the timing and content of norm transmission can be credibly separated from the institutional environment in which fertility choices are made, and the evidence confirms that these two forces interact in precisely the way the hypothesis predicts. Second, the findings identify schooling as a causal source of the persistent East–West divide in gender norms and female labor supply that endures decades after institutional convergence (Campa and Serafinelli, 2019; Boelmann, Raute, and Schönberg, 2025).

The broader relevance of these findings extends beyond the post-socialist context. Many high-income countries are experiencing rapid shifts toward dual-earner norms while work–family institutions adapt more slowly—a configuration that mirrors, in attenuated form, the mismatch that East Germans faced after 1990. South Korea, Japan, or Southern Europe combine among the most egalitarian youth cohorts in the world with among the lowest fertility rates, and the institutions governing the work–family trade-off have not kept pace with changing preferences. The limited effectiveness of many pro-natalist transfer programs (e.g., Bergsvik, Fauske, and Hart, 2021) may reflect not insufficient generosity but a mismatch between the institutional structures through which transfers operate and the values of the populations they target. The evidence here suggests that aligning work–family infrastructure with prevailing gender norms—rather than layering transfers onto misaligned institutions—may be the more productive path, though establishing this more broadly remains an important question for future research.

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Appendix A Theoretical Framework

This appendix develops a framework that formalizes the norm–institution mismatch channel motivating the empirical analysis. The goal is not to provide a complete structural model of fertility but to isolate one mechanism—the interaction between gender-egalitarian norms acquired through schooling and the institutional environment encountered in adulthood—and show that it generates qualitative predictions consistent with the three empirical patterns documented in Section 6.3. I keep the framework deliberately parsimonious so that every assumption is transparent and its role in generating the results is clear.

The mechanism runs as follows. Socialist schooling instilled gender-egalitarian norms that raised women's non-pecuniary valuation of market work. After reunification, women carrying these norms encountered a Western German institutional environment with limited public childcare. Because each child requires parental time, and egalitarian women place a higher shadow value on that time, the opportunity cost of children rose. This time conflict between internalized norms and encountered institutions reduced fertility. Critically, the conflict—and hence the fertility reduction—is weaker when childcare institutions are more supportive, because institutional support substitutes for parental time and thereby lowers the opportunity cost of children.

A.1 Setup

Norm formation. I model egalitarian norms as a stock that accumulates during schooling. Let $s_{i,L}$ and $s_{i,U}$ denote individual i's years of exposure to socialist schooling in lower grades (roughly grades 1–6) and upper grades (roughly grades 7–10), respectively. As documented in Section 2, gender-egalitarian content in the East German curriculum was concentrated in upper-grade subjects—*Staatsbürgerkunde* (civics) and *Polytechnischer Unterricht* (polytechnic instruction) began or intensified from grade 7 onward. To capture this curricular gradient, I define a summary index of internalized egalitarian norms as

$$G_i = \gamma_L s_{i,L} + \gamma_U s_{i,U}, \qquad \gamma_U > \gamma_L \geq 0. \tag{A.1}$$

The parameter γ_g captures the ideological intensity of the curriculum in grade level g. The assumption $\gamma_U > \gamma_L$ reflects that each additional year of upper-grade exposure transmits more egalitarian content than each additional year in lower grades.[16]

16. The cardinalization of G_i is a normalization; any monotone transformation would leave the qualitative comparative statics unchanged.

Institutions. Let $\chi_r \in [0,1]$ index institutional support for working parents in region r, proxied empirically by public childcare availability for children under age 3. Higher values of χ_r mean that more of the time burden of childcare is absorbed by public institutions rather than by parents. I define the residual parental time requirement per child as

$$T_r \equiv 1 - \chi_r \in [0,1]. \tag{A.2}$$

When $\chi_r = 1$, institutions fully absorb the childcare time burden ($T_r = 0$); when $\chi_r = 0$, parents bear the full time cost ($T_r = 1$). The empirical variation exploits the fact that post-reunification childcare availability varied substantially across East German states, so that women in different regions faced different values of χ_r.

Choices and time budget. A woman allocates her unit time endowment across three activities: market work $\ell \geq 0$, childcare $T_r n$, and residual non-market time m (leisure, household production, and personal time). For a given number of children $n \geq 0$, the time constraint is

$$m = 1 - \ell - T_r n, \qquad m \geq 0. \tag{A.3}$$

This formulation captures the key tradeoff: each additional child absorbs T_r units of the mother's time, and this time must come from either market work or non-market time.

A.2 Preferences

I assume quasilinear preferences in consumption, which serves as the benchmark specification because it shuts down income effects on fertility and isolates the time-allocation channel. Let w denote the wage and $\bar{c}$ the per-child monetary cost. Utility is

$$U = \underbrace{(y + w\ell - \bar{c}n)}_{\text{consumption}} + v(n) + \underbrace{B(G_i)\,\ell}_{\text{norm-based value of work}} + h(m), \tag{A.4}$$

where y is non-labor income, $v(\cdot)$ captures the direct utility from children, $h(\cdot)$ captures the value of non-market time, and $B(G_i)\,\ell$ captures a norm-based non-pecuniary return to market work.

I assume standard regularity conditions: $v'(n) > 0$, $v''(n) < 0$ (diminishing marginal utility of children); $h'(m) > 0$, $h''(m) < 0$ (diminishing marginal utility of non-market time); and $B'(G) > 0$ (more egalitarian norms raise the non-pecuniary return to work).

The term $B(G_i)\,\ell$ is the key normative channel. It captures the idea that women who internalized egalitarian gender norms during socialist schooling derive additional utility from

market work beyond its pecuniary return w. This additional utility may reflect career orientation, identity utility from employment, or a psychological cost of deviating from an internalized dual-earner ideal.[17] The linearity of $B(G_i)\,\ell$ in ℓ is a simplification that ensures the first-order conditions are tractable; it implies that egalitarian norms raise the marginal value of each hour of market work by a constant $B(G_i)$.

Finally, the $h(m)$ term ensures that time is scarce even for childless women. Without it, a woman with $n = 0$ would have no reason not to devote all time to market work.

Decision problem. Substituting (A.3) into (A.4), the woman chooses (n, ℓ) to maximize (A.4) subject to $m = 1 - \ell - T_r n \geq 0$.

A.3 Optimality Conditions

For an interior solution with $n^* > 0$ and $m^* > 0$, the first-order conditions are:

$$\text{Labor supply:} \quad w + B(G_i) \;=\; h'(m^*), \tag{A.5}$$

$$\text{Fertility:} \quad v'(n^*) \;=\; \bar{c} + T_r\, h'(m^*). \tag{A.6}$$

The labor-supply condition (A.5) equates the full marginal return to work—the wage w plus the non-pecuniary norm-based return $B(G_i)$—with the marginal value of non-market time $h'(m^*)$. More egalitarian norms (higher G_i, hence higher $B(G_i)$) shift the left-hand side up, so the woman works more and enjoys less non-market time.

The fertility condition (A.6) equates the marginal utility of an additional child $v'(n^*)$ with its full marginal cost. This cost has two components: the direct monetary cost $\bar{c}$ and the time cost $T_r\, h'(m^*)$. The time cost is the product of the parental time requirement per child (T_r) and the shadow value of time ($h'(m^*)$). Importantly, the shadow value of time is determined by (A.5), which depends on norms. Substituting (A.5) into (A.6) makes this link explicit:

$$v'(n^*) \;=\; \bar{c} \;+\; T_r\,[w + B(G_i)]. \tag{A.7}$$

This expression is the key equation of the framework. It shows that the total opportunity cost of a child includes not only the monetary cost $\bar{c}$ and the forgone wage $T_r w$, but also a norm-based component $T_r B(G_i)$ that reflects the non-pecuniary value of the market work displaced

17. This formulation is related to the identity framework by Akerlof and Kranton (2000), in which agents derive utility from actions that conform to internalized prescriptions for their social category. In the present context, egalitarian norms prescribe labor market participation as part of the female role, so that employment generates identity utility and non-employment generates disutility.

by childcare. In a traditional institutional environment (T_r close to 1), this norm-based component is large, so egalitarian women face a substantially higher opportunity cost of children. In a supportive institutional environment (T_r close to 0), childcare absorbs most of the time burden and the norm-based component vanishes—the "mismatch" between norms and institutions is resolved.

A.4 Comparative Statics

I now derive the three predictions that map to the empirical patterns tested in Section 6.3.

Prediction (i): Egalitarian norms raise labor supply and reduce fertility. Differentiating (A.7) with respect to B yields:

$$\frac{\partial n^*}{\partial B} = \frac{T_r}{v''(n^*)} < 0 \qquad \text{for } T_r > 0 \ (\chi_r < 1), \tag{A.8}$$

since $v''(n^*) < 0$ by the concavity of v. The intuition is direct: stronger egalitarian norms raise the shadow value of time through the non-pecuniary work payoff $B(G_i)$, which increases the opportunity cost of the parental time that each child requires. The fertility reduction is larger when institutions are less supportive (higher T_r), because each child then absorbs more of the mother's time.

For labor supply, differentiating (A.5) with respect to B gives

$$\frac{\partial m^*}{\partial B} = \frac{1}{h''(m^*)} < 0, \tag{A.9}$$

since $h''(m^*) < 0$. Using the time constraint $\ell^* = 1 - m^* - T_r n^*$, it follows that

$$\frac{\partial \ell^*}{\partial B} = -\frac{\partial m^*}{\partial B} - T_r \frac{\partial n^*}{\partial B} > 0. \tag{A.10}$$

Labor supply rises through two reinforcing channels: the woman substitutes market work for non-market time (first term), and the reduction in fertility frees up additional time for work (second term).

Mapping to schooling exposure. Because G_i is linear in exposure (equation A.1) and B is increasing in G, the chain rule gives

$$\frac{\partial n^*}{\partial s_{i,g}} = \underbrace{\frac{T_r}{v''(n^*)}}_{<0} \cdot \underbrace{B'(G_i)}_{>0} \cdot \underbrace{\gamma_g}_{>0} < 0 \qquad \text{for } \chi_r < 1, \tag{A.11}$$

and analogously $\partial \ell^* / \partial s_{i,g} > 0$. An additional year of socialist schooling in grade level g reduces completed fertility and increases labor supply, with the magnitude depending on the curricular intensity γ_g, the strength of the norm–work link $B'(G_i)$, and the institutional gap T_r.

Prediction (ii): Institutional complementarity. The fertility effect in (A.11) is proportional to $T_r = 1 - \chi_r$. This yields a sharp prediction about heterogeneity across institutional environments:

$$\lim_{\chi_r \to 1} \frac{\partial n^*}{\partial s_{i,g}} = 0. \tag{A.12}$$

As childcare institutions become fully supportive ($\chi_r \to 1$), the time-conflict channel shuts down entirely. The mechanism is intuitive: when public childcare absorbs the full time burden of children, an additional child no longer competes with market work for the mother's time. The norm-based component of the opportunity cost, $T_r B(G_i)$, vanishes, and the "mismatch" between egalitarian norms and traditional institutions is resolved.

Empirically, this means that the negative fertility effect of socialist schooling should be attenuated in counties with higher post-reunification childcare coverage for children under age 3. Section 6.3 tests this prediction directly.

