

# **The Effects of a Wall: Gender Attitudes and Political Involvement in Unified Germany**

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## **Abstract**

Why are women less politically involved than men? Scholars posit that gender (in)egalitarian attitudes are an important determinant of women's engagement and participation. Yet, existing work finds only mixed support for this claim. Using the German General Social Survey (1991-2016), we examine the impact of gender egalitarian attitudes on political interest and involvement across birth cohorts from East and West Germany. We find that traditional gender attitudes are on average negatively correlated with political participation and engagement, especially among women. Women who hold gender egalitarian attitudes, in contrast, are nearly as involved in politics as their male counterparts. We then show that this finding holds when instrumenting for gender attitudes, and identify a possible individual-level mechanism underlying our findings: women's access to education. Together, these results reveal an important barrier to gender equality and inform debates about the persistent gender gap in political involvement.

**Word Count:** 9,634

There is a persistent gender gap in political participation and engagement. Across countries and over time, women have generally been less likely to discuss politics, join political organizations, work on campaigns, and engage in other political activities (Alexander and Jalalzai 2020; Atkeson 2003; Beauregard 2014, 2018; Córdova and Rangel 2017; Hinojosa and Kittilson 2020; Kittilson and Schwindt-Bayer 2012; Wolbrecht and Campbell 2007, 2017). These lower levels of involvement can have pernicious consequences. Gender inequities “undermine the quality of deliberation, representation, and legitimacy in the democratic process” (Kittilson 2016, 1).

In an effort to close the political gender gap, a large body of research identifies factors that depress women’s interest in politics and participation in political activities. This work demonstrates that women often lack the resources to participate on an even playing field with men, and that societal- and institutional-factors—especially women’s underrepresentation among political elites—erect additional barriers to inclusion. Less clear, however, is the role played by gender (in)egalitarian attitudes. Attitudes towards gender equality affect political behavior (Cassese and Barnes 2019; Dassonneville and Kostelka 2021; de Geus, Ralph-Morrow, and Shorrocks Forthcoming;), and intuitively traditional gender attitudes—essentialist views and beliefs that encourage women to be more passive and focused on the private sphere—should be associated with lower levels of political involvement among women. Yet, while some scholars find support for this link, others find null results.

Even when gender role attitudes and political involvement are correlated, moreover, the nature and direction of this relationship remains unclear. Gender egalitarian attitudes might predict women’s political involvement, or citizens (and countries) might display more gender egalitarian values precisely because women engage and participate more. People who hold traditional gender attitudes, moreover, differ from their more egalitarian counterparts in many ways. And, countries in which citizens on average express gender traditional attitudes differ from more egalitarian states on many dimensions. The political gender gap may thus be a consequence of traditional gender attitudes, or one of the many other factors that separate more and less progressive citizens and states.

Do traditional gender attitudes hamper women's political participation and engagement? To help answer this question, we examine gender attitudes and citizens' intention to vote and political interest in unified Germany. The German case is especially compelling because the Cold War division and subsequent reunification of the country offers a "unique opportunity to investigate...[the] understanding of political issues of citizens who were socialized in different contexts" (Neundorf 2009, 202). East and West had a similar history — one in which women were excluded from politics and kept the home according to the mantra "Kinder, Küche, Kirche" ("children, kitchen, church"). Then, the two states experienced four decades of exposure to radically different gender ideologies. Whereas under communist rule East Germany (German Democratic Republic, GDR) actively propagated gender equality (at least in some areas), during the same period West Germany (Federal Republic of Germany, FRG) was characterized by a strong adherence to the male-breadwinner-female-caregiver model (Banaszak 2006, Bauernschuster and Rainer 2012).

The separation of Germany allows us to observe the effects of semi-exogenously formed gender attitudes on political participation (e.g., vote intention) and engagement (e.g., stated interest in politics). Indeed, by leveraging this case, we minimize many of the inferential barriers inherent in studying the relationship between gender (in)egalitarian attitudes and women's political involvement. To establish that the East-West separation did, in fact, influence citizens' gender attitudes, following Banaszak (2006), Campa and Serafinelli (2019), and Lippmann, Georgieff, and Senik (2020), and others, we first use survey data—the German General Social Survey (1991-2016)—to compare the beliefs of men and women within different birth cohorts in East and West Germany. We find no differences in gender attitudes between birth cohorts from the East and West who were socialized after the fall of the Berlin Wall and subsequent German reunification. Consistent with existing research, however, we show that among the Cold War generation, those from the West hold much more traditional attitudes than those from the East.

Having confirmed that men and women socialized in the GDR express more egalitarian attitudes, in our main analysis we show that these attitudinal differences shape the gender gap in vote intention and political interest. Traditional gender attitudes are on average negatively correlated with political participation and engagement, especially among women. *Women who hold gender egalitarian attitudes, in contrast, are nearly as involved in politics as their male counterparts.* We further confirm these findings using instrumental variable regressions to address the possible endogeneity between reported gender attitudes and political involvement. And, importantly, we show that these results hold when accounting for the disparate resources that are available to women and men.

Finally, we examine a possible individual-level mechanism underlying our findings: women's access to education. We demonstrate that women in East Germany had higher education rates than their West German counterparts, and that having an educated mother is associated with both more egalitarian gender attitudes and greater political engagement and participation. Taken together, these results highlight an important source of the gender gap in political involvement. As long as traditional gender attitudes persist, we are unlikely to remedy the pernicious under involvement of women in politics. They also provide insights into eliminating this persistent barrier to gender equality. Egalitarian attitudes close the gap between men and women, and the link between mother's education and children's engagement and participation suggests a promising area for future exploration.

### **The Gender Gap in Political Involvement**

Women are on average less politically involved than men. Existing work identifies a number of individual- and contextual-level factors that influence this gender gap in political engagement and participation—that is men's greater propensity to discuss politics, contact elected officials, join political parties, and so on.<sup>1</sup> At the individual-level, scholars note that women often enjoy fewer

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<sup>1</sup> Though on most measures women report lower levels of political involvement than men, this pattern does not always hold with respect to voting (Kittilson and Schwindt-Bayer 2012).

of the civic resources associated with political involvement, including money, time, access to networks, and political knowledge (Brady, Verba, and Schlozman 1995; Bernhard, Shames, and Teele 2021; Brulé, and Gaikwad 2020; Burns, Schlozman, and Verba 2001; Inglehart and Norris 2003; Norris and Lovenduski 1995; Matland and Montgomery 2003). Focusing on contextual-level factors, a mounting body of evidence points to the institutional and cultural determinants of the gender gap. Significant attention has been paid, for example, to “role model effects” and the influence of women’s presence in political institutions on women in the mass public (Alexander and Jalalzai 2020; Barnes and Burchard 2013; Barnes and Taylor-Robinson 2018; Beaugard 2018; Desposato and Norrander 2009; Wolbrecht and Campbell 2007, 2017). Other work explores the impact of party system institutionalization (Fraile and Gomez 2017), as well as legal (Tudor 2022) and electoral systems (Beaugard 2014; Córdova and Rangel 2017; Kittilson and Schwindt-Bayer 2012) on women’s political involvement.<sup>2</sup>

