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Socio-economic Circumstances at Birth and Early Motherhood: The Case of the "Daughters of the Wall"

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Abstract: The fall of the Berlin Wall in November 1989 resulted in a severe economic downturn and a stark temporary decline in fertility in East Germany. But did it also affect the fertility of future generations? In this paper, I investigate early motherhood - a marker of lifetime disadvantage - of those born in the years immediately after the fall of the Berlin Wall. Using data from the German Socioeconomic Panel and a difference-in-differences specification comparing the "Daughters of the Wall" with East Germans born in adjacent years and with West Germans in order to control for region fixed-effects and time-varying confounders, I find that these Daughters of the Wall were more likely to have children in young adulthood if they did not grow up with both of their parents. These results suggest that severe recessions increase early motherhood of those born into disadvantage, increasing the transmission of disadvantage across generations.

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1 Introduction

In this paper, I investigate whether being born to negatively selected parents during a time of economic and social upheaval increases early motherhood. I use the fall of the Berlin Wall in November 1989 and the subsequent sharp reduction in fertility rates in East Germany[1] as the exogenous variation that allows me to identify this effect using a difference-in-differences framework. Since early motherhood is associated with worse economic outcomes, understanding the linkage between motherhood and economic shocks helps us to better understand how disadvantage and gender inequality is perpetuated through fertility choices of women and whether the rate of these transmissions is different for those born during difficult economic times.

Early motherhood negatively affects economic outcomes throughout women's lives. Having children in young adulthood is associated with lower educational attainment, lower income, and a greater poverty risk (Hübgen 2020; Raab 2017). Young mothers are also more likely to be single mothers or to live in unstable relationships, both of which are predictors of poverty, including in East and West Germany (Federal Ministry for Family Affairs 2018; Hübgen 2020; Raab 2017; Zagel et al. 2021; see also Bundesministerium für Familie, Senioren, Frauen, und Jugend 2012). Perhaps not surprisingly, single mothers are also more stressed and unhappy (Hamermesh 2021). Early motherhood is transmitted through generations. Daughters of young mothers are more likely to themselves become mothers at a young age and in less stable family environments (Amato and Patterson 2017; Blomeyer et al. 2013; Morosov and Trappe 2018; Raab 2017). There is an extensive literature in sociology documenting the contribution of economic hardship, educational attainment, and values passed on to the next generation, as well as the stressors that are present in unstable families linking mothers' and daughters' fertility choices (see, e.g., Raab 2017). Young mothers are thus more likely to be disadvantaged.

Disadvantaged families are especially affected by severe recessions. Parents who were unemployed during the great recession, for example, suffered not only from reduced incomes

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[1] For simplicity, I will refer throughout this article to the region of the former German Democratic Republic as East Germany and that of the Federal Republic of Germany in 1989 as West Germany.

and increased stress but also from worse health outcomes. These negative effects were worse for single, low-income mothers, and accentuated existing gender differences in poverty rates (Currie et al. 2015; Currie and Duque 2016). Their children are affected not only because they have fewer resources available to them in childhood, but also because they have worse relationships with their parents (Mincy and De la Cruz Toledo 2016; Schneider et al. 2016a and 2016b). Worse relationship with parents, in turn, predict early moving out of the family home and early motherhood (Hofferth and Goldscheider 2010). It is thus possible that severe recessions affect the next generation by increasing their probability of having children in early adulthood, and especially those who are already at risk.

While recent studies have analyzed the effects of the great recession on families (see, e.g., Currie et al. 2015; Garfinkel, McLanahan, and Wimer 2016), it is still too early to know whether the fertility timing of those who were born during that time was affected. The effects of the Great Depression on children have been studied extensively (see, e.g., Duque and Schmitz 2021; Thomasson and Fishback 2014), but the material deprivation during that time led to unique hardship among the poor and those who fell into poverty during the depression (e.g., Terkel 1970), so the findings are not informative about the effects of severe, more recent recessions. The fall of the Berlin Wall in 1989 and the subsequent reunification with West Germany is therefore a unique opportunity to study the fertility choices of those who were born around this time.

My study has two main contributions. First, this is the first study to analyze the fertility choices of those born during severe recessions. Previous research has focused on more short-term effects of recessions on mothers and their children, such as mothers' health and health behaviors (e.g., Currie and Duque 2016). Second, it is the first study to investigate early motherhood of the women born in East Germany in the period immediately after the fall of the Berlin Wall. I call these women the "Daughters of the Wall", following Chevalier and Marie (2017) who named this generation the "Children of the Wall". Since early motherhood is associated with socioeconomic disadvantage, it is an important predictor of future disadvantage of mothers and their children. This is especially pertinent to the Daughters of the Wall. This cohort was born during a time when fertility had dropped sharply in East Germany and to mothers who were negatively selected

(Chevalier and Marie 2017). They have been shown to have worse cognitive and noncognitive skills as well as different risk attitudes (Chevalier and Marie 2017 and 2022; Gill and Kleinjans 2020; Kleinjans and Gill 2018).