Prediction (iii): Content gradient. The fertility effect in (A.11) is also proportional to γ_g, the ideological intensity of the curriculum at grade level g. Because gender-egalitarian content was concentrated in upper-grade subjects—*Staatsbürgerkunde* and *Polytechnischer Unterricht* from grade 7 onward—the framework predicts that $\gamma_U > \gamma_L$ implies

$$\left| \frac{\partial n^*}{\partial s_{i,U}} \right| > \left| \frac{\partial n^*}{\partial s_{i,L}} \right|. \tag{A.13}$$

That is, an additional year of upper-grade exposure should have a larger effect on fertility than an additional year of lower-grade exposure. Empirically, this maps to a testable contrast: fertility effects should concentrate among students who were in grades 7–10 at reunification (and hence lost upper-grade socialist schooling at the margin) and should be weak or absent for students who were only in grades 1–3.

A.5 The Extensive Margin: Childlessness

The interior analysis above assumes $n^* > 0$. To allow for the possibility of childlessness, I introduce a fixed time cost $F > 0$ that must be incurred upon becoming a parent, in addition to the per-child flow time cost $T_r n$. This fixed cost captures indivisibilities in the transition

to parenthood—setting up childcare arrangements, adjusting work schedules, and the initial disruption to career trajectories. With this modification, residual non-market time for a parent is

$$m \;=\; 1-\ell-F-T_r n, \qquad n \;>\; 0. \tag{A.14}$$

A woman remains childless ($n^* = 0$) when the marginal gain from the first child falls short of its full marginal cost, evaluated at her childless optimum. Under quasilinearity and using the labor-supply condition (A.5) at $n = 0$, this condition can be written as

$$v'(0) \;<\; \bar{c} \;+\; (T_r + F)\,[w + B(G_i)]. \tag{A.15}$$

The right-hand side is the full opportunity cost of the first child: the monetary cost $\bar{c}$ plus the shadow value of the total time displaced, $(T_r + F)\,[w + B(G_i)]$. Because higher socialist schooling exposure raises G_i and hence $B(G_i)$, it increases the opportunity cost of the fixed time investment F required to enter parenthood. This makes condition (A.15) more likely to hold, generating higher childlessness rates among treated women—a prediction consistent with the extensive-margin effects documented in Section 6.

A.6 Scope and Limitations

The framework isolates one mechanism that generates clear qualitative predictions. It does not model partner bargaining, fertility timing, housing markets, or general equilibrium effects of reunification on wages and labor demand. These omissions are deliberate: the model's purpose is to provide a conceptual mapping between the norm–institution mismatch channel and the empirical predictions, not to offer a complete account of post-reunification fertility. The reduced-form estimates in the main text remain valid regardless of which structural model is correct. The framework's role is to discipline the interpretation of these estimates by providing a coherent mapping from one specific channel—the interaction of egalitarian norms with traditional institutions—to the observed patterns.

Appendix B Descriptive Survey: Design and Results

B.1 Sample and Fieldwork

I fielded a descriptive survey of German residents born between 1960 and 1970 through *Talk Online*, one of Germany's main online panel providers. The survey was conducted in February 2026; median completion time was 6 minutes. To ensure adequate statistical precision for East–West comparisons, sampling overrepresents respondents who completed the majority of their schooling in the territory of the former German Democratic Republic (GDR). The final sample comprises 900 respondents: 600 who attended school in the former GDR and 300 who attended school in West Germany. Respondents who failed an embedded attention check, were born outside the 1960–1970 cohort range, or who did not attend school in Germany were screened out.

Childhood region is defined using a retrospective question on the federal state in which the respondent attended the majority of their schooling. Respondents are classified as East German if this state is Brandenburg, Mecklenburg-Vorpommern, Saxony, Saxony-Anhalt, Thuringia, or East Berlin; all remaining German states are classified as West German.

B.2 Questionnaire Design

The questionnaire comprises three substantive modules followed by a brief closing section. The full instrument, including exact wording in both English and German, is reproduced in Appendix C. Here I summarize the key design choices.

Module ordering. To minimize backward rationalization—in particular, the risk that reflecting on reunification primes respondents to reinterpret their school experiences—all questions on schooling and socialization are asked *before* any questions about reunification or family planning. All items relying on retrospective recall include an explicit "cannot assess / do not remember" option.

Schooling and socialization (Questions 11–15). This module measures the socialization channel at the heart of the paper's mechanism. Respondents first rate how strongly each of five channels—parents, school, peers, media, and the workplace—shaped their views on work–family compatibility. They then report the gender-role model conveyed in their schooling (egalitarian, traditional, none, or cannot remember). The module's most targeted items ask respondents to rate, on a 0–5 scale, the extent to which three specific egalitarian norms were presented as normal or self-evident in school: that women should be able to work regardless of family situation; that mothers of young children should be employed; and that a profession is as important for women as for men. These three items map directly

to the gender-egalitarian content documented in Section 2. For respondents schooled in the GDR, a supplementary item identifies in which subjects these norms were most salient, with answer options corresponding to the GDR-specific curriculum (*Staatsbürgerkunde*, *Polytechnischer Unterricht*, etc.).

Reunification and family planning (Questions 16–20). This module elicits whether and how reunification affected family planning. Respondents who report an effect indicate its direction (fewer children, delayed timing, or both) and the resulting change in desired fertility. They then select from a randomized list the reasons underlying any reported change—including deterioration of work–family compatibility, loss of childcare, financial insecurity, labor-market uncertainty, housing, and partnership circumstances—and identify the single most important factor. Randomizing the order of reasons mitigates primacy and anchoring effects.

Childcare and perceived constraints (Questions 21–24). The final substantive module captures the institutional side of the norm–institution mismatch. Respondents rate retrospective satisfaction with public childcare in their region after reunification (0–5 scale) and report how strongly an additional child (or, for childless respondents, a first child) would have constrained their career development. A constraint battery then asks respondents to rate the importance of eight structural and circumstantial factors—including work–family compatibility, childcare availability, financial insecurity, career demands, housing, social support, and health—in shaping their family-size decisions. The battery is administered separately to parents and childless respondents, with appropriately adapted wording. The module closes with ideal completed fertility under unconstrained choice.

B.3 Sample Characteristics and Descriptive Results

Appendix Table B.1 reports summary statistics for the analysis sample, separately by childhood region. East and West German respondents are broadly comparable in age and gender composition by design, reflecting the stratified sampling scheme. Appendix Table B.2 summarizes responses on schooling socialization and the perceived impact of reunification on family planning. Appendix Table B.3 reports perceived constraints on fertility decisions.

Table B.1. Survey Sample: Summary Statistics and Balance

	East ($N = 600$)		West ($N = 300$)			
	Mean	SD	Mean	SD	Δ	p-value
Panel A: Demographics (Q1–Q6)						
Birth year	1963.1	3.0	1963.3	2.9	−0.2	0.36
Female (%)	51.7		50.3		1.4	0.70
Number of children	1.58	1.08	1.82	0.98	−0.24	0.002
Childless (%)	18.2		12.3		5.9	0.02
Had children before 1990 (%)	11.3		12.7		−1.4	0.55
Currently in East Germany (%)	76.2		3.7		72.5	<0.001
Panel B: Socioeconomic status (Q7–Q9)[†]						
Employed full-time (%)	33.4		27.1		6.3	0.05
Employed part-time (%)	12.8		18.6		−5.8	0.02
Self-employed (%)	6.2		7.4		−1.2	0.48
Retired (%)	37.3		35.0		2.3	0.50
Not employed (%)	10.3		11.9		−1.6	0.47
Currently married (%)	57.2		63.4		−6.2	0.07
Divorced (%)	20.4		14.1		6.3	0.02
Net income ≥ 2,000 (%)	41.3		53.2		−11.9	<0.001

Notes. Survey of 900 Germans aged 56–66 (birth cohorts 1960–1970), stratified by region of schooling (Q3). "East": former GDR states including East Berlin; "West": former West German states including West Berlin. Panel A from Q1–Q6; Panel B from optional items Q7–Q9 ([†]). Δ is the raw East–West difference; p-values from two-sided t-tests (continuous) or χ^2 tests (proportions). See Appendix C for the full instrument.

Table B.2. Survey Evidence on Socialization Channels and Perceived Reunification Effects

	East	West	Δ	*p*-value
Panel A: Socialization channels (Q11–Q12)				
Share rating strongly formative (%):				
School and teachers	47	23	24	<0.001
Parents and family	60	58	2	0.56
Peers and acquaintances	26	25	1	0.74
Media	30	29	1	0.76
Workplace	35	34	1	0.78
Single most important channel (%):				
School and teachers	24	12	12	<0.001
Parents and family	38	42	−4	0.24
Panel B: Gender role models in school (Q13–Q15)				
Recalled type of role model (%):				
Egalitarian	72	18	54	<0.001
Traditional	5	34	−29	<0.001
None specific	14	38	−24	<0.001
Cannot remember	9	10	−1	0.63
Subjects cited (East only, Q14; %):				
Staatsbürgerkunde	68			
Polytechnischer Unterricht	47			
Geschichte	31			
School-transmitted norms (mean, 0–5):				
Mothers should work	4.2	1.9	2.3	<0.001
Women employed regardless	4.3	2.0	2.3	<0.001
Career equally important	4.1	2.2	1.9	<0.001
Panel C: Reunification and family planning (Q16–Q20)				
Reunification affected planning (%)	69	11	58	<0.001
Direction of effect (among affected East, Q17; %):				
Fewer children	76			
Timing only	12			
Both fewer and delayed	8			
More children	4			
Modal change in planned number (Q18)	−1 child			
Reasons cited (Q19; % cited / % most important, Q20):				
Work–family compatibility	73 / 46			
Loss of childcare	58 / 27			
Financial insecurity	37 / 13			
Labor-market uncertainty	32 / 8			
Housing	15 / 3			
Partnership situation	9 / 3			

Notes. Data from an original survey of 900 Germans aged 56–66 (600 East, 300 West). Panel A: share rating each socialization channel as strongly shaping views on work–family compatibility (high values on a 0–5 scale; Q11); single most important channel from Q12. Panel B: recalled type of gender role model transmitted in school (Q13); subjects transmitting these role models among East Germans only (Q14; multiple responses allowed; order randomized); mean agreement that school conveyed each norm (Q15; 0 = not at all, 5 = very strongly). Panel C: share reporting reunification affected family planning (Q16); direction and magnitude conditional on Q16 = Yes (Q17–Q18); reasons allow multiple responses with randomized order (Q19); most important is single choice (Q20). *p*-values from two-sided *t*-tests or χ^2 tests.