With respect to cultural explanations, Inglehart and Norris (2000, 2003) and others argue that the modernization process—i.e., the shift from agrarian to industrial and finally postindustrial societies—shrinks the gender gap in political participation. Modernization theory posits that socioeconomic development and societal gender equality bolster women’s participation in politics (Coffé and Dilli 2015). More generally, scholars draw on cultural explanations, those that “emphasize the attitudes and values that people bring to the electoral process, including their political interest and ideological beliefs” (Inglehart and Norris 2003, 102), to explain (wo)men’s willingness to participate in politics. The degree to which a society holds traditional versus gender egalitarian attitudes, in particular, is thought to influence the gender gap in both men’s and women’s political involvement (Fraile and Gomez 2017; Inglehart and Norris 2003) and presence in elected office (Norris and Inglehart 2001; Paxton and Kunovich 2003). Likewise, attitudes towards gender equality—including hostile and ambivalent sexism—increasingly shape women’s and men’s political behavior (de Geus, Ralph-Morrow, and

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<sup>2</sup> A growing number of studies also investigate the effects of electoral gender quotas on women’s engagement and participation (Beaugard 2017; Clayton 2015; Davidson-Schmich 2016; Kittilson and Schwindt-Bayer 2012; Kittilson 2016; Zetterberg 2009). These studies typically find null results.

Shorrocks Forthcoming; Cassese and Barnes 2019). Below we explore the link between gender attitudes and women's political involvement, including identifying the obstacles inherent in testing the relationship between the two. We then propose using German separation and reunification to study the link between attitudes and women's engagement and participation in politics.

### *Traditional versus Egalitarian Gender Attitudes and Political Involvement*

Attitudes about gender roles shape citizens' expectations about appropriate masculine and feminine behavior within a given culture. More traditional gender roles encourage men to be autonomous, self-reliant leaders who engage in the public sphere. Women's gender role, in contrast, is more passive and focused on the private sphere (Coffé and Bolzendahl 2010, 2011; West and Zimmerman 1987).

For much of history, social norms limited women's formal participation in political activities (Iversen and Rosenbluth 2010). Yet, there is variation in adherence to traditional gender roles over space and time. This can be attributed to myriad factors, including exposure to women political elites (Alexander 2012; Alexander and Jalalzai 2020, Beaman et al. 2012), matrilineality (Brulé and Gaikwad 2020; Robinson and Gottlieb 2019), religion and religiosity (Alexander and Welzel 2011; Morgan 2006), and so on. Greater educational attainment likewise increases women's support for gender equality (Plutzer 1988). Differences in the presence and implementation of gender egalitarian policies can also affect gender attitudes (Zoch and Schober 2018). Söberg (2004) finds that state policies that support dual-earner families are associated with more egalitarian attitudes toward maternal employment. Focusing on Germany, Banaszak (2006) shows persistent differences in East and West Germans' gender attitudes, which she attributes to GDR "gendered state policies" related to religion and women's employment.

Scholars have demonstrated that adherence to traditional gender roles can affect women's attitudes towards, and behavior in, the public sphere (Campa and Serafinelli 2019, Lippmann, Georgieff, and Senik 2020). Effects on political involvement, however, are less clear. Intuitively, gender role attitudes should help to explain the persistent gender gap in men's and women's

party membership and political interest. Indeed, Atkeson and Rapoport (2003: 500) argue that they could be “key in understanding differences between men’s and women’s willingness or ability to communicate political preferences.” Traditional gender roles “promote an unadventurous political role for women” (Fraile and Gomez 2017, 601), and women are often “trapped by a culture that sees politics as a man’s world and keeps women’s political self-esteem low” (Atkeson and Rapoport 2003, 500). This reduces women’s levels of political involvement. Chhibber (2002) demonstrates, for example, that women who do not have an identity outside the household are less likely to be politically active, even after controlling for demographic factors. Tudor (2022) likewise shows that the consolidation of husbands’ authority in the French Civil Code led to a decline in women’s political participation, arguing that it is “private relations that shape women’s public engagement.”

Complementary work suggests that women in more gender egalitarian environments participate in politics at levels comparable to men. Robinson and Gottlieb (2019) demonstrate that the gender gap in political participation is smaller in matrilineal societies, because they foster more progressive norms about women’s roles. Fraile and Gomez (2017) show that gender gaps in political interest are smaller in countries enacting policies aimed at promoting gender equality. Dassonneville and Kostelka (2021) find that cultural differences, as measured by country-level differences in boys’ and girls’ math scores, explain the gender gap in political interest. At the individual level, Cassese and Holman (2016) find that women with higher levels of gender consciousness are more likely to participate in politics.

Yet, other studies find that gender (in)egalitarian roles have limited effects. In the American context, Welch (1977) called into question the validity of political socialization explanations, finding no systematic differences in levels of men’s and women’s participation once accounting for situational and structural variables. Related work by Fox and Lawless (2014) finds that traditional family dynamics—including the division of labor pertaining to household tasks and child care—do not predict the gender gap in political ambition. Looking cross-nationally, in their study of 18 advanced Western democracies, Coffé and Bolzendahl note that “controlling

for...political attitudes did not impact gender gaps as much as might be expected based on theories of...gender role socialization” (2010, 331). Likewise, cross-national differences in the gender gap in political participation in 13 Muslim-majority nations cannot be explained by levels of state Islamization, modernization or societal gender equality (Coffé and Dilli 2015). Mayer and Schmidt (2004) note the surprisingly small gender differences in political interest and beliefs about political participation across four countries with otherwise different beliefs about appropriate gender role attitudes—China, Japan, Mexico, and the United States.

Though adherence to traditional gender roles clearly varies across countries, whether and how this affects political engagement and participation remains in doubt, particularly when accounting for other individual- and contextual-level factors. This uncertainty, in turn, has significant consequences for how we seek to close the political gender gap. Weighing in on this important debate, we first posit that on average *women are less politically interested and involved than men*. We expect, however, that this gender effect is conditioned on women’s attitudes towards traditional gender roles. Women who hold more progressive beliefs about women’s place in the public and private spheres should be as likely as men to express political interest and join political parties. Women who believe that their main responsibilities lie at home and with their families, on the other hand, are expected to be especially unlikely to engage in what are traditionally regarded as male spheres of activity. We thus propose that *traditional gender role attitudes increase the gender gap in political engagement and participation, whereas women who hold egalitarian gender role attitudes are (almost) as likely to be involved in politics as men*.

### **Identifying the Effect of Attitudes on Involvement**

Though we expect that holding gender egalitarian attitudes increases women’s political involvement, concerns about unit heterogeneity and reverse causality make it difficult to test this claim. First, though we know that gender roles vary across countries, it is also the case that countries in which citizens express gender egalitarian attitudes differ from more traditional states in a number of ways. For example, they are more secular, enjoy higher levels of economic



development, and elect more women to political office (Inglehart and Norris 2003, Paxton and Kunovich 2003). This calls into question whether the political gender gap is a consequence of egalitarian attitudes, or one of the many other alternative factors that separate more and less progressive states.

