# POLITICO-ECONOMIC REGIMES AND ATTITUDES: FEMALE WORKERS UNDER STATE-SOCIALISM\*

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This paper investigates the extent to which attitudes are affected by politico-economic regimes. We focus on gender-role attitudes and female attitudes toward work, exploiting the efforts of state-socialist regimes to promote women's economic inclusion. In the main part of the analysis, we take advantage of the German partition into East and West to implement a spatial discontinuity design. Our estimates indicate that the attitudes of interest were profoundly affected by the regimes. We also find a regime effect on female employment, as suggested by historical accounts. A comparison of attitudes and employment in Eastern versus Western Europe confirms these results. [Z10, P51, J16]

Keywords: female attitudes towards work, gender-role attitudes, female employment, Germany.

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# **I** Introduction

To what extent are attitudes affected by politico-economic regimes and government policies? We focus on female attitudes toward work and gender-role attitudes in the population at large. These attitudes differ significantly over time and space<sup>1</sup>, and have been shown to have significant effects on labor market outcomes.<sup>2</sup>

Answering the question of whether politico-economic regimes affect attitudes is complicated due to the fact that regimes are not randomly assigned. In this paper, we exploit the imposition of state-socialist regimes across Central and Eastern Europe after World War II. Between their rise to power in the late 1940s, and up to the late 1960s, state-socialist governments throughout the region made efforts to promote women's economic inclusion - their rapid industrialization and general plan for economic growth (which was based on an intensive use of labor) were dependent on such inclusion (de Haan, 2012, p.89). Moreover, women's economic independence was seen as a necessary precondition for women's equality, a principle to which these governments were arguably committed (though many scholars claim that the need for female labor power was by far more relevant). Constitutional changes such as the adoption of the principle of equal work under equal conditions, new family laws, and education and training policies were used to further this goal (Shaffer, 1981; Wolchik, 1981; Fodor, 2002). Easy access to abortion also helped women's entry into the workforce (David, 2013). Within this historical context, we empirically investigate the role played by political regimes in influencing attitudes.

In the main part of our analysis of the influence of political regimes on attitudes, we make use of the German Socioeconomic Panel (GSOEP), a longitudinal survey of households residing in Germany, and unique access to restricted information on respondents' place of residence. We

<sup>&</sup>lt;sup>1</sup>Giavazzi, Schiantarelli and Serafinelli (2013) observe variation in these attitudes over time for the period 1980-2000 in European regions and OECD countries.

<sup>&</sup>lt;sup>2</sup>Fortin (2008) presents evidence that gender differences in attitudes towards work have a significant role in accounting for the gender wage gap. Further, Fernández, Fogli and Olivetti (2004) and Fernández and Fogli (2009) show a substantial effect of gender-role attitudes on women's labor force participation. In a similar vein, Bertrand, Kamenica and Pan (2015) present evidence that gender identity norms impact women's labor force participation, the gender gap in income, the distribution of relative income within households and the division of home production.

<sup>&</sup>lt;sup>3</sup>See the dicussion in Buckley (1981) and de Haan (2012).

exploit quasi-experimental variation in political regimes and government policies in postwar Germany. Before 1945, the politico-economic system was the same in East and West Germany. After 1945 the country was split in two, with women in the East and West becoming exposed to very different institutions and policies. East Germany focused (particularly during the 1960s) on policies that favored female qualified employment, while West Germany encouraged a system in which women either stayed home after they had children, or were funneled into part-time employment after an extended break (Trappe, 1996; Shaffer, 1981).

The historical circumstances suggest that we can contrast attitudes toward work in the sample of women who, before re-unification, had lived in East versus those who had lived in West Germany.<sup>4</sup> A simple comparison of attitudes between women who lived in East Germany and women who lived in West Germany may be biased due to (a) selective East-West migration, or (b) local unobserved heterogeneity before the separation, which some evidence suggests may be relevant in our setting.<sup>5</sup> Our empirical strategy directly addresses the potential issue of migration by exploiting information on the historical place of residence. In order to address the issue of local heterogeneity, we use a spatial regression discontinuity framework (Black, 1999; Lalive, 2008; Dell, 2010; Schumann, 2014) to compare only those women who had lived close to the East-West border prior to reunification. The underlying assumption is that women living spatially close to each other in this area had similar attitudes before separation. Attitudes towards work are measured using a question about the importance of career success for the respondent. This question is

<sup>&</sup>lt;sup>4</sup>The German separation has been exploited in an influential study by Alesina and Fuchs-Schundeln (2007), who focus on preferences for redistribution. In Section II, we describe how we build on their analysis.

<sup>&</sup>lt;sup>5</sup>Klüsener and Goldstein (2014), using data between 1840 and 1940, show larger non-marital fertility in regions that would become part of East Germany. Bauernschuster and Falck (2015), using data between 1834 and 1905, document spatial variation in childcare coverage, with an important role played by cultural proximity to Bad Blankenburg, Thuringia, a region which would become part of East Germany - this is where Friedrich Froebel, the leader of the kindergarten movement in the 19th century established his first institution. Furthermore, we have digitized and analyzed data from the 1925 German census and we find that the gender equality in employment was slightly lower in the part of Germany that would become the German Democratic Republic (GDR) in the East, but there are not significant differences when the comparison is restricted to areas close to the East-West border. Although this analysis has some measurement issues related to the use of historical data, it suggests that areas in East and West Germany very distant from each others might be less comparable than areas that are close to each other. In general, given that non-marital fertility, childcare coverage and especially female participation in the labor market may be related to the (unobservable before separation) attitudes of interest in our study, this evidence of local differences in observables further motivates our design.

asked in 1990, before the process of unification is completed; this is important because it allows us to disentangle the effects of having lived in a state-socialist country from that of living in a post-socialist country.

Figure I summarizes our conceptual framework. We hypothesize that female employment and attitudes were affected by policies targeting women. Attitudes and female employment may then also influence one another. Unfortunately, the research design and available data prevents us from determining the relative importance of the several policy differences between East and West Germany. However, in order to open up somehow the black box of regime influence, we explore and provide suggestive evidence on (a) the relationship between local female employment and attitudes; and (b) the role of propaganda.

Our estimates show that, in 1990, the likelihood of reporting that career success is important is approximately 11 percentage points higher for women in East Germany compared to women in West Germany. Conversely, we find no evidence of a significant difference in men's attitudes towards work between the East and the West.<sup>6,7</sup> The East-West difference in women's attitudes appear to persist after reunification, up to 2004. We also find a regime effect on female employment, as suggested by historical accounts - the change in this dimension was arguably one of the very few positive achievements of the East German regime.

To examine the potential channels of influence, we first employ an IV strategy in the spirit of Moretti (2013) and show suggestive evidence that the change in women's attitudes toward work was larger in areas where the growth in female employment was larger, consistent with Fogli and Veldkamp (2011).<sup>8</sup> Second, we analyze the extent to which women in East Germany were affected by government propaganda by: (1) employing individual-level proxies for ideology; (2) exploiting plausibly exogenous spatial variation in the availability of West German TV in the East (Bursztyn

<sup>&</sup>lt;sup>6</sup>This test provides strong suggestive evidence that the identified East Germany effect does not reflect a general pattern in attitudes towards work, but instead is due to an increased focus on female economic inclusion.

<sup>&</sup>lt;sup>7</sup>Further, we present Donut spatial RD estimates showing that our results are not due to non-random selection following regulatory and other changes affecting areas just East/West of the border.

<sup>&</sup>lt;sup>8</sup>The basic intuition behind the IV approach is the following: if employment in a relatively feminized industry increases nationally, districts where the industry employs a relatively large share of the labor force will experience a relatively large increase in female employment (Katz and Murphy, 1992).

and Cantoni, 2015); and (3) exploiting plausibly exogenous variation in the time spent in school learning the foundations of the socialist system (Fuchs-Schündeln and Masella, 2016). We fail to reject the null hypothesis of no propaganda effect on attitudes (although when using the second approach the standard errors are quite large and prevent us from drawing definitive conclusions).

We also make use of the German General Social Survey (ALLBUS) which allows a comparison, in the context of a spatial regression discontinuity, of gender role attitudes in East and West Germany in 1996. We find that gender-role attitudes, of both women and men, are less 'traditional' in East versus West Germany.<sup>9</sup>

Next, we broaden our focus to state-socialism throughout the entire Central and Eastern European region. We employ a difference-in-differences strategy that compares gender-role attitudes formed in Central and Eastern European countries (CEECs) versus Western European countries (WECs), before and after the imposition of state socialism in CEECs. Similar to the argument above for Germany, we maintain that the imposition of state-socialist regimes across Central and Eastern Europe constitutes a quasi-experiment that can be exploited to study whether attitudes are endogenous to politico-economic regimes.<sup>10</sup> To this end, we need to obtain a time-varying measure of attitudes, which is problematic because of data limitations.<sup>11</sup> We cope with this challenge by using data on the attitudes of U.S. immigrants and their offspring to construct a time-varying measure of attitudes in the respondents' source countries. This is motivated by a recent body of work that has noted and exploited the relationship between the behavior of immigrants and that of residents in their countries of origin (Giuliano, 2007; Fernández and Fogli, 2009; Antecol, 2000), and by evidence that the parents' gender-role attitudes are a useful predictor of the attitudes of children (Farré and Vella, 2013; Dhar, Jain and Jayachandran, 2015).<sup>12</sup>

<sup>&</sup>lt;sup>9</sup>We use, for convenience, the term 'traditional' to reflect the opinion that women should specialize in home production and men in market production.

<sup>&</sup>lt;sup>10</sup>For a discussion of some background to Europe after WWII and the imposition of Soviet rule in CEECs see Section A.II.iv

<sup>&</sup>lt;sup>11</sup>The 1980s is the earliest period in which a measure of gender-role attitudes in cross-country surveys is available.

<sup>&</sup>lt;sup>12</sup>Fernández (2007) also delivers an empirical test of the intergenerational transmission of attitudes by showing that source-country attitudes towards women's work in 1990 predict the labour supply of second-generation American women in 1970. For a discussion of the intergenerational transfer of other attitudes, such as trust, see Guiso, Sapienza and Zingales (2006).

Using the country of origin of U.S. immigrants who immigrate over time (and the attitudes inherited by their offspring), we identify the over-time variation of gender-role attitudes in the source countries. For example, by contrasting U.S. residents of Spanish and Polish origin who migrated between 1945 and 1990, and their offspring, we identify differences in gender-role attitudes formed in Spain and Poland during this time. We then obtain a time-varying measure of attitudes in these two countries by implementing the same procedure for US residents (and their offspring) who immigrated between 1900 and 1945.

Our measure of attitudes is taken from the General Social Survey (henceforth, GSS), which collects data on the contemporaneous gender-role attitudes of US residents, and information that allows us to infer their approximate period of immigration or that of their ancestors. This approach enables us to track the variation in gender-role attitudes in nineteen European countries, including five in the "treatment" group<sup>13</sup> and fourteen in the "control" group.

Employing this measure of gender-role attitudes with intertemporal variation, we estimate the relationship between the change in the politico-economic regime and the evolution in women and men's gender-role attitudes. More specifically, we use the GSS respondents' answer to the question that reads "It is much better for everyone involved if the man is the achiever outside the home and the woman takes care of home and family" in order to construct an index of gender-role attitudes. We show that prior to the imposition of the new politico-economic regime, gender-role attitudes in CEECs appear to have evolved in a similar manner to attitudes in WECs. These attitudes appear to have become significantly less 'traditional' in CEECs versus WECs after 1945. We show that it is unlikely that the estimated relationship reflects differential changes in the selection of immigrants in CEECs and WECs after the imposition of state-socialism. Overall, the weight of the evidence presented suggests that state-socialism decreased the degree of agreement with the statement above. The point estimate for the Diff-in-Diff coefficient is 0.23. This compares to a mean of the index of 2.73 in the control group of WECs.

The remainder of this paper is organized as follows: in Section II, we relate our research to

<sup>&</sup>lt;sup>13</sup>The 5 CEECs are: Czechoslovakia, Hungary, Lithuania, Poland and Romania.

the existing literature. Section III discusses the analysis exploiting the German separation. The difference-in-differences analysis which compares CEECs and WECs using the GSS is presented in Section IV. Section V concludes.

# II Relation to Previous Literature

By combining concepts regarding institutions and attitudes in an original manner, our study adds to a growing literature on related issues. The first related body of work, surveyed in Alesina and Giuliano (2015), analyzes the effects of large institutional changes on attitudes. One set of papers studies communities belonging to different states to isolate the effects of formal institutions on attitudes (Peisakhin, 2010; Becker et al., 2016; Grosfeld and Zhuravskaya, 2015; Wysokinska, 2015; Lowes et al., 2015). Another set of papers within this body of work uses the advent of state-socialism as a source of institutional change. Most notably, the seminal study by Alesina and Fuchs-Schundeln (2007) analyzes preferences for redistribution in Germany in 1997 and 2002, and finds that East Germans are more pro-state than West Germans.<sup>14</sup> In addition to the focus on different outcomes (female attitudes toward work and gender-role attitudes as opposed to preferences for redistribution), our work builds on the analysis in the Alesina and Fuchs-Schundeln (2007) study in several ways. First, we disentangle the effects of having lived in a state-socialist country from that of living in a post-socialist country. Second, through our spatial regression discontinuity design we guard against the possibility that the estimates of the regime effect in Germany are due to local unobservable determinants of attitudes. Third, we directly assess the empirical relevance of selective East-West migration in Germany. Fourth, we provide suggestive evidence on the extent to which state-socialism affects attitudes in the broader Central and Eastern European region.<sup>15</sup>

<sup>&</sup>lt;sup>14</sup>Kim et al. (2015) exploit the division of Korea to investigate whether institutions affect social preferences.

<sup>&</sup>lt;sup>15</sup>Related to our work are also the recent studies by Bauernschuster and Rainer (2011), Beblo and Goerges (2015) and Lippmann, Georgieff and Senik (2016). The first paper uses the ALLBUS, the German equivalent to the GSS, for the period 1991-2008 and shows that being from East Germany is associated with a lower likelihood of believing that segregation of male and female roles is appropriate. The second paper uses three waves of ALLBUS (1991, 1998/2000 and 2010/2012), and shows that the gender gap in preferences toward work is smaller in East versus West Germany, consistent with an impact of "nurture" on preference formation. The third paper uses the GSOEP for the period 1991-2012 and shows that in East Germany females can earn more than their spouse without having to overplay

The second related body of work investigates the determinants of cultural attitudes and their transmission (Bisin and Verdier, 2001; Tabellini, 2008; Durante, 2009; Voigtländer and Voth, 2012; Alesina, Giuliano and Nunn, 2013; Gorodnichenko and Roland, Forthcoming). The central message of this literature is that attitudes have a component that is quite persistent. Yet, this message does not imply that attitudes are absolutely invariant, a point well-made by Algan and Cahuc (2010) and Giavazzi, Petkov and Schiantarelli (2014). Our study blends these different views by acknowledging that an element of attitudes can be transmitted within families, but that attitudes can also change as a reaction to shocks in institutions and economic incentives. The European ancestors of modern Americans have experienced very different politico-economic regimes. Specifically, ancestors from CEECs who migrated after 1945 were influenced by the advent of state socialism. We show suggestive evidence of a change in gender-role attitudes following a regime change and of these attitudes being transmitted within families.

# III Analysis exploiting the German separation

# III.A Institutional Background

In 1945, the Allied Forces separated Germany. Their motives were unrelated to any differences in attitudes between East Germans and West Germans. The border between East and West Germany was determined by the location of the occupying armies and the negotiation between the Soviet Union and other Allied Forces at the end of World War II. In 1949, the German Democratic Republic (GDR) in the Soviet bloc (East Germany) was officially established, and developed as "one of the most rigid" state-socialist regimes (Alesina and Fuchs-Schundeln, 2007, p.1510). The Federal Republic of Germany (FRG) was established in the same year in the Allied bloc (West Germany).

their feminine role (by spending more time on housework), or putting their marriage at risk. We extend the empirical approach used in these three studies in the same ways as we extend the one in Alesina and Fuchs-Schundeln (2007).

<sup>&</sup>lt;sup>16</sup>Giuliano and Spilimbergo (2014) present evidence that historical macroeconomic environment affects preferences for redistribution; Di Tella, Galiant and Schargrodsky (2007) show that obtaining land rights affects an extensive set of attitudes; Bau (2015) studies relatively small policy changes, and finds (a) heterogeneous responses to these policies by different ethnic groups over just a few years, (b) a rational decline of traditional practices as a result of the policies.

Starting from 1952, a sophisticated arrangement of border barriers and other obstacles was built on the eastern side of the border to prevent migration from East Germany to West Germany, even though there remained the opportunity for limited transit between East and West Berlin until the erection of the Berlin Wall in 1961.<sup>17</sup> The division of Germany was formalized with the Basic Treaty of 1972, after which East and West Germany were accepted as full members of the United Nations. In 1989, large-scale demonstrations of disappointment with the government by East German citizens ended with the fall of the Berlin Wall on November 9th. A monetary union between East and West Germany was established on June 30, 1990, and a formal reunification was declared on October 3, 1990. East Germany became part of the FRG, and the politico-economic regime of the West was transferred to the East.

As a consequence of the separation, women in the two Germanys experienced "different policy configurations and contrasting gendered divisions of labor" (Rosenfeld, Trappe and Gornick, 2004, p.107). East Germany encouraged work for women, including mothers (Rosenfeld, Trappe and Gornick, 2004). The government adopted the principle of equal work under equal conditions in its 1949 constitution, and new family laws in 1965 supported the independence of women. The East German state also introduced legislation to encourage women's educational attainment as early as 1950, whereas no comparable efforts took place in West Germany (Shaffer, 1981, p.20). During the 1960s, "many efforts were made to give women special opportunities to improve their qualifications, to develop a better understanding of technologies, and to get greater access to positions of higher responsibility" (Trappe, 1996, p.357). By the 1970s, fertility in East Germany had dropped significantly. The GDR government interpreted the fertility decline as women's reaction to their "double burden" of work and childcare (Engelhardt, Trappe and Dronkers, 2003) and therefore took initiatives to facilitate the combination of employment and family responsibilities.

<sup>&</sup>lt;sup>17</sup>See Section III.D.ii for a discussion of migration between the two Germanys during the divided years.

<sup>&</sup>lt;sup>18</sup>As pointed out by Duggan (1995, p.182):

Rights of East German citizens were based on their status as labor-force workers, so with these rights came an obligation to do labor-force work.

<sup>&</sup>lt;sup>19</sup>This focus was in part driven by the fact that the industrial expansion, and the flight of skilled workers to West Germany, had caused a shortage of available labor (Schenk, 2003, p.55).

These initiatives included the public provision of extensive childcare, paid maternity leaves with a job-return assurance, and decreased working time in the first few years of the children's lives (Trappe, 1996).

In West Germany, reconciling employment outside the home with maternity was problematic for women because of the lack of public child care (Rosenfeld, Trappe and Gornick, 2004). Further, FRG tax policy permitted income splitting within couples, so that the greatest tax benefits accrued to married couples where one member earned significantly less than the other (Guenther, 2010). Overall, the FRG encouraged a system in which women stayed home after they had children, or went back to part-time employment after an extended break.