Table B.3. Survey Evidence on Fertility Constraints, Childcare Adequacy, and Desired Fertility

	East	West	Δ	p-value
Panel D: Life-course fertility constraints (mean, 0–5; Q23/Q23')				
Work–family incompatibility	3.6	2.6	1.0	<0.001
Inadequate childcare	3.3	2.7	0.6	<0.001
High professional demands	2.9	2.4	0.5	<0.001
Financial insecurity	2.7	2.7	≈ 0	0.94
Housing	2.4	2.6	−0.2	0.08
Lack of family/social support	2.3	2.1	0.2	0.12
Missing or unstable partnership	1.8	1.9	−0.1	0.42
Health	1.4	1.5	−0.1	0.38
Panel E: Childcare adequacy and career–fertility trade-offs (Q21–Q22')				
Childcare met expectations (mean, 0–5)	1.7	3.0	−1.3	<0.001
Children strongly constrain career (%):				
Women	64	35	29	<0.001
Men	21	20	≈ 0	0.78
Panel F: Desired vs. realized fertility (Q4, Q24)				
Desired number of children	2.10	2.01	0.09	0.32
Realized number of children	1.58	1.82	−0.24	0.002
Fertility gap (desired − realized)	0.52	0.19	0.33	<0.001

Notes. Data from an original survey of 900 Germans aged 56–66 (600 East, 300 West). Panel D: mean ratings of how strongly each factor constrained fertility decisions over the life course (0 = not at all, 5 = very strongly; Q23 for parents, Q23' for childless respondents); elicited independently of reunification. Panel E: childcare adequacy measures correspondence between post-1990 provision and respondents' own reference point (Q21; 0 = not at all adequate, 5 = very adequate); career constraint reports the share rating 4 or 5 on a 0–5 scale (Q22 for parents, Q22' for childless respondents). Panel F: desired fertility from "If you could have chosen freely, how many children would you have wanted?" (Q24); realized fertility from Q4. p-values from two-sided t-tests.

Appendix C Survey Questionnaire

This section reproduces the survey questionnaire in English translation (Section C.1) and in the original German (Section C.2). All items relying on retrospective recall include the response option "Cannot assess / do not remember." Items marked with † are optional. Routing conditions are indicated in italics; filtered questions were shown only to the specified subgroup of respondents.

C.1 English Translation

[Attention check; respondents who do not select the instructed option are flagged and excluded from the analysis]
0. To begin the survey, please select the option "A little".
Not at all; A little; Moderately; A lot; Very much

Section 1: Demographics

1. In which year were you born?
[Dropdown: 1955–1975]

2. What is your gender?
Male; Female; Diverse

3. In which German federal state did you mostly attend school?
[Dropdown with all German federal states, plus Berlin (East), Berlin (West), and "Did not attend school in Germany"]

4. How many children do you have?
[Dropdown: 0–9]

5. Did you already have children before reunification?
Yes; No

6. In which part of Germany is your current place of residence?
East Germany (former GDR); West Germany

7.† Which of the following best describes your current employment status?
[Dropdown:] Employed full-time; Employed part-time; Self-employed; Unemployed; Homemaker; Retired (including pension or early retirement); Other employment status *[free-text field]*

8.† What is your current marital status?
Single, never married; Married; Registered partnership; Divorced; Widowed; In a committed partnership, not married

9.† What was your net income last month?
Less than 500 €; 500 to less than 1,000 €; 1,000 to less than 1,500 €; 1,500 to less than 2,000 €; 2,000 to less than 2,500 €; 2,500 to less than 3,000 €; 3,000 to less than 3,500 €; 3,500 to less than 4,000 €; 4,000 to less than 4,500 €; 4,500 to less than 5,000 €; 5,000 to less than 5,500 €; 5,500 to less than 6,000 €; 6,000 € or more; Prefer not to say; Don't know

10.† Please enter your month and year of birth in the text field.
[Single-line text field]

Section 2: Schooling and socialization

11. How strongly did the following factors shape your view on the compatibility of family and work?
[Matrix; 0 = not at all … 5 = very strongly; order randomized]

- Parents / family
- School / teachers
- Friends / acquaintances
- Media (TV, books, internet, …)
- Workplace / professional environment

12.† And which of these factors was most important overall?
Same answer categories as Question 11 + "Cannot say precisely"

13. What gender roles for men and women were conveyed at school, in your perception?
(1) Egalitarian division of roles (e. g., both partners employed, shared family work); (2) Traditional division of roles (e. g., man as main breadwinner, woman primarily responsible for household and children); (3) No specific gender roles; (4) Cannot remember

14.† *(shown only for respondents who mostly attended school in the GDR, i. e. Question 3 ∈ {Berlin (East), Brandenburg, Mecklenburg-Vorpommern, Saxony, Saxony-Anhalt, Thuringia})*
In which school subjects were these gender roles conveyed in particular? *[Multiple selections possible]*
Civics (Staatsbürgerkunde); History; Geography; Polytechnical education; Physical education (sports); Biology; Chemistry; Physics; Mathematics; German; Russian; Other: *[free-text field]*; Not in any subject in particular; Cannot remember

15. To what extent were the following ideas conveyed as normal or self-evident in your school?
[Matrix; 0 = not at all … 5 = very strongly]

(a) Women should be able to work regardless of their family situation.
(b) Even mothers of young children should work.
(c) Having a job is as important for women as for men.

[Attention check; respondents who do not select the instructed option are flagged and excluded from the analysis] To confirm your attention, please select the option "A little".
Not at all; A little; Moderately; A lot; Very much

Section 3: Reunification, childcare, and perceived constraints

16. Did German reunification in 1990 influence your family planning?
Yes; No; Cannot remember / don't know

17. *(shown only if Question 16 = Yes)* In what way did reunification change your family planning?
Fewer children; More children; Same number, only timing changed; Both the number and the timing changed; Cannot say precisely

18. *(shown only if Question 16 = Yes)* By how many children did your originally planned number of children change as a result of reunification?
-3; -2; -1; 0; $+1$; $+2$; $+3$

19. *(shown only if Question 16 = Yes)* What were the reasons that reunification influenced your family planning? *[Multiple selections possible; order randomized]*
Worsened compatibility of work and family; Loss or deterioration of childcare provision; Financial uncertainty / unemployment; Uncertainty about future career prospects / the labor market; Housing situation; Partnership situation; Other reasons: *[free-text field]*; Cannot say precisely

20. *(shown only if Question 19 was answered)* And which of these was the most important reason?
[Same categories as Question 19, single choice]

21. Thinking about the years after 1990 in your region of residence at the time: How well did public childcare provision match your expectations?
0 = not at all … 5 = very well; cannot assess

22. *(shown only if Question 4 $\geq$ 1)* How strongly would another child have constrained your career development?
0 = not constrained at all … 5 = constrained very strongly; cannot assess

22'. *(shown only if Question 4 = 0)* How strongly would a child have constrained your career development?
0 = not constrained at all … 5 = constrained very strongly; cannot assess

23. *(shown only if Question 4 ≥ 1)* Regardless of reunification: To what extent did the following factors constrain or complicate your decision about the number of children?
[Matrix; 0 = not at all … 5 = very strongly]

- Difficulties balancing family and work
- Insufficient availability of public childcare
- Lack of a partner or unstable partnership
- Financial uncertainty
- High job demands
- Housing situation
- Lack of support from family / social environment
- Health

23'. *(shown only if Question 4 = 0)* Regardless of reunification: To what extent did the following factors constrain or complicate your decision to have children or not to have children?
[Matrix; 0 = not at all … 5 = very strongly; same sub-items as Question 23]

24. If you could have decided freely: How many children would you have wanted in total?
[Dropdown: 0–9]

Section 4: Closing

25.† Would you like to tell us anything else?
Yes *[free-text field]*; No

C.2 Original German Version

[Attention check; respondents who do not select the instructed option are flagged and excluded from the analysis]
0. Um die Umfrage zu beginnen, wählen Sie bitte die Option "Ein wenig" aus.
Überhaupt nicht; Ein wenig; Mäßig; Viel; Sehr viel

Section 1: Demographics

1. In welchem Jahr sind Sie geboren?
[Dropdown: 1955–1975]

2. Welches Geschlecht haben Sie?
Männlich; Weiblich; Divers

3. In welchem Bundesland sind Sie überwiegend zur Schule gegangen?
[Dropdown with all German federal states, plus Berlin (Ost), Berlin (West), and "Nicht in Deutschland zur Schule gegangen"]

4. Wie viele Kinder haben Sie?
[Dropdown: 0–9]

5. Hatten Sie vor der Wiedervereinigung bereits Kinder?
Ja; Nein

6. In welchem Teil Deutschlands befindet sich Ihr derzeitiger Wohnort?
Ostdeutschland (ehemalige DDR); Westdeutschland

7.† Wie lässt sich Ihre derzeitige Erwerbssituation am besten beschreiben?
[Dropdown:] Vollzeit erwerbstätig; Teilzeit erwerbstätig; Selbstständig; Arbeitslos; Hausmann / Hausfrau; In Rente, Pension oder Vorruhestand; Andere Erwerbssituation *[Freitextfeld]*

8.† Wie ist Ihr derzeitiger Familienstand?
Ledig, war nie verheiratet; Verheiratet; Eingetragene Partnerschaft; Geschieden; Verwitwet; In fester Partnerschaft, nicht verheiratet

9.† Wie hoch war Ihr Nettoeinkommen im letzten Monat?
Unter 500 €; 500 bis unter 1.000 €; 1.000 bis unter 1.500 €; 1.500 bis unter 2.000 €; 2.000 bis unter 2.500 €; 2.500 bis unter 3.000 €; 3.000 bis unter 3.500 €; 3.500 bis unter 4.000 €; 4.000 bis unter 4.500 €; 4.500 bis unter 5.000 €; 5.000 bis unter 5.500 €; 5.500 bis unter 6.000 €; 6.000 € und mehr; Keine Angabe; Weiß nicht

10.† Bitte geben Sie im Textfeld Ihren Geburtsmonat und Ihr Geburtsjahr an.
[Textfeld einzeilig]

Section 2: Schulzeit und Prägung

11. Wie stark haben die folgenden Faktoren Ihre Sicht auf die Vereinbarkeit von Familie und Beruf geprägt?
[Matrix; 0 = gar nicht … 5 = sehr stark; Reihenfolge randomisiert]

- Eltern / Familie
- Schule / Lehrkräfte
- Freunde / Bekannte
- Medien (TV, Bücher, Internet, …)
- Arbeitsplatz / berufliches Umfeld

12.† Und welcher dieser Faktoren war für Sie insgesamt am wichtigsten?
Gleiche Antwortkategorien wie Frage 11 + "Kann ich nicht genau sagen"

13. Welche Rollenbilder zu Männern und Frauen wurden Ihrer Wahrnehmung nach in der Schule vermittelt?
(1) Gleichberechtigte Rollenverteilung (z. B. beide Partner erwerbstätig, geteilte Familienarbeit); (2) Traditionelle Rollenverteilung (z. B. Mann als Hauptverdiener, Frau primär für Haushalt und Kinder verantwortlich); (3) Keine spezifischen Rollenbilder; (4) Kann mich nicht erinnern

14.† *(nur angezeigt für Befragte, die überwiegend in der DDR zur Schule gegangen sind, d. h. Frage 3 ∈ {Berlin (Ost), Brandenburg, Mecklenburg-Vorpommern, Sachsen, Sachsen-Anhalt, Thüringen})* In welchen Schulfächern wurden diese Rollenbilder besonders vermittelt? *[Mehrfachnennung möglich]*
Staatsbürgerkunde; Geschichte; Geografie; Polytechnischer Unterricht; Sport; Biologie; Chemie; Physik; Mathematik; Deutsch; Russisch; Andere: *[Freitextfeld]*; In keinem Fach besonders; Kann mich nicht erinnern

15. Inwieweit wurden in Ihrer Schule folgende Vorstellungen als normal oder selbstverständlich vermittelt?
[Matrix; 0 = gar nicht … 5 = sehr stark]

(a) Frauen sollten unabhängig von ihrer familiären Situation berufstätig sein können.
(b) Auch Mütter kleiner Kinder sollten berufstätig sein.
(c) Ein Beruf ist für Frauen ebenso wichtig wie für Männer.