Second, there is also reason to suspect reverse causality. Aggregate-level gender egalitarian attitudes may predict women's political involvement. But, countries may be more gender egalitarian precisely because women engage and participate more (Alexander 2012). And, at the individual level, women may be more involved in politics because they hold more progressive beliefs about gender roles. Or their political participation and engagement may determine their attitudes.

In essence, our inability to randomly assign traditional or egalitarian attitudes represents a central challenge to assessing the connection between gender role attitudes and the gender gap in political involvement. Following other studies in political science and economics (Alesina and Fuchs-Schündel 2007; Banaszak 2006; Banaszak and Plutzer 1993; Bauernschuster and Rainer 2012; Neundorf 2010, 2012; Rohrschneider 1994), we mitigate these issues by taking advantage of the division of post-WWII Germany into two distinct political, economic, and ideological regimes. The quasi-exogenous imposition of radically divergent gendered state policies allowed for the formation of distinct gender role attitudes among East and West Germans who might otherwise have held similar beliefs about what constitutes appropriate behavior for men and women. This allows us to identify whether these attitudes in turn influence the gender gap in party membership and political interest in unified Germany.<sup>3</sup> Below, we explain more about the case, and then turn to our empirical strategy.

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<sup>3</sup> Becker, Mergele and Woessmann (2020) argue that pre-existing differences between East and West Germany before separation—coupled with selective migration in subsequent years—disqualify Germany as a natural experiment to study the long-term effects of regime type. We do not claim to identify the effect of a political regime on women's political behavior, but rather use the setting to compare political participation and engagement between regions with differing gender attitudes. For other recent work using this case to study the effects of gender role attitudes see, for example, Zoch (2021) and Jessen (2021).

### *Gender Role Attitudes in the Two Germanies*

With respect to gender attitudes, East and West Germany had broadly similar starting conditions. A number of historical sources on gender and family norms in 19th and early 20th century Germany support the idea that birth cohorts from both parts of the country socialized before the Cold War were very alike with respect to their attitudes about gender (Hausen 1983, Frevert 1986, Boak 1990; Tenfelde 1992, Bauernschuster and Rainer 2012). Studies examining fertility, marriage-, and women's employment rates from the first half of the 20th century, for example, show no divergence across the two regions (Banaszak 2006, Bauernschuster and Rainer 2012). Women's representation in state parliaments throughout the Weimar Republic was also similar in Eastern and Western states (Boak 1990).

The creation of the socialist controlled German Democratic Republic and the conservative-corporatist democracy under the auspices of the Western allies, the Federal Republic of Germany, marked "the beginning of a monumental social experiment." In both systems, the "political culture had to be reconstructed to conform to the new regimes" (Rohrschneider 1994, 928). And, although East and West Germany had similar starting conditions (though see Becker, Mergele and Woessmann (2020)), their subsequent stances on the place of women in society were as divergent as their approaches to regulating the economy, particularly with respect to women's education and employment.

These "very different positions on the role of women in society" were clearly "reflected in the two governments' social policies" (Banaszak 2006, 31-2). Former West Germany represented the conservative welfare state or male-breadwinner model (Orloff 1993). The dominant strategy of the post-war West-German government was to propagate a gender regime that idealized men as breadwinners and women as mothers and housewives devoted to their "natural" calling of home and family life (Budde 1999, 54-55). Education and employment policies explicitly promoted this traditional gender hierarchy (Pfau-Effinger 1998, 156). West German parents, for example, largely decided whether their children would pursue higher

education, and even in the 1970s many “still consider[ed] the education of daughters as a luxury” (Shaffer 1981: 130). Likewise, until the late 1950s, women could only take up paid employment with their husband’s expressed permission. Even if women did work, the Civil Code maintained that their principal responsibility lay in supporting their family through domestic work. This male-breadwinner model changed only marginally in the late 1960s and 1970s, despite the notable efforts of the West German second-wave feminist movement (Pfau-Effinger 1998, 454-55).<sup>4</sup>

East Germany, by comparison, was a dual-breadwinner state (Sandole-Staroste 2002). The Socialist Unity Party of Germany (SED) regime formally granted women the right to abortion, education, and paid employment. Education, in particular, was one of the signature policies for the GDR, and this drew women into universities at much higher absolute and relative rates than in the Federal Republic. Likewise, in the aftermath of WWII, the shortage of male workers and economic mismanagement and resource-loitering by the Soviet occupiers created a situation in which women’s labor force participation was of vital importance for post-war recovery (Sandole-Staroste 2002). The introduction of the Mother- and Child Act (*Mütter- und Kinderschutzgesetz*, 1950), an independent family law (*Familiengesetzbuch*, 1966), and other family support policies (*Familienförderungs politik*) further strengthened women’s rights as mothers and workers. SED rhetoric and socialist media also propagated the notion that women were entitled to education and should be able to combine domestic and paid work (Einhorn 1995).

While the FRG reinforced traditional gender attitudes, GDR policies were markedly more progressive. And, these differences had long term consequences. Even after the end of the Cold War, East Germans were stronger supporters of women’s employment (Banaszak 2006). East German women continue to contribute more to household income than their West German counterparts, and can earn more than their husbands without having to increase their housework hours (Lippmann, Georgieff, and Senik 2020). The long-run child penalty on women’s income share is also lower for East German couples (Jessen 2021). Women from East Germany are also

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<sup>4</sup> See Table SI.1 for a list of family- and gender- policy milestones in the FRG and GDR from 1945 to 1990.

more likely to place importance on career success than women from the West (Campa and Serafinelli 2019), and views on maternal employment remain substantially different between the two regions (Zoch 2021).

Though necessarily brief, and therefore generalized, our comparison of East and West Germany during the Cold War demonstrates that the two states pursued radically different sets of policies concerning women's involvement in the public sphere. Even if women's roles in the private sphere may have been similar across the two Germanys, attitudes towards women's role in society were starkly different. Thus, like Banaszak (2006), Campa and Serafinelli (2019), Lippmann, Georgieff, and Senik (2020) and others, we expect that citizens raised in the former GDR hold different gender attitudes than those from West Germany. Importantly, moving this scholarship forward, we posit that these traditional or progressive gender attitudes explain women's (un)willingness to engage with politics as compared to men. We turn now to testing these claims.

### **Data, Operationalizations and Methods**

We examine the relationship between traditional gender role attitudes and political involvement using the biennial cumulative data from the German General Social Survey (ALLBUS, 1980-2018). We focus on data from 1991 through 2016, which includes respondents from both the East and West and questions tapping into respondents' gender attitudes and political behavior. In our first analysis, we establish that citizens raised in the GDR express more progressive gender attitudes than those brought up in the FRG by testing differences in gender attitudes in the new and old federal states and across generations. We then turn to our main analysis, which examines the relationship between these gender attitudes and respondents' political participation and engagement.