Given this background, in what follows we contrast gender differences in attitudes toward work between individuals who lived under different regimes in order to evaluate the extent to which politico-economic regimes influence such attitudes.<sup>20</sup>

### **III.B** Data and Variables

Our goal is to compare, before reunification was complete, attitudes toward work of East and West German women who had lived close to the East-West border. To this end, we use data from the German Socioeconomic Panel (GSOEP), a longitudinal survey of German households, launched in West Germany in 1984 and conducted annually. As of 1990, households residing in the former GDR were inclued in the GSOEP. In 1990, 6,695 individuals in West Germany (around March) and 4,304 in East Germany (around June) answered a survey question about the importance of career success to them. For the West German sample, the question reads: "Different individuals find different things in life important. How important are the following things to you today? Succeed in one's occupation".<sup>21</sup> For the East German sample, the question reads: "Which of the following

<sup>&</sup>lt;sup>20</sup>Anecdotal evidence suggests that attitudes might have evolved differently in West and East Germany after separation. For instance, West Germans would refer to East German mothers who left their children in day-care facilities while they went to work as *Rabenmütter*, or raven mothers, after the black bird that, according to old myths, pushes its chicks out of the nest (Guenther, 2010). Such divergence of attitudes is also suggested in Christian Petzold's movie *Barbara* (2012).

<sup>&</sup>lt;sup>21</sup>The same question is repeated, in sequence, for the following items: 1) Able to afford something; 2) Be there for others; 3) Fulfill oneself; 4) Succeed in one's occupation; 5) Own a house; 6) Have a good marriage/partnership;

things are very important, important, not so important, or unimportant to your sense of well-being and personal satisfaction? Your career success". Responses are coded into a unique variable by GSOEP on a scale from 1 to 4 corresponding to, respectively, "unimportant," "not very important," "important," "very important". We group the answers "unimportant" and "not very important" under "0", and "very important" and "important" under "1". We call the resulting variable Job Success Important: when it takes a value of one, the respondent puts a higher value on career success. Table A.1 reports summary statistics for our baseline sample. One potential concern is that the differences in responses between East and West German women might be caused by the slightly different phrasing of the question they were asked. To address this concern, in Section III.D.ii we show that our main estimates are unchanged when we measure attitudes in 1992, when exactly the same question is asked in both East and West Germany. Additionally, we perform a placebo test showing that our main results regarding women's attitudes do not hold for the sample of East and West German men interviewed by the GSOEP - see Section III.D.i for details. Finally, the grouping of the four categories of answers into 0 and 1 arguably makes the answers of East and West Germans more comparable.

Individuals are also asked the question "Where did you live in 1989: East or West?". As in Alesina and Fuchs-Schundeln (2007), we create the dummy East that takes the value of one if the respondent lived in East Germany in 1989.<sup>25</sup> Further, we use restricted-access information about respondents' place of residence at the time of the interview.<sup>26</sup> In Section III.D.ii we discuss the

<sup>7)</sup> Have children; 8) Be together with friends often; 9) Be politically/socially involved; 10) See the world; 11) Travel frequently.

<sup>&</sup>lt;sup>22</sup>The same question is repeated, in sequence, for the following items: 1) Your work; 2) Your family; 3) Your friends; 4) Your income; 5) Your power to influence political decisions; 6) Your career success; 7) Your leisure time; 8) Your health; 9) The protection of the environment.

<sup>&</sup>lt;sup>23</sup>In 1992 the GSOEP asks the question "Different individuals find different things in life important. How important are the following things to you today? Succeed in one's occupation" to both East and West Germans. Nevertheless, we choose to focus on 1990 in the main part of the analysis, because this serves better our goal of identifying the effect on attitudes of having lived in a state-socialist country versus that of living in a post-socialist country.

<sup>&</sup>lt;sup>24</sup>Estimates are nevertheless very similar if the original coding for the question is used (results available upon request).

<sup>&</sup>lt;sup>25</sup>Six women moved from East to West and three from West to East between 1989 and 1990. We drop these women from the sample.

<sup>&</sup>lt;sup>26</sup>Due to confidentiality reasons, this version of the GSOEP dataset with sensitive regional data can be accessed and analyzed only (a) on the premises of DIW Berlin, or (b) remotely, by preparing a job request for each step of the analysis that is screened and processed by local staff.

additional data which allows us to address the issue of selective East-West migration.

# **III.C** Framework and Empirical Strategy

The institutional background of the German separation suggests an empirical strategy that compares women who lived in East versus West Germany during the separation period. One might in principle interpret any differences between them as the result of exposure to different regimes. The identifying assumption underlying this approach would be that East and West Germany were not systematically different before the forced division of the country along dimensions that would influence the outcome of interest. Previous evidence provides somewhat mixed support for the appropriateness of this assumption. On the one hand Alesina and Fuchs-Schundeln (2007) show that East and West Germany were similar on average before separation in terms of income, the percentage of the population working in industry, agriculture, or commerce, and support for the Social Democrats. On the other hand, Klüsener and Goldstein (2014), using data between 1840 and 1940, show that there was higher non-marital fertility in regions that would become part of East Germany. Bauernschuster and Falck (2015), using data between 1834 and 1905, document spatial variation in childcare coverage, with an important role played by cultural proximity to Bad Blankenburg, Thuringia, a region which would become part of East Germany - Bad Blankenburg is where Friedrich Froebel, the leader of the kindergarten movement in the 19th century established his first institution. To further investigate this issue, we have digitized data from the 1925 edition of the German census. As shown in Table A.4 column (1), gender equality in employment in 1925 was between 2 and 3 p.p. lower in the portion of the country that would became the GDR (for details on our measures of participation in the labor market and sample selection see Section A.I.i).

Given that non-marital fertility, childcare coverage, and especially women's participation in the labor market may be related to the (unobservable before separation) attitudes of interest in our study, a simple comparison of East and West Germany might thus fail to deliver causal estimates in our context. In order to address this concern, we attempt to account for local differences in unobservables by building on the spatial regression discontinuity (henceforth, spatial RD) design framework. The basic idea is to place more weight on observations that are closer to the border versus those farther away. Areas geographically close to each other were arguably more similar before the political separation. In the spatial RD design, the running variable is two-dimensional; as recommended by Imbens and Zajonc (2011), we collapse it to one dimension, thus using distance from the border as our running variable (Black, 1999; Lalive, 2008; Schumann, 2014). Specifically, we measure the Euclidean distance between the centroid of each respondent's county of residence and the East-West German border (Figure A.1).<sup>27</sup>Following the recommendation in recent work by Gelman and Imbens (2014), we estimate a local linear RD polynomial, which controls linearly for distance from the border, and weights observation by proximity to the border using a triangular kernel.

The regression equation that forms the basis of our empirical analysis on the sample of women in the GSOEP is:

$$Y_{icb} = \beta_0 + \beta_1 East_c + \beta_2 Distance_c + \beta_3 Distance_c * East_c + \varphi_b + \varepsilon_{icb}$$
 (1)

where the dependent variable is *Job Success Important* for woman i living in county c along segment b of the border.  $East_c$  is a dummy for having lived in the GDR, as defined above, and is our main explanatory variable of interest.  $Distance_c$  is distance from the border (with West German distances listed as negative values); and  $\phi_b$  is a set of border-segment fixed effects that denote which of four equally sized portions of the East-West border is closest to the county of residence of individual i.<sup>28</sup> Our main explanatory variable of interest is the dummy variable  $East_c$ . The weights we use are equal to  $pw = max (0, bandwidth - abs(Distance_c))$ . Results are shown

East Berlin, with its proximity to the West, was a magnet for young people and dissidents. West Berlin attracted young draft resisters (Berlin's occupied status meant draft laws did not apply there) and people looking for an alternative to the bland materialism of postwar West Germany.

<sup>&</sup>lt;sup>27</sup>See Section A.I.ii for a discussion of potential measurement error in our running variable.

<sup>&</sup>lt;sup>28</sup>The analysis excludes Berlin, because of its peculiar status (with West Berlin politically aligned to the FRG but surrounded by GDR territory) and particularly strong concerns of selective migration. As Cooper (1998, p.57) puts it:

for bandwidths between 200 and 50 km from the border. Our estimates of Equation (1) for two measures of gender equality in employment in 1925, as reported in Table A.4 columns (2) to (4) lend support to the hypothesis that areas East and West of the border close to each other are more comparable than areas further away. In particular, for bandwidths of 150 km and smaller, there is no significant difference in gender equality in employment between East- and West-Germany in 1925.

It is important to note that we do not expect the state-socialist treatment to be unrelated to other observables. On the contrary, we believe that the state-socialist regime in East Germany may have influenced some socio-economic variables during the period. What is key for our identification strategy is that the state-socialist treatment can be considered an "exogenous" institutional shock, a view supported by historical accounts about the process that led to the German separation post WWII - see Becker et al. (2016, p.56) for a discussion in a similar context.<sup>29</sup> In Section III.D.i we focus on female employment in addition to attitudes. Section A.I.iii reports the findings on the extent to which the regime influenced other demographic and socio-economic variables.

### **III.D** Estimation Results

#### III.D.i Main Estimates

To begin with, we show estimates from an OLS regression using the entire sample of East and West German women.<sup>30</sup> We report two standard errors: robust and clustered that allow for arbitrary patterns of correlation within counties. Women who lived in East Germany are 14 p.p. more likely to report that career success is important to them (see Table I, column (1)). However, if there were systematic differences between East- and West-Germany before the separation the difference in attitudes cannot be interpreted as the causal effect of the regime (see our discussion in Section III.C). We thus turn to the spatial RD described in Section III.C. Our results can be visualized in RD

<sup>&</sup>lt;sup>29</sup>Becker et al. (2016) focus on the Habsburg Austrian Empire, known for its localized and well-respected administration, and compare communities on both sides of the long-gone border. They find that historical Habsburg affiliation increases current trust.

<sup>&</sup>lt;sup>30</sup>Results of a probit model are very similar to those of the baseline linear probability model.

graphs. The left panel of Figure II shows bin-averages and a linear polynomial fit for *Job Success Important* in the sample of German women. A discontinuity can be observed, with more positive attitudes toward work for women on the East side of the border. We interpret this discontinuity as the regime impact on attitudes. The main estimates of Equation (1) are reported in columns (2)-(5) of Table I, which show spatial RD estimates for progressively smaller bandwidths (from 200 down to 50 km).<sup>31</sup>Point estimates of the regime effect on attitudes range from 7 to 17 percentage points, with the mean of the point estimates being 11 percentage points.<sup>32</sup> This compares to a mean likelihood of reporting that career success is important of around 64% in the control group of West-German women.

The finding in Table I of a positive and significant coefficient on the dummy East is robust to the inclusion of a rich set of covariates (which may potentially be "bad" controls, see our discussion in Section III.C): age, education, income, satisfaction with household income, marital status, employment status, number of children, religious affiliation, residence in urban area (results available upon request).

Women vs Men The right panel of Figure II shows bin-averages and a linear polynomial fit for *Job Success Important* in the sample of men. A comparison of the left and right panel of Figure II suggests that the effect identified above is genuine to the promotion of female employment, and

<sup>&</sup>lt;sup>31</sup>Table I and Figure II are not directly comparable because Figure II displays bin-averages and linear polynomial fit while Table I shows estimates of specifications which include border FE and weight observations by proximity to the border.

<sup>&</sup>lt;sup>32</sup>The point estimates are larger as the distance from the border decreases. Recall from Table A.4 that for the 200 km bandwidth, gender equality in employment in 1925 was significantly lower in the portion of the country that would became the GDR. As we move to smaller bandwidths, the point estimates of the dummy East decrease in absolute terms are not statistically significant. To the extent that lower gender equality in employment is correlated with women giving less importance to work success, this pattern leads us to emphasize more the estimates for bandwidths between 150 and 50 km, and is qualitatively consistent with that of increasing point estimates as we move to smaller bandwidths in Table I. Further, recall that RD estimates are inherently local. Specifically, in our context, Figure II shows that values of *Job Success Important* in West Germany are relatively low within 50 km from border, whereas there are some relatively high values between 50 and 100 km. The latter data points do not contribute to the estimates for the 50 km bandwidth, whereas they receive a relatively large weight when the bandwidth is of 100 km or larger. Last but not least, it bears noticing that the estimates based on bandwidths between 150 and 50 km in several cases are not statistically different from one another. The 50 km coefficient does not statistically differ from any other bandwidth coefficient with clustered or robust standard errors. With clustered standard error, the 150 km coefficient is not statistically different from the 100 km coefficient. With robust standard errors, the 150 km coefficient is different from the 100 km coefficient at the 10% level.

does not reflect a general pattern in attitudes toward work. Specifically, while a discontinuity can be easily observed for women, the same cannot be said for men. To further investigate this issue, in Table A.9, we use the full sample of German individuals and estimate an augmented version of Equation 1 that compares attitudes East and West of the inner border for women and men. The East-West difference in attitudes is significantly larger for women than for men. In general, both women and men seem to attribute more importance to work in East Germany, but the East-West difference for men is significant only in the OLS specification, and it is at most only half as large as that observed for women.<sup>33</sup>

**State-Socialism and Female Employment** We now turn to female employment as the outcome of interest. In Table A.2, we present detailed data on trends in employment in East and West Germany for the period 1950-90. The table shows that women's participation in the formal labor market was higher in the East than in the West, and employed women in the East worked longer hours. We then estimate Equation (1), with employment status as the dependent variable (obtained from the GSOEP) for the sample of German women in 1990 between 30 and 45 years old.<sup>34</sup>

The estimates in Table II and Figure III confirm the historical accounts: there is evidence of a discontinuity at the border for employment. Point estimates of the state-socialist regime effect on female employment range from 20 to 24 percentage points, with the mean of the point estimates being 22 percentage points for the RD specification (Columns 2-5). This compares to a mean likelihood of being employed of around 64% in the control group of West-German women. In Table A.3, we use the full sample of German individuals and estimate a specification that compares employment of men and women East and West of the border. We find the East-West difference in employment is significantly larger for women than for men.

<sup>&</sup>lt;sup>33</sup>When we turn to the spatial RD, the coefficient for the variable *East*, which measures the East-West difference for the sample of men, is larger than the standard error only in one specification. In general, the conclusions from Table A.9 are consistent with the evidence from Figure II where it appears that, while attitudes toward work tend to be larger for men in the Eastern part of Germany, there is not a visible jump at the East-West border.

<sup>&</sup>lt;sup>34</sup>Most females in this age group have concluded their education yet are arguably still rather far from retirement concerns. In Section A.I.iii we discuss evidence of an increase in female education.

Local Female Employment and Attitudes We now turn to the relationship between local female employment and attitudes. We employ an IV strategy in the spirit of Moretti (2013). The basic intuition behind the IV approach is the following: if employment in a relatively feminized industry increases nationally, districts where the industry employs a relatively large share of the labor force will experience a relatively large increase in female employment (Katz and Murphy, 1992). Section A.I.v provides a discussion of the estimation details and of the results. Note, these regressions should be interpreted cautiously because of data limitations. Setting this concern aside, the estimates suggest that the change in women's attitudes towards work was larger in areas where the growth in female employment was larger. This suggestive evidence is consistent with the theoretical analysis by Fogli and Veldkamp (2011), who present a dynamic model of culture in which women have heterogeneous beliefs about the consequences of paid employment and beliefs evolve due to intergenerational learning. Specifically, females learn about the long-run payoffs from employment by observing nearby working females, and attitudes change over time as a consequence of this process.

The role of propaganda East German women might have been affected by the regime's propaganda to bring them into the labor force - see Figure A.2 for an example; see also Kranz (2013, p.76). We explore this possibility by: (1) employing individual-level proxies for ideology; (2) exploiting plausibly exogenous spatial variation in the availability of West German TV (Bursztyn and Cantoni, 2015); and (3) exploiting plausibly exogenous variation in the time spent in school learning the foundations of the socialist system (Fuchs-Schündeln and Masella, 2016). Section A.I.vi provides a discussion of the estimation details and of the results. We fail to reject the null hypothesis of no propaganda effect on attitudes, although, when using the second approach, the standard errors are quite large and prevent us from drawing definitive conclusions.

## III.D.ii Validity and Robustness

Alternative Specifications Our main estimates are based on the estimation of a local linear RD polynomial. Table A.5 shows estimates under two alternative specifications of the RD polynomial that control for a smooth function of geographic location. First, instead of the linear polynomial, we fit a third order polynomial in distance. Second, following Dell (2010), we specify a multi-dimensional (in latitude x and longitude y) RD polynomial of third order. Notice that these are fully parametric specifications, where we do not weight observations by distance. The results are qualitatively similar to the main estimates discussed in Section III.D.i.

Attitudes in 1992 As discussed in Section III.B, a potential concern is that the estimated difference in responses between East and West German women might be caused by the slightly different phrasing of the question that they answered. Fortunately, the GSOEP also interviews survey respondents regarding their attitudes toward work in 1992, using the same wording for the question in East and West Germany. The question asked is the same as the question asked in West Germany in 1990, i.e.: "Different individuals find different things in life important. How important are the following things to you today? Succeed in one's occupation". In Table A.10 we show the estimates from the sample of women interviewed in 1992 who were also interviewed in 1990,<sup>35</sup> using the answers to the question posed in 1992 as the dependent variable. The results using this sample and dependent variable confirm the results from Table I (that uses the 1990 survey responses). Estimates are very similar when we measure attitudes in subsequent years (when the same question is asked again to East and West Germans) up to 2004 included (results discussed in Section III.D.iii).

**Non-random selection just East/West of the border** The basic idea of a spatial RD is to place more weight on observations that are closer to the border versus those farther away. In our context,

The GSOEP tracks individuals over time. However, a certain number of respondents are also added at each wave, and some individuals are not followed over time due to attrition. We retain only women who responded in 1990 for two reasons. First, since we use the county of residence at the time of the first interview to infer the county of residence during the separated years, the degree of error induced by this procedure is higher for individuals who are first interviewed in 1992. Second, we want to replicate as closely as possible a situation in which the women whose answers we use in Table I are asked a question with the same exact wording in East and West, in order to gauge to what extent the estimates in Table I are affected by the different wording in 1990.

however, there are concerns of potential non-random selection in areas just East/West of the border. These concerns arise because of regulatory and other changes affecting these areas after the separation. In East Germany, access to areas very close to the border with the FRG was restricted (Rottmann, 2008, p.21). Specifically, apart from the border guards, only local residents had access to areas within 5 km of the border. Furthermore, border crossing between the two Germanys became a tedious process, increasing trading difficulties between localities on the two sides. Redding and Sturm (2008), for example, show evidence of a population decline in West German cities close to the border due to a loss in market access. At the same time, the border areas enjoyed some level of economic subsidization in both Germanys, designed to compensate the locals somewhat for the disadvantages arising from the closed border (Buchholz, 1994).<sup>36</sup> In order to explore the possibility of non-random selection of women just East/West of the border,<sup>37</sup> we conduct three tests: first, we exclude counties with centroids within 10 km from the border; second, we exclude counties that are adjacent to the border<sup>38</sup> (both these tests are in the spirit of a Donut RDD (Barreca et al., 2011)); and third, we use the full sample but give equal weights to all the observations, as opposed to putting more weight on observations closer to the border. Table A.11 shows that estimates are consistent with the main finding in Section III.D.i.