[Attention check; respondents who do not select the instructed option are flagged and excluded from the analysis] Um Ihre Aufmerksamkeit zu bestätigen, wählen Sie bitte die Option “Ein wenig” aus.
Überhaupt nicht; Ein wenig; Mäßig; Viel; Sehr viel

Section 3: Wiedervereinigung, Kinderbetreuung und wahrgenommene Einschränkungen

16. Hat die Wiedervereinigung 1990 Ihre Familienplanung beeinflusst?
Ja; Nein; Kann mich nicht erinnern / weiß nicht

17. *(nur angezeigt falls Frage 16 = Ja)* In welcher Weise hat die Wiedervereinigung Ihre Familienplanung verändert?
Weniger Kinder; Mehr Kinder; Anzahl gleich, nur Zeitpunkt verändert; Sowohl Anzahl als auch Zeitpunkt verändert; Kann ich nicht genau sagen

18. *(nur angezeigt falls Frage 16 = Ja)* Um wie viele Kinder hat sich Ihre ursprünglich geplante Kinderzahl infolge der Wiedervereinigung verändert?
−3; −2; −1; 0; +1; +2; +3

19. *(nur angezeigt falls Frage 16 = Ja)* Was waren die Gründe dafür, dass die Wiedervereinigung Ihre Familienplanung beeinflusst hat? *[Mehrfachnennung möglich; Reihenfolge randomisiert]*
Verschlechterte Vereinbarkeit von Beruf und Familie; Wegfall oder Verschlechterung von Kinderbetreuungsangeboten; Finanzielle Unsicherheit / Arbeitslosigkeit; Unsicherheit über die berufliche Zukunft / den Arbeitsmarkt; Wohnsituation; Partnerschaftssituation; Andere Gründe: *[Freitextfeld]*; Kann ich nicht genau sagen

20. *(nur angezeigt falls Frage 19 beantwortet)* Und was war davon der wichtigste Grund?
[Gleiche Kategorien wie Frage 19, Einfachauswahl]

21. Wenn Sie an die Jahre nach 1990 in Ihrer damaligen Wohnregion denken: Wie gut entsprach das öffentliche Kinderbetreuungsangebot Ihren Erwartungen?
0 = überhaupt nicht … 5 = sehr gut; kann ich nicht beurteilen

22. *(nur angezeigt falls Frage 4 ≥ 1)* Wie stark hätte ein weiteres Kind Ihre berufliche Entwicklung eingeschränkt?
0 = gar nicht eingeschränkt … 5 = sehr stark eingeschränkt; kann ich nicht beurteilen

22'. *(nur angezeigt falls Frage 4 = 0)* Wie stark hätte ein Kind Ihre berufliche Entwicklung eingeschränkt?
0 = gar nicht eingeschränkt … 5 = sehr stark eingeschränkt; kann ich nicht beurteilen

23. *(nur angezeigt falls Frage 4 ≥ 1)* Unabhängig von der Wiedervereinigung: Wie sehr haben die folgenden Faktoren Ihre Entscheidung für die Anzahl der Kinder eingeschränkt oder erschwert?
[Matrix; 0 = gar nicht … 5 = sehr stark]

- Schwierigkeiten bei der Vereinbarkeit von Familie und Beruf
- Unzureichende Verfügbarkeit von öffentlicher Kinderbetreuung
- Fehlende oder instabile Partnerschaft
- Finanzielle Unsicherheit
- Hohe berufliche Anforderungen
- Wohnsituation
- Fehlende Unterstützung durch Familie / Umfeld
- Gesundheit

23'. *(nur angezeigt falls Frage 4 = 0)* Unabhängig von der Wiedervereinigung: In welchem Ausmaß haben die folgenden Faktoren Ihre Entscheidung, Kinder zu bekommen oder nicht zu bekommen, eingeschränkt oder erschwert?
[Matrix; 0 = gar nicht … 5 = sehr stark; gleiche Unterpunkte wie Frage 23]

24. Wenn Sie frei hätten entscheiden können: Wie viele Kinder hätten Sie sich insgesamt gewünscht?
[Dropdown: 0–9]

Section 4: Abschluss

25.† Möchten Sie uns sonst noch etwas mitteilen?
Ja *[Freitextfeld]*; Nein

Appendix D Data Sources

This appendix describes the individual-level datasets used in the analysis, supplementing the German Microcensus. Across all datasets, I restrict the sample to East German respondents born between 1974 and 1983 who report state of birth, month and year of birth, and basic demographics.

D.1 National Education Panel Study (NEPS)

The National Education Panel Study (NEPS) is a large-scale longitudinal survey documenting educational trajectories and life courses in Germany (Blossfeld and Von Maurice, 2011). It follows six starting cohorts, ranging from newborns to adults, across repeated waves. I use Starting Cohort 6, which tracks the educational and professional careers of a representative adult sample born between 1944 and 1988. The survey began in 2007/2008 and continues with regular follow-up waves through 2022. NEPS provides retrospective information on educational biographies, including respondents' state of birth, which I use to infer whether individuals attended school in East Germany.

I restrict the sample to individuals born between 1974 and 1983 in East Germany who report state of birth, month and year of birth, and basic demographics. The primary outcome is fertility, measured as the number of children residing in the household. Respondents are also asked about ideal fertility—"If you set aside all obstacles, how many children would you ideally like to have in total?"—and about gender-related attitudes, including support for an equal division of household tasks.

D.2 German Socio-Economic Panel (SOEP)

The German Socio-Economic Panel (SOEP) is a nationally representative longitudinal household survey covering a wide range of topics. I employ SOEP Core 1984–2022 (v.39), which has followed individuals since 1984, with periodic sample refreshes (Goebel et al., 2019).

I restrict the sample to East German individuals born between 1974 and 1983 who report state of birth, month and year of birth, and basic demographics. The primary outcome is fertility, measured as the number of children in the household. In addition, respondents report ideal fertility and a range of gender-related attitudes, such as whether maternal employment harms young children and the importance of career success for women.

D.3 Family Research and Demographic Analysis (FReDA)

The Family Research and Demographic Analysis (FReDA) survey is a large-scale, biannual panel survey designed to be nationally representative of individuals aged 18 to 49 in

Germany (Bujard et al., 2023). The survey is conducted in mixed mode, combining self-administered web and paper questionnaires. Data collection began in early 2021 with an initial sample of approximately 38,000 respondents. I restrict the sample to East German respondents born between 1974 and 1983 who report state of birth, month and year of birth, and basic demographics. The primary outcome is fertility, measured as the sum of biological children with the current partner and with former partners. Respondents are also asked about gender-related attitudes, including whether maternal employment harms relationships, whether women should be primary caregivers, and whether women need children for a fulfilled life.

D.4 Additional Datasets

D.4.1 German Longitudinal Election Study (GLES). The German Longitudinal Election Study (GLES) is a nationally representative survey that investigates political attitudes and behavior in Germany (Rattinger et al., 2015). I use the GLES cross-sectional data from 2017 to 2021, which include detailed items on social and policy views. The key variables capture respondents' positions on gender equality, such as support for equal career opportunities for women and opinions on whether the government should actively promote gender parity.

D.4.2 Shell Youth Study (1991). The Shell Youth Study is a nationally representative survey series of young people in Germany aged 12 to 25, focusing on social values, political orientations, and economic expectations. I use the 1991 wave, conducted shortly after reunification, to capture early post-transition attitudes (Fischer et al., 1999). To align the analysis with the study's cohort window, I restrict the sample to respondents born between 1974 and 1978, who were aged 13 to 17 at the time of the survey. The data provide rich information on respondents' economic outlook, perceived life opportunities, and confidence in Germany's future, allowing for an early assessment of how optimism and expectations differed between cohorts raised under socialist versus capitalist institutions.

D.4.3 DJI Youth Survey (1992, 1997, and 2003). The DJI Youth Survey (1992, 1997, and 2003) is a nationally representative study conducted by the German Youth Institute, covering adolescents and young adults aged 16 to 29 across East and West Germany. It collects detailed information on financial concerns, life satisfaction, and attitudes toward social change in the aftermath of reunification. Importantly, it includes measures of nostalgia for the former GDR, providing insights into how young people evaluated the institutional transition and its socioeconomic consequences during the early 1990s.

Table D.1. Descriptive Statistics for Supplementary Outcome Variables

	Mean	Std. dev.	Min.	Max.	Obs.	Data Source	Waves
Number of Children	1.608	0.961	0	8	395	NEPS, FReDA, SOEP	2021
Ideal Number of Children	2.189	1.329	0	12	212	NEPS, SOEP	2019-2022
Currently Living in East Germany	0.752	0.432	0	1	3,104	NEPS, SOEP	1991-2021
Gender-Role Attitude Indices							
Egalitarian Family Views	−0.127	0.937	−3.324	2.603	435	FReDA	2021
Acceptance of Maternal Employment	0.575	0.916	−1.653	1.426	128	SOEP	2018
Equal Household Division	−0.065	0.929	−0.672	3.754	119	NEPS	2013, 2016, 2022
Career Success Important for Life Fulfillment	0.018	0.921	−2.819	1.375	544	SOEP	1992, 1995, 2004, 2008, 2012, 2016, 2021
Gender-Role Attitudes: Standardized Individual Items							
Working Mother: Warm Relationship	0.328	0.757	−3.200	0.668	438	FReDA	2021
Women Should Be Primary Caregivers	0.231	0.884	−2.281	1.083	437	FReDA	2021
Children Essential for Life Fulfillment	−0.098	0.974	−2.408	0.880	436	FReDA	2021
Maternal Employment: Harms Children (Age <6)	0.495	0.910	−1.812	1.243	128	SOEP	2018
Maternal Employment: Harms Children (Age <3)	0.593	0.892	−1.454	1.313	128	SOEP	2018
Support for Gender Equality Policies							
Importance of Gender Equality (continuous)	3.374	1.131	1	5	1,955	GLES	2017–2021
Importance of Gender Equality (binary; =1 if >3)	0.470	0.499	0	1	1,955	GLES	2017–2021
Support for State Gender Equality Measures	4.496	1.568	1	7	1,955	GLES	2017–2021
Future Outlook and Economic Attitudes							
Satisfaction with financial situation	4.722	2.667	0	10	579	DJI Youth Survey	1992, 1997, 2003
People were better off in the past	2.744	0.935	1	4	577	DJI Youth Survey	1992, 1997, 2003
Optimism about personal future	2.296	0.558	1	3	81	Shell Youth Study	1991
Optimism about society's future	1.765	0.426	1	2	81	Shell Youth Study	1991

Notes. This table reports descriptive statistics for the supplementary outcome variables used in the analysis. The sample includes, where possible, individuals born in East Germany between 1974 and 1983. Reported values correspond to the estimation samples used in the regressions. Gender-role attitude indices and standardized individual items are each normalized to have mean zero and unit standard deviation in the control group (June-born) and coded so that higher values indicate more egalitarian attitudes; underlying items are reversed where necessary. The first three individual items are the constituents of the *Egalitarian Family Views* index; the last two are the constituents of the *Acceptance of Maternal Employment* index.