To capture citizens' gender attitudes, we rely on responses to six statements included in eight waves of the ALLBUS survey:<sup>5</sup>

- I. "A working mother can establish just as loving and secure a relationship with her children as a mother who doesn't work."
- II. "It is more important for a wife to help her husband's career than to have one herself."
- III. "A pre-school child is likely to suffer if his or her mother works."
- IV. "It is much better for everyone involved if the man is the achiever outside the home and the woman takes care of the home and family."
- V. "A child actually benefits from his or her mother having a job rather than just concentrating on the home."
- VI. "A married woman should not work if there is a limited number of jobs and her husband is able to support the family."

For each statement there are four possible responses ranging from 1 (strongly agree) to 4 (strongly disagree). Each variable was recoded such that 1 corresponds to egalitarian and 4 to traditional attitudes toward gender roles. Traditional attitudes are understood to be those that view women's responsibilities as primarily in the private sphere (i.e. agreement with statements II through IV and VI, and disagreement with statements I and V). Mokken Scaling analysis demonstrates that responses for these statements can be summarized into a single scale ( $H=0.43$  and each  $H_i > 0.30$ ). Based on these scaling results, we created an index capturing traditional gender attitudes, with values ranging from 1 (most egalitarian) to 19 (most traditional outlook).<sup>6</sup>

After establishing that respondents raised in the East and West hold different gender role attitudes, in our main analysis we explore the effect of these attitudes on men's and women's

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<sup>5</sup> 1991, 1992, 1996, 2000, 2004, 2008, 2012 and 2016

<sup>6</sup> Mokken scaling is based on item response theory and used to assess whether a number of items measure the same underlying concept. It is preferable over other scaling methods because it is non-parametric, in the sense that it makes virtually no assumptions about the precise shape of the item response function (Van Schuur 2003). We also subtract 5 from our additive scale so that it runs from 1 to 19 (as opposed to 6 to 24).

vote intention and political interest. We examine vote intention because it is one of the most important and frequently studied measures of political participation. Indeed, the classical notion of democracy is based on the idea of direct participation of citizens, and unequal participation may introduce bias into the democratic process (Lijphart 1997). We opt for political interest because it is a prerequisite for political involvement more generally (Dahl 1973). In our Supporting Information (SI) we provide similar results for party and union membership (see Figure SI.5).<sup>7</sup>

Our models use dummy variables for gender, as well as for East Germany. The ALLBUS survey does not record respondents' birthplace in every survey year. To retain the largest possible sample size, the explanatory variables East and West combines the territory in which the interview was conducted and information on whether the respondent migrated from East to West (or from West to East). Our results are unchanged when we re-run all regressions excluding East-West and West-East migrants from the sample (see Figure SI.3).<sup>8</sup> As we are interested in the differences in gender attitudes and political behavior between cohorts socialized during and after Germany's Cold War separation, we include birth cohort dummies based on respondents' year of birth.

The empirical analyses include socio-economic controls that account for important factors identified in the literature on gender attitudes and political involvement. These include education, employment, income, marital status, religiosity and religious denomination and household size. In the vote intention and political interest regressions we also account for the respondent's trust in fellow citizens.

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<sup>7</sup> The ALLBUS survey includes only a limited set of political participation and engagement measures.

<sup>8</sup> For a number of survey years ALLBUS does, however, contain a variable for the state in which the respondent grew up. Pairing this variable with information on where the respondent was born and the state in which the interview occurred, we identified respondents who moved from East to West after birth or childhood. Our data include 287 respondents who were born or grew up in West Germany but who lived in the East at the time of the interview, and 703 respondents who were born or grew up in an East Germany and were interviewed in the West. Re-estimating all regression models excluding East-West and West-East migrants from the sample did not change the results (see Figure SI.3).

## *Methods*

In our analysis, we aim to distinguish birth cohorts from both age effects based on respondents being at the same point in their life cycle and period effects based on respondents' exposure to the same contemporaneous events. The starting point for such estimation is typically the Age–Period–Cohort (APC) model (Holford 1985). A well-documented problem with these models is that only two of these effects can be identified, as age (years since birth), period (year), and cohort (year of birth) are exact linear functions of each other (Winship and Harding 2008). A useful approach for solving the APC identification problem, without imposing strong assumptions about which birth years to group together, is to use annual birth cohorts and a control group to aid in the identification of cohort effects while also accounting for period effects (Pischke 2007; Dinas and Stoker 2014).

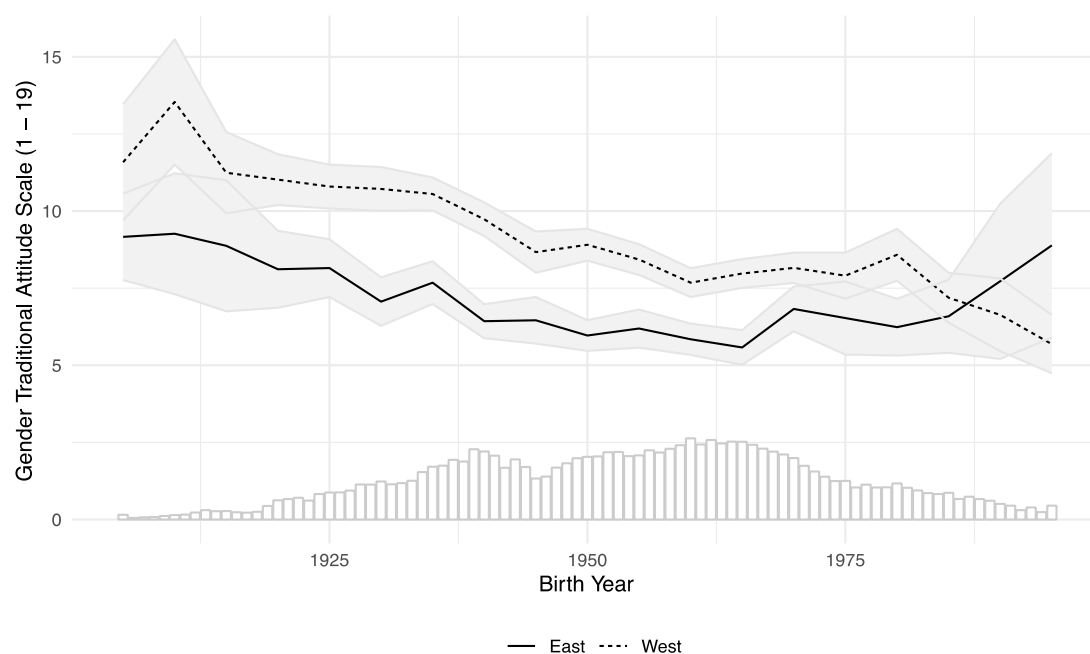
Like Pischke's analysis of the impact of policy change on school performance, we estimate the effect of exposure to the FRG/GDR regimes on gender attitudes by within-cohort comparisons between West and East Germany before, during, and after the Cold War. If being raised in the GDR made East German gender attitudes more progressive as compared to West Germany in the same period, then we would expect the East-West differences in gender attitudes to be largest for cohorts from the Cold War era. We do not expect attitudinal differences among those socialized following reunification. Period effects are controlled in our analysis to capture any aggregate time trends within the time-series that could influence our East-West comparison (Pischke 2007; Dinas and Stoker 2014).