East-West migration during the divided years Around 3 million people migrated from the East to the West before the erection of the Berlin Wall in  $1961.^{39}$  From 1961 to the end of 1988, around 600,000 people emigrated from the GDR to the FRG.<sup>40</sup> In contrast, about 30,000 individuals per year emigrated from the FRG to the GDR in the 1950s, and almost none emigrated after the Wall was built (Fassmann and Münz, 1994a). This migration creates an identification challenge in our

<sup>&</sup>lt;sup>36</sup>See Section A.I.iv for further details on the "inner border".

<sup>&</sup>lt;sup>37</sup>Our main estimates would be inconsistent if the nature of the selection is (a) correlated with the outcomes of interest; (b) different on the two sides of the border; and (c) specific to women (recall that we do not find a regime effect for men.)

<sup>&</sup>lt;sup>38</sup>This test amounts to excluding counties with centroid at a maximum distance of approximately 35 km from the border.

<sup>&</sup>lt;sup>39</sup>This number represents a significant share of the peak population (of around 19 million) living in the Soviet-controlled territory in 1947 that officially became the GDR in 1949.

<sup>&</sup>lt;sup>40</sup>Family reunions and general economic reasons were the two chief motives for migration during the divided years. See Alesina and Fuchs-Schundeln (2007, p.1510) for a discussion and references.

context. We address this challenge in Section A.I.vii and conclude that our main finding from Section III.D.i is not explained by East-West migration during the divided years.

**Placebo Border** Lastly, we conduct a placebo experiment in the spirit of Grosfeld and Zhuravskaya (2015) in order to verify that our results capture a specific regime effect, rather than a general West-East pattern unrelated to the separation. We estimate discontinuities at hypothetical borders defined by shifting West the GDR/FRG border by 50, 70, 90, 110, 130, 150, 170, 190, 210, 230, 250, 270 and 290 km. As shown in Figure A.3, only one coefficient is positive and significant (when the border is moved by 250 km). All the other coefficients are insignificant. Figure A.4 further shows that at 250 km a clear discontinuity cannot be observed.

## III.D.iii Long-term analysis

In section III.D.ii, we showed significant differences in the attitudes of East and West German women two years after the reunification. In this section, we consider every year when a question about the importance of career success is asked in the GSOEP<sup>41</sup> and investigate whether the differences between East and West German women persist in the longer term. In order to conduct this analysis, we focus on respondents who answered the question of interest in 1990, and we follow them until 2012.<sup>42</sup> Based on both the OLS and the Spatial Discontinuity analysis, female attitudes toward work in East- and West-Germany seem to start converging sometime after 2004 (see Table A.13). By 2008 it appears that the effect of the regime exposure on the attitudes toward work of German women is undone. The observed pattern might reflect a real change in personal preferences, or a shift in the cohort composition of the sample.<sup>43</sup>

<sup>&</sup>lt;sup>41</sup>These years are: 1990, 1992, 1994, 1995, 1998, 1999, 2004, 2018 and 2012.

<sup>&</sup>lt;sup>42</sup>We exclude respondents who joined the GSOEP in waves following that of 1990, for whom the county of residence during separation can be inferred less reliably (remember that we only observe the county of residence at the time of the interview). See footnote 35 and section A.I.ii for further discussion of measurement error.

<sup>&</sup>lt;sup>43</sup>This issue is discussed in similar terms in Alesina and Fuchs-Schundeln (2007).

### **III.D.iv** Cohort-level analysis

Next, we turn to analyzing the heterogeneous effect of exposure to the regime by looking at four different groups of birth cohorts, namely: born before 1935, born between 1935 and 1949, born between 1950 and 1961, and born after 1961.<sup>44</sup> The results of this analysis are shown in Table A.14. The East-West difference is most pronounced for the second and the third cohorts, i.e. for women born between 1935 and 1961; it is never significant for the oldest and the youngest cohorts.<sup>45</sup> For the oldest cohort, the negative effect of age might offset the impact of a longer exposure to the regime.<sup>46</sup> Furthermore, the fact that the oldest women (born before 1935) spent a significant part of their life in pre-separation Germany may explain this result (Alesina and Fuchs-Schundeln, 2007).

The lack of difference for the youngest cohort may reflect two factors. First, the limited (in time) exposure to the different regimes. Second, the fact that the GDR efforts to promote women's economic inclusion were weaker after the 1960s.

#### III.D.v Gender-role attitudes

We perform a comparison of gender role attitudes in East and West Germany for both women and men, using data from the German General Social Survey (ALLBUS). ALLBUS is the German equivalent to the US General Social Survey, and currently covers the years 1980 to 2012, at a biannual cadence. We use answers to six questions (examined separately) which ask, specifically, for the degree of agreement with the following statements: "A working mother can just as well have a hearty and trustful relationship with her children as a non-working mother"; 47 "Certainly,

<sup>&</sup>lt;sup>44</sup>We split the sample based on the quartiles of the distribution of birth year.

<sup>&</sup>lt;sup>45</sup>None of the coefficients of interest are significant in the specification in column (5), which restricts the sample to individuals within 50km from the border; the size of this sample is likely too small to estimate heterogeneous effects precisely.

<sup>&</sup>lt;sup>46</sup>Consistent with this interpretation, we find that the oldest cohort of West-German women appears significantly less likely to attribute importance to work than the younger cohorts (see Table A.14); relatedly, in results untabulated here we estimate a negative and significant relation between age and attitudes toward work in both East and West-Germany.

<sup>&</sup>lt;sup>47</sup>Recall that the GDR government took initiatives to facilitate the combination of employment and family responsibilities.

a baby suffers if his or her mother is employed"; "It is even good for a child if his or her mother is employed instead of merely focusing on household work"; "It is more important for a woman to support her husband's career instead of making her own career"; "It is better for all if the husband works and the wife stays at home taking care of the household and the children"; "A married woman should turn a job down if only a limited number of jobs is available and her husband is able to make a living for the family". The respondents can give one of the following answers: Completely agree, Tend to agree, Tend to disagree, Completely disagree, Don't know. As we did above in constructing the variable Job Success Important, we obtain six measures of gender role attitudes by grouping in a unique category, respectively, the two levels of agreement and the two levels of disagreement, which we recode as 0 and 1, in such a way that for each 1 represents the less traditional view and 0 the more traditional one. Additionally, we use restricted-access information on the individual's place of residence at the time of the interview.<sup>48</sup>

In Section A.I.viii we provide a discussion of the estimation details and of the results, and we discuss some drawbacks of the ALLBUS data, which lead us to focus on the GSOEP data for the main analysis. The picture that emerges using the ALLBUS data points toward a regime effect on gender role attitudes for both women and men.

# IV Comparison of CEECs and WECs

In this Section we broaden our focus to state-socialism throughout the entire Central and Eastern European region. Specifically, this Section presents our Diff-in-Diff analysis that compares gender-role attitudes formed in CEECs and WECs, before and after the imposition of state socialism in CEECs. We circumvent the lack of a long time-series of measures of attitudes by using the attitudes of US immigrants and their offspring as a time-varying measure of attitudes in their source country.

<sup>&</sup>lt;sup>48</sup>The ALLBUS datasets used for our analysis contain detailed regional information and are accessible at the Secure Data Center (www.gesis.org/en/sdc) of the GESIS Data Archive for Social Sciences in Cologne Germany. Researchers are required to sign a special usage agreement and to work within an individually tailored secure virtual workspace. See GESIS - Leibniz Institute for the Social Sciences (2013) and GESIS - Leibniz Institut für Sozialwissenschaften (2014) for details.

The institutional background is discussed in detail in Section A.II.i.

### **IV.A** Measurement and Data

Measure of Attitudes and Data Description In order to implement our Diff-in-Diff analysis, we need to observe individuals in both CEECs and WECs before and after the establishment of state socialist regimes in CEECs. This is problematic because the 1980s are the earliest years in which a measure of gender-role attitudes in cross-country surveys is available, long after the imposition of state-socialist regimes in CEECs. We cope with this challenge by using the gender-role attitudes of US immigrants and their offspring to construct a time-varying measure of attitudes in their source country, in the spirit of Algan and Cahuc (2010). Our source of information about gender-role attitudes is the General Social Survey database (GSS), which collects reponses from US residents between 1972 and 2016, and contains individual data on the respondent's country of birth and that of her ancestors since 1977. The GSS question on the country of origin reads: "From what countries or part of the world did your ancestors come?". The individual can list up to three countries by order of preference.<sup>49</sup> We select the country of origin which the individual ranks highest.<sup>50</sup>

The CEECs in our sample are Czechoslovakia, Hungary, Lithuania, Poland, and Romania. The Soviet Union exercised a major influence in these five countries starting from the end of WWII. Prior to the end of WWII, Lithuania had been incorporated into the Soviet Union.<sup>51</sup> In the four other countries Stalin favored a system of "indirect rule through national communist elites" (Mazower, 2009, p.282). State-socialist regimes were imposed, with the Soviet hold over them ultimately consolidated in the formation of the Warsaw Pact (McMahon, 2003). See Section A.II.iv for a discussion of some background to the imposition of Soviet rule in CEECs, and Section A.II.v for an explanation as to why our sample does not include other countries located in the region.

<sup>&</sup>lt;sup>49</sup>Around two respondents out of three list only one country.

<sup>&</sup>lt;sup>50</sup>We only include countries for which we can construct a time-varying measure of attitudes for both the periods before and after 1945. This excludes Switzerland since we cannot construct a measure for the period post-1945.

<sup>&</sup>lt;sup>51</sup>Lithuania was first incorporated into the Soviet Union in July 1940, but was under German occupation between June 1941 and July 1944. See Misiunas and Taagepera (1993) for a discussion of Lithuania under Soviet rule.

The WECs in our sample include: Austria, Belgium, Denmark, Finland, France, Greece, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, and the UK. Table A.18 reports the count of immigrants from each of the 19 countries in our sample.

GSS respondents are asked if they were born in the United States and how many of their parents and grandparents were born in the United States. These responses allow us to separate responders into four potential groups of immigrants: fourth-generation Americans and above (more than two grandparents born in the US and both parents born in the country)<sup>52</sup>; third-generation Americans (at least two grandparents born outside US and both parents born in the country); second-generation Americans (at least one parent immigrated to the US); and first-generation Americans.<sup>53</sup>

Gender-role attitudes are measured by the following question: "Please tell me whether you strongly agree, agree, disagree, or strongly disagree with the following statement. It is much better for everyone involved if the man is the achiever outside the home and the woman takes care of home and family".<sup>54</sup> We recode the answers to this question, "Strongly Agree," "Agree," "Don't Know," "Disagree," and "Strongly Disagree," as respectively, 1, 2, 2.5, 3, and 4.<sup>55</sup> We call the resulting index "Better for Man to Work, Woman Tend Home"; the higher its value, the less traditional are an individual's attitudes toward women working.

Gender-role attitudes in the home country in 1990 are also used to provide a benchmark comparison with the attitudes of US immigrants, as shown below. Attitudes in the source country are measured using the 1990 wave of the World Value Survey (WVS) database. The gender-role attitude question in the WVS reads as follows: "Do you agree or disagree: husband and wife should both contribute to income". We recode the answers to this question, "Strongly Agree," "Agree," "Disagree," and "Strongly Disagree" as, respectively, 4, 3, 2, and 1; once again, the higher the

<sup>&</sup>lt;sup>52</sup>For simplicity, in most of the text we will refer to this group as "fourth-generation Americans".

<sup>&</sup>lt;sup>53</sup>We depart from Algan and Cahuc (2010) by adding first-generation immigrants to the sample, while at the same time always controlling for generation dummies in our regressions where the outcome of interest is the gender-role attitude of US immigrant *i*. We include responses of first-generation immigrants to obtain the maximum number of observations on gender-role attitudes. However, our results still hold when we drop first-generation Americans.

<sup>&</sup>lt;sup>54</sup>Among the GSS questions about gender-roles, this is the only one which features at least 30 responses for CEECs after 1945 (49 responses).

<sup>&</sup>lt;sup>55</sup>Only 147 out of 8846 respondents answer "Don't Know". Results are similar if we use alternative approaches, such as recoding "Don't Know" as missing, and recoding the answers "Strongly Agree," "Agree," "Don't Know," "Disagree," and "Strongly Disagree" as, respectively, 1, 2, 3, 4, and 5.

value, the less traditional are an individual's attitudes toward working women. We call the resulting index "Husband and Wife Should Both Contribute to Income".

Measuring the evolution of gender-role attitudes We now describe in detail how we track the change over time in gender-role attitudes using the GSS. We measure the attitudes formed before the imposition of state-socialism in CEECs (before 1945) with the attitudes of GSS respondents who immigrated (or whose ancestors immigrated) to the United States before 1945. We assume a gap of 20 years between two generations, <sup>56</sup> which lets us identify four groups of pre-1945 immigrants, depending on wave and approximate year of own (for first generation) or ancestors' (for second generation and above) migration:

- 1. First generation Americans who migrated before 1945. These are the first generation Americans born before 1929 who report to have been living in the US when 16 years old we use answers to the question "In what state or foreign country were you living when you were 16 years old?" or first generation Americans born before 1945.
- 2. Second generation Americans born before 1945, since the parents of the second generation left Europe for the US before 1945 (These individuals are born in the US, thus their parents must have left Europe before the year in which these individuals are born).
- 3. Third generation Americans born before 1965, since the grandparents of the third generation born before 1965 left Europe for the US before 1945.
- 4. Fourth-generation Americans born before 1985.

We call individuals in these four groups the 1945 cohort. Notice that, regarding third- and fourth- generation Americans, we use responses of some Americans born after 1945. However, they have inherited the attitudes formed in the country of origin of their ancestors before 1945. We

<sup>&</sup>lt;sup>56</sup>Results are very similar if we assume a gap of 25 or 30 years.

use responses of multiple generations of immigrants to obtain the maximum number of observations on gender-role attitudes. Neverthless, our main results hold when we drop third- and fourthgeneration Americans.

The attitudes of GSS respondents who immigrated (or whose ancestors immigrated) to the United States between 1945 and 1990 are used to measure the attitudes formed between the imposition of state-socialist regimes and their collapse, i.e. between 1945 and 1990. We call these respondents the 1990 cohort. This cohort includes:

- 1. First generation Americans who migrated between 1945 and 1990. These are first-generation Americans who are either born after 1929, report to have been living in a foreign country when 16 years old, and are interviewed before 1990; or are born after 1945 and are interviewed before 1990.
- 2. Second-generation Americans born between 1955 and 1990. In principle, we could have defined the 1990 cohort as a residual cohort after having removed respondents in the 1945 cohort. In practice, given that we cannot directly observe the time of arrival for the parents of second-generation immigrants, we select 1955 (instead of 1945) as the lower bound of the interval for the birth year to reduce the probability of misclassification, i.e. the assignment to the 1990 cohort of some second-generation US immigrants who inherited attitudes formed in the country of origin before 1945. This is a departure from the strategy in Algan and Cahuc (2010) and should reduce measurement error. We similarly add 10 years to the lower bound of the intervals for third- and fourth- generation immigrants (outlined below). Some misclassification is obviously still possible but it would arguably affect both CEECs and WECs; moreover it would lead us to underestimate the evolution of attitudes during the period 1945-1990, when looking at differences between the 1945 cohort and the 1990 cohort. Such misclassification is therefore highly unlikely to drive our results of a significant effect of state-socialism.
- 3. Third-generation Americans born between 1975 and 1990.

### 4. Fourth-generation Americans born before 1995.

This method of decomposition eliminates overlap in the gender-role attitudes of the two groups. Tables A.19 and A.22 report summary statistics. Notice that we have a much lower number of observations for the 1990 cohort than for the 1945 cohort. This is due to the fact that the most recent year in the GSS is 2016; the survey does not capture many of the third generation Americans born after 1975 nor most of the fourth-generation Americans born after 1995. This issue of the lower number of observations for the 1990 cohort is particularly relevant for the CEECs, since they are only five out of the nineteen countries in the sample. That said, the number of available observations appears large enough to enable us to obtain precise estimates of the coefficient of interest (see estimates of Equation 2 in Table III).

Correlation Between Attitudes of US immigrants and Attitudes in the Home Country The hypothesis behind our strategy to measure the evolution of gender-role attitudes is that immigrants' attitudes mirror those in their country of origin, and that there is a cultural transmission of gender-role attitudes within families. If our hypothesis is correct, one should observe two things in the data. First, we should find a statistically significant correlation between gender-role attitudes of US immigrants and gender-role attitudes in their source countries. Second, assuming that there has been temporal variation in gender-role attitudes in the European source countries (either CEECs or WECs), the correlation between the gender-role attitudes of a source country in 1990, and those of immigrants from the same country who left before 1945, should be weaker than the correlation between the gender-role attitudes of the source country in 1990, and those of immigrants who left between 1945 and 1990. We document both facts in Section A.II.vi.

# IV.B Empirical Strategy

The imposition of state-socialist regimes in CEECs arguably constitutes a quasi-experimental setting. Therefore, in principle, the before-after difference in attitudes (where "after" means "following the imposition of state-socialism") could be interpreted as the effect of the regime. A concern arises, however, that a general trend in gender attitudes might have been already in place. We estimate a Diff-in-Diff equation, where we compare the evolution of attitudes in CEECs versus WECs.

The regression equation that forms the basis of our empirical analysis is:

$$Y_{igrcp} = \beta_0 + \beta_1 CEEC_c + \beta_2 Post 1945_p + \beta_{DiD} CEEC_c \cdot Post 1945_p + \beta_4 X_{icrp} + \rho_g + \eta_r + \varepsilon_{igrcp}$$
(2)

where  $Y_{igrcp}$  is the answer to the question *Better for Man to Work, Woman Tend Home* of individual i, belonging to generation g, residing in US region r, who migrated (or whose ancestors migrated) from country c in period p (either before 1945 or between 1945 and 1990);  $CEEC_c$  is a dummy taking the value of one if country c belongs to the group of CEECs; Post 1945 $_p$  is a dummy taking the value of one if the individual's attitudes were formed in the country of origin between 1945 and 1990 (or inherited from someone whose attitudes were formed in the country of origin between 1945 and 1990);  $\rho_g$  and  $\eta_r$  are generational and regional dummies, respectively; and  $X_i$  are individual-level characteristics. We estimate both OLS and within-country (of origin) specifications of equation (2). For the baseline specification, we include only gender in  $X_i$  because the politico-economic regime may have affected some demographics resulting in them being outcomes variables and thus "bad" controls. However, we also present estimates which include a rich set of individual characteristics.  $^{58}$ 

### IV.B.i Identifying Assumptions

**Parallel trend assumption** The first identifying assumption in our context is that, absent the state-socialist regime, the evolution of gender attitudes in CEECs would have followed a path that cannot, on average, be distinguished from that in WECs. In Table A.23 we run placebo regressions

<sup>&</sup>lt;sup>57</sup>Results are very similar if we allow the coefficients on the regional dummies to vary by period.