To study the effect of the fall of the Berlin Wall on early motherhood of those born in its immediate aftermath, I use a sample of women aged 17-24 who were born between 1983 and 2000 from the German Socioeconomic Panel (SOEP). Employing a difference-in-differences specification that compares the outcomes of those born in the years adjacent to the fall of the Berlin Wall in East Germany with those born in West Germany, I find that those women who were born right after the fall of the Berlin Wall during the time of the sharp drop in fertility had a greater likelihood of becoming young mothers. This effect is only present, however, for those who did not grow up with both parents. Children who grow up with single or cohabitating, non-married parents face greater early life adversity and lower socio-emotive home environments, and fare worse in a range of social and economic outcomes, which are in turn associated with earlier childbearing and greater likelihood of becoming single mothers (see, e.g., Blomeyer et al. 2013; Bundesministerium für Familie, Senioren, Frauen, und Jugend 2012; Chevalier and Marie 2017; Foran et al. 2022; Manning 2015). My findings suggest, thus, that it is those who are already disadvantaged whose behavior is affected in a way that is likely to result in greater poverty and socioeconomic disadvantage in their lives, worsening their disadvantage. Female poverty, therefore, is not only transmitted through generations by motherhood at young ages but the rate of transmission increases in the aftermath of economic shocks through their effects on the next generation of women - lowering women's incomes, worsening their poverty, and increasing the gender gaps in economic outcomes.

2   The Daughters of the Wall

The fall of the Berlin Wall in November 1989 resulted in the worst economic contraction since World War II (Akerlof et al. 1991; BA 2019; Collier 1991) and a stark drop in fertility in East Germany. As can be seen in Figure 1, the total fertility rate in East Germany dropped by 36% alone between 1990 and 1991, a drop that continued until 1993 (henceforth referred to as

fertility trough). Those who did have children during this time of low fertility were more negatively affected by labor demand shocks because of greater exposure to the economic restructuring that took place after November 1989 (Liepmann 2018). This aligns with findings by Chevalier and Marie (2017). They have shown that the "Children of the Wall" - who were born immediately after the fall of the Berlin Wall up until the flattening of the fertility decline in 1993 - grew up in less favorable family environments than those who were born just before: They had mothers who were younger, less educated, and more likely to be on welfare, and grew up in less stable families with parents who were less engaged in the lives of their children. Chevalier and Marie (2017) also found that these children had lower test scores and educational achievement as teenagers. This was not the case for those who were born to mothers already pregnant in November 1989, pointing to the importance of parental selection for these findings rather than it just being the consequence of the social and economic upheaval (Chevalier and Marie 2017). Follow-up work by Gill and Kleinjans (2020) and Kleinjans and Gill (2018; 2022) found that the Daughters of the Wall also have lower noncognitive skills in young adulthood, and that the young men born during this time exhibit riskier health behaviors. Chevalier and Marie (2022) further link mothers' and children's riskier attitudes to children's higher propensity to commit crimes.

It is the fertility behavior in young adulthood of these women that I investigate in this study. Born during a time of low fertility in East Germany, in young adulthood they lived in a Germany in which East and West fertility rates had converged, as can be seen in Figure 1. Focusing on this group, my identification strategy allows me to causally identify how being born during economic and social upheaval to negatively selected parents affected their fertility in young adulthood.
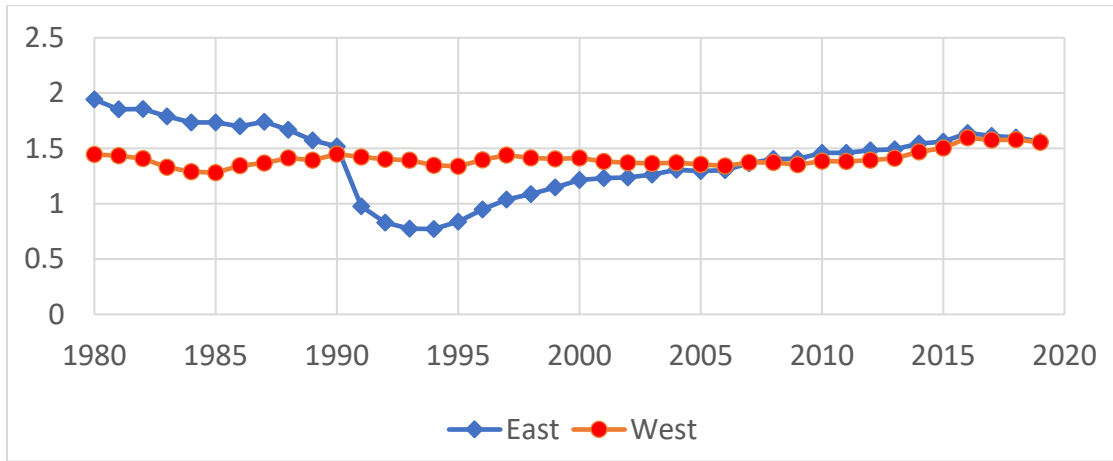
Figure 1: Total Fertility Rates in Germany, by Region

For women aged 15-49 years. Berlin is excluded from 2001 onwards.