Table D.2. Descriptive Statistics: Microcensus Sample (2018–2019)

Variable	Obs.	Mean	Std. dev.	Min	Max
Demographics					
Gender (1 = male, 2 = female)	5,407	1.488	0.500	1	2
Year of birth	5,407	1978.733	2.886	1974	1983
Month of birth (5 = May, 6 = June)	5,407	5.491	0.500	5	6
Age	5,407	39.402	2.988	34	45
Household and Labor Market					
Unemployed (=1)	5,402	0.067	0.256	0	1
Monthly household net income[a] (EUR)	5,352	3,467.788	2,169.374	75	22,500
Monthly individual net income[a] (EUR)	5,377	1,917.156	1,324.345	0	22,500
Weekly working hours[b]	4,873	33.067	15.158	0	80
Education					
Highest ISCED education level	5,404	4.146	1.663	1	8
University degree (=1)	5,407	0.296	0.456	0	1
Further training last year (=1)	5,403	0.216	0.412	0	1
Family and Relationship Status					
Not married (=1)	5,407	0.493	0.500	0	1
Has children (=1)	5,407	0.676	0.469	0	1
Number of children in household	5,407	1.148	1.007	0	6
Number of children in family	5,407	0.999	1.018	0	6
Employment Rates					
Overall employment	5,407	0.901	0.298	0	1
Male employment	2,770	0.915	0.279	0	1
Female employment	2,637	0.887	0.317	0	1

Notes. The table reports descriptive statistics for the estimation sample drawn from the 2018–2019 Microcensus. The sample includes individuals born between 1974 and 1983 in May or June who currently reside in East Germany. [a] Midpoints of income brackets are used. For the top-coded category (€18,000 or more), the midpoint is set to €22,500 (1.25 × €18,000). [b] Conditional on employment; the question asks: "How many hours did you actually work last week?"

Appendix E Institutional Background and Descriptive Statistics

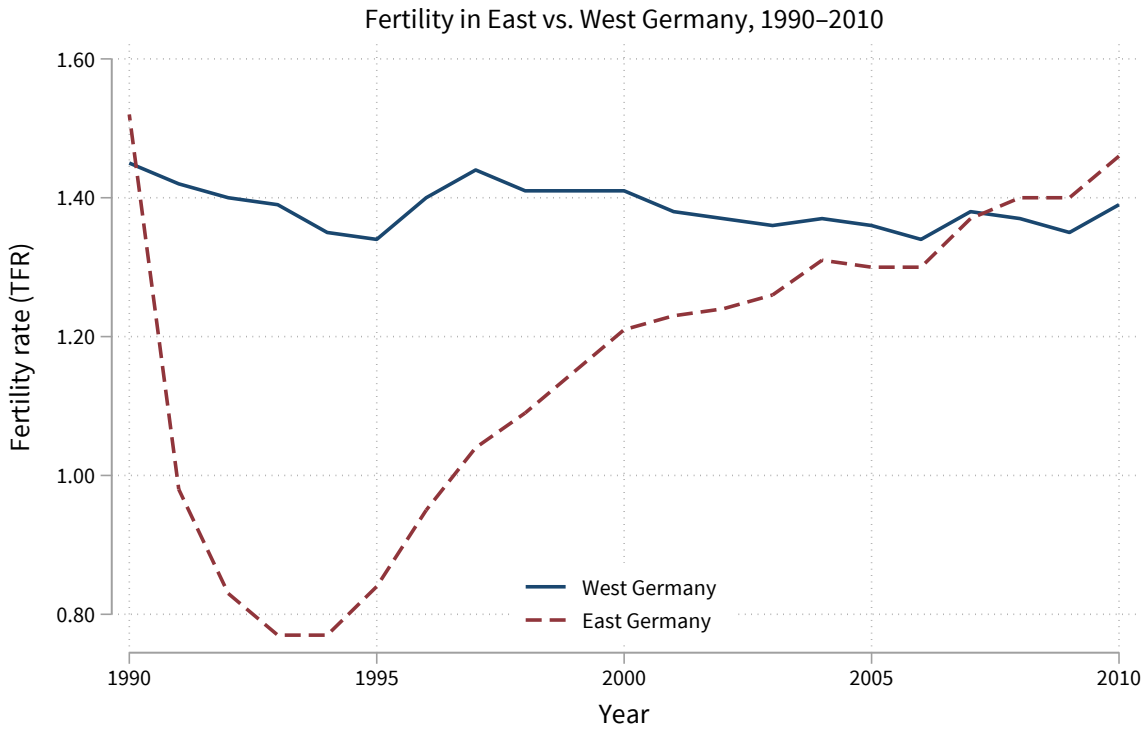


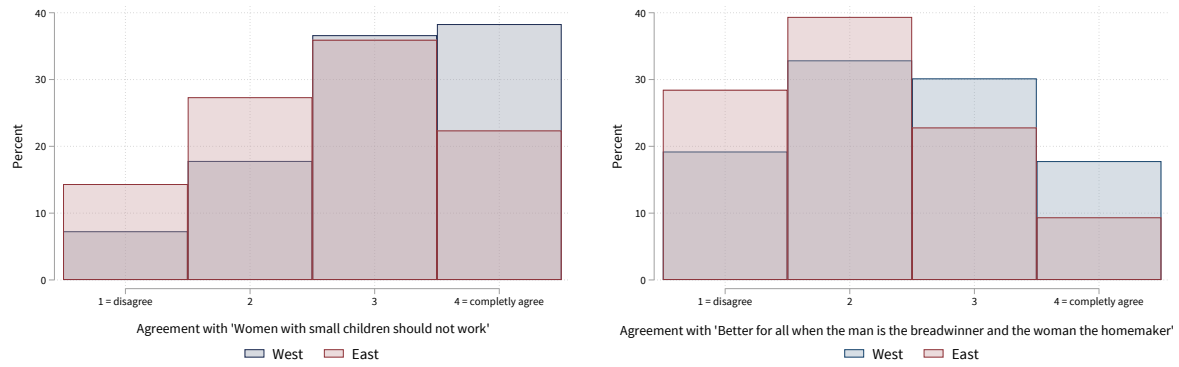
Figure E.1. Total Fertility Rate in East and West Germany, 1990–2010

Sources. This figure shows the evolution of total fertility rates in East and West Germany following reunification. By 2008, rates had largely converged and have evolved in parallel since. Data source: Federal Statistical Office of Germany (Destatis), GENESIS-Online Database.

Table E.1. Gender Role Attitudes in East and West Germany, 1991–2016

	East		West	
	1991	2016	1991	2016
"A working mother can establish just as loving and secure a relationship with her children as a mother who doesn't work."	89.9	92.5	72.9	85.9
"A small child is bound to suffer if his or her mother goes out to work."	57.6	26.0	75.9	44.0
"It is much better for everyone concerned if the man goes out to work and the woman stays at home and looks after the house and children."	32.4	13.7	50.1	26.2
"A child actually benefits if his or her mother has a job rather than just concentrating on the home"	60.9	79.6	34.4	62.1
"A married woman should not work if there are not enough jobs to go round and her husband is also in a position to support the family."	43.7	15.0	52.5	22.1

Notes. Values show the percentage of respondents reporting "agree" or "strongly agree" on a four-point Likert scale ranging from "strongly disagree" to "strongly agree." Source: German General Social Survey (ALLBUS), 1991 and 2016.



(a) (b)

Figure E.2. East–West Gap in Child-Rearing Gender Norms, 1991

Notes: Distribution of responses to gender role attitudes in East and West Germany, measured in 1991. Panel (a) shows agreement with the statement "Women with small children should not work" and Panel (b) shows agreement with "Better for all when the man is the breadwinner and the woman the homemaker." Scale: 1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree. Data source: German General Social Survey (ALLBUS), 1991.

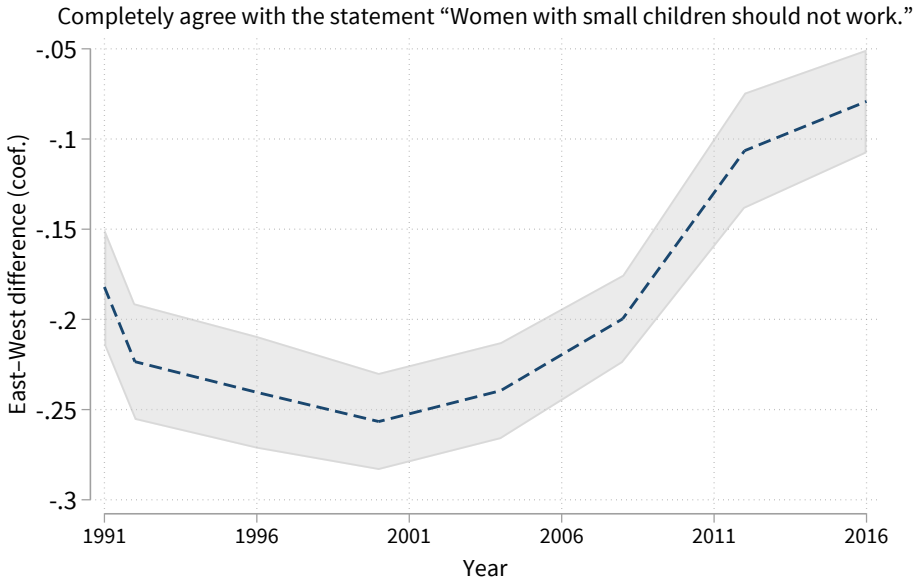


Figure E.3. Evolution of the East–West gap in attitudes toward mothers of young children working

Notes: This figure tracks the evolution of East-West differences in agreement with "Women with small children should not work." The coefficient represents the gap between East and West Germany, with negative values indicating East Germans are less likely to agree with this statement (i.e., hold more egalitarian views). Shaded area represents 95% confidence intervals. Data source: German General Social Survey (ALLBUS), repeated cross-sections 1991–2016.