<sup>&</sup>lt;sup>58</sup>In particular, the inclusion of this rich set of controls attempts to address concerns of bias arising from differential immigrants selection.

where we estimate equation (2) using 1900 as the date of the imposition of state-socialist regimes in CEECs rather than the true date of 1945. In Column 1, the point estimate for the coefficient on  $CEEC \cdot Post$  1900 is positive, but not significant. In Column 2 (where we include additional controls), the estimate is negative and not significant. Overall, the evidence suggests that prior to the imposition of the new political and economic regime, gender-role attitudes in CEECs and the WECs evolved in a similar fashion.<sup>59</sup>

**Selection of Immigrants** Since we use the attitudes of immigrants, there is an additional identifying assumption, namely that the selection of immigrants on unobservables does not change differentially in CEECs and WECs after 1945 in a way that may affect gender-role attitudes. In our context, a concern of differential selection arises because the individual incentives for migrating from CEECs into the US were likely to be different before and after 1945.<sup>60</sup> To explore this possibility, we investigate the extent of differential selection on a rich set of observable variables. This should arguably help us infer something regarding the degree of differential selection on unobservables. More precisely, we estimate:

$$x_{igrcp} = \beta_0 + \beta_1 CEEC_c + \beta_2 Post 1945_p + \beta_{DiD} CEEC_c \cdot Post 1945_p + \rho_g + \eta_r + \varepsilon_{igrcp}$$
 (3)

where  $x_{igrcp}$  represents each one of the many individual characteristics that we observe. The OLS estimates should be interpreted cautiously because the composition of the population of US immigrants changes over time simply in terms of country of origin. If this concern is set aside, the OLS regressions (Table A.24) show that immigrants from CEEC countries in the period after 1945 are younger (10% significance level), have higher education (10% significance), are less likely to be satisfied with the financial situation of the household (5% significance level), have higher educated mothers (5% significance level), are more likely to be Jewish (1% significance level) and

<sup>&</sup>lt;sup>59</sup>In Section A.II.iii we further compare CEECs and WECs in terms of economic development and demographics, and document that there are not systematically different changes in these variables over the period of interest, which would undermine our ability to identify the state-socialism effect.

<sup>&</sup>lt;sup>60</sup>Section A.II.vii provides descriptive statistics and some background to migration patterns from countries in our sample to the United States over the period of analysis.

less likely to be politically conservative (10% significance level). The selection does not change differentially in terms of gender, marital status, income, number of children, father's education, employment status,<sup>61</sup> and other religious categories (catholic, protestant, orthodox, other religion, no religion).

The within-country estimates, shown in Table A.25, attempt to address the issue of a changed population of immigrants in terms of country of origin. Immigrants from CEECs in the period after 1945 are shown to be less likely to be satisfied with the financial situation of the household (1% significance level) and less likely to be politically conservative (5% significance level). Unlike the OLS, the within  $\hat{\beta}_{DiD}$ 's on age, education, mother's education, and Jewish religion are not significant. Like in the OLS estimates, the selection does not change differentially in terms of gender, marital status, income, number of children, father's education, employment status, and other religious categories.<sup>62</sup>

Overall, the rather limited degree of selection on observables arguably supports the validity of our empirical strategy, though we acknowledge that our test is quite indirect and prevents us from drawing more definitive conclusions. Regarding the documented change in political views, this may reflect a direct treatment effect of state-socialism rather than differential selection (Alesina and Fuchs-Schundeln, 2007). Furthermore, we show below that estimates of our coefficient of interest in the main regression equation are qualitatively similar when we control for this rich set of individual characteristics.

### **IV.C** Diff-in-Diff Estimates

Estimates of Equation (2) are shown in Table III. The standard errors are clustered at countryperiod level (38 clusters). Our baseline estimates in Column 1 suggest that attitudes formed in

<sup>&</sup>lt;sup>61</sup>When looking at employment status we remove from the sample women between 30 and 45 years old who were born in the United States. This is because female employment is an outcome of interest (recall the evidence above of an increase in female employment in East Germany) and in Section IV.C we estimate equation (2) with employment as dependent variable, restricting the sample to these women.

<sup>&</sup>lt;sup>62</sup>We do not find systematic evidence of differential selection which may affect gender-role attitudes in terms of immigration wave nor destination region in the United States (results are available upon request).

CEECs between 1945 and 1990 are less traditional than those formed in WECs during the same period. In Column 2, we include many individual controls: age, education, marital status, income, satisfaction with the financial situation of the household, employment status, number of children, mother's and father's education, religion and political views. The motivation for such specification is twofold. First, the inclusion of these individual characteristics is a way to further explore the issue of immigrants' selection as discussed above. Second, it controls for the possibility that the sample of immigrants in the GSS is not representative of the population of US immigrants. In Columns 3 and 4 the "Post-1945" period is restricted to 1945-1967. Specifically, in these two columns the sample is formed exclusively by immigrants who left Europe before 1967 and their descendants. The motivation for such specification is again twofold. First, the interval 1945-1967 is interesting because state-socialist governments throughout the region made the most efforts to promote women's economic inclusion during this period. Second, we want to consider a shorter interval for the "post" period so that the likelihood of shocks that may drive our results is smaller, i.e. in this specification shocks to CEECs in the period 1968-1990 cannot bias the estimates. The estimates in Columns 3 and 4, are very similar to those in Columns 1 and 2. In summary, across columns (1) - (4) the estimated coefficients on  $CEEC \cdot Post 1945$  imply that state-socialism appears to decrease the degree of approval with the statement Better for Man to Work, Woman Tend Home; the mean of the point estimates is 0.23. This compares to a mean of the index "Better for Man to Work, Woman Tend Home" of 2.73 in the control group of WECs. As a robustness check, we estimate the four specifications in Table III dropping individuals from one of the 5 state-socialist countries at a time in order to check that no particular country is driving the results. The estimates (shown in Table IV) are qualitatively similar to the ones for the full sample of individuals. In interpreting our estimates, it is important to highlight that we estimate the effect of state-socialism on gender-role attitudes relative to the effect of any other policy regime in place in Europe during the same period. While some Western governments, especially in the 1970s, embraced change in women's opportunities as a formal policy objective, in no case have their commitments been as long-standing as those of the governments in CEECs (Wolchik, 1981, p.446). See section A.II.ii

for more details.

Since country of origin is an important determinant of gender-role attitudes (Table A.21), our estimates may be affected by the changing composition of the population of immigrants over time in terms of country of origin. To investigate this issue, in Table A.26 we report within country estimates of equation (2), which compare the evolution of attitudes in a given country versus that in other countries, and find similar results.

We also estimate, after constructing a 1900 cohort, a version of Equation (2) where *Better for Man to Work, Woman Tend Home* is regressed on the baseline controls (generation dummies, regional dummies, and gender) plus country dummies and cohort indicators. Figure A.7 visually shows the estimates. The displayed coefficients on the cohort dummies indicate mean attitudes for CEECs and WECs relative to the 1945 cohort. Consistent with Table A.23, the figure shows that before 1945 the attitudes in CEECs appear to have evolved similarly to attitudes in WECs.<sup>63</sup> Consistent with Table A.26, the figure suggests that after 1945 gender-role attitudes formed in CEECs during the state-socialist regime become less traditional compared to WECs.

Lastly, we estimate equation (2) with employment status as the dependent variable. We restrict the sample to women between 30 and 45 years old who were born in the United States. The estimates should be interpreted cautiously since immigrants from different countries in different periods may be subject to different labor market opportunities, for instance because of discrimination (Acemoglu, 2017). If this concern is set aside, the estimates in Table A.27 show that  $CEEC \cdot Post$  1945 has positive significant explanatory power even after controlling for individual characteristics. Point estimates of the coefficient range from 11 to 19 percentage points, with the

<sup>&</sup>lt;sup>63</sup>Since families of immigrants in the *1945 cohort* have on average spent a longer time in the US than those of immigrants in the *1990 cohort*, a competing explanation for the pattern observed in the graph could be the adaptation of immigrants to the norms of the new society in which they live. In other words, it could be that attitudes in the two groups were similar in 1945 and 1990, but the process of cultural integration is completed only for the 1945 cohort. However, Table A.21 (discussed in Section IV.A) suggests this explanation is not likely given that the coefficients of the country effects in the regression with inherited attitudes in 1945 as dependent variable are statistically highly significant.

<sup>&</sup>lt;sup>64</sup>Analysing second or higher-generation immigrants should reduce shocks to "normal" behavior which arise from immigration (e.g., language obstacles) - see Fernández and Fogli (2009, p.147)

<sup>&</sup>lt;sup>65</sup>Regarding female education we cannot reject the null hypothesis that having experienced state-socialism has no explanatory power.

mean of the point estimates being 16 percentage points. This compares to a mean likelihood of being employed of around 72 % in the control group. Within country estimates are very similar (available upon request).

### **IV.D** Further Discussion

Current gender employment gaps As shown in Table A.28 (discussed in detail in Section A.II.iii), during the state-socialist period, the number of women as a percentage of the labor force in CEECs was higher than in WECs. de Haan (2012, p.96) discusses how after the regime change

women were particularly hard hit, both by higher unemployment rates (though not everywhere) and by the cuts on social spending. Even if social services under state-socialism had been insufficient, they were still important in allowing women to work, helping them to cope with their "double burden".

Figure A.8 plots a measure of the gender gap in employment for different age groups of the working population (15 years and above) in the sample of countries that are part of our analysis based on 2016 data - data is from the International Labour Organization.<sup>66</sup> Averages for both the CEECs and WECs are also included. The data shows that the CEECs tend to have a lower gender gap in employment in the age groups 35-44, 45-54 and 65+, whereas the opposite is true for age groups 15-24, 25-34 and 55-64.

Gender-role attitudes after 1990 As discussed above there exists a statistically significant correlation between gender-role attitudes of US immigrants and gender-role attitudes in their source countries. The question from the 1990 wave of WVS that we have used to provide this benchmark comparison with the attitudes of US immigrants ("Do you agree or disagree: husband and wife should both contribute to income") is also asked in two later WVS waves, conducted in the years 1995-1998 and 1999-2004, respectively. Figure A.9 plots the answers to this question and shows that CEECs tend to have less traditional attitudes over the three available waves.

<sup>&</sup>lt;sup>66</sup>The measure of gender gap in employment that we use is ratio of female to male employment-to-population ratios.

Shifts in gender-role attitudes and economic growth An interesting question concerns the relationship between gender-role attitudes and economic performance, and in particular whether shifts in gender-role attitudes in CEECs have enhanced growth after the removal of state socialism, separate from any growth impacts from a more efficient economy. With our research design and the available data we cannot provide a definitive answer. Nevertheless, in Section A.II.viii we provide a brief discussion.

# V Conclusion

To what extent are attitudes affected by political regimes and government policies? In this paper, we focus on female attitudes toward work and gender-role attitudes in the population at large, which have been shown to have significant effects on labor market outcomes. We exploit the imposition of state-socialist regimes across Central and Eastern Europe, and their efforts to promote women's economic inclusion, for both instrumental and ideological reasons. In the main part of our analysis, we take advantage of the German partition into East and West after 1945 and restricted information on historical place of residence. Our empirical strategy directly disentangles the effects of having lived in a state-socialist country from that of living in a post-socialist country, guards against bias from local unobservables (by implementing a spatial regression discontinuity design), and addresses the potential issue of selective East-West migration. We find more positive attitudes toward work in the sample of East German women. We also find a regime effect on female employment, as suggested by historical accounts. Furthermore, we show suggestive evidence that the change in women's attitudes toward work was larger in areas where the growth in female employment was larger, while we fail to reject the null hypothesis of no propaganda effect. Finally, we employ a difference-in-differences strategy that compares attitudes formed in Central and Eastern European countries (CEECs) and Western European Countries (WECs), before and after the imposition of state socialism in CEECs. Gender-role attitudes formed in CEECs during the state socialist period appear to be significantly less traditional than those formed in WECs. Overall, we

overcome previous identification and data limitations and find that attitudes are profoundly affected by politico-economic regimes.

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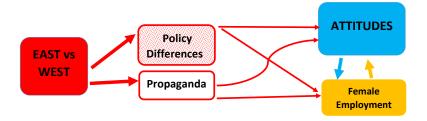
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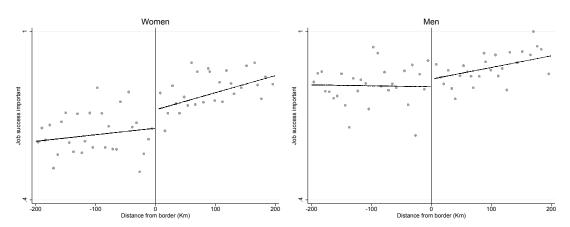
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# **Figures and Tables**

**Figure I**Conceptual Framework

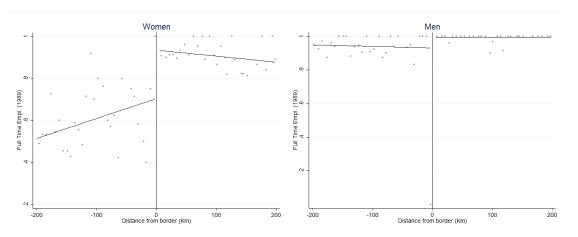


**Figure II**Job Success Important, RD graphs



The Figure shows bin-averages and a linear fit for women and men in GSOEP. Specifically, the lines are fitted values from a regression of *Job Success Important* on linear polynomials in distance, estimated on the two sides of the border. The size of the bins is a little over 5 km, chosen as to have thirty bins on each side. Left side is West Germany. The variable *Job Success Important* is constructed using answers to the question on how important is career success for the individual's personal satisfaction. Bandwidths to construct polynomial fit are chosen to span the full support of the data. See Calonico, Cattaneo and Titiunik (2015) for details.

**Figure III** Employment, RD graphs



The Figure shows bin-averages and a linear polynomial fit for women and men in GSOEP. See notes to Figure II for more details.

 Table I

 Female attitudes towards work: Job success important, main estimates.

	(1)	(2)	(3)	(4)	(5)
	OLS		Spati	ial RD	
		<= 200  km	<= 150  km	<= 100  km	<= 50  km
East	0.146 (0.013)***	0.072 (0.035)**	0.083 (0.041)**	0.105 (0.052)**	0.165 (0.077)**
	(0.015)***	(0.041)*	(0.041)*	(0.052)*	(0.089)*
Counties	346	252	180	118	64
Observations	5,059	3,854	2,870	1,915	978
Adj. R-squared	0.023	0.017	0.013	0.009	0.009
Border segment FE.s	NO	YES	YES	YES	YES
Mean y control	0.625	0.628	0.638	0.652	0.650

The dependent variable is *Job Success Important*, constructed using answers to the question on how important is career success for the woman's personal satisfaction. We group the answers "unimportant" and "not very important" under "0", and "very important" and "important" under "1". We estimate a linear probability model. The dummy East takes on the value of one if the respondent lived in East Germany in 1989. Robust standard errors in parentheses (below: clustered, allowing for arbitrary correlations within counties). Significance levels: 1% \*\*\*, 5% \*\* and 10% \*

**Table II**Female Employment (women aged 30 - 45)

	OLS	Spatial RD					
		<= 200  km	<= 150  km	<= 100  km	<=50  km		
East	0.320	0.231	0.240	0.199	0.211		
	(0.020)***	(0.056)***	(0.067)***	(0.085)**	(0.121)*		
	(0.020)***	(0.051)***	(0.060)***	(0.072)***	(0.107)*		
Observations	1,582	1,203	901	606	294		
Mean y control	0.712	0.593	0.634	0.649	0.689		
Border segment FE.s	NO	YES	YES	YES	YES		

The Table show estimates of Equation (1) with employment as the dependent variable. Robust standard errors in parentheses (below: clustered, allowing for arbitrary correlations within counties). For estimation details, see notes to Table (I)

Table III
State-socialism and Attitudes Toward gender-roles, Diff-in-Diff Estimation: Disagreement with "Better for Man to Work, Woman Tend Home"

			Post-19	45: 1945-1967
	(1)	(2)	(3)	(4)
CEEC	0.126***	0.097***	0.127***	0.095***
	(0.027)	(0.025)	(0.027)	(0.025)
Post-1945	0.439***	-0.020	0.451***	-0.013
	(0.046)	(0.047)	(0.045)	(0.038)
CEEC x Post-1945	0.175*	0.265**	0.205*	0.281**
	(0.103)	(0.111)	(0.108)	(0.129)
Male	-0.156***	-0.220***	-0.157***	-0.222***
	(0.014)	(0.017)	(0.015)	(0.017)
Age	,	0.004	(	0.004
6		(0.004)		(0.005)
Age squared		-0.000**		-0.000**
-84		(0.000)		(0.000)
Education (yrs)		0.050***		0.050***
Education (yls)		(0.004)		(0.004)
Married		-0.085***		-0.085***
viairied		(0.016)		(0.016)
Household Income (cotes)		0.010)		0.035***
Household Income (categ.)				
9 .: 6 1 .: 4 6 .: 1 .: .:		(0.004)		(0.004)
Satisfied with financial situation		-0.023**		-0.020**
		(0.009)		(0.009)
Employed		0.108***		0.102***
		(0.027)		(0.027)
Children		-0.029***		-0.028***
		(0.008)		(0.008)
Mother's Education		0.005		0.005
		(0.004)		(0.004)
Father's Education		0.010***		0.011***
		(0.002)		(0.002)
Catholic		-0.160***		-0.159***
		(0.032)		(0.033)
Protestant		-0.234***		-0.238***
		(0.033)		(0.035)
Jew		-0.022		0.009
		(0.081)		(0.084)
Orthodox		-0.186		-0.233
~		(0.205)		(0.221)
Other Religion		-0.180**		-0.179**
Onici Rengion		(0.081)		(0.083)
Politically Conservative		-0.116***		-0.116***
onticarry Conscivative		(0.007)		
Observations	0.202		0.150	(0.007)
	9,302	6,387	9,150	6,297
Adjusted R-squared	0.048	0.230	0.049	0.232
Mean y control	2.706	2.760	2.707	2.760
SD y control	0.840	0.833	0.841	0.834

This table reports estimates of equation 2, i.e. the main estimates for our comparison of CEECs and WECs. In column 3-4 the "Post-1945" period is restricted to 1945-1967, i.e. the sample for the "Post-1945" period includes first-generation immigrants who left Europe between 1945 and 1967 and their descendants. Gender-role attitudes are measured by the following question: "Please tell me whether you strongly agree, agree, disagree, or strongly disagree with the following statement. It is much better for everyone involved if the man is the achiever outside the home and the woman takes care of home and family". We recode the answers to this question, "Strongly Agree", "Agree", "Don't Know", "Disagree", and "Strongly Disagree" as, respectively, 1, 2, 2.5, 3, and 4. Reference group in Column 2 and 4: non-religious. Estimation method: OLS. Standard errors clustered at country-period level in parentheses. Regional and generation gummies always included. Number of countries is equal to 19. Significance levels: 1% \*\*\*, 5% \*\* and 10% \*.