Data Source: Statistisches Bundesamt (2020), available at

https://www.destatis.de/DE/Presse/Pressemitteilungen/2020/07/PD20_282_122.html

3   Empirical Approach

To identify the causal effects of being born in East Germany in the years immediately after the fall of the Berlin Wall on early motherhood, I use a difference-in-differences model estimated on a sample of 17- to 24-year-old women. Following Chevalier and Marie (2017), I define the treated group, the Daughters of the Wall, as those born in East Germany between August 1990 and the end of 1993. Their mothers became pregnant after the fall of the Berlin Wall during the fertility trough and were negatively selected. The first control group are those born in East Germany before August 1990 or after 1993. This first difference allows me to identify whether this treated group's fertility timing differs from other East German cohorts. The second control group are West Germans, who were neither affected by the upheaval nor experienced changes in parental selection following the fall of the Berlin Wall. Using this second difference allows me to control for time-varying confounders that may have affected the fertility of different birth cohorts. Figure 2 visualizes the control and treatment groups along the year-of-birth axis. I estimate the following equation:

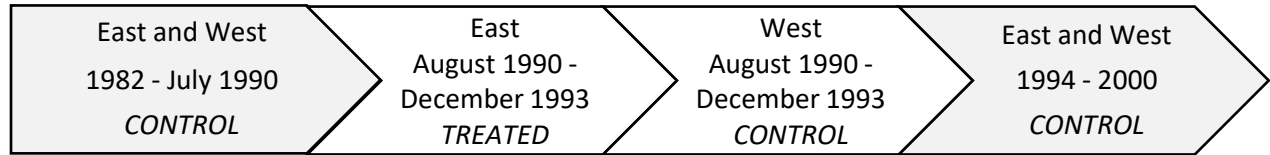$$child_{irc} = \emptyset_r + \sqrt{}_c + x_{irc} + \propto D_{rc} + u_{irc} \; , \tag{1}$$

where *i* is the individual, *r* is the region (East or West), and *c* is the cohort (that is, the year of birth). The outcome variable, *child*, is equal to one if the individual has at least one child. D_{rc} is the treatment, which is equal to one if the individual was born in the East and between August 1990 and 1993. x are the covariates (age dummies and survey year dummies), $\emptyset_r$ are regional fixed effects, $\sqrt{}_c$ cohort fixed effects, and u_{irc} is the error term.

The cohort is equal to the year of birth, with two exceptions because of the timing of the fall of the Berlin Wall in November 1989 as well as the timing of pregnancy and birth. Chevalier and Marie (2017) have demonstrated that mothers who were already pregnant when the Berlin Wall fell were not negatively selected, and that the sharp drop in fertility happened after these women gave birth. This cohort, which I call *Crossing* following Kleinjans and Gill (2020), is thus distinct from those born before the fall of the Berlin Wall and from those born to negatively selected mothers who became pregnant afterwards. To take this into account, I code them as a separate cohort. Since this leaves a small cohort size for the Daughters of the Wall born in 1990, I combine these with those born in 1991 into a cohort *1990/ 1991*.

The model thus estimates the average treatment effect of the treated (ATET) by fitting a linear model with year-of-birth and regional fixed effects to control for time-varying confounders and time-invariant group characteristics. This identification method requires the assumption that the respective East and West German women in the 1983-2000 birth cohorts would have exhibited similar trends in family formation over time had the fall of the Berlin Wall and the decrease in fertility in the subsequent three years not occurred. This assumption is plausible given the fertility trends in East and West Germany and the birth cohorts included in my sample. Starting in the early 2000s, when the earliest cohort of women in my sample (those born in 1983) started to have children overall fertility rates were very similar (see Figure 1). I report formal tests of the parallel trend assumption and graphical evidence in the next section. Also note that I chose a narrow window of year-of-birth cohorts of about seven years before the fall of the Wall up until about seven years after the fertility trough for my working sample to make the included cohorts

as similar as possible while maintaining sufficient sample sizes for inference. My results are not driven by the exact choice and definition of cohorts. (See subsection Robustness Checks.)