Finally, our first set of results report the findings from an Ordinary Least Squares (OLS) regression with the gender attitudinal scale as the dependent variable, annual birth year cohorts, and interactions with region. Our main findings rely on both OLS regression (political interest) and linear probability (vote intention) models. All models include period controls and a set of socio-economic variables.

## Confirming East-West Differences in Gender Attitudes

Following Banaszak (2006), Campa and Serafinelli (2019), Lippmann, Georgieff, and Senik (2019) and others, we first establish the link between exposure to the GDR regime and more egalitarian gender role attitudes. Figure 1 displays the predicted traditional gender attitudes in East and West Germany by birth cohorts with 95% confidence intervals based on a fully-specified OLS regression model accounting for socio-economic background factors—secondary education levels, employment status, personal income, religious denomination, regular church attendance, marital status, household size and period effects (full results are reported in Table SI.2 in the in the supporting information).

**Figure 1:** Traditional Gender Attitudes by Birth Year



Notes: Figure displays the predicted traditional gender attitudes in East and West Germany by birth cohort based on a fully-specified OLS regression model controlling for socio-economic background factors and period effects. The analysis is weighted to adjust for regional oversampling; non-weighting yields identical results. The histogram represents the distribution of the sample across birth cohorts. For full results see Table SI.2. Source: ALLBUS Surveys 1991-2016.

We confirm that the difference in gender attitudes between the East and West is statistically significant for all but the youngest birth cohorts (Figure 1). As expected, on average



respondents in East Germany hold less traditional gender attitudes than those in West Germany, and this difference stems primarily from birth cohorts socialized during the Cold War.<sup>9</sup> In fact, birth cohorts in the East and West socialized after German reunification do not significantly differ in terms of gender attitudes.

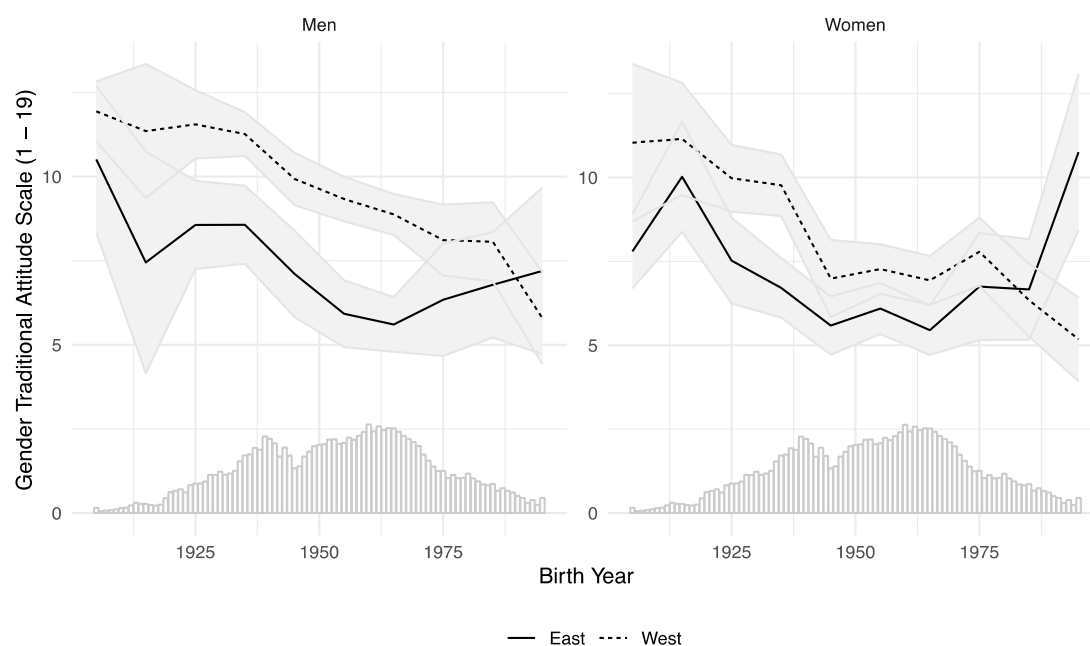
For the West, moreover, we witness an overall steady decline in traditional gender attitudes from the 1905 to the 1990 birth cohort, which reflects the gradual introduction of more progressive gender legislation since the end of WWII. For the East, in contrast, we witness a drop in traditional gender attitudes between roughly the 1905 and 1918 birth cohorts, which then stabilizes for birth cohorts after. Interestingly, for those socialized following the end of the Cold War, we observe a slight increase in traditional gender attitudes as compared to the West. This may indicate a breakaway from the comparatively more progressive gender policies in the GDR after reunification.

Figure 2 replicates the analysis presented in Figure 1 but separates out the effects for women and men. This allows us to address the concern that the differences in gender attitudes observed between birth cohorts in East and West are primarily explained by differences in the resources of women in the two regions. Women in the GDR had greater access to the labor market as compared to those in the FRG, while men in the East and West had similar access to work. If the differences in gender attitudes that we observe between East and West (Figure 1) are merely a function of the disparate resources that were available to women, then we should find few differences in men's gender attitudes in the two regions. Figure 2 shows the evidence for men and women separately (full results are reported in Table SI.3 in the supporting information). It suggests that the differences in gender attitudes between the two regions are similar for both groups, and perhaps even more pronounced for men.

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<sup>9</sup> See Figure SI.1 for a replication of Figure 1 without control variables, Figure SI.2 for a replication without survey weights, and Figure SI.3 for a replication excluding migrants. These results are also robust when we relax the parallel period assumption (see Figure SI.4) and when we add fixed effects (see Table SI.6).