Table E.2. Timetable for the ten-grade secondary school from school year 1971/72

Subject / Grade	1		2	3	4	5	6	7	8	9	10
	1st H.	2nd H.									
German	11	10	12	14	14	7	6	5	4+1	3	3+1
Russian	—	—	—	—	—	6	5	3	3	3	3
Mathematics	5	5	6	6	6	6	6	6	4	5	4
Physics	—	—	—	—	—	—	3	2	2	3	3
Astronomy	—	—	—	—	—	—	—	—	—	—	1
Chemistry	—	—	—	—	—	—	—	2	4	2	2
Biology	—	—	—	—	—	2	2	1	2	2	2
Geography	—	—	—	—	—	2	2	2	2	1	2
Handicraft	1	1	1	1	2	2	2	—	—	—	—
School garden	—	1	1	1	1	—	—	—	—	—	—
Polytechnic education, including	—	—	—	—	—	—	—	4	4	5	5
Introduction to social production	—	—	—	—	—	—	—	(1)	(1)	(2)	(2)
Technical drawing	—	—	—	—	—	—	—	(1)	(1)	(—)	(—)
Productive work	—	—	—	—	—	—	—	(2)	(2)	(3)	(3)
History	—	—	—	—	—	1	2	2	2	2	2
Civics	—	—	—	—	—	—	—	1	1	1	2
Drawing	1	1	1	1	2	1	1	1	1	1	—
Music	1	1	1	2	1	1	1	1	1	1	1
Physical education	2	2	2	2	3	3	3	2	2	2	2
Weekly hours	21	21	24	27	29	31	33	32	32+1	31	32+1
Optional											
Needlework	—	—	—	—	1	1	—	—	—	—	—
2nd foreign language	—	—	—	—	—	—	—	3	3	3	2
Weekly hours	21	21	24	27	30	32	33	35	35+1	34	34+1

Notes. Directive on the introduction of the timetable for the ten-grade general polytechnical secondary school for the school year 1970/71 and from 1971/72. — indicates no hours allocated; entries such as "4+1" denote additional hours (study groups / specialization). Source: Schmidt (1988)

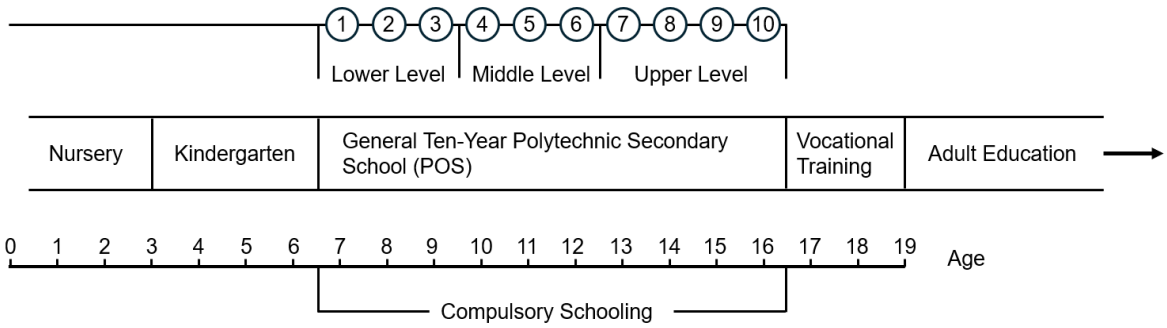


Figure E.4. Structure of the GDR Education System

Notes: This figure illustrates the structure of the education system in the German Democratic Republic (GDR). Children typically entered the General Ten-Year Polytechnic Secondary School (POS) at age 6 and progressed through lower, middle, and upper levels over ten grades. Compulsory schooling spanned from ages 6 to 16. After completing the POS, students could enter vocational training or pursue further education in adult institutions. Source: Schmidt (1988)

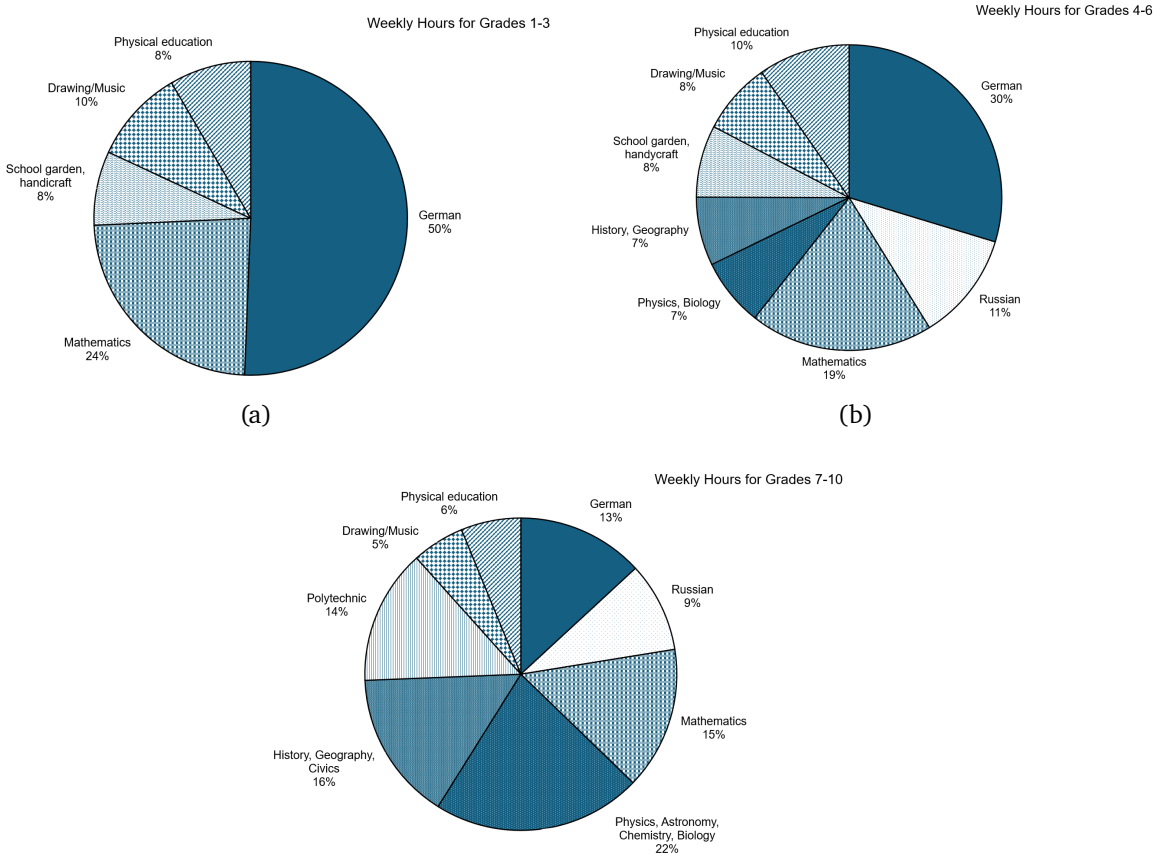


Figure E.5. Distribution of Teaching Time by Subject and Grade Level

Notes: This figure displays the allocation of weekly instruction time across subjects in the GDR's polytechnic school system, based on official curriculum standards. Detailed curriculum hours are reported in Table E.2. Data source: Schmidt (1988).

Appendix F Additional Estimates and Robustness

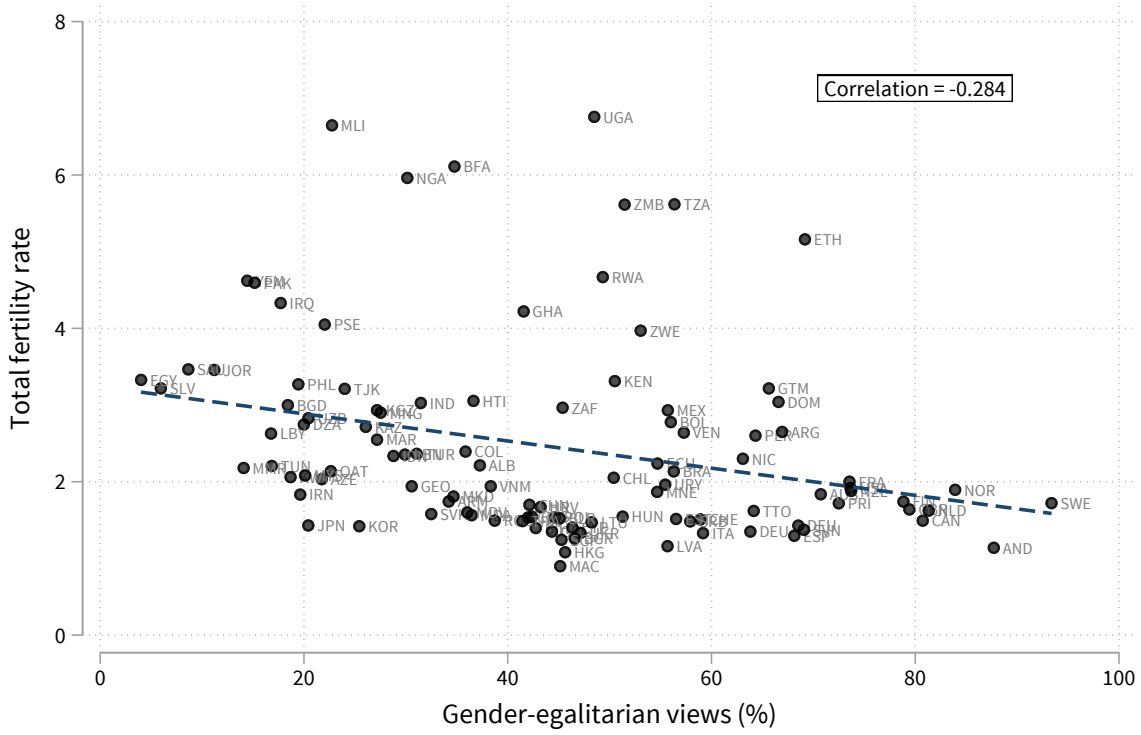


Figure F.1. Gender-Egalitarian Views and Fertility Across Countries

Notes. Country-level correlation between total fertility rate and gender-egalitarian views, pooled 1989–2023. Gender-egalitarian views measured as the percentage disagreeing with "When jobs are scarce, men should have more right to a job than women" from the World Values Survey (Inglehart et al., 2022). Sample includes 108 countries covering over 90% of world population. Total fertility rates from World Bank Development Indicators (Azevedo, 2011). Alternative measure using agreement with "A preschool child suffers with a working mother" yields a correlation of −0.341.

Table F.1. Gender-Egalitarian Norms and Fertility by Childcare Availability: Cross-Country Evidence

Outcome variable:	**Total fertility rate**		
Childcare availability	All	High	Low
Gender egalitarian views (%)	-0.018***	-0.010	-0.022***
(country-level)	(0.005)	(0.007)	(0.006)
No. of countries	102	61	41
No. of individuals	427,569	253,883	173,686

Notes. Cross-country analysis of the relationship between gender egalitarian norms and fertility rates, 1989–2023. Gender egalitarian views measured as the country-level percentage disagreeing with "When jobs are scarce, men should have more right to a job than women" from the World Values Survey (Inglehart et al., 2022). High/low childcare availability based on whether national law establishes government provision of center-based childcare services (World Bank, 2024). Total fertility rate from World Bank development indicators (Azevedo, 2011). Standard errors clustered at the country level are shown in parentheses. Significance: $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table F.2. Gender-Egalitarian Norms and Ideal Number of Children: Cross-Country Evidence

Outcome variable:	**Ideal Number of Children**		
Gender egalitarian view (dummy)	-0.182***	-0.157***	-0.155***
(individual-level)	(0.043)	(0.045)	(0.017)
Year FE	NO	YES	YES
Country FE	NO	NO	YES
Observations	144,340	144,340	144,340

Notes. Individual-level analysis using World Values Survey data (Inglehart et al., 2022), 1989–2023. Gender egalitarian view coded as 1 if respondent disagrees with "When jobs are scarce, men should have more right to a job than women," 0 otherwise. Ideal number of children based on respondent's stated preference. Standard errors clustered at the country level are shown in parentheses. Significance: $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table F.3. Gender-Egalitarian Norms and Fertility: Cross-Country Evidence

Outcome variable:	**Total fertility rate**		
Gender egalitarian views (%)	-0.018***	-0.018***	-0.012***
(country-level)	(0.005)	(0.005)	(0.003)
Year FE	NO	YES	YES
Country FE	NO	NO	YES
Observations	437,374	437,374	437,374

Notes. Cross-country analysis of the relationship between gender egalitarian norms and fertility rates, 1989–2023. Gender egalitarian views measured as the country-level percentage disagreeing with "When jobs are scarce, men should have more right to a job than women" from the World Values Survey (Inglehart et al., 2022). Total fertility rate from World Bank development indicators (Azevedo, 2011). Standard errors clustered at the country level are shown in parentheses. Significance: $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table F.4. Gender-Egalitarian Norms and Ideal Number of Children by Childcare Availability: Cross-Country Evidence