East and West 1982 - July 1990 CONTROL	East August 1990 - December 1993 TREATED	West August 1990 - December 1993 CONTROL	East and West 1994 - 2000 CONTROL

Figure 2: Assignment of Treated and Control Groups by Region and Year of Birth

To adjust for the small number of groups and the relatively large number of individuals in each group, I use the aggregation method proposed by Donald and Lang (2007) to calculate the coefficient of interest (the average treatment effect of the treated) and the standard errors. Using wild bootstrapping instead to compute p-values and confidence intervals leads to similar coefficients and mostly slightly lower p-values; I thus report the more conservative results.

To avoid bad controls, that is, variables that are themselves affected by the treatment (Angrist and Pischke 2009) I only control for age and survey year. Age dummies are included to account for differences in fertility rate by age, and survey year dummies to control for events that may have affected fertility in any given year (such as a recession). I estimate this model for the whole sample. To evaluate potential mechanisms for differences in early fertility of the Daughters of the Wall also estimate the model with the sample split by partnership status and by whether individuals grew up with both of their parents.

My identification strategy relies on the comparison of differences in early motherhood within and across regions. While the fall of the Berlin Wall was unexpected, it did affect all East Germans. Therefore, my results do not show how the social and economic upheaval following the fall of the Berlin Wall affected early motherhood of those who were children during that time or born in the years afterwards. What they do show is whether early motherhood of those who were *born* in the immediate aftermath, to negatively selected parents, was different.

To investigate potential patterns and mechanisms, I estimate the same model on two different sets of subsamples. First, I split the sample by partner status to investigate whether differences in early motherhood are associated with single motherhood. Second, I split the sample by whether a woman grew up with both parents during the first fifteen years of her life. Under the assumptions that not growing up with both parents is a good measure of disadvantage and that selection into relationship status did not differ for the parents of the Daughters of the Wall, the results from these models show the effect of being born during a severe recession for those born into disadvantage and for those who were not.

4 Data and Variables

For this study, I use data from version 36 of the German Socioeconomic Panel (SOEP), a nationally representative annual survey of around 11,000 households in Germany, collected between 1984 and 2019 (Wagner et al. 2007; see also Goebel et al. 2019).[2] To study prevalence of early motherhood, I use the subsample of German-born women who are between 17 and 24 years old and were born between 1983 and 2000, that is, between roughly seven years before the fall of the Berlin Wall and seven years after the trough in fertility. I restrict the sample to women who live in private households who were not abroad and whose mothers were not abroad in 1989. I drop 16 observations of individuals to whom I cannot assign a cohort and 796 observations to which I could not assign the region of birth.[3] Because I do not observe every woman until she reaches age 24, I pool the observations. The final working sample contains 18,063 observations from 4,605 women for the years 2000-2019.

Individuals are classified as being from the East or from the West region of Germany based on their mother's location in 1989. If this information is missing (the case in 13% of the sample), I used the region of birth if available or the current region if the respondent reported to be living in the same location where she grew up.

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[2] I use the 95% sample that is available to international researchers.
[3] Using the current region for these 796 missing observations as region of birth instead of dropping them does not affect the results.

Table 1: Descriptive Statistics

	All	East	East *Daughters of the Wall only*	West
East	25.72%			
West	74.28%			
Any child	6.11%	9.00%	13.07%	5.11%
Age	19.88	19.95	20.14	19.86
	(2.22)	(2.24)	(2.17)	(2.21)
Living with partner	11.61%	14.60%	15.35%	10.58%
Grew up with both parents during the first 15 years of life				
Yes	68.80%	63.98%	54.56%	70.47%
No	30.38%	35.05%	43.31%	28.76%
Not known	0.82%	0.97%	2.13%	0.77%
N	18,063	4,645	658	13,418

Standard deviations shown in parentheses for continuous variables.

As described in the previous section, I divide individuals into the treated and control groups based on their location and year and month of birth. The treated cohort are those born in the East between August 1990 and the end of 1993, and the control group are those born before or afterwards in the East as well as all birth cohorts in the West.

The outcome variable of interest is whether the woman has any child. (Only 6% of women in the sample have more than one child.) Covariates used include age, whether the respondent lives with a partner (set to zero for 8 observations with missing information), and whether the respondent lived with both biological parents during the first 15 years of her life. Since only 2.1%

of the working sample of these young adults are married and less than 0.25% were married previously, I am not able to explore differences in marriage behavior.

Table 1 provides descriptive statistics of the sample. Slightly more than one fourth of observations are from women born in East Germany. Respondents are on average 20 years old, and a majority grew up with both parents. There are, however, regional differences: While 70% of women born in the West grew up with both parents, only 64% of those born in the East did. East Germans are more likely to have children (9% vs. 5%) and to live with a partner (15% vs. 11%). Table 1 also shows the descriptive statistics for the Daughters of the Wall. They are more likely to have a child than East German women born before or after but look similar to them in terms of average age and cohabitation status. They are, however, less likely to have grown up with both of their parents.