**Figure 2: Traditional Gender Attitudes by Birth Year and Gender**

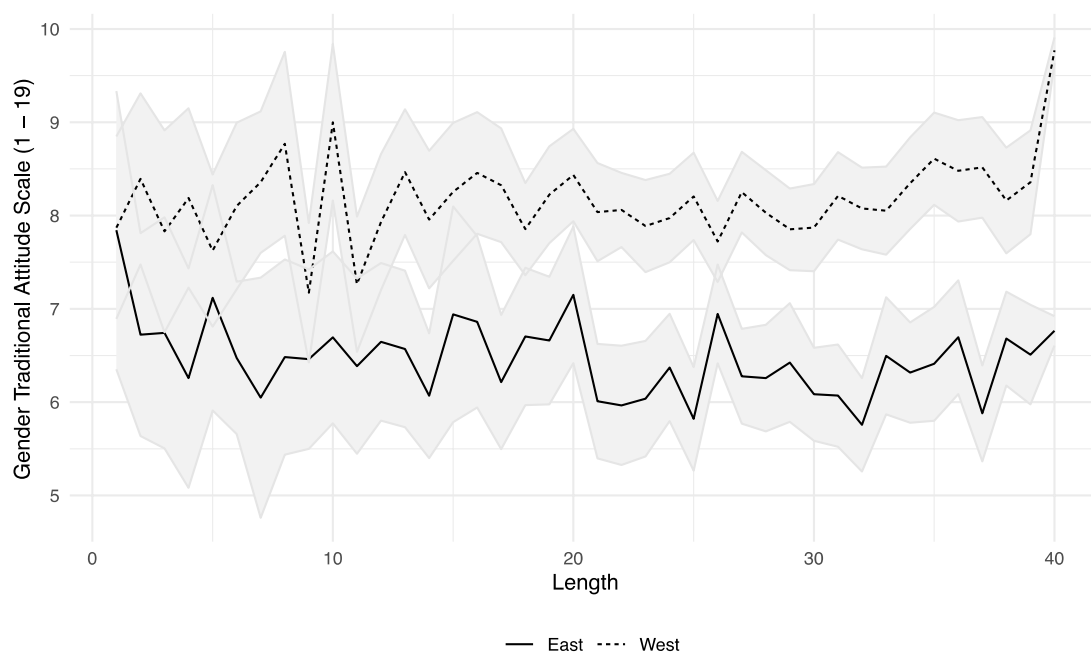


Notes: Figure displays the predicted traditional gender attitudes in East and West Germany by birth cohort and gender based on a fully-specified OLS regression model controlling for socio-economic background factors and period effects. The analysis is weighted to adjust for regional oversampling; non-weighting yields identical results. For full results see Table SI.3. Source: ALLBUS Surveys 1991-2016.

Finally, we consider how long respondents were exposed to the two regimes. The GDR originated in 1949 and collapsed in 1989, so our measure of length of socialization varies between a minimum of 1 year (those born in 1989) to a maximum of 40 years (those born in

1949 or before). Those born after 1989 serve as the reference category (0). Figure 3 displays the difference in gender attitudes between respondents socialized in East and West Germany by length of socialization (full results are reported in Table SI.4 in the supporting information). These results suggest that the difference in gender attitudes between those socialized in the East versus the West increases with length of socialization. Together, our findings reported in Figures 1 through 3 support the expectation that exposure to the GDR is associated with citizens holding less traditional gender role attitudes.<sup>10</sup>

**Figure 3:** Traditional Gender Attitudes by Length of Socialization



Notes: Figure displays the predicted traditional gender attitudes in East and West Germany by length of socialization based on a fully-specified OLS regression model controlling for socio-economic background factors and period effects. The analysis is weighted to adjust for regional oversampling; non-weighting yields identical results. For full results see Table SI.4. Source: ALLBUS Surveys 1990-2016.

### Testing the Effects of Gender Attitudes on Political Involvement

Having established that East and West Germans socialized during the Cold War subscribe to distinct gender roles, we exploit these differences to address an unresolved question in the

<sup>10</sup> Interestingly, looking across a broader set of countries, Pop-Eleches and Tucker (2017) find lasting legacies of communism on citizens' political and economic attitudes, but *not* their gender role attitudes.

gender and politics and political behavior literatures: do traditional gender attitudes affect women's political engagement and participation? Below we first show that more egalitarian attitudes increase vote intention and political interest in unified Germany, especially among women. We then further confirm the link between attitudes and involvement using an instrumental variable approach. Mitigating concerns about unit heterogeneity and endogeneity, our analyses suggest that traditional gender role attitudes contribute to the persistence of political gender gaps.

To establish whether conservative attitudes towards gender roles correlate negatively with (women's) political involvement, we estimate two models using a respondent's vote intention and political interest as the dependent variables. The main independent variables are a respondent's gender, traditional gender attitudes, and the interaction between the two.

We first consider the effect of respondent gender. The gender dummy coefficient (see Table SI.5 in the supporting information) shows that women are statistically significantly less politically involved than men. In terms of the size of these effects, women respondents are on average approximately 7 % less interested in politics and approximately 3% less likely to vote as compared to men.<sup>11</sup>

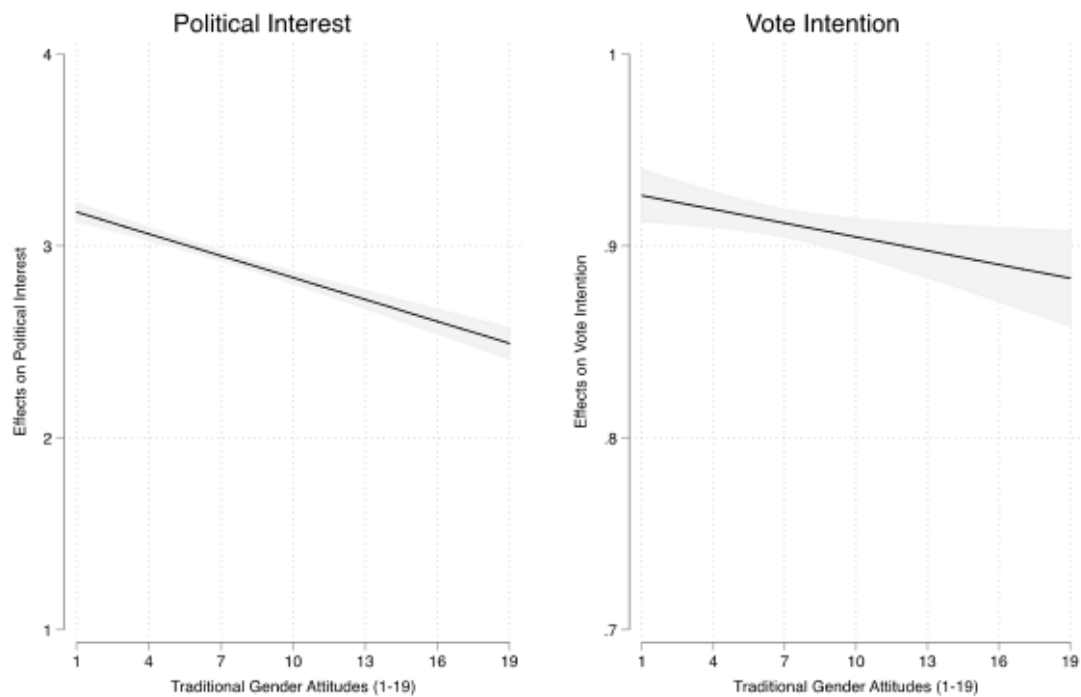
We next examine whether citizens' gender attitudes influence their political interest and the likelihood to vote. Table SI.5 displays the conditional marginal effects for our traditional gender attitude proxy, coded from 1 (for most liberal) to 19 (for most conservative). *Ceteris paribus*, there is a statistically significant negative correlation between traditional gender attitudes on the one hand and political involvement on the other. That is, citizens who are less egalitarian in their views on gender roles are also less likely to be interested in politics or to intend to vote in an election. This effect, moreover, is larger for women than for men. That is, gender

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<sup>11</sup> The results also show that political engagement and participation are statistically significantly lower in the East. Controlling for sex and survey year effects, being from East Germany decreases the probability of being interested in politics and voting. This echoes the literature on political participation in unified Germany. Scholars attribute the comparatively lower levels of political involvement in the new federal states to political disillusionment among citizens in the East following the perceived setbacks of the unification process (Pickel and Walz 1997).

(in)egalitarian attitudes have an especially pronounced effect on women's political engagement and participation.