45

**Table IV**Dropping individuals from one of the 5 state-socialist countries at a time. Diff-in-Diff Estimation:
Disagreement with "Better for Man to Work, Woman Tend Home"

	Post-1945: 1945-19			945: 1945-1967
	(1)	(2)	(3)	(4)
	No Czec	hoslovakia		
CEEC x Post-1945	0.172	0.253**	0.219*	0.314**
	(0.115)	(0.121)	(0.127)	(0.149)
	No H	lungary		
CEEC x Post-1945	0.153	0.253*	0.211	0.343*
	(0.112)	(0.144)	(0.130)	(0.181)
	No Li	thuania		
CEEC x Post-1945	0.114*	0.197**	0.129**	0.161***
	(0.066)	(0.083)	(0.053)	(0.040)
	No I	Poland		
CEEC x Post-1945	0.310**	0.404***	0.337	0.353
	(0.146)	(0.118)	(0.220)	(0.226)
	No R	omania		
CEEC x Post-1945	0.194*	0.268**	0.211*	0.278**
	(0.113)	(0.122)	(0.112)	(0.130)

This table reports estimates of the main coefficient of interest in equation 2, dropping individuals from one of the 5 state-socialist countries at a time. For estimation details, see notes to Table III.

# Appendix (For Online Publication)

# A.I Analysis exploiting the German separation: Further Information

#### A.I.i Gender equality in employment in 1925 Germany

The 1925 German census provides detailed labor force statistics. In particular, it is possible to derive different measures of gender equality in employment for counties that overlap with the territory of post-WWII Germany.<sup>67</sup> We use two measures of gender equality in employment: the share of women working as dependent employees over the total number of dependent employees, and a similar measure that also includes unemployed individuals.<sup>68</sup> We run county-level regressions using the specification in equation (1), where the dependent variable is a measure of gender equality in employment in 1925. As shown in Table A.4, for either measure used, while there are significant differences between the parts of Germany that would become respectively the GDR and the FGR when the entire sample is considered, the difference becomes statistically insignificant for counties that are close to the border when we use a Spatial RD.

In sum, our analysis of census data indicates that the status of women in the labor market in pre-separation Germany might have been different between the Eastern and the Western part of the country, but there is no evidence of heterogeneity across localities that are relatively close to what would become the inner border. This evidence lends credibility to the Spatial RD that we use in our analysis of German data.

#### A.I.ii Measurement error in our running variable

As discussed above, we use distance from the border as the running variable in the Spatial RD. Employing confidential information on the county where the respondent resides at the time of the interview, we measure the Euclidean distance from the border to each respondent's county of

<sup>&</sup>lt;sup>67</sup>We consider counties that have at least a partial overlap with the territory of post-WWII Germany.

<sup>&</sup>lt;sup>68</sup>Unemployed individuals are workers who normally participate in the labor market but are not in a job at the time of the interview. We consider the total amount of workers, which includes the following categories: *independent*, *work in household*, *staff or civil servant*, *worker* and *family member*, *who helps out*.

residence centroid.

The true value of distance might be measured with error in our data. If what matters for attitudes' formation is where an individual spent a large part of her life, rather than her location at the time of the interview, distance is measured with error for those respondents who moved across counties shortly before the interview. One might suspect that this error is correlated with the initial location of residence, and thus with the true value of distance, if individuals closer to the border were more likely to move further away from it, given the disruptions that the division of previously integrated areas might have caused. This would thus induce a bias in the estimate of the effect of distance, whose sign we cannot a priori determine, affecting also the consistency of the other estimated coefficients. To explore this potential issue we exploit some useful information available in SOEP. We start by dropping individuals who live in West Germany at the time of the interview, but who report having lived in East Germany before 1990, and vice-versa. Additionally, since SOEP respondents are asked in what year they moved to their current dwelling, we drop individuals who report having moved in the last five years (i.e. after 1985); while having changed dwelling does not necessarily imply having changed county of residence, the sample we are left with necessarily includes only individuals who lived in the same county at least in the last five years. The spatial RD estimates using this sample are virtually unchanged with respect to our main estimates in Table I (results available upon request).

#### A.I.iii Changes in education and other socioeconomic variables

In Section III.C we noted that the state-socialist regime in East Germany may have influenced some demographics during its reign, beyond its impact on female employment. In this Section we discuss the findings of our investigation of this aspect. We find evidence of a substantial discontinuity at the East-West German border in women's overall years of education (see Figure A.5. Results are similar if we use probability of completing college). The increase in education is consistent with the discussion in III.A. We also find that higher education is associated with higher values of *Job success important*.

Further, we explore whether any of the plausibly relevant covariates that we observe in our data: (a) exhibit a substantial discontinuity at the East-West German border, and (b) are statistically related with attitudes. The covariates we observe are (in addition to employment status and education): age, income, satisfaction with household income, marital status, number of children, religious affiliation, and residence in urban area. A few variables satisfy condition (a) and (b): the woman's age (lower in the East), household income (also lower in the East), marriage status (women in the East are more likely to be married), and number of children (higher in the East).<sup>69</sup> Based on our estimates, income, number of children and marital status are very unlikely to explain an *increase* in the degree of importance attributed to success at work. We find that lower household income is associated with lower attitudes toward work, and the same holds true for larger number of children and being married.<sup>70</sup> As for age, there is some evidence of a younger population on the East side of the inner border, although the jump is not distinct. Moreover, attitudes toward work tend to decrease as women get older. To further explore this issue, we focus on the sample of women younger than 65, and we find that age cannot explain the estimated effect of state socialism on attitudes: in this sample, there is no evidence of a discontinuity at the border in age, whereas the sharp difference in attitudes and employment status is clear. All the estimates discussed in this Section are available upon request. In concluding, it is important to note that, as mentioned in Section III.D.i, the finding in Table I of a positive and significant coefficient on the dummy East is robust to the inclusion of the rich set of covariates we observe in our data, including age.

<sup>&</sup>lt;sup>69</sup>For some other variables a clear discontinuous jump is observed, but no statistical association with attitudes. These are income satisfaction, urban residence, probability of being Protestant (all lower in the East) and probability of reporting no religion (larger in the East).

<sup>&</sup>lt;sup>70</sup>Household income is reported in the two parts of Germany in their respective currency, since the monetary unification process was not completed at the time of the survey. While the East German mark was officially exchanged by the East German government at par with the West German mark, it was in practice worthless outside of the GDR. For this reason, an issue of comparability arises (notice also that ideally we would adjust household income by price level). However, using data for 1992, when the same currency is used, the jump in income is negative and of the same order of magnitude as that estimated in 1990, which confirms that the economic status of East German respondents to the survey was lower than that of West Germans.

#### A.I.iv The "inner border"

This Section briefly discusses some background to the German "inner border". After the German separation the GDR invested more and more effort into fortifying its border with the FRG, which served several purposes. First, the heavily guarded border was supposed to stop the migration of the East-Germans to the FRG, a phenomenon that was especially strong in the first decade of the GDR's existence (Rottmann, 2008, p.10). Further, by closing the borders in 1952 the GDR tried to force out its official recognition as a state (Schaefer, 2011, p.509). Last but not least, the strong border control had an ideological role as well as it was supposed to keep the influence of the capitalist West from reaching the citizens of the GDR and to protect them from western aggression (Ahonen, 2012, p.84).

It is important to note that border fortifications were present solely on the eastern side; the FDR did not place great emphasis on such activities. The GDR continually upgraded the initial fence, and protective measures were constantly modernized from 1952 up until the fall of the Berlin Wall. The fortifications ran along the total length of the border<sup>72</sup> and were very severe. The original setup consisted of a barbed wire fence followed by the Controlled Zone (10 meters wide), later came the 500m wide Security Zone, and then as an extra precaution the 5km wide Restricted Zone was established (Buchholz, 1994, p.57). Apart from the border guards only locals residing in these zones had access to these areas, and even for them movement was restricted. The border cut through roads, highways and railroads; several previously existing crossing points to West-Germany were thus completely shut down. Along some sections of the border minefields were installed starting from 1961.

These fortifications, combined with numerous other protective measures, were mostly successful in reaching the first of the above mentioned goals; they made the illegal migration to the FRG incredibly difficult in the countryside just as the Wall proved to be an effective way to diminish the number of escapes to the West in Berlin. However, the closing of the border had other direct

<sup>&</sup>lt;sup>71</sup>For a longer overview, see Rottmann (2008)

<sup>&</sup>lt;sup>72</sup>1381 km according to Rottmann (2008, p.14)

effects on the lives of people who resided very close to it in the GDR.

To start with, in some cases people belonging to the same village now became citizens of two different countries and were not allowed to visit each other. In other cases villages lying close to the border or on the border in the GDR were destroyed and people from these areas were relocated to other parts of the country. Two major government-organized deportation waves took place in East Germany in the early 1950s and mid 1960s: some twelve thousand people were forced to move from the border regions to places chosen by the authorities (Rottmann, 2008, p.16). The deported individuals were considered to be politically unreliable thus dangerous to state security. These people were basically branded for life as at their new living location they were known as the enemies of the state. For those who were not subjected to deportation or other types of relocation, life close to the border became nevertheless difficult. These citizens needed special permits to move and work within the Restricted Zone (Rottmann, 2008, p.21) and were generally not allowed to visit other villages located there. Agricultural activity very close to the border was also monitored by the border troops and could be dangerous as mines were "often washed out by rains into farmers' fields", as Rottmann (2008, p.18) notes. Moreover, citizens were more closely monitored than anywhere else in the country in order to detect any signs of illegal border crossing intentions. The agents of the Ministry for State Security ('Stasi') were active all over the GDR but very close to the intra-German border their vigilance was even higher (Rottmann, 2008, p.21). Thus living just East of the border was psychically also demanding as people were aware of the higher level of surveillance focused on them.

In spite of all the measures the GDR took to cut communication along the intra-German border, at local level there were several attempts to create some measure of cooperation between villages and towns on the two sides of the fence. However, Schaefer (2011) shows that even low priority partnerships were impossible to create because of the interference of higher political interests in the local level negotiations.<sup>73</sup>

<sup>&</sup>lt;sup>73</sup>Schaefer (2011) illustrates the case of the Eichsfeld region which was cut in half by the border and so the everyday cooperation between its parts was broken. There were several attempts to revive this partnership which consisted, for instance, in "returning stray animals, regulation of waterways, and warnings in cases of fire along the border" (Schaefer, 2011, p.524); however, these attempts never succeeded. According to Schaefer the main reason of the failure

As mentioned above, the FRG did not protect its border with the GDR, people were allowed to go close to it. Nevertheless, this didn't diminish the negative effects of the border on either side of it. The safety measures and the closing of the roads in the GDR meant that previously operating trading connections were completely severed for decades. Since there was no regard for the interests of local communities, the border cut through villages, even houses (Rottmann, 2008, p.17), and separated previously smoothly cooperating neighboring localities which relied upon each other for various reasons (Schaefer, 2011).

The closed border also had consequences related to trade. Redding and Sturm (2008) show evidence of a population decline in West German cities close to the intra-German border. The authorities of both German states started to offer some level of compensation to the inhabitants of the border regions (Buchholz, 1994; Redding and Sturm, 2008). In the FRG the subsidy for the border regions was more substantial and was directed to improvements in infrastructure and to revive businesses (Deutscher Bundestag, 1970) while in the GDR it was proportional to income and it was rather small (Buchholz, 1994, p.59).

Overall, the localities very close to the intra-German border experienced special circumstances compared to the rest of their corresponding states. This is even more true to the Eastern part where border fortifications made everyday life particularly difficult. The fact that the Restricted Zone itself was accessible with special permits only and thus the population of this area was basically forming a separate entity within the GDR shows how different the life of people living here was from that of the other citizens of East Germany.

was that the GDR tried to use these negotiations to force out the recognition of its state from the FRG. As the FRG wanted to avoid this at all cost, the local officials taking part on the meetings were instructed to behave in accordance with the higher political goals of their states which then made the agreement between the parties impossible. This in turn "worked to weaken cross-border religious, kinship, and economic networks, thus contributing to the process of German division" (Schaefer, 2011, p.534).

#### A.I.v Local Female Employment and Attitudes

The regression equation that forms the basis of our empirical analysis of the relationship between local female employment and attitudes is:

$$\Delta Attitudes_c = \beta_0 + \beta_1 \Delta Fem. Empl._d + \varepsilon \tag{4}$$

where  $\Delta Attitudes$  is the difference between the attitudes of "young" female cohorts (born after 1935) and those of "old" female cohorts (born before 1935) in county c. We use the change relative to the group of birth cohorts born before 1935 because, as shown in Section III.D.iv the attitudes of those cohorts do not seem to have been affected by state-socialism, and therefore can arguably be considered as baseline attitudes for our purposes. The variable  $\Delta$  *Fem.Empl.* is the change in female employment rate between 1950 and 1985 in district d. We address the issue of endogeneity of  $\Delta$  *Fem.Empl.* d by employing an IV strategy in which the instrument for  $\Delta$  *Fem.Empl.* d is defined as:

$$IV \equiv \sum_{s} \eta_{sd} * \lambda_{s} * \Delta Empl._{s}$$
 (5)

where  $\eta_{sd}$  is the share of men and women employed in industry s in district d in 1950,  $\lambda_s$  is the share of women employed in industry s nationwide in 1950 and  $\Delta Empl._s$  is the nationwide change between 1950 and 1985 in (log) employment in industry s. Because we use Census data for East Germany, district is the finest available geographical level. The basic intuition behind the IV approach is the following: if employment in a relatively feminized industry increases nationally, districts where the industry employs a relatively large share of the labor force will experience a relatively large increase in female employment (Katz and Murphy, 1992; Moretti, 2013). Table A.6 shows the output of OLS estimation of Equation 4 (column 1), first stage (column 2), reduced form (column 3), and two stage least square (2SLS) estimation of Equation 4 (column 4). The 2SLS estimate of  $\beta_1$  is equal to 0.024, suggesting a positive relationship between local female employment and attitudes. When we cluster standard errors by district (14 districts), the coefficient

in the 2SLS regression is significant at the 10% level (s.e. equal to 0.012). When we bootstrap the standard errors following the procedure developed by Cameron, Gelbach and Miller (2008) the p-value is 0.152. The coefficient on  $\Delta Fem.Empl._d$  implies that a 1 p.p. increase in female employment rate is associated with a 2.4 p.p. larger mean probability that women report success at work to be important. The 2SLS estimate is larger than the OLS one: in addition to measurement error in  $\Delta Fem.Empl._7^{74}$  this could be due to the effect of local female employment being heterogeneous across counties. If there are indeed heterogeneous effects of  $\Delta Fem.Empl.$  on  $\Delta Attitudes$ , then consistent OLS measures the average effect of  $\Delta Fem.Empl.$  on  $\Delta Attitudes$  across all counties. 2SLS on the other hand estimates the average effect for the counties that are marginal in terms of change in female employment, in the sense that they experience a relatively large change in female employment if and only if there exists a industry mix which is conducive to such change. If the effect of local female employment on attitudes is larger for counties that are marginal, the 2SLS estimates will exceed those of consistent OLS. In practice, however, the IV standard errors are quite large and prevent us from drawing definitive conclusions.

#### A.I.vi The role of propaganda

In this Section we assess to what extent propaganda is a plausible channel for the estimated effect of socialism on attitudes in East Germany by conducting three tests. The first test is based on the relationship between exposure to propaganda and approval of the regime; the second exploits differential exposure to West-German TV; and the third considers differences in the amount of time spent learning the foundations of the socialist system by East-German children who were in school at the time of the transition.

<sup>&</sup>lt;sup>74</sup>For the 1950 period data on female employment rate had to be imputed in the following way. The numerator is the number of women employed. For the denominator, ideally we would consider the number of working age women. This statistic is not available for 1950. Therefore, we consider population data for 1955, when information on number of women by age is reported. We calculate the share of women aged 15-60 in 1955, and we apply this share to the population numbers from 1950.

<sup>&</sup>lt;sup>75</sup>See Imbens and Angrist (1994) for a discussion. For a recent example, see Eisensee and Strömberg (2007).

**Approval of the regime and attitudes toward work** One may argue that women whose attitudes were shaped by the exposure to government propaganda are more favorable to the regime itself. Under this scenario, we should observe more positive attitudes toward work for East-German women who are more in favor of the socialist regime. We explore this possibility by estimating (in the sample of East German female respondents to the GSOEP) the following equation:

$$Y_i = \delta_0 + \delta_1 I deolog y_i + \delta_2 X_i + \varepsilon_i$$
 (6)

where  $Y_i$  is the variable Job Success Important. Ideology is constructed using one of either two questions, asked in 1990 and 1992 respectively: how satisfied the respondent was with democracy in the GDR, and which political party was supported by the respondent. Specifically, the variable Ideology is either Satisfaction with Democracy, which takes a higher value the larger one's reported satisfaction with democracy in the GDR is; or the dummy variable Party Support, which takes a value of 1 if the respondent expresses support for the PDS (Party of Democratic Socialism), which was the successor of the SED (Socialist Unity Party of Germany), the ruling party in the GDR.  $X_i$  is a full set of controls described in Section A.I.iii. The estimates of equation (6) are shown in columns (1) and (2) of Table A.7: the coefficient estimate of  $\delta_1$  is not significant in either specification. The standard error associated with the coefficient for *Party Support* is quite large, reflecting the overall low level of approval of the PDS in the sample (2.7 p.p.). According to our estimates, supporting the PDS is associated with up to 11 p.p. higher attitudes toward work; however, we cannot reject a negative association of up to 12 p.p. either. The point estimate for the coefficient Satisfaction with Democracy is more precise: according to our analysis, attitudes toward work among women who report to be satisfied with the level of democracy in the GDR are higher by a maximum of 1 p.p. than the attitudes of women who report being dissatisfied with it.

Exposure to West-German TV and attitudes toward work In our second approach, we use a measure of propaganda based on TV consumption during the divided years. <sup>76</sup> In practice, we regard East Germans who used to live in counties not reached by the West Germany TV as more exposed to GDR propaganda. The main public TV networks from East Germany (DFF) began its broadcasts in 1952. "By that time very few East Germans owned a TV set. However, television gained popularity rapidly, and by the end of 1958, there were already over 300,000 TV sets in the GDR" (Bursztyn and Cantoni, 2015, p.8). East German TV was "a drab mixture of political propaganda and Soviet-produced movies" (Bursztyn and Cantoni, 2015, page 1). Under the assumption that encouragement of women's work was part of the East German TV propaganda, more positive attitudes toward work among women who were more exposed to the East German TV channels would be suggestive that propaganda is a plausible mechanism behind the evidence in Section III.D.i. Unfortunately, we do not have information on the heterogeneous reception of national television in East Germany.<sup>77</sup> We thus develop an *indirect* measure of heterogeneous exposure to East German TV, based on a notion of "crowding out" from the West German one. We contend that individuals who had access to West German TV arguably reduced the time spent watching the East German TV, since they were reached by alternative sources of information and entertainment. We thus presume that areas that did not receive the West TV were relatively more exposed to East German propaganda. Therefore, comparing these areas to those receiving West TV provides an indirect test of the effect of propaganda on women's attitudes toward work. We estimate the following regression (using the sample of East German female respondents to the GSOEP):

$$Y_i = \gamma_0 + \gamma_1 No \text{ West } TV_c + \gamma_2 X_i + \varepsilon_i$$
 (7)

where the variable *No West TV* $_c$  is a dummy for lack of predicted reception of West TV (based on a signal propagation model) in the individual's county of residence. *No West TV* is built starting

<sup>&</sup>lt;sup>76</sup>A large literature documents the effect of exposure to television on political (Gentzkow (2006); Della Vigna and Kaplan (2007); Enikolopov, Petrova and Zhuravskaya (2011); Della Vigna et al. (2014)) and social (Jensen and Oster (2009); Olkean (2009); La Ferrara, Chong and Duryea (2012)) outcomes.