5 Results

Main results

The effect of being a Daughter of the Wall - that is, being born in East Germany right after the fall of the Berlin Wall - on early motherhood are shown in Table 2. Column (1) shows the results for the entire sample, and columns (2) and (3) the results for the sample divided by cohabitation status. The two means shown on the bottom of the panel are the overall mean of the outcome variable, and its mean for non-treated East German women only.

The effect is economically and statistically significant. The Daughters of the Wall are 6.8%-points more likely to have a child. This is an over 80% increase over the sample mean of non-treated East German women. When splitting the sample by cohabitation status, the results show that this effect seems to be driven by those living with a partner (of course, the direction of the causation is not determined). Daughters of the Wall who live with a partner are twice as likely to have a child compared to the baseline mean for the East German control group. There is no difference for single women. This implies that greater childbearing is associated with women who started to cohabit either before or as a result of having a child.

Table 2: The effect of being a "Daughter of the Wall" on early motherhood

	(1)	(2)	(3)
	All	Living with partner	Not Living with partner
ATET	0.068 ***	0.292 ***	0.018
	(0.018)	(0.097)	(0.017)
Age dummies	√	√	√
Survey year dummies	√	√	√
Region FE	√	√	√
Year FE	√	√	√
Parallel-trends test (Prob > F)	0.929	0.465	0.405
Mean (sample)	6.11%	30.22%	2.94%
Mean (not-treated East only)	8.33%	29.29%	4.78%
Number of observations	18,063	2,098	15,965

ATET (average treatment effect of the treated) and standard errors are calculated using the Donald and Lang (2007) aggregation method. * p-value < 0.10, ** p-value < 0.05, *** p-value < 0.01.

The results of the parallel-trends tests for the full sample are shown in the middle panel. In all three cases, I cannot reject the null hypothesis that the linear pretreatment trends are parallel in East and West Germany. Figure 3 shows the results of this linear trend model visually for the full sample. Recall that to account for the fact that those born to a mother who was already pregnant at the time of the fall of the Berlin Wall are not treated, I created the birth cohort *Crossing* (which includes those born between November 1989 and July 1990) and merged those treated in 1990 with those (also treated) born in 1991. The parallel trends are convincing except for, maybe, the *Crossing* cohort and the cohort born in 1994. I investigate the possibility that these cohorts should be considered treated (and reject it) as reported in the robustness checks section.
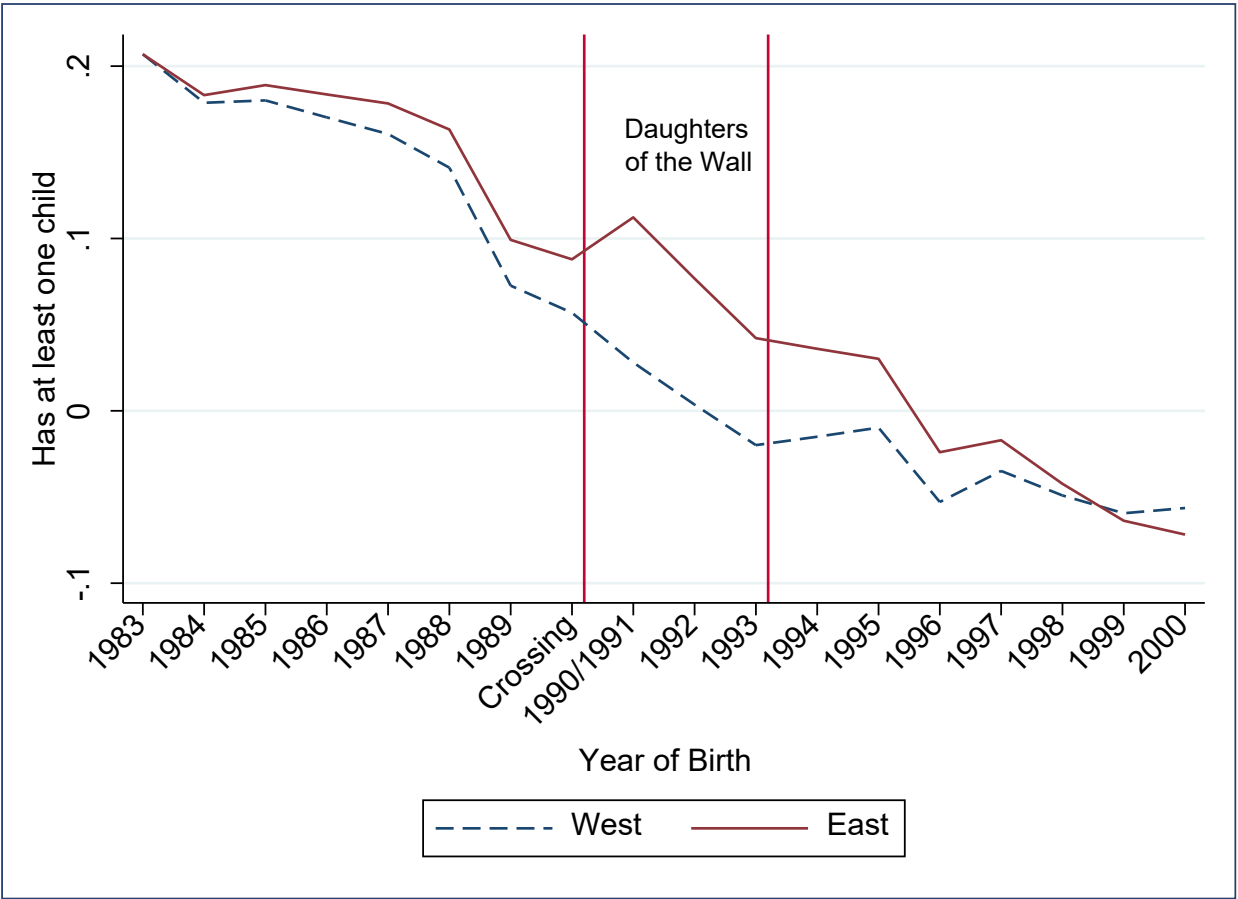
Figure 3: Linear Trends Model (full sample): Early Motherhood