**Figure 4:** Effect of Gender Attitudes on Political Involvement for Women



Notes: Figure displays the predicted political interest and vote intention by traditional gender attitudes for women based on a fully-specified OLS regression model in case of political interest and linear probability model in the case for vote intention controlling for socio-economic background factors and period effects. The analysis is weighted to adjust for regional oversampling; non-weighting yields identical results. For full results see Table SI.5. Source: ALLBUS Surveys 1990-2016.

Figure 4 plots the effect of traditional gender role attitudes on vote intention and political interest for women. Women are more likely to intend to vote in elections or be interested in politics when they hold less traditional gender role attitudes. Figure SI.5 in the supporting information show similar patterns for other types of political involvement. These findings support the idea that women who subscribe to more egalitarian gender roles are much more likely to be politically involved than women holding more traditional views.

### *Instrumental Variable Analysis*

The results thus far corroborate our intuition that differences in gender role attitudes help to explain gender gaps in political involvement. In this section, we confirm the effect of gender attitudes on political involvement via instrumental variable regressions (IV). This approach allows us to isolate the causal effect of a regressor on the dependent variable by including an instrumental variable that affects the outcome variable endogenously through this regressor. The instrumental variable procedure operates in two stages. First, we run a regression on the exogenous regressor(s), and then on the predicted values of this first regression. The causal estimate is the second-stage regression coefficient.

Key to generating a reliable IV model is the existence of one or more appropriate instruments. Instrumental variables must fulfill two conditions—they must not be directly correlated with the error term of the regression and they must be correlated with the predictor (Foster 1997, 489). We identified an instrument for testing the causal effect of traditional gender attitudes on political participation: the gender of one's children. In line with previous research documenting that having daughters leads to more support for gender equality (e.g. Washington 2008, Gomper and Wang 2017), we find that the combined gender attitude scores of those that have children are lower (i.e. more egalitarian) when they have daughters (the first stage coefficients for political interest equals -0.601 and for vote intention equals -0.598, both significant at the  $p \leq 0.01$  level, full first stage results are reported in Table S1.7). This creates exogenous variation in gender attitude scores.

After the two-stage least squares instrumental variable regression, we ran the Sargan-Hansen test of over-identifying restrictions to test the null-hypothesis that the instruments are valid. In addition, we looked at the Wald test statistic to reject the null-hypothesis of exogeneity. Both tests showed that instrumenting gender attitudes was possible (see Table 1). Moreover, the coefficients for traditional gender attitudes are both negative (though only statistically significant at conventional levels of significance in the case of vote intention). The IV regression thus

shows that traditional gender attitudes exert a negative and statistically significant causal effect on vote intention, while the effect is less consistent for political interest. Nonetheless these findings lend further support to the claim that there is a causal link between traditional gender attitudes and political participation.

**Table 1:** Instrumental Variable Regression (2<sup>nd</sup> stage): Traditional Gender Attitudes and Political Involvement

	<b>Political Interest</b>	<b>Vote Intention</b>
Traditional Gender	-0.058	-0.034**
Attitudes	(0.053)	(0.017)
Female	0.560***	0.057**
	(0.072)	(0.023)
East	-0.425***	-0.133**
	(0.183)	(0.058)
Constant	3.903***	1.236***
	(1.388)	(0.186)
State Fixed Effects	Yes	Yes
Year Fixed Effects	Yes	Yes
Controls	Yes	Yes
F-statistic	25	25
Wald statistic restrictions	0.000	0.000
Observations	8594	8600

Notes: Table reports second stage instrumental variable regression coefficients and standard errors in parentheses. The analysis includes number of children and overall household size as controls. We restrict the sample to respondents with children only. First stage results are reported in Table SI.7. \*\*\*  $p \leq .01$ , \*\*  $p \leq .05$ . Source: ALLBUS-Cumulation 1980-2016.

## **Traditional Gender Attitudes, Political Involvement and Mother's Educational Attainment**

Mitigating concerns about unit heterogeneity and reverse causality, we show that gender egalitarian attitudes close the gender gap in men's and women's political involvement. In our final analysis, we explore the effects of a policy on which East and West Germany differed dramatically—women's access to education—in an effort to uncover a possible individual-level

mechanism underlying our findings. We demonstrate that women in East Germany had higher education rates than their West German counterparts, and that having an educated mother is associated with both more egalitarian gender attitudes and greater political engagement and participation.

As we note above, East and West Germany's social policies radically diverged following their post-World War II separation, particularly with respect to women's educational attainment. The GDR pursued policies that fostered women's access to university (Shaffer 1981). Parental guidance was replaced by bureaucratic control and a "more objective, sex-neutral (if not discriminatory in favor of women) selection process." Likewise, and in stark contrast to West Germany, "efforts to encourage qualified women to enroll in institutions of higher learning and prepare themselves for professional careers received the full support of college university faculty and administrators" (Shaffer 1981: 130).

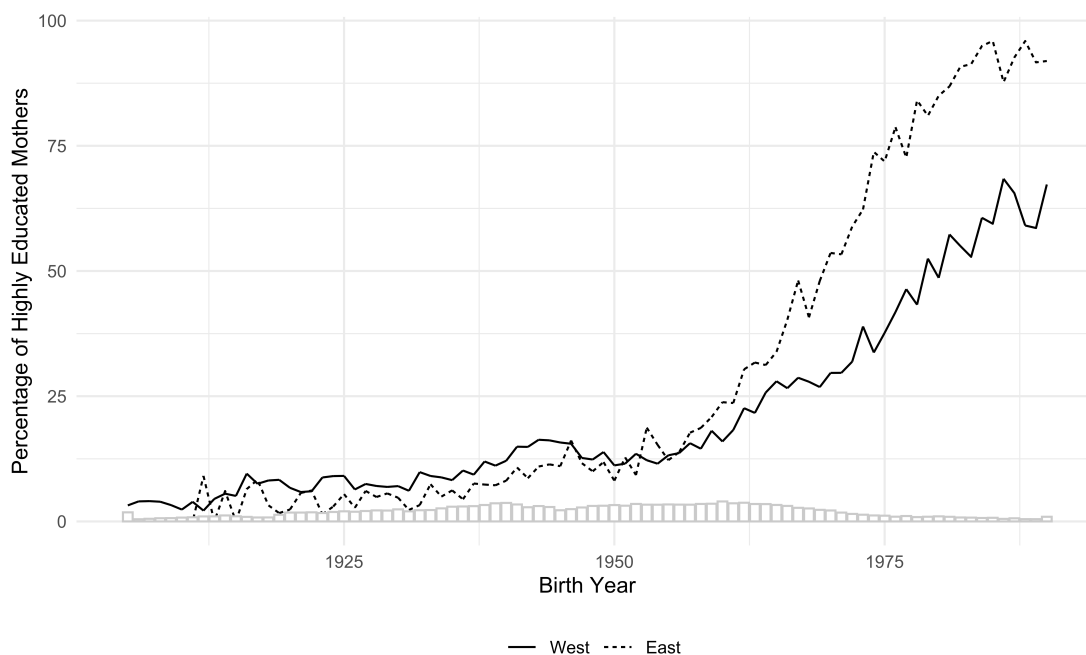
The subsequent difference in the educational attainment of women between East and West Germany becomes clear in our data. Figure 5 shows the percentage of respondents whose mothers have completed secondary and tertiary degrees across the two regions. Though the proportion of highly educated mothers clearly increases among those respondents born after 1960, this increase is much more pronounced among those respondents from the GDR as compared to the Federal Republic.