<sup>&</sup>lt;sup>77</sup>Bursztyn and Cantoni (2015, p.6) report data suggesting that access to national TV channels was spatially homogeneous in the GDR.

from the municipality-level measure used in Bursztyn and Cantoni (2015)'s investigation of the effect of exposure to West German TV on the consumption behavior of East Germans.<sup>78</sup> We first use their data of West TV signal in East German municipalities to calculate the weighted (by municipality area) average signal at the county level. We then follow their definition of treatment area, by considering as not-receiving West German TV (*No West TV*) the counties whose average TV signal strength is lower than or equal to that of the city of Dresden. <sup>79</sup> As a result, the following counties are classified as not receiving West TV during the divided years: Bautzen, Dresden, Görlitz, Sächsische Schweiz-Osterzgebirge, Vorpommern-Greifswald, and Vorpommern-Rügen.

The estimates show there is a positive and significant coefficient on *No West TV* in a regression where the dependent variable is the measure of East German women's attitudes toward work (column 3 of Table A.7). However, since the areas that did not receive the West TV signal are in the North-East and South-East regions of the former GDR, the estimated coefficient for *No West TV* in equation (7) is likely biased, due to spurious correlation with distance from the border. Following Bursztyn and Cantoni (2015), we thus augment equation (7), adding *Distance<sub>c</sub>*, as defined in Section III.D.i, as a control; the coefficient on *No West TV* is halved, and it is no longer statistically significant (column 4 of Table A.7). A concern arises from the possibility that, once the control for distance is added, not enough identifying variation is left to estimate the relation between the exposure to West TV and attitudes. In other words, since *Distance* and *No West TV* are highly correlated, if they both have an impact on attitudes, the effect of differential exposure to West TV might be hard to detect, once distance is controlled for, given that the former is more likely to be measured with error than the latter. To explore this possibility, we restrict the analysis to women

<sup>&</sup>lt;sup>78</sup>Bursztyn and Cantoni (2015) use a signal propagation model to predict the availability of West German television in the GDR as follows. First, they measure the TV signal for the whole territory of the former GDR, divided into a 1x1 raster. Based on this raster, they then calculate the level of TV signal strength for each municipality. See their paper for a more detailed description of the measure of TV signal strength.

<sup>&</sup>lt;sup>79</sup>Ideally, one wants to classify municipalities based on a dummy variable for receiving or not the signal. However, as Bursztyn and Cantoni (2015) point out, the discontinuity of TV signal strength is fuzzy. They thus use the anecdotal evidence that Dresden was close to the signal discontinuity, and define a municipality as not receiving any West German TV if it had a signal strength weaker than or equal to that in Dresden.

<sup>&</sup>lt;sup>80</sup>See Bursztyn and Cantoni (2015, page 28) for a map of the predicted West TV signal in East Germany.

<sup>&</sup>lt;sup>81</sup>That distance from the border might have predictive power is confirmed by the fact that, in a regression of attitudes on distance and control variables in the sample of women who live in the part of East Germany receiving West television, the coefficient of distance is positive and 10% statistically significant.

who lived at a distance from the border larger than 100 km. While in the original sample, 88% of women receive West TV, and 12% do not, in this restricted sample 72% of women receive West TV, and 28% do not. In practice, although the gap in distance between the "treated" and "control" units is reduced in this sample, there is still substantial variation in treatment status. Nevertheless, the coefficient on *No West TV* is smaller than that in the baseline sample, and statistically insignificant (column 5 of Table A.7). This suggests that the relation between exposure to West TV and attitudes is due to spurious correlation with distance from the border.

Overall, the results of this analysis suggest that, once distance from the inner border is properly taken into account, there is no evidence of more positive attitudes toward work among East German women who were relatively more exposed to East German television. However, the standard errors are quite large and prevent us from drawing definitive conclusions. Specifically, we cannot reject that not receiving West-German TV made East-German women more likely to report that work is important by up to 7 p.p., and less likely by up to 3 p.p.

Learning the foundations of the socialist system We also conduct a test based on exposure to propaganda in the GDR through the school system. One of the official purposes of the compulsory schooling system in the GDR was the formation of a socialist personality; every school subject was shaped by this goal (Fuchs-Schündeln and Masella, 2016). Furthermore, two specific subjects in compulsory school were specifically aimed at teaching the foundation of the socialist system: Social Studies and Introduction to Socialist Production (Fuchs-Schündeln and Masella, 2016). This education system was quickly dismantled after the fall of the Berlin Wall, and any reference to the formation of a socialist personality was eliminated from school subjects (Fuchs-Schündeln and Masella, 2016). Conversely, the school system in West-Germany remained unchanged throughout the transition. Following the strategy in Fuchs-Schündeln and Masella (2016), we compare students who spent different amounts of time in socialist schools for arguably exogenous reasons. Under the assumption that, the longer the time spent in socialist education, the larger the exposure to the regime propaganda, we interpret this comparison as an additional test of the role that

propaganda played in shaping women's attitudes toward work. Specifically, we exploit the fact that, at the time of the transition, students of the same birth cohort had been exposed to differential amounts of socialist education, depending on their month of birth. In the GDR, children who would turn 6 on or before May 31st started their first grade in September of the same year; students of the same birth cohort who were born after May 31st started their first grade the following year. Therefore, among the children in schooling age during the transition, those born on or before May 31st had spent one more year exposed to socialist education than children in their same birth cohort born on or after June 1st.

We estimate the following equation:

$$Y_{ic} = \theta_0 + \theta_1 East_{ic} + \theta_2 Before May 31st_{ic} + \beta_3 (Before May 31st \times East)_{ic} + X_{ic} + \gamma_c + \varepsilon_{ic},$$
 (8)

where  $Y_{ic}$  is our measure of attitudes toward work for woman i in birth cohort c, and  $East_{ic}$  indicates whether a female respondent lived in East Germany before the fall of the Berlin Wall.  $Before\ May\ 31st_{ic}$  is a dummy for being born on or before May 31st. We pool several survey years together and estimate equation (8) using a sample of 2,070 women who answered the question of interest between 1990 and 2004 and who belong to the birth cohorts 1974 - 1983. These women were in grades 1 to 10 in November 1989, when the transition to the new school system started. Within each birth cohort c, women born before May 31st had spent one more year into socialist education than their peers born on or after June 1st. Our term of interest is  $Before\ May\ 31st\ X$   $East_{ic}$ , a difference-in-difference parameter. Equation (8) estimates the causal effect of one more year of socialist education, by comparing the difference in attitudes between East-German women within the same birth cohort and born before or after May 31st, versus the same difference for West-German women.

<sup>&</sup>lt;sup>82</sup>Information on month of birth is available for about 90% of the survey respondents in the relevant years. Notice that, unlike the analysis in Table A.7, where we use data from the earliest year when the relevant information is available (1990 or 1992), in this part of the analysis we study women who answer the GSOEP in any year between 1990 and 2004; this is because most of the women born between 1974 and 1983 participate only in the most recent waves of the GSOEP, given their young age. We nevertheless exclude women who participate in the survey in 2008 and 2012 because we find that the East-West difference in attitudes persists only until 2004 (see Section III.D.iii).

<sup>&</sup>lt;sup>83</sup>We do not estimate equation (8) with a spatial RD because most of the women born between 1974 and 1983

The results of this analysis, shown in Table A.8, do not suggest that women who were more exposed to a socialist education have more positive attitudes toward work.<sup>84</sup> Specifically, in the sample used in this part of the analysis, East-German women who were born after May 31st appear 7 p.p. more likely to report that success at work is important to them than their West counterparts; among their peers born before May 31st, this difference might be maximum 4 p.p. larger, but it might also be 9 p.p. smaller, and the difference between these two groups is not statistically significant.

#### A.I.vii East-West migration during the divided years

If the distributions of female attitudes toward work were similar in the East and the West at the time of the separation, but women attaching less importance to job success migrated from the GDR to the FRG, then this could be driving our main finding from Section III.D.i. To test for this, we restrict the sample to women who lived in the East in 1949, and create two dummy variables, "Moved E to W 49-56" and "Moved E to W 57-89". These dummies take on a value of one if a woman migrated from the East to the West during 1949-1956 or during 1957-1989, respectively. 85 The coefficients on the two dummies in a regression with *Job Success Important* as dependent variable capture the attitudes of women who migrated East-West relatively early or relatively late, respectively, with respect to women who stayed in East Germany. As the regression estimates in

participate only in the most recent waves of the GSOEP, given their relatively young age. Therefore, we cannot reliably infer their county of residence during the separated years. See sections III.D.ii and III.D.iii for a discussion of measurement error in the running variable for survey respondents observed in more recent years. Furthermore, notice that the underlying identifying assumption for the causal estimation of the parameter of interest  $\beta_3$  in equation (8) is arguably stringent enough. In practice, it is required that any spurious (i.e. independent of socialist education) difference in attitudes between individuals from the same cohort who start their first grade at different ages is comparable between East- and West-Germany.

<sup>&</sup>lt;sup>84</sup>The controls in columns (2) and (3) are a full set of age dummies, state fixed-effects, and month of birth (entered linearly), and are selected following Fuchs-Schündeln and Masella (2016).

<sup>&</sup>lt;sup>85</sup>We select 1957 because this year divides the distribution of East-West female migrants approximately into two halves. We classify a woman as having moved from east to west if (a) she is currently in west Germany – she is in west german sample; (b) area of origin is former GDR – question asks whether one is originally from former GDR, former German territory, or other; (c) reports having lived in west Germany since after 1949 (so we do not capture movers before separation) - question asks whether moved before 1949 or after. Then we divide sample in pre-1956 and post-1956 movers using question that asks "Lives in West Germany since ... (Year)". After 1961, as a consequence of the building of the Berlin Wall, there was a significant change in migration possibilities. This suggests using 1961 to split the sample. Unfortunately only 5 women moved after 1961, preventing us from further analysis.

Table A.12 column (1) show, women who migrated East-West during the divided years attach significantly less importance to job success. <sup>86</sup> To address the potential issue signaled by this finding, we code the women who moved from East to West as if they lived in East Germany in 1989. This is in the spirit of "restoring" the distribution of preferences in the GDR as if migration had not occurred. On this "manipulated" sample, we then estimate the main relation of interest between politico-economic regimes and attitudes toward work. <sup>87</sup> We perform this exercise in the remaining part of Table A.12. In column (2) for comparison we report OLS estimates on the entire sample of women in the GSOEP (i.e. women observed in East and West in 1990). In column (3) we operate the "manipulation" in order to address selective migration. The coefficient estimates in columns (2) and (3) are very similar, indicating that our main finding from Section III.D.i is not explained by East-West migration during the divided years.

#### A.I.viii Gender-role attitudes

The German General Social Survey (ALLBUS) allows a comparison of gender-roles attitudes in East and West Germany. The first year when we can analyze ALLBUS data on gender-role attitudes is 1996.<sup>88</sup> This might be problematic for two reasons. First, as emphasized before, we think that it is important to examine differences in attitudes between East and West Germans by 1990 in order to distinguish the effect of socialism from that of post-socialism. Second, we are only able to recover the place of residence of each respondent in the year of the interview; therefore, both the dummy *East* and the variable *Distance* from equation (1) are measured with error if the interviewee changed place of residence with respect to the divided years. Nevertheless, we think

<sup>&</sup>lt;sup>86</sup>East-West female migrants might attach less importance to job success than stayers for two (non-mutually exclusive) reasons: self-selection and differential treatment. For what concern the latter explanation, recall from Section III.A that the FRG encouraged a system in which women stayed home after they had children, or went back to part-time employment after an extended break. East-West female migrants were exposed to the West Germany system, which may have negatively affected their attitudes towards work. At the same time the reference group was exposed to the GDR regime that positively affected their attitudes towards work.

<sup>&</sup>lt;sup>87</sup>Notice that we cannot execute a spatial RD in this context, since we do not know the (old) county of residence in East Germany of individuals who had moved to West Germany by 1990.

<sup>&</sup>lt;sup>88</sup>This is because: (i) the information on the individual respondent's county of residence, which is needed to implement the spatial RD, is available only starting from the 1994 wave of ALLBUS, and (ii) the first year after 1994 when the gender role attitudes questions are asked in the survey is 1996.

that it is interesting to investigate the extent to which the emerging pattern using the GEOSP data is confirmed when looking at gender role attitudes and female attitudes toward work.

Using the 1996 wave of ALLBUS, we re-estimate equation (1), with the dependent variable being the answer to each of the six questions listed in Section III.B. A positive coefficient for *East* in equation (1) would signal less traditional gender role attitudes in East versus West Germany. Since we use both men and women for this analysis, we augment equation (1) with a control for the gender of the respondent.<sup>89</sup>

The results of the analysis are reported in Table A.15. For each question, we show the coefficient for *East* across different bandwidths. Figure A.6 allows a visualization of the unconditional differences between East and West Germans at the border, i.e. without controls for border segment fixed-effects and gender.

The emrging picture points toward an effect of the regime on gender role attitudes, for both women and men (for the estimates disaggregated by gender, see Table A.16; Table A.17 also shows estimates of a difference-in-differences model that compares women and men on the two sides of the border). In particular, when we consider questions regarding the effect of a mother's work outside home on her children's wellbeing, East Germans are unequivocally less traditional than West Germans. Regarding questions about the appropriateness of specialization of roles between men and women, the picture is somewhat more mixed. East Germans are significantly less likely to believe that the husband should work outside the home whereas the woman should take care of the house and kids. However, there is no significant difference (except for the OLS estimates in Table A.17) in the level of agreement with the statements that a wife should support her husband's career more than her own, and that she should turn down jobs when few of them are available. This lack of difference masks a positive, although not precisely estimated, coefficient among women, and a negative imprecise coefficient for men. Given that there exists an unemployment rate gradient along the border after reunification (see Fuchs-Schündeln and Izem (2012)), one could speculate that the relatively high level of unemployment faced by East German men in 1996 might in part

<sup>&</sup>lt;sup>89</sup>The differences between the GDR and the FRG in terms of focus on women's economic inclusion may have affected the gender-role attitudes of both women and men.

explain these results. This suggests that it may be indeed important to distinguish the effect of socialism from that of post-socialism on individual attitudes.

All in all, the analysis described in this Section confirms that the gender-role attitudes of German individuals were shaped by the politico-economic regime in which they were formed.

# A.II Comparison of CEECs and WECs: Further Information

## A.II.i Institutional Background

Soon after their imposition in the late 1940s, the state-socialist governments in CEECs adopted the principle of equal pay for equal work in their new constitutions (Wolchik, 1981, p.446). For instance, the Hungarian Constitution of 1949 stated that women had the right to the same work under the same working conditions as men, and "the new family laws in 1952 – preceding the revision of the Austrian family law by almost two-and-a half decades – supported the independence of women" (Fodor, 2002, p.117). Easy access to abortion helped the entry of women into paid employment (David, 2013). 11,92 In the years after the imposition of state-socialist regimes, CEECs experienced a large increase in participation in economic activity outside the home (Berent, 1970). See Section A.II.iii for details.

It should be noted that under state-socialism most women were workers as well as mothers, but in many areas of CEECs (a) there were not sufficient social services, and (b) women continued to perform the majority of domestic work and childcare (Szelenyi and Rueschemeyer, 1989; Alpern Engel and Posadskaya-Vanderbeck, 1998).<sup>94</sup> However, despite being potentially overbur-

<sup>&</sup>lt;sup>90</sup>Fodor (2002) also points that the Hungarian government used propaganda to encourage women's employment. Pictures of female workers appeared in newspapers and newscasts, political posters, and other central propaganda materials.

<sup>&</sup>lt;sup>91</sup>In Romania abortion was legalized in 1957, but the government reversed its policy in 1966 due to concerns over the low fertility rates.

<sup>&</sup>lt;sup>92</sup>Wage setting policies also provided strong incentives for women to find a job. Specifically, "elite efforts to encourage women to enter the labor force to help their homelands were accompanied by wage scales that virtually required two incomes per family to maintain a decent standard of living" (Wolchik, 1992, p.122).

<sup>&</sup>lt;sup>93</sup>A similar picture emerges for higher education. Women's role in the exercise of political power changed instead far less. Therefore, there is less difference in the degree to which females have attained equal representation in political elites in CEECs and WECs during this period (Wolchik, 1981).

<sup>&</sup>lt;sup>94</sup>Several studies also emphasize that women were not fully equal to men in the labor markets of CEECs. For

dened, women did not seem to want to work solely at home (de Haan, 2012, p.91). Indeed many women acknowledged, and made use of, the opportunities that state-socialism had made available to them. The significance of the workplace collectives for women's sense of self can be seen in contemporary sources and later interviews (Massino, 2009; Toth, 2009). 95,96

# A.II.ii Women's work in Western Europe after 1945

This Section briefly discusses some background to women's work in Western Europe. <sup>97</sup> While in CEECs changes in women's economic status after 1945 have occurred as part of a broader process of directed social change, in WECs these changes have occurred more spontaneously, "largely as the result of non-directed processes of modernization and secularization" (Wolchik, 1981, p.445). State-socialist countries and WECs differed the most in terms of women's opportunities and economic status during the first twenty years following WWII. On one hand women in CEECs contributed to building up their societies by joining the labor force. On the other hand in Western Europe there was a vast agreement that women – in particular those with children – belonged to the home rather than the labor market, and that males had the right to a breadwinner's wage, which could support a wife and dependent children (de Haan, 2012, p.93). In countries such as the Netherlands, UK and West Germany female workers were for the most part young and single (Pott-Buter, 1993; Simonton, 1998).

Starting from the mid-1960s, independent women's organizations and informal groups started to actively seek change in most of Western Europe (Mazower, 2009; Wolchik, 1981). This happened in the context of and intertwined with changes in women's opportunities: employment levels

instance, a quite significant gender wage gap existed throughout the region (Wolchik, 1992; Molyneux, 2001).

<sup>&</sup>lt;sup>95</sup>From the early 1960s, birthrates dropped significantly in CEECs, and, as a reaction, political leaders took initiatives to facilitate the reconciliation of employment and childcare. Paid maternity leave and mothers' allowances did ease women's burden. However, they also strengthened the identification of women as a group with domestic work and care for children. In the 1970s and 1980s, female employment rates either grew or remained high throughout the region. However, amidst economic crises, "so-called women's issues remained low on the list of politicians' priorities"(de Haan, 2012, p.92).

<sup>&</sup>lt;sup>96</sup>For a longer overview of women's work in Central and Eastern Europe, see de Haan (2012) and Wolchik (1981). Additionally, Section A.II.ii discusses some background to women's work in Western Europe.

<sup>&</sup>lt;sup>97</sup>For a longer overview, see de Haan (2012).

of females started to increase around this period throughout the area. <sup>98</sup> In certain countries, the debate sparkled by the women's movement has led to "governmental commitments to women's equality, as well as to increased public awareness of the need for gender-role change" (Wolchik, 1981, p.446). For instance, in 1970 the Dutch government did away with the rule that the husband was the head of the married couple, and in 1977 the West German government put an end to the clause which required husband's consent for a wife to work (Mazower, 2009; de Haan, 1998). Around the same time, governments in Nordic countries started to support more actively female employment outside the home with "an extensive array of family benefits, including maternal and paternal paid leaves and a network of municipal and licensed family day care facilities, which fall somewhat short of meeting the needs" (Kahne, 1992, p.285). Such state benefits however remained mainly absent in other WECs. <sup>99</sup>

Overall, while some Western governments, especially starting from the 1970s, have embraced change in women's opportunities and economic status as a formal policy objective, in no case their commitments have been as long-standing as those of the governments in CEECs, a point well-made by Wolchik (1981).