My results show that early motherhood of the Daughters of the Wall is higher for those who live with a partner. While only few of them are married (marriage rates in young adulthood are very low in Germany – recall that in my sample only 2.1% are married) they did not choose to raise their children as single mothers. It is too soon to know what happens to these families as time passes, but previous research has found, as described above, that cohabitating relationships are less stable. It is well possible, and maybe even likely that the relationships of the Daughters of the Wall are even less stable. In the aftermath of the great recession, for example, cohabitating relationships were more likely to dissolve and less likely to be formed in areas with higher

unemployment, pointing to the importance of financial strain and resulting partner conflict for the instability of cohabitating partnerships (Schneider et al. 2016a).

The role of childhood disadvantage

In order to investigate a potential mechanism for this increased early fertility, I investigate whether growing up with both parents (or not) affected the likelihood of the Daughters of the Wall to become young mothers. Growing up without both parents is an indicator for childhood disadvantage as discussed above, and I argue a good measure of parental selection.

Under the assumption that selection into relationship status did not differ for the parents of the Daughters of the Wall, splitting the sample and conducting separate analyses allows me to investigate whether Daughters of the Wall who grew up disadvantaged have a different early fertility compared to others who grew up with a similar family constellation but were born at a different time, as well as whether being born during a time of economic and social upheaval has an effect on early fertility in the absence of such disadvantage.

Table 3 shows the results of the estimated model with the sample split by this variable, with Column (1) repeating the results for the full sample. As can be seen in Column (2), the Daughters of the Wall who grew up with both parents are neither more nor less likely to have a child than the control group of those who were born before and afterwards. The positive treatment effect is thus entirely driven by those who did not spend their first 15 years of life with both parents. As shown in Column 3, these Daughters of the Wall are 16%-points more likely to have a child, or over 80% more likely than the not-treated group in East Germany. As before, the hypotheses of linear parallel tends cannot be rejected. Figure 4 shows the linear trends graphically for the regression that only includes those who did not grow up with both parents. Up until the *Crossing* period, the trends in East and West Germany are almost identical; they diverge for the Daughters of the Wall and become more similar for subsequent cohorts.

These results suggest that it is the childhood disadvantage combined with being born during the economic and social upheaval in the aftermath of the fall of the Berlin Wall that amplified the intergenerational transmission of low socio-economic status (SES) by increasing early

motherhood of the Daughters of the Wall, even compared to others who also grew up disadvantaged.

Table 3: Mechanism - Childhood disadvantage and early motherhood

	(1)	(2)	(3)
	All	Grew up with both parents	Did not grow up with both parents
ATET	0.068 ***	-0.017	0.160 ***
	(0.018)	(0.025)	(0.040)
Age dummies	√	√	√
Survey year dummies	√	√	√
Region FE	√	√	√
Year FE	√	√	√
Parallel-trends test (Prob > F)	0.929	0.533	0.728
Mean (sample)	6.11%	4.98%	8.42%
Mean (not-treated East only)	8.33%	7.88%	8.71%
Number of observations	18,063	12,428	5,487