Outcome variable:	**Ideal Number of Children**		
Childcare availability	All	High	Low
Gender egalitarian view (dummy)	-0.183***	-0.146***	-0.235***
(individual-level)	(0.043)	(0.047)	(0.083)
Observations	143,167	91,657	51,510

Notes. Individual-level analysis using World Values Survey data (Inglehart et al., 2022), 1989–2023. Gender egalitarian views coded as 1 if respondent disagrees with "When jobs are scarce, men should have more right to a job than women," 0 otherwise. High/low childcare availability based on whether national law establishes government provision of center-based childcare services (World Bank, 2024). Standard errors clustered at the country level are shown in parentheses. Significance: $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table F.5. Effects of Socialist Schooling on Fertility: Robustness Checks

	Number of Children
Panel A: Baseline	
May-born (treated)	-0.072***
	(0.019)
Observations	5,407
Panel B: Including State fixed effects	
May-born (treated)	-0.075***
	(0.019)
Observations	5,407
Panel C: Including State-specific linear trends in year of birth	
May-born (treated)	-0.074***
	(0.019)
Observations	5,407
Panel D: Including Labor market conditions after graduating	
May-born (treated)	-0.055***
	(0.022)
Observations	5,407
Panel E: Two months before and after	
May-born (treated)	-0.042***
	(0.015)
Observations	10,715

Notes. This table presents regression discontinuity estimates comparing fertility outcomes between May-born and June-born individuals in East Germany. Baseline specifications control for age dummies, birth-year dummies, and a binary indicator for being female. Panel B adds state fixed effects based on current residence. Panel C alternatively includes state-specific linear trends by year of birth. Panel D augments the baseline specification with measures of local labor market conditions at labor market entry—youth unemployment rate, overall unemployment rate, and employment rate—with the 1990 value imputed using 1991 data. Labor market entry is defined as 16 years after birth for the treatment group (born in May) and 17 years for the control group (born in June). Finally, Panel E expands the estimation window to include individuals born within two months on either side of the school-entry cutoff. Sample includes East German cohorts born 1974-1983, drawn from the German Microcensus 2018-2019. Standard errors are clustered at the cohort–month-of-birth level. Significance: $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table F.6. Treatment Status and Labor Market Conditions at Graduation

	Youth Unemployment Rate (%)	Overall Unemployment Rate (%)	Employment Rate (%)
May-born (treated)	-0.084	-0.822	1.017
	(0.611)	(1.291)	(1.489)
Observations	5,407	5,407	5,407

Notes. This table presents regression discontinuity estimates of labor market conditions at graduation for May- and June-born individuals in East Germany. Each column reports coefficients from a separate regression for the outcome indicated in the column header. Labor market at graduation is defined as age 16 for May births (earlier school entry) and age 17 for June births. Labor market conditions include youth unemployment rate, overall unemployment rate, and employment rate. 1990 values are imputed using 1991 data. Data source: DESTATIS Statistisches Bundesamt matched to cohort-specific graduation years. Sample includes East German cohorts born 1974-1983 from the German Microcensus 2018-2019. All specifications include age fixed effects, birth year fixed effects, and a female indicator. Standard errors clustered at the cohort-month-of-birth level in parentheses. Significance: $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table F.7. Effects of Socialist Schooling on Financial Concerns

Outcomes:	Satisfaction with financial situation	People were better off in the past
Panel A: Cohorts 1974-1983 (Waves: 1992, 1997, 2003)		
May-born (treated)	-0.220	-0.006
	(0.173)	(0.059)
WCB *p*-value	0.431	0.942
Observations	579	577
Panel B: Cohorts 1974-1977 (Wave: 1992)		
May-born (treated)	-0.359	0.014
	(0.634)	(0.051)
WCB *p*-value	0.871	0.883
Observations	86	86

Notes. Regression discontinuity estimates comparing financial attitudes between May-born (treated) and June-born (control) individuals. Treatment represents one additional year of socialist education. Column (1) shows responses on current financial satisfaction, measured on an 11-point scale from 0 (completely dissatisfied) to 10 (completely satisfied). Column (2) uses responses to "People were better off in the past," measured on a 4-point Likert scale from 1 (does not apply at all) to 4 (applies completely). All regressions include birth year fixed effects. Data source: DJI Youth Survey, a representative sample of teenagers and young adults in Germany. Standard errors clustered at the cohort-month-of-birth level are shown in parentheses. p-values are based on wild cluster bootstrap procedures using Webb weights (Roodman et al., 2019), with 999 iterations. Significance: $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table F.8. Effects of Socialist Schooling on Future Outlook: Survey Evidence from 1991

Outcomes:	Optimism about personal future	Optimism about society's future
May-born (treated)	0.140	0.030
	(0.088)	(0.086)
WCB *p*-value	0.160	0.752
Observations	81	81

Notes. Regression discontinuity estimates comparing future outlook between May-born (treated) and June-born (control) individuals. Treatment represents one additional year of socialist education. Column (1) examines optimism about personal future, measured on a three-point scale: mostly gloomy (1), mixed (2), or mostly confident (3). Column (2) examines optimism about society's future, measured as mostly gloomy (1) or mostly confident (2). Data source: Shell Youth Study, a representative survey of East German adolescents conducted shortly after reunification (Fischer et al., 1999). Sample includes cohorts born 1974–1978 (ages 13–17 at survey). All regressions include birth year fixed effects. Standard errors clustered at the cohort-month-of-birth level are shown in parentheses. p-values are based on wild cluster bootstrap procedures using Webb weights (Roodman et al., 2019), with 999 iterations. Significance: $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table F.9. Treatment Status and Current Residence in East Germany

	Currently Living in East Germany
May-born (treated)	-0.015
	(0.034)
WCB *p*-value	0.80
Observations	3,104

Notes. This table presents regression discontinuity estimates comparing East–West migration rates between individuals born just before and just after the school-entry cutoff in East Germany. Sample: Individuals born in East Germany 1974-1983, pooled from SOEP and NEPS panels (waves 1991-2021). Treatment assigned based on birth location. All specifications include age and birth year fixed effects, gender indicator, and dataset indicator. Standard errors are clustered at the cohort–month-of-birth level. *p*-values are based on wild cluster bootstrap procedures using Webb weights (Roodman et al., 2019), with 999 iterations. Significance: $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table F.10. Fertility Results Using Pooled 2021 Survey Data (SOEP, NEPS, FReDA)

	Number of Children
May-born (treated)	-0.117**
	(0.047)
WCB *p*-value	0.069
Observations	395

Notes. This table presents the regression discontinuity estimate comparing the number of children between May-born and June-born individuals in East Germany. Sample includes East German-born individuals from the 1974–1983 cohorts, pooled from SOEP, NEPS, and FReDA (2021 wave). Fertility is measured as the number of children in the household (SOEP, NEPS) or total biological children across all partnerships (FReDA). All regressions include birth year fixed effects and control for age, gender, and survey source. Standard errors are clustered at the cohort–month-of-birth level. *p*-values are based on wild cluster bootstrap procedures using Webb weights (Roodman et al., 2019), with 999 iterations. Significance: $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table F.11. Fertility Effects of Socialist Schooling: Alternative Fertility Measures

	Number of Children
Panel A: Number of Children in Household (baseline)	
May-born (treated)	-0.072***
	(0.019)
Observations	5,407
Panel B: Number of Children in Household (2020 wave)	
May-born (treated)	-0.078***
	(0.026)
Observations	2,847
Panel C: Number of Children in Family	
May-born (treated)	-0.075***
	(0.015)
Observations	5,407
Panel D: Number of Children Born (only mothers in wave 2018)	
May-born (treated)	-0.092*
	(0.051)
Observations	1,230

Notes. Each panel reports estimates from a regression discontinuity specification comparing May-born versus June-born individuals. Panel A presents the baseline specification using children in the household. Panel B restricts the sample to the 2020 wave, which experienced higher non-response due to the COVID-19 pandemic. Panel C uses number of children in the family rather than household (correlation = 0.979). Panel D uses the reported number of children ever born, available only for mothers in the 2018 wave, resulting in a smaller sample. Sample includes East German cohorts born 1974–1983 from the German Microcensus. All specifications include age fixed effects, birth year fixed effects, and a female indicator. Standard errors are clustered at the cohort–month-of-birth level. Significance: $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table F.12. Heterogeneous Effects of Socialist Schooling by Grade Level at Reunification

Outcome variable:	**Number of Children**			
Cohorts:	**placebo (1970-1973)**	**1974-1977**	**1978-1980**	**1981-1983**
May-born (treated)	0.009	-0.148***	-0.071***	0.006
	(0.009)	(0.018)	(0.010)	(0.034)
WCB *p*-value	0.587	0.006	0.018	0.924
Observations	2,289	2,004	1,606	1,797

Notes. This table presents regression discontinuity estimates comparing fertility outcomes between May-born and June-born individuals in East Germany. The table presents heterogeneous effects by grade level at reunification, with columns corresponding to distinct curricular phases in the East German education system: grades 7–10 (birth cohorts 1974–1977) experienced intensive ideological instruction, grades 4–6 (1978–1980) received moderate political content, and grades 1–3 (1981–1983) had minimal exposure to socialist ideology. Placebo cohorts (1970-1973) had completed compulsory schooling before the reform. Sample includes East German cohorts born 1970–1983 from the German Microcensus 2018–2019. All specifications include age fixed effects, birth year fixed effects, and a female indicator. Standard errors are clustered at the cohort–month-of-birth level. *p*-values from the wild cluster bootstrap routine using weights from Webb's distribution (Roodman et al., 2019) and 999 iterations. Significance: $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table F.13. Fertility Effects Using Earlier East German Cohorts as Control Group

	Number of Children
May-born (treated) ×	-0.080***
Treated cohorts (1974-1983)	(0.023)
WCB *p*-value	0.043
Observations	7,696

Notes. Estimates come from a difference-in-differences specification that compares May-born versus June-born individuals in cohorts exposed to reunification (1974–1983) relative to earlier cohorts (1970–1973) who had completed schooling before reunification. This design nets out mechanical age-at-entry effects. All regressions control for age and birth year fixed effects, as well as a female indicator. The sample includes cohorts born between 1970 and 1983, drawn from the German Microcensus 2018–2019. Standard errors are clustered at the cohort–month-of-birth level. p-values are based on wild cluster bootstrap procedures using Webb weights (Roodman et al., 2019), with 999 iterations. Significance: $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