Education was a particularly successful social policy for the GDR, and there is reason to expect that promoting women's education is especially important for closing the gender gap in political involvement. Existing work suggests that parental education influences women's attitudes towards employment (Vella 1994). For example, Thornton et al. (1983) show that maternal educational attainment yields more egalitarian views in their adult children. Relatedly, women's aggregate education levels influence individual respondents' attitudes towards feminism (Banaszak and Plutzer 1993). Education is also linked to (women's) political involvement. Inglehart and Norris (2003: 103) argue that increased access to education should influence



political activism, as “education has been found to increase cognitive skills, confidence, and practical knowledge that help people make sense of politics.” Education is especially important for women. Coffé and Bolzendahl (2010), for example, find that among women—but not men—holding a university degree significantly increases the likelihood of political party involvement (whereas employment has only a limited impact). Finally, existing work demonstrates that mothers’ interests and experiences subsequently affect their adult children’s interest in politics, political knowledge, and political participation (Atkeson and Rapoport 2003; Fox and Lawless 2005; Gidengil, O’Neill, and Young 2010). This research together suggests that higher levels of mother’s educational attainment may allow for the transmission of progressive gender attitudes, thereby yielding greater political involvement.

**Figure 5:** Educational Attainment of Mothers by Region



Notes: The figure displays the percentage of respondents from East and West Germany respectively and stated that their mothers have completed secondary and tertiary degrees. Source: ALLBUS Surveys 1990-2016.

We perform two analyses in order to examine whether mother’s educational attainment affects respondents’ gender attitudes and political engagement and participation, while

controlling for a respondent’s own education level.<sup>12</sup> First, we estimate the effect of the educational attainment of mothers on gender attitudes generally (Table 2, Model 1). Second, we model the effect of mothers’ educational attainment on political interest and party membership (Table 2, Models 2-3). This variable ranges from 1 “no formal education” to 5 “University education.”

The results presented in Table 2 suggest that respondents whose mothers have higher levels of education are both much less likely to hold traditional gender attitudes and also more likely to intend to vote and be interested in politics. These effects hold when controlling for region, state and other respondent characteristics, such as gender, education, and socio-economic controls which are generally associated with attitudes towards gender roles.

**Table 2:** Traditional Gender Attitudes, Political Involvement and Mother’s Educational Attainment

	Traditional Gender Roles	Political Interest	Vote Intention
Educational Attainment	-0.327***	0.099***	0.008***
of Mothers	(0.039)	(0.008)	(0.002)
Female	1.081***	0.307***	0.078
Male	(0.064)	(0.012)	(0.003)
East	0.055***	0.071***	0.010***
West	(0.201)	(0.039)	(0.011)
Constant	10.136***	1.545***	-0.762***
	(0.525)	(0.090)	(0.029)
State Fixed Effects	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
Controls	Yes	Yes	Yes
F-Test	0.000	0.000	0.000
R <sup>2</sup>	0.33	0.18	0.03
Observations	15398	33440	33470

Notes: Table reports regression coefficients. Standard errors are given in parentheses. Models are weighted to adjust for regional oversampling, and the analysis includes socio-economic and demographic controls. For full results see Table SI.8. \*\*\* p ≤.01, \*\* p ≤.05. Source: ALLBUS-Cumulation 1991-2016.

<sup>12</sup> Note that in our dataset one’s mother’s education level and one own education level are weakly positively correlated in our dataset Pearson’s R: .24, significant at the p=.001 level.

Promoting women's education thus seems to have a subtle yet important effect on political interest and involvement. In the GDR, Budde (2003: 14) suggests that "women of the intelligentsia" were well aware of their comparative educational advantages vis-à-vis women in West Germany and took considerable pride in their educational accomplishments. Thus, though the near gender parity in terms of educational attainment did not necessarily yield professional or social equality for women in East Germany, these policies may have affected political engagement by changing norms about who should actively participate in public life.

### **Discussion and Conclusion**

This paper addresses a central question in the gender and politics and political behavior literatures—why are women less politically involved than men? We shed new light on this question by assessing the consequences of traditional gender attitudes on women's political involvement in unified Germany. Exploiting the quasi-exogenous imposition of more egalitarian gendered state policies, which in turn shaped the attitudes of East German citizens, we show that these attitudinal differences have important consequences for gender gaps in political involvement. Even when controlling for education, employment, income, marital status, religiosity, religious denomination, household size, and after adding state fixed effects, German women who hold egalitarian attitudes are almost as likely to be involved in politics as men. Traditional gender attitudes, on the other hand, are negatively correlated with political participation and engagement, and this negative effect is especially pronounced for women. Our instrumental variable analysis lends further support to the expectation that there is a causal link between attitudes and involvement. And, our final analysis suggests an individual-level mechanism that might drive these results: mother's educational attainment.

Together, these findings shed light on the persistent gap in men's and women's political participation and engagement. Traditional gender role attitudes likely remain a considerable impediment to women's political involvement in democracies today. They likewise point to a

potential mechanism for closing the gender gap. Before the separation of East and West Germany, citizens in both regions appear to have held similar gender role attitudes. Then, exposure to different social policies shifted attitudes for those in the GDR, which in turn affected women's political participation and engagement. This suggests that by changing beliefs about who should be active in public life, "gendered state policies" (Banaszak 2006) can have an important effect on women's political involvement.

Our results also suggest a number of avenues for future research. To begin with, more work is needed to establish the scope conditions of our findings. We provide some cause for optimism, as our results suggest that policies that facilitate women's presence in the public sphere can alter citizens' attitudes and behaviors. Yet, few regimes are likely to adopt policies as transformative as East Germany's overhaul of its education system. Additional research should examine whether less comprehensive reforms—such as expanding educational access without a strong stated ideological commitment to gender equality—yield similar results. Other studies should likewise consider the effects of different types of policies. A growing body of scholarship on the consequences of quota adoption for women's political involvement, for example, yields more mixed findings (Beauregard 2017; Davidson-Schmich 2016; Kittilson 2016; Kittilson and Schwindt-Bayer 2012; Zetterberg 2009).

Future work should also consider how traditional gender role attitudes interact with individual-level characteristics, including economic status and religious background, to shape political behavior. Though gender (in)egalitarian attitudes have the greatest effect on women's political interest and vote intention, they might also influence men. A growing body of scholarship explores men's political behavior through a gendered lens (Bjarnegård 2018; de Geus, Ralph-Morrow, and Shorrocks Forthcoming; Cassese and Barnes 2019; Halevy, Kedar, and Oshri 2019). While our study is principally concerned with women, subsequent research should explore when and why gender egalitarian attitudes bolster men's political engagement and participation.

Finally, our results contribute to the burgeoning literature on gender and historical political economy.



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