ATET (average treatment effect of the treated) and standard errors are calculated using the Donald and Lang (2007) aggregation method. * p-value < 0.10, ** p-value < 0.05, *** p-value < 0.01.
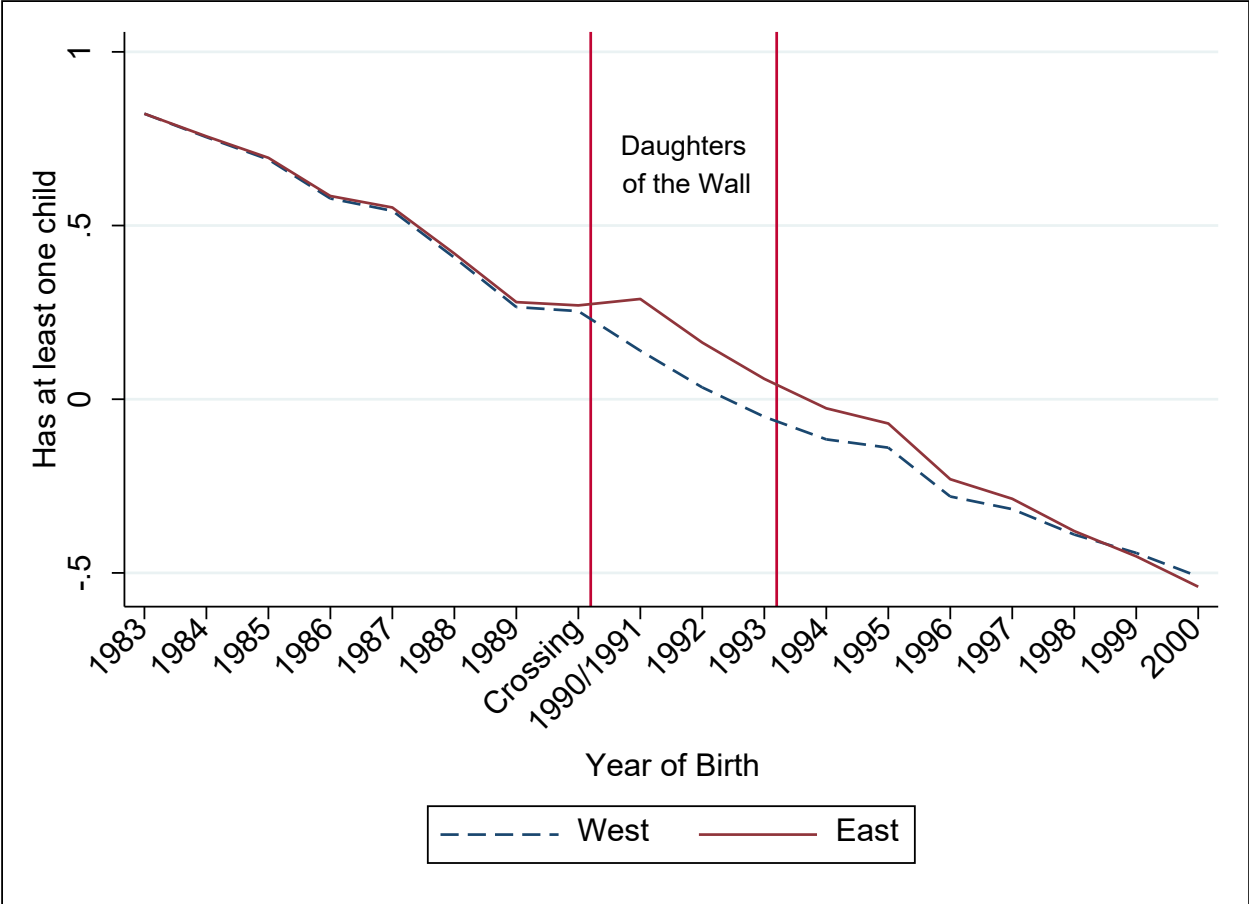
Figure 4: Linear Trends Model: Early Motherhood - Sample restricted to those who did not grow up with both parents

This interpretation relies on the assumptions that parental relationship status can be used to control for parental selection and that parental selection did not change after the fall of the Berlin Wall. While these are by definition not testable, I argue that it is plausible based on the following:

First, as discussed earlier, not growing up with both parents negatively affects children's outcomes, including in East and West Germany. Second, including additional measures of mothers' characteristics (education, teenage mother, young mother) in the estimated model does not affect the results, supporting the use of parental relationship status as a measure of parental selection and the assumption that selection into partnership status did not change (results not shown; see also Chevalier and Marie 2017). Third, if parental selection into relationship status had changed after the fall of the Berlin Wall, one would expect that the results

be sensitive to the selection of the East German control group. But excluding all cohorts born after 1993 from my sample or all cohorts born before the Daughters of the Wall does not affect the results (see Appendix Table A1 for the results for the sample of those who did not grow up with both parents). While I cannot rule out that selection into relationship status has only changed for mothers who gave birth to the Daughters of the Wall based on parental characteristics that I cannot control for, the evidence presented above supports the interpretation that it is the combined effect of being born into disadvantage during a time of social and economic upheaval that causes the greater likelihood of early motherhood for the Daughters of the Wall. This interpretation is further strengthened by the fact that it is possible that among all cohorts who did not grow up with both parents, the Daughters of the Wall might have grown up in relatively less disadvantage. The stress resulting from the upheaval following the fall of the Berlin Wall may have led to an increased dissolution of marginal relationships, which is what happened in the U.S. during the great recession (Schneider et al. 2016a). This would have softened the negative parental selection for this subgroup of the Daughters of the Wall compared to others who grew up without both parents, leading to a downward bias in my results.