# A.II.iii Economic development and sex-ratios

Table A.28 shows the number of women as a percentage of the labor force in CEECs and WECs for the period 1950-1978. It reports values from Table 3 in Wolchik (1981), who assembles these numbers by combining data from both the International Labor Office and individual national institutes of statistics. <sup>100</sup> In her discussion of the available information on female participation during this period Wolchik (1981) reports the following: <sup>101</sup>

<sup>&</sup>lt;sup>98</sup>A similar picture emerges for education, see de Haan (2012, p.94-95).

<sup>&</sup>lt;sup>99</sup>In the 1970s and 1980s female employment in western Europe kept rising, yet mostly in terms of part-time jobs (Lagrave, 1996, p.481-482).

<sup>&</sup>lt;sup>100</sup>Wolchik (1981) sample includes also Albania, Bulgaria, Yugoslavia, Soviet Union and United States, which do not belong to our sample, and therefore we do not report their respective data.

<sup>&</sup>lt;sup>101</sup>The problems involved in the cross-country comparisons of women's labor force participation mentioned in the following passage from Wolchik (1981) are also discussed by the International Labor Office at http://laborsta.ilo.org/applv8/data/c1e.html.

Women's economic activity outside the home has increased greatly since the institution of socialist systems in Eastern Europe and the Soviet Union, and women currently comprise over 30% of the labor force in all socialist countries and above 45% in Czechoslovakia, Bulgaria, the GDR and the Soviet Union (see Table 3). Precise comparison of the participation of women in the labor force of Eastern and Western Europe or within groups of countries is difficult, due to national differences in the methods of reporting labor force statistics. As numerous scholars have noted, there are several sources of bias in the reporting of this information, including differences in the treatment of auxiliary family workers and part-time or seasonal workers; the reliability of national reporting units also varies (For a discussion of these problems, see Berent, 1970). Nonetheless, several types of information indicate that women in Eastern Europe and the Soviet Union are significantly more likely to be employed outside the home than are women of non-socialist countries considered. Since the labor force statistics presented for the socialist countries in Table 3 include only those persons employed for wages in the socialist sector, they exclude unpaid family workers, most of whom tend to be concentrated in private agriculture. 102 If we compare these figures with the proportions of women in Western labor forces, excluding unpaid auxiliary family workers, we find that women generally have comprised higher proportions of the labor forces in the socialist countries. Differences between the two groups of countries were greatest in the 1950s and 1960s.

Table A.29 shows per capita levels of GDP in CEECs and WECs in our sample for specific years dividing in equal intervals the period before and after 1945 (1900, 1922, 1945, 1967, 1990).

<sup>&</sup>lt;sup>102</sup>Footnote 4 in Wolchik (1981, p.453):

Information concerning the number of auxiliary family workers in Eastern Europe is not available after the early 1950s for most countries. That information which is available indicates that exclusion of such workers, who form a diminishing proportion of the labor force, does not change the proportion of women in the labor force greatly. If auxiliary family members are excluded, women in Poland, for example, comprised 30.5% of the labor force in 1950 and 39.9% in 1970; the latter figure is virtually identical to their proportion of the socialized labor force (40.0%) [...]

A joint look at Table A.28 and Table A.29 suggests that economic development affects women's labor market outcomes in both sets of countries. Within the state-socialist group, the number of women as a percentage of the labor force is generally higher in the more developed nations (such as Czechoslovakia and East Germany) than in Romania. The values of this indicator are also generally higher in the more developed Western countries than in Italy and Spain. Nevertheless, the contrast between countries at different level of economic development is overshadowed by the contrast between state-socialist countries and WECs. Therefore in Romania the number of women as a percentage of the labor force in the mid-1970s is similar to that in such more developed countries as Belgium, West Germany and Norway. <sup>103</sup>

Table A.29 also shows GDP growth rates before and after 1945. It is instructive in particular to compare growth rates in 1922-1945 versus 1945-1967 for CEECs and WECs. The data indicate that CEECs did not experience a larger change in growth rates than WECs between the two periods closest (before and after) to the advent of state-socialism in CEECs. Table A.31 further compares CEECs and WECs in terms of sex-ratios. On average the sex-ratio dropped 3 p.p. in CEECs between 1930 and 1951, as opposed to a 2 p.p. increase in WECs. In Poland and Romania the drop is particularly large (5 p.p. and 3 p.p., respectively). As a robustness check, we have estimated the 4 specifications in Table III when dropping individuals from Poland and Romania, in order to check that these two particular countries are not driving the main results. The estimates (available upon request) are very similar to the ones for the full sample of individuals.

# A.II.iv Europe after WWII and the imposition of state-socialist regimes in CEECs

This Section briefly discusses some background to Europe after WWII and the imposition of Soviet rule in CEECs. <sup>104</sup> In both West and East Europe we focus mostly on countries in our sample. <sup>105</sup>

WWII brought incomparable levels of destruction and chaos in Europe. Around 40 million

<sup>&</sup>lt;sup>103</sup>See Wolchik (1981) for a detailed discussion.

<sup>&</sup>lt;sup>104</sup>For a longer overview, see McMahon (2003) and Mazower (2009).

<sup>&</sup>lt;sup>105</sup>Recall that the CEECs in our data are Czechoslovakia, Hungary, Lithuania, Poland and Romania (plus the GDR for the analysis exploiting German separation); the WECs are Austria, Belgium, Denmark, Finland, France, Greece, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, the UK (plus the FGR).

people died as a direct effect of the conflict. The share of noncombatants dead – perhaps half of the total – easily outweighed any previous wars (Mazower, 2009, p.213). Between 10 to 20% of the total populations of the Soviet Union, Poland and Yugoslavia died, 4 to 6% of the total populations in Germany, Italy, Austria and Hungary.

As reported by McMahon (2003, p.2)

At war's end, much of the European continent lay in ruins. British Prime Minister Winston S. Churchill, in characteristically vivid prose, described postwar Europe as 'a rubble heap, a charnel house, a breeding ground of pestilence and hate'. Berlin was 'an utter wasteland', observed correspondent William Shirer, 'I don't think there has ever been such destruction on such a scale'. In fact, many of the largest cities of central and eastern Europe suffered comparable levels of devastation; 90% of the buildings in Cologne, Dusseldorf, and Hamburg were gutted by Allied bombing, 70% of those in the center of Vienna. In Warsaw, reported John Hershey, the Germans had 'destroyed, systematically, street by street, alley by alley, house by house. Nothing is left except a mockery of architecture'. US Ambassador Arthur Bliss Lane, upon entering that warravaged city in July 1945, wrote: 'The sickening sweet odor of burned human flesh was a grim warning that we were entering a city of the dead'. In France, fully one-fifth of the nation's buildings were damaged or destroyed; in Greece, one-quarter. Even never-occupied Great Britain suffered extensive damage, principally from Nazi bombing, while losing an estimated one-quarter of its total national wealth in the course of the conflict. [...] Across Europe, an estimated 50 million of the war's survivors had been uprooted by the war, some 16 million of them euphemistically termed 'displaced persons' by the victorious Allies.

The war not only devastated much of Europe, but the old international order as well. As pointed out by McMahon (2003, p.3)

The Eurocentric international system that had dominated world affairs for the past

500 years had, virtually overnight, vanished. Two continent-sized military behemoths - already being dubbed superpowers - had risen in its stead, each intent upon forging a new order consonant with its particular needs and values. As the war moved into its final phase, even the most casual observer of world politics could see that the United States and the Soviet Union held most of the military, economic and diplomatic cards.

Toward the end of the war Britain and US were prepared to accept the fact that Soviet Union would exercise a major influence in CEECs. In November 1944 the 'percentages agreement' dividing the Central and Eastern European region and the Balkans into territories of predominant British or Soviet influence was tentatively ratified by Churchill and Stalin (McMahon, 2003, p.20). Lithuania had already been incorporated into the Soviet Union. In Poland and Romania the Soviets imposed obedient governments. In Czechoslovakia and Hungary instead fairly open elections were initially permitted (McMahon, 2003, p.26). However, in February 1948, a Soviet-sponsored coup took place in Czechoslovakia. Around the same time, non-communist opposition was crushed in Hungary (McMahon, 2003, p.32). In May 1955 the Soviet Union consolidated the hold over the region with the formation of the Warsaw Pact. The alliance included Albania, Bulgaria, Czechoslovakia, East Germany, Hungary, Poland and Romania (McMahon, 2003, p.61). 106

#### **A.II.v** Selection of countries in the GSS sample

The CEECs in the GSS used for the comparison with WECs include Czechoslovakia, Hungary, Lithuania, Poland and Romania. We now explain why our sample does not include other countries located in the Central and Eastern European region. We drop Germany, because immigrants in the GSS who report Germany as their country of origin may come from East or West Germany, and therefore they may or may not be "treated". Regarding the remaining Soviet allies under the Warsaw Pact (Bulgaria) or other countries incorporated into the Soviet Union (Estonia and Latvia), there is no separate category for them in the GSS question "From what countries or part of the world did your ancestors come?". Descendants of immigrants from these countries are likely

<sup>&</sup>lt;sup>106</sup>Albania would leave the Warsaw Pact in 1968.

to end up in the residual GSS category "other European", making it unfeasible for us to use their attitudes. We drop Yugoslavia from our sample for two reasons. First, because the Warsaw Pact did not include this country, due to the Tito-Stalin split in 1948, which "essentially came about because the Yugoslav would not accept the kind of Soviet domination of their internal affair which was becoming routine throughout the region" (Mazower, 2009, p.263). The second reason is the country's "early move toward a market socialist system" (Wolchik, 1992, p.120).

# A.II.vi Correlation Between Attitudes of US immigrants and Attitudes in the Home Country

We evaluate the link between gender-role attitudes of US immigrants and gender-role attitudes in the source country, following the approach in Algan and Cahuc (2010). More precisely, we run individual-level regressions in which the dependent variable is the gender-role attitude question of the GSS, and the variable of interest is the average gender-role attitudes in the country of origin, obtained from the 1990 wave of the WVS. <sup>107</sup> The regression equation is:

$$Y_{igrcp} = \gamma_0 + \gamma_1 Y_c^{WVS,1990} + \gamma_2 X_{icr} + \eta_r + \rho_g + \varepsilon_{igrc}$$
(9)

where  $Y_{igrcp}$  is the answer to the question *Better for Man to Work, Woman Tend Home* of individual i, belonging to generation g, residing in US region r, who migrated (or whose ancestors migrated) from country c in period p.  $Y_c^{WVS,1990}$  is the average response in the country of origin of individual i, obtained using the answers of country c residents to the question *Husband and Wife Should Both Contribute to Income*.  $X_i$  are individual-level characteristics, and  $\rho_g$  and  $\eta_r$  are generational and regional dummies, respectively. For the baseline specification we only include in  $X_i$  individual characteristics that are available for the full sample: gender, age, marital status, satisfaction with the financial situation of the household, current employment status (i.e. in the US labor market), number of kids, education. However, we also present estimates which include a

<sup>&</sup>lt;sup>107</sup>The first period in which attitudes in the European countries were measured is 1980. The reason we do not use the 1980 wave of WVS is that the only CEEC participating to that wave is Hungary.

richer set of individual characteristics.

We report the results in Table A.20.<sup>108</sup> Column 1 reports the results with the attitudes formed in the period 1945-1990 as the dependent variable. The correlation between attitudes in the United States and attitudes in the home country in 1990 is statistically significant at 1 percent level. Column 2 shows the estimates when we regress the attitudes formed in the period before 1945 on  $Y_c^{WVS,1990}$ . While positive, the coefficient is an order of magnitude smaller than in the previous column, and far from significant. This result suggests that gender-role attitudes acquired before 1945 by the first generation immigrants in the source country (CEEC or WEC), and transmitted to their offspring, were different from the gender-role attitudes acquired (and transmitted) in the period 1945-1990. A competing explanation for the weak correlation in Column 2 could be a convergence in attitudes of immigrants as the years they or their family spent in the US increases. To explore this issue in Table A.21 we regress individual attitudes formed in the period before 1945 on country of origin dummies, with attitudes inherited by British Americans used as the reference group. Having ancestors coming from a different source country than United Kingdom has a statistically significant effect on inherited attitudes. This result suggests that an element of attitudes can be transmitted within families. It also suggests that the finding in Column 2 of Table A.20 is not due to adaptation of immigrants to the norms of the new society in which they live. <sup>109</sup> In Column 3 of Table A.20 we estimate equation (9) with the attitudes formed in the period 1945-1990 as dependent variable and include also individual controls which are not available for the full sample: political views, income, mother's and father's education (to account for the fact that inherited attitudes might transfer through parents' human capital rather than through cultural transmission), and religion. Estimates are similar to those in Column 1.

<sup>&</sup>lt;sup>108</sup>Regarding the estimation of the standard errors, in the baseline specification we cluster standard errors by country of origin (12 clusters). We also bootstrap the standard errors following the procedure developed by Cameron, Gelbach and Miller (2008) to improve the inference with clustered standard errors.

<sup>&</sup>lt;sup>109</sup>A further competing explanation for the difference in the correlations in Column 1 and that in Column 2 is that the selection of immigrants from the source countries changed before and after 1945, causing a decline in the correlation between attitudes in the source country in 1990 and attitudes of US immigrants before 1945. Variation over time in gender-role attitudes could therefore be linked to variation in the sample selection of immigrants. We return to this issue in Section IV.B.i.

#### A.II.vii East-West Migration

This Section briefly discusses some background to East-West migration patterns. While our focus is on flows from CEECs to the United States during the period 1945-1990, it is important to consider general patterns of East-West migration as well, since it is possible that before entering the United States, people leaving the CEECs that we use in our analysis migrated to a third country. <sup>110</sup>

Overview Fassmann and Münz (1994*a*) describe three major factors explaining East-West migration before the Cold War. One is the Industrial Revolution, that began in the West and only later spread, slowly, to the East. The emergence of democratic systems in Great Britain, France and US, which were based on the principle of civil rights and a liberal attitude, was another decisive factor. The rise of violent nationalism in Eastern Europe, which forced religious and other minorities to emigrate also played an important role. Wallace (2002) notes that, traditionally, CEECs were places of emigration; since the nineteenth century, many millions left for new lives in the New World or in Western Europe, escaping poverty or persecution. Dietz (2004) also asserts that political repressions and ethnic persecutions contributed heavily to the mass emigration from Eastern Europe. Roughly 20 million people migrated from East to West Europe in 1945-50 (Table 1, Fassmann and Münz (1994*a*)). These include ethnic Germans, prisoners of war, and other displaced persons.

The Cold War and the Iron Curtain significantly reduced East-West migration, but did not bring it to a complete halt. The period 1950-1990 was characterized by distinct waves of migration, directly linked to political events or political bargaining between countries, as discussed in more detail below. Fassmann and Münz (1994*a*) report that an estimated 14 million people migrated in this period from East to West. The authors also note that the actual number must have been higher because cumulated data are only available for regular "emigrants".

**Migration to the United States** Dietz (2004) notes that the major migration flow from Eastern Europe to the US began in mid-19th century. This was mainly driven by poverty and unemploy-

<sup>&</sup>lt;sup>110</sup>For a detailed survey, see Fassmann and Münz (1994a) and Fassmann and Münz (1994b).

ment in the home countries, while there was a high demand for labor overseas. It is estimated that around 2.4 million people in 1851-1900 and 7 million in 1901-15 migrated to the US and Canada from Eastern Europe<sup>111</sup>. In contrast, the migration flows after World War I were mainly due to political and ethno-national reasons and were largely intra-European<sup>112</sup>. In general, the migrants fluxes from Eastern Europe to the United states slowed down considerably after War World I. With the new Immigration Act of 1924, the United States reduced the admission quotas for Eastern Europeans considerably. Only 1.7 million Eastern Europeans migrated overseas in 1919-39 (Dietz (2004)). The US experienced, in this period, a decline in immigration fluxes from pretty much all over Europe. Chiswick and Sullivan (1995) look at the administrative records of Immigration and Naturalization Services (INS) (United States), and notice that immigration greatly declined after World War I and was followed by low immigration during the 1930s and 40s. The difficulties of leaving Europe and the dangers of ocean transport during World War I, the restrictive legislation enacted in 1924, the Great Depression of the 1930s, and World War II all contribute to explain the decline in immigration from Europe to the United States.

Following World War II, and particularly following relaxation of immigration barriers in 1965 against Eastern and Southern Europeans, immigration in the US has increased. In the period 1950-92, about 700,000 East Europeans were admitted by the United States, which constituted 5% of all East-West migration in that period (including both political refugees and "regular" immigrants) (Fassmann and Münz, 1994*a*). <sup>113</sup>

Table A.30 shows the level and growth rates of the number of immigrants into the US from the CEECs and WECs that we use in our analysis, for 10 years intervals between 1930 and 1990. The years during and after World War II saw a decline in immigration to the US from CEECs (compared to the previous decade), whereas migration from WECs increased substantially. The minimum decline from the CEECs is for Czechoslovakia at 42%. This is consistent with the fact

<sup>&</sup>lt;sup>111</sup>These numbers include people migrating from the Russian Empire.

<sup>&</sup>lt;sup>112</sup>These migrations were either organized by governments in order to avoid potential ethnic conflicts, or the results of ethnic groups migrating to their (former) homelands to escape discrimination Dietz (2004)

<sup>&</sup>lt;sup>113</sup>In the census of 1970, more than 1.6 million first generational immigrants declared a birth place in Eastern Europe, many of whom had entered the US before 1950. This number dropped to just over 1 million in 1990. Also, many first emigrated to Israel or another third country before moving to the US.

that most East-West migration in this period was intra-European. Conversely, the later decades saw a rise in the immigrants from the CEECs (except in the decade 1971-1980), and a continuing increase of those from the WECs, before their number started to decline in the 70s.

## **Countries of Origin (CEECs)**

**Poland** Between 1950 and 1992 about 15% of all European East-West migrants were from Poland (about 2.1 million). Most were ethnic Germans and others who could claim West German citizenship. As can be seen in Table A.30, Poland also had the largest number of migrants to the US among the CEEC countries that we use in our analysis, with the largest outflow being in 1980-90.<sup>114</sup>

**Hungary** Hungary's emigration can be divided into three major periods: before World War I, 1920-1948, and the Cold War years. The massive migration to the US during the first period was greatly reduced in the second one. <sup>115</sup> In the last period emigration was minimal except during the few months when the borders were open during the Hungarian Revolution of 1956 (Dövényi and Vukovich, 1994). This pattern can be seen in Table A.30, specifically with respect to migration to the US. <sup>116</sup>

Czechoslovakia Similar to the other CEECs, emigration from Czechoslovakia declined after World War I. Post World War II, about 3.2 million ethnic Germans were ordered to leave the country (Fassmann and Münz, 1994a). During the 1948-89 period, major political changes in the country were followed by waves of emigration - the rise to power of the communists in 1948 and the Soviet army's occupation in 1968 (Drbohlav et al., 2009). Table A.30 shows a decline in the postwar period and a steady increase after 1960 of migrants to the US.<sup>117</sup>

<sup>&</sup>lt;sup>114</sup>For a detailed overview of emigration from Poland see Fassmann and Münz (1994*a*), Korcelli (1994) and Stola (2001).