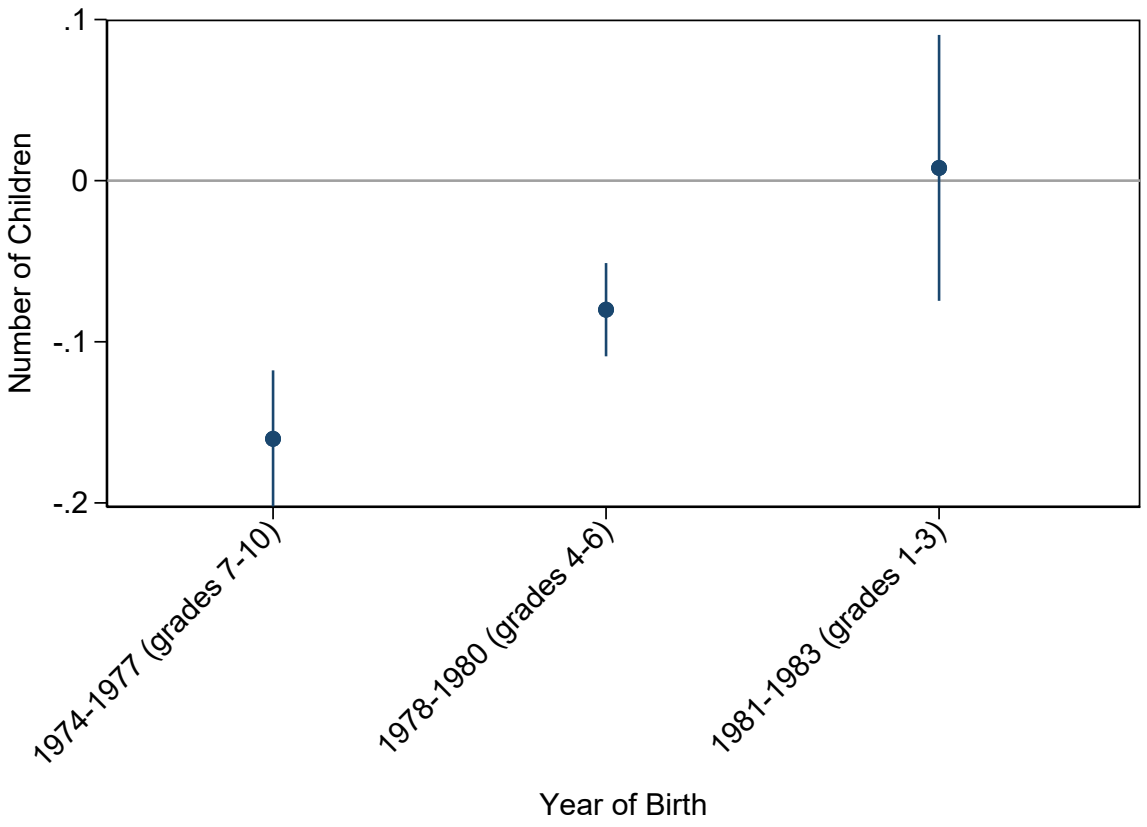


Figure F.2. Heterogeneity by grade cohorts: Difference-in-differences

Sources. This figure presents difference-in-differences estimates comparing May-born versus June-born individuals in treated cohorts relative to earlier cohorts (1970–1973) who completed schooling before reunification, netting out mechanical age-at-entry effects. The heterogeneous effects correspond to distinct curricular phases in the East German education system: cohorts in grades 7–10 at reunification (1974–1977), grades 4–6 (1978–1980), and grades 1–3 (1981–1983). Sample includes East German cohorts born 1970–1983 from the German Microcensus 2018–2019. All specifications include age fixed effects, birth year fixed effects, and a female indicator. Standard errors are clustered at the treatment-birth year-group level. Vertical bars indicate 95% confidence intervals. See Appendix Table F.15 for underlying estimates.

Table F.14. Fertility Effects Using Earlier East German Cohorts as Control Group: Robustness

	Number of Children
Panel A: Baseline	
May-born (treated) ×	-0.080***
Treated cohorts (1974-1983)	(0.023)
Observations	7,696
Panel B: Including state fixed effects	
May-born (treated) ×	-0.082***
Treated cohorts (1974-1983)	(0.024)
Observations	7,696
Panel C: Including state-specific linear trends in year of birth	
May-born (treated) ×	-0.088***
Treated cohorts (1974-1983)	(0.024)
Observations	7,696
Panel D: Two months before and after	
May-born (treated) ×	-0.052***
Treated cohorts (1974-1983)	(0.016)
Observations	15,336
Panel E: Two months before and after (excluding June)	
May-born (treated) ×	-0.047***
Treated cohorts (1974-1983)	(0.016)
Observations	11,530

Notes. Estimates come from a difference-in-differences specification that compares May-born versus June-born individuals in cohorts exposed to reunification (1974–1983) relative to earlier cohorts (1970–1973) who had completed schooling before reunification. This design nets out mechanical age-at-entry effects. Baseline specifications control for age dummies, birth-year dummies, and a binary indicator for being female. Panel B adds state fixed effects based on current residence. Panel C alternatively includes state-specific linear trends by year of birth. Finally, Panel D expands the estimation window to include individuals born within two months on either side of the school-entry cutoff, while Panel E drops observations from June births in that window. The sample includes cohorts born between 1970 and 1983, drawn from the German Microcensus 2018–2019. Standard errors are clustered at the cohort–month-of-birth level. Significance: $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table F.15. Fertility Effects Using Earlier East German Cohorts as Control: Heterogeneity by Grade at Reunification

Outcome variable:	**Number of Children**		
Cohorts:	**1974-1977**	**1978-1980**	**1981-1983**
May-born (treated) ×	-0.160***	-0.080***	0.008
Treated cohorts (1974-1983)	(0.020)	(0.013)	(0.038)
WCB *p*-value	0.000	0.004	0.923
Observations	4,293	3,895	4,086

Notes. Estimates come from a difference-in-differences specification comparing May-born versus June-born individuals in treated cohorts relative to earlier cohorts (1970–1973) who completed schooling before reunification. This design nets out mechanical age-at-entry effects. The table presents heterogeneous effects by grade level at reunification: columns show cohorts in grades 7–10 (1974–1977), grades 4–6 (1978–1980), and grades 1–3 (1981–1983), corresponding to distinct curricular phases in the East German education system. All regressions control for age and birth year fixed effects, as well as a female indicator. The sample includes cohorts born between 1970 and 1983, drawn from the German Microcensus 2018–2019. Standard errors are clustered at the cohort–month-of-birth level. *p*-values from the wild cluster bootstrap routine using weights from Webb's distribution (Roodman et al., 2019) and 999 iterations. Significance: $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table F.16. Socialist Schooling and Gender-Role Attitudes: Individual Items

	FReDA			SOEP	
	Working Mother: Warm Relationship	Female Should be Caregivers	Women Need Children for Fulfillment	Maternal Employment Harms Children Under Age 6	Under Age 3
May-born (treated)	0.161**	0.066	0.188**	0.133	0.275**
	(0.057)	(0.044)	(0.074)	(0.104)	(0.098)
Observations	438	437	436	128	128

Notes. Regression discontinuity estimates comparing gender-role attitudes between May-born (treated) and June-born (control) East Germans, birth cohorts 1974–1983. All outcomes are standardized to have mean zero and unit standard deviation in the control group (June-born); signs are oriented so that positive coefficients indicate more egalitarian attitudes in all columns. *Variable descriptions.* "Warm Relationship" measures agreement that a working mother can build just as warm a relationship with her child (FReDA; 1–5 raw scale). "Female Should be Caregivers" measures agreement that women should focus on family (FReDA; 1–5; reversed). "Women Need Children for Fulfillment" measures the belief that women need children for a fulfilled life (FReDA; 1–5; reversed). "Harms Children Under Age 6/3" measures agreement that children suffer when their mother works (SOEP; 1–7; reversed). Columns 1–3 are the constituent items of the *Egalitarian Family Views* index; columns 4–5 are the constituent items of the *Acceptance of Maternal Employment* index reported in Table 2. All specifications include age and birth year fixed effects, a gender indicator, and survey wave fixed effects where applicable. Standard errors clustered at the cohort–month-of-birth level in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table F.17. Effects of Socialist Curricula on Support for Gender Equality Policies

	Importance of Gender Equality		**Support for State**
	Continuous Scale (1-5)	Binary Indicator (0/1)	Gender Equality Measures (1-7)
May-born (treated)	0.162	0.082*	0.344**
	(0.117)	(0.045)	(0.162)
Observations	1,955	1,955	1,955

Notes. Regression discontinuity estimates comparing policy preferences between May-born (treated) and June-born (control) individuals. Treatment represents one additional year of socialist education. Column (1): 5-point scale measuring importance of gender equality (1 = "not important at all" to 5 = "very important"). Column (2): Binary indicator for considering gender equality important or very important. Column (3): 7-point scale measuring support for state gender-equality measures (1 = "go much too far already" to 7 = "do not go nearly far enough"). Sample: East German cohorts born 1974-1983. Data source: German Longitudinal Election Study (GLES), waves 2017-2021. All specifications include wave fixed effects, birth year fixed effects, and a gender indicator. Standard errors are clustered at the cohort–month-of-birth level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table F.18. Socialist Schooling and Human Capital Formation

	Educational Attainment ISCED (1-8)	**University Degree** (0/1)	**Further Training** (0/1)
May-born (treated)	-0.080*	0.021	0.006
	(0.042)	(0.012)	(0.007)
Observations	5,404	5,404	5,403

Notes. This table presents regression discontinuity estimates comparing human capital outcomes between May-born and June-born individuals in East Germany. Each column reports coefficients from a separate regression for the outcome indicated in the column header. The variable further training refers to participation in further training during the last year. Sample includes East German cohorts born 1974-1983, drawn from the German Microcensus 2018-2019. All specifications include age fixed effects, birth year fixed effects, and a female indicator. Standard errors are clustered at the cohort–month-of-birth level. Significance: $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table F.19. Effect of Socialist Schooling on Desired Family Size

	Ideal Number of Children
May-born (treated)	-0.358***
	(0.096)
WCB *p*-value	0.008
Observations	212

Notes. This table presents the regression discontinuity estimate comparing ideal number of children between May-born and June-born individuals in East Germany. The sample comprises birth cohorts 1974–1983 from the German SOEP and NEPS, observed in survey waves 2019–2022. In NEPS, ideal fertility is measured by the question: "If you set aside all obstacles, how many children would you ideally like to have in total?" In SOEP (2019 wave), ideal fertility is measured by the question: "How many children would you ideally like to have?" All regressions control for age, birth year fixed effects, and a female indicator. Standard errors are clustered at the cohort–month-of-birth level. p-values are based on wild cluster bootstrap procedures using Webb weights (Roodman et al., 2019), with 999 iterations. Significance: $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table F.20. Heterogeneity by Institutional Support: Fertility Effects by Childcare Availability (1998 Data)

	Number of Children
May-born (treated)	-0.294**
	(0.139)
Childcare availability (in %)	-0.002
	(0.003)
May-born (treated) ×	0.007
Childcare availability (in %)	(0.004)
Implied effect at:	
25th percentile childcare (24.1%)	-0.136***
	(0.037)
75th percentile childcare (47.2%)	0.016
	(0.070)
Observations	5,407

Notes. This table examines heterogeneity in fertility effects by institutional support, proxied by childcare availability in 1998. Childcare availability is measured as the percentage of available slots for children under age 3 by state: Berlin (32.2%), Brandenburg (51.9%), Mecklenburg-Vorpommern (30.8%), Saxony (24.1%), Saxony-Anhalt (47.2%), and Thuringia (25.9%) (Deutsches Jugendinstitut, 2002). The interaction term captures whether fertility responses differ by levels of childcare provision. Implied effects are calculated at the 25th (24.1%) and 75th (47.2%) percentiles of the 1998 childcare distribution. The sample includes East German cohorts born between 1974 and 1983, drawn from the 2018–2019 German Microcensus. Standard errors are clustered at the cohort–month-of-birth level. Significance: $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.