Robustness checks

To ensure that my findings are not the result of the choice of control group or standard error correction, I conducted a series of robustness checks on which I report below. None of these altered the conclusions.

Starting with the choice of control group, I investigated two potential shortcomings of my approach. First, it is possible that the *Crossing* cohort – those born to mothers who were pregnant at the time the Berlin Wall fell but had not yet given birth – might also exhibit different early fertility despite not being born to negatively selected mothers. If this were the case, the interpretation of my results that it is the combination of disadvantage and upheaval that caused the different early fertility of the Daughters of the Wall might be flawed. To confirm that the results are not dependent on including those born during the *Crossing* period, I conducted the analyses excluding this cohort from the sample. The results are unchanged.

Second, based on Figure 2, it seems possible that there were cohorts still affected after those born in 1993. To investigate this, I re-estimated the models without the cohort born in 1994. The results do not change. Reassigning treatment status to the cohort born in 1994 yields results that are still similar if slightly smaller and with somewhat higher rejection probabilities of the null hypothesis of parallel trends for the regression that only includes those who did not grow up with both parents. My results are thus not contingent on excluding 1994 from the treated cohort. As reported earlier, excluding all cohorts born after 1993 likewise does not affect the results.

I also conducted simple linear regressions using only the sample of East Germans, with age and survey year dummies. While this is not my preferred specification since it does not allow me to control for time-varying confounders, the fact that my results are qualitatively similar shows that they are not the result of using West German as control group.[4]

And, lastly, to assess whether using the Donald and Lang (2007) aggregation method to adjust for the small number of groups affects the result, I reestimated the model with standard clustered standard errors as well as wild bootstrap. The results are very similar except for the subsample of those who are partnered, for which with wild bootstrap the coefficient of interest remains very similar but becomes statistically insignificant.

6   Conclusions

The sudden and unexpected fall of the Berlin Wall created enormous opportunities for people who lived in East Germany, but also caused extraordinary economic and social disruption. One response of people living through this time was a stark drop in fertility. Mothers who did have children in the immediate aftermath of the fall of the Berlin Wall were negatively selected - more likely to be young, of low socio-economic status, and less attentive to their children (Chevalier and Marie 2017). Not surprisingly, these children had lower cognitive and noncognitive skills (Chevalier and Marie 2017; Gill and Kleinjans 2020; Kleinjans and Gill 2018).

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[4] For the full sample I find no statistically significant and small effects, but for those who are partnered the coefficient for early fertility is 0.260*** and for those who did not grow up with both parents it is 0.104 ***. Full results are available upon request.

In this paper, I investigate fertility of these Daughters of the Wall in early adulthood, comparing their outcomes to those born before and after this fertility trough and controlling for time-varying effects using West German women as a control group. I find that these Daughters of the Wall are more likely to have children, and that this difference is driven by those who did not grow up with both of their parents. These Daughters of the Wall have lower levels of education and lower incomes, which is likely to worsen gender differences in economic outcomes for these women. My results thus suggest that it is those who are already more disadvantaged in childhood who are responding to being born in a period of economic and social upheaval by having children in young adulthood. While I can only speculate about the transmission mechanism, it is possible that the upheaval increased the effect of upbringing on early fertility through increased family instability in childhood and a more stressful home environment (Amato 2005; Fomby and Cherlin 2007).

These results shed light on how disadvantage transmits through generations and is amplified by economic shocks. Since young mothers have lower education and wages, the increased early fertility of the Daughters of the Wall is likely to perpetuate and even increase gender inequalities in this cohort of Germans.

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APPENDIX

Table A1: Cohort Restrictions: Only those who did not grow up with both parents

	(1)	(2)	(3)
	All	Cohorts born before 1994 only	Cohorts born after *Crossing* only
ATET	0.160 ***	0.162 **	0.161 ***
	(0.040)	(0.054)	(0.026)
Age dummies	√	√	√
Survey year dummies	√	√	√
Region FE	√	√	√
Year FE	√	√	√
Parallel-trends test (Prob > F)	0.728	0.993	N/A
Number of observations	5,487	2,949	3,526

ATET (average treatment effect of the treated) and standard errors are calculated using the Donald and Lang (2007) aggregation method. * p-value < 0.10, ** p-value < 0.05, *** p-value < 0.01.