<sup>&</sup>lt;sup>115</sup>This was due to immigration restrictions in the US and to the troubled history of postwar central Europe.

<sup>&</sup>lt;sup>116</sup>For a detailed overview of Hungarian migration refer to Dövényi and Vukovich (1994) and Hárs, Sik and Tóth (2001).

<sup>&</sup>lt;sup>117</sup>For a detailed history of migration in Czechoslovakia see Drbohlav et al. (2009).

**Romania** Between 1960 and 1992, around 500,000 Jews emigrated to Israel and the US (Fassmann and Münz, 1994*a*). Though Romania, among the CEECs that belong to our sample, had the lowest emigration to the US in 1930-1970, toward the later decades of the century it sent the second highest number of migrants after Poland (Table A.30).<sup>118</sup>

**Typology of migration** Fassmann and Münz (1994*a*) categorizes migration from Eastern Europe to the West in 1950-91 into three broad categories, which have emerged as well in the documentation that we have reported in the previous paragraphs.

**Ethnic migration** More than 75% of East-West migrants are classified as ethnic migrants. However, this number is not necessarily precise, as many "ethnic" migrants were taking the opportunity to leave their home country for economic or political reasons. In many cases, their movement was the result of political negotiations and relations between sending and receiving countries. The most important groups are Jewish and ethnic German emigrants. <sup>119</sup>

Political Refugees and Asylum-Seekers Political refugees and asylum-seekers constituted about 10% of the migrants. This type of migration was mostly observed in waves that were directly linked to political crises and conflicts. Reestablishment of the Iron Curtain between Hungary and Austria in 1956-57 (194,000 Hungarians), "Prague spring" in Czechoslovakia and subsequent military intervention by the Soviet Union and other Warsaw Pact countries in 1968-69 (160,000 Czechs), imposition of martial law and political persecution of the Solidarnosc movement in Poland in 1980-81 (250,000 Polish) are some examples.

**Labor Migration** Only about 15% of all European East-West migrants can be classified as (regular or irregular) labor migrants (including dependent family members). Migration for economic reasons was very low due to the split between Eastern and Western Europe, that heavily

<sup>&</sup>lt;sup>118</sup>For a detailed overview of emigration from Romania see Fassmann and Münz (1994a).

<sup>&</sup>lt;sup>119</sup>In 1950-93, some 3 million ethnic Germans migrated to the FRG (mainly motivated by its Basic Constitutional Law which gave migrants of German origin privileged treatment). Of these 51.4% were from Poland and 17.5% from Romania.

reduced the flow of capital and labor between the two regions. 120

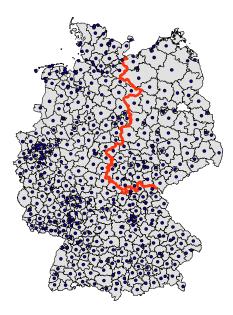
## A.II.viii Shifts in gender-role attitudes and economic growth

In Figure A.10 we plot the difference in attitudes between the 1990 cohort and the 1945 cohort of U.S. immigrants against the GDP growth of the country of origin during the period 1990-2010. The graph does not support the existence of a positive correlation between shifts in gender-role attitudes and economic growth.

<sup>120</sup> About 500,000 East European workers, followed by an unknown number of dependents were recruited by FGR and Austria. This number decreased in the following decades as a result of economic recession and restrictive measures.

## **A.III Additional Figures and Tables**

**Figure A.1** Germany's east-west border and county centroids



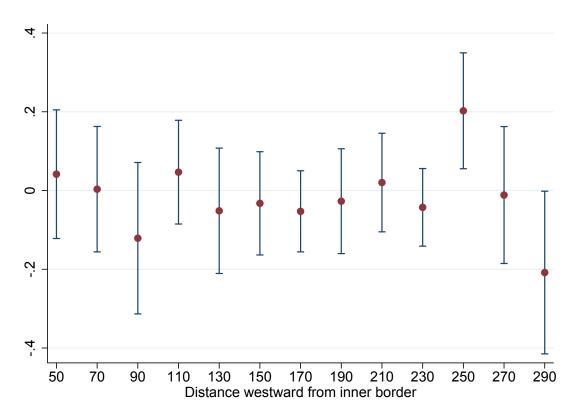
Note: This Figure shows the east-west German border and the centroids of each of Germany's counties. We match GSOEP data, which report the county of residence of the respondent in 1990, to this map in order to calculate our measure of distance from the border. The analysis excludes Berlin. See text for details.

**Figure A.2** East German political poster



Source Freier Deutscher Gewerkschaftrsbund (1954).

**Figure A.3** Placebo Experiment, Summary of Results



Note: The figure shows coefficients and 95% confidence intervals for placebo estimates of the dummy "East", defined after we shift the GDR/FRG border from 50 to 290 km westward. We estimate equation (A.3) using a 50 Km bandwidth.

**Figure A.4** Placebo Border, shifted 250 Km westward

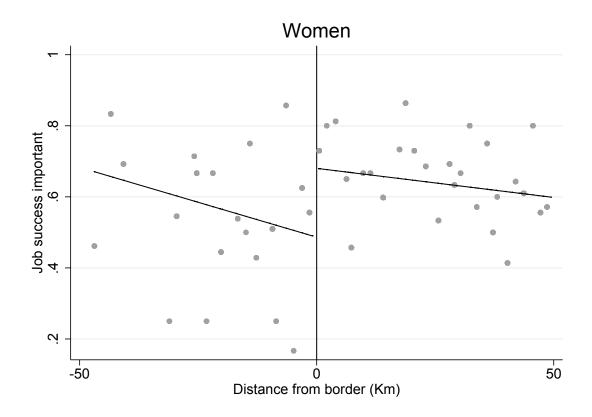
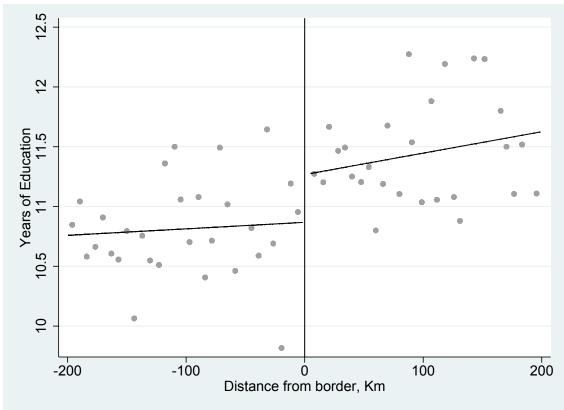
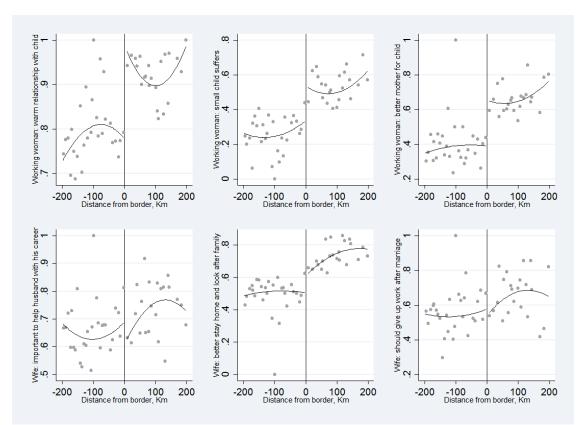


Figure A.5
Womens' Years of Education in East and West Germany



Note: the Figure shows bin-averages and a linear polynomial fit for women in GSOEP. See Figure II for more details.

**Figure A.6** Gender role attitudes



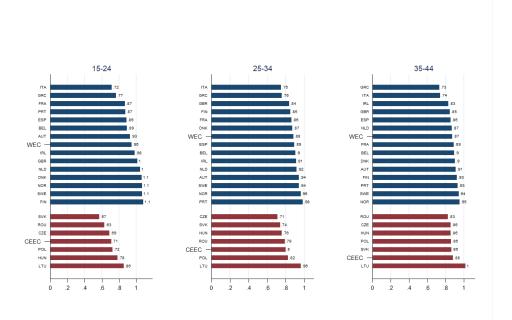
Note: the Figure shows bin-averages and a second order polynomial fit for ALLBUS respondents. As in Table A.15, we recode the answers so that increasing values of the dependent variable denote less traditional gender role attitudes.

**Figure A.7** Gender-role attitudes, relative to 1945 cohort



**Figure A.8** Gender employment gaps in CEECs and WECs, 2016

(a) Age group: 15-44

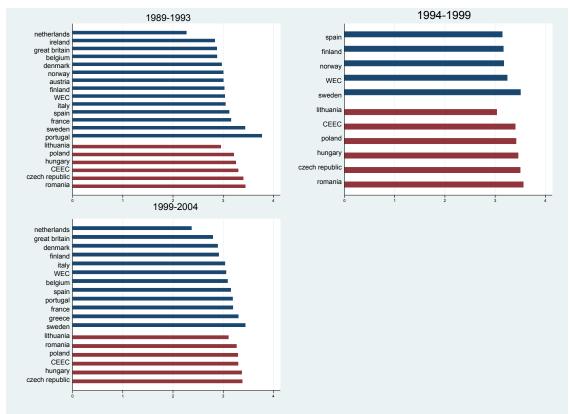


**(b)** Age group: 45-65+



Note: The bars labelled "CEEC" and "WEC" represent the simple averages of the values of the Central and Eastern European and Western European Countries, respectively

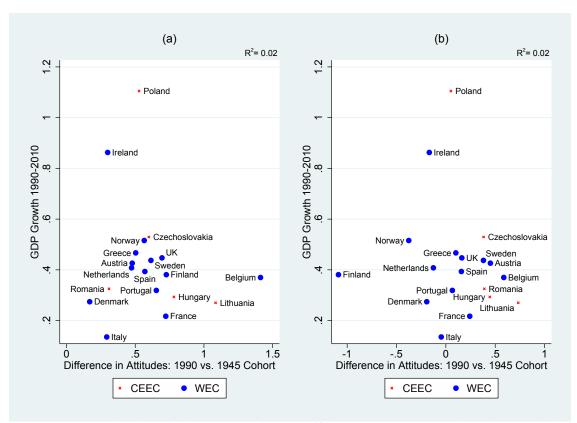
**Figure A.9**Gender-role attitudes after 1990: Husband and Wife Should Both Contribute to Income



Note: See text for details on the index "Husband and Wife Should Both Contribute to Income". All five CEECs were surveyed using the question "Do you agree or disagree: husband and wife should both contribute to income" in each of the three waves. In 1989-1993, France, Greece, and Spain were not asked this question. In 1994-1999, only four WECs were asked this question: Spain, Finland, Norway, and Sweden. In 1999-2004, Austria, Ireland, and Norway were not asked this question. The bars labelled "CEEC" and "WEC" represent the simple averages of the values of the Central and Eastern European and Western European Countries, respectively.

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Figure A.10 Shifts in gender-role attitudes and economic growth



Note: Country gender-role attitudes on the x-axis are coefficients on country-cohort dummies, obtained by regressing the variable Better for Man to Work, Woman Tend Home on country-cohort dummies (for 1945 and 1990) and other control variables. UK in 1945 is used as the reference group. The change in attitudes is computed as the difference between the 1945 cohort dummy and 1990 cohort dummy for each individual country. In panel A only baseline controls are included included (gender, generation dummies and region dummies) when estimating the coefficients on country-cohort dummies. In panel B additional controls are included (age, marital status, children, education, employment, political views, income, and religion). GDP data comes from the Maddison Project.

**Table A.1** GSOEP, Main Estimation Sample

Variable	Mean	(Std. Dev.)	Min.	Max.	N
Job Success Important	0.695	(0.46)	0	1	3853
East	0.471	(0.499)	0	1	3853
Distance from Border	100.194	(58.106)	2.475	199.241	3853
Age	43.798	(17.547)	16	95	3853
Years of Education	13.615	(2.822)	0	20	8762
Completed College	0.139	(0.346)	0	1	3832
Log yearly household income	10.21	(0.659)	0	12.388	3737
Satisfaction with HH Income	6.152	(2.408)	0	10	3810
Married	0.635	(0.482)	0	1	3852
Employed July 1989	0.569	(0.495)	0	1	3853
Children in HH	0.614	(0.907)	0	5	3853
Catholic	0.209	(0.407)	0	1	3853
Protestant	0.456	(0.498)	0	1	3852
Other Christian	0.015	(0.122)	0	1	3852
Other Religion	0.001	(0.023)	0	1	3853
Live in Urban Area	0.496	(0.403)	0	1	3853
Satisfaction with Democracy	2.35	(0.696)	1	4	1811
Party Support	0.027	(0.163)	0	1	1540
No West Germany TV	0.102	(0.303)	0	1	1815

**Table A.2**Trends in part-time and full-time employment in East and West Germany: 1950-1989/90

West Germany					East Germany <sup>a</sup>					
	Activity	Part-ti	me wo	rkers as	Female	Activity	Part-ti	me wo	rkers as	Female
	rate of	% of $\epsilon$	employe	ees	full-	rate of	% of e	employe	ees	full-
	women				time	women				time
	aged				workers	aged				work-
	16-60				(%)	16-60				ers
	(%)					(%)				(%)
		M	F	Total			M	F	Total	
1950	45	1	6	3		45				
1960	49	2	9	4	32	62				
1965/6	7	2	16	7	30		3	29	16	42
1970	50	2	24	9	28	66	3	33	18	43
1975		2	29	12	29	71	3	33	19	44
1980	53	1	29	12	30	73	3	29	17	46
1985		2	31	13	30	76	2	27	16	46
1990/89	9 60	2	33	14	33	78	2	27	15	45

Source: Schenk (2003). *a.* Excluding Employees of the so called 'x' sector (military, police etc.)

**Table A.3** Employment. Differences between women and men (aged 30-45)

	(1)	(2)	(3)	(4)	(5)
	OLS		Spatia	ıl RD	
		<= 200 km	<= 150  km	<= 100  km	<= 50  km
East	0.051	0.029	0.041	0.020	0.040
	(0.008)***	(0.027)	(0.033)	(0.042)	(0.060)
	(0.009)***	(0.026)	(0.031)	(0.039)	(0.056)
Female	-0.355	-0.307	-0.286	-0.288	-0.268
	(0.018)***	(0.027)***	(0.032)***	(0.041)***	(0.063)***
	(0.019)***	(0.028)***	(0.033)***	(0.042)***	(0.060)***
Female*East	0.269	0.232	0.213	0.209	0.179
	(0.021)***	(0.030)***	(0.035)***	(0.044)***	(0.067)***
	(0.022)***	(0.030)***	(0.035)***	(0.043)***	(0.063)***
Observations	3,149	2,394	1,777	1,188	585
Border segment FE.s	NO	YES	YES	YES	YES

Robust standard errors in parentheses (below: clustered, allowing for arbitrary correlations within counties).

**Table A.4** Gender equality in employment in 1925

	(1)	(2)	(3)	(4)	(5)		
	OLS	S Spatial RD					
		<= 200  km	<= 150  km	<= 100  km	<= 50  km		
		Panel A. W	omen employe	ed over total			
East	-0.029***	-0.025***	-0.017	-0.014	-0.012		
	(0.005)	(0.010)	(0.011)	(0.013)	(0.018)		
Observations	874	657	479	322	168		
Border segment FE.s	NO	YES	YES	YES	YES		
		Panel B. Won	nen in labor ma	arket over total			
East	-0.020***	-0.020***	-0.013	-0.010	-0.007		
	(0.004)	(0.008)	(0.008)	(0.010)	(0.014)		
Observations	874	657	479	322	168		
Border segment FE.s	NO	YES	YES	YES	YES		

Unit of observation is county. In Panel A, the dependent variables is the ratio of women employed to total employed. In Panel B, the dependent variable is the ratio of women active in the labor market (i.e. employed plus unemployed) over total active individuals. Robust standard errors in parentheses. Significance levels: 1% \*\*\*, 5% \*\* and 10% \*.

 Table A.5

 Female attitudes towards work: Job success important, alternative specifications.

	(1)	(2)	(3)	(4)
	<= 200  km	<= 150  km	<= 100  km	<=50  km
	Panel A: The	nird order polyı	nomial in distan	ce from border
East	0.152	0.168	0.301	0.341
	(0.082)*	(0.099)*	(0.136)**	(0.248)
	(0.071)**	(0.086)*	(0.119)**	(0.270)
Adjusted R-squared	0.025	0.018	0.011	0.007
	Panel B	: Third order p	olynomial in lat	and long.
East	0.096	0.093	0.140	0.165
	(0.041)**	(0.045)**	(0.051)***	(0.062)***
	(0.035)***	(0.040)**	(0.047)***	(0.061)***
Adjusted R-squared	0.026	0.018	0.009	0.008
Counties	252	180	118	64
Observations	3,854	2,870	1,915	978
Border segment F.E.s	YES	YES	YES	YES

The dependent variable is *Job Success Important*, constructed using answers to the question on how important is career success for the woman's personal satisfaction. We group the answers "unimportant" and "not very important" under "0", and "very important" and "important" under "1". We estimate a linear probability model. The dummy East takes on the value of one if the respondent lived in East Germany in 1989. Robust standard errors in parentheses (below: clustered, allowing for arbitrary correlations within counties). Significance levels: 1% \*\*\*, 5% \*\* and 10% \*

**Table A.6**Local Female Employment and Attitudes

	OLS	OLS	OLS	2SLS
	(1)	(2)	(3)	(4)
	$\Delta$ Women's	$\Delta$ Fem	$\Delta$ Women's	$\Delta$ Women's
	attitudes	Empl	attitudes	attitudes
$\Delta$ Fem Empl	0.008			0.024
	(0.007)			(0.012)*
	[0.332]			[0.152]
IV		82.966	1.967	
		(33.375)**	(0.694)**	
		[0.046]**	[0.126]	
Observations	60	60	60	60
Angrist-Pischke Fstat, 1st stage		6.18		

The Table shows the output of OLS estimation of Equation 4 (column 1), first stage (column 2), reduced form (column 3), and two stage least square (2SLS) estimation of Equation 4 (column 4) Standard Errors clustered by district in parentheses (14 districts). We report in brackets the p-value obtained using the bootstrap procedure developed by Cameron et al (2008). See Section A.I.v for details on IV construction.

**Table A.7**Job success is important: the role of propaganda I

	(1)	(2)	(3)	(4)	(5) Dist. from Inner Border > 100
Party Support	-0.002 (0.058) (0.055)				
Satisfaction with Democracy		-0.013 (0.011) (0.013)			
No West Germany TV		(*** - 2 )	0.049 (0.023)** (0.024)**	0.010 (0.027) (0.022)	0.020 (0.025) (0.023)
Distance from Inner Border				0.000 (0.000)*** (0.000)***	(******)
Observations	1,488	1,749	1,752	1,752	655
Adjusted R-squared	0.318	0.369	0.371	0.373	0.444
Controls	YES	YES	YES	YES	YES

Ideology is measured in Column 1 with the variable *Party Support* and in Column 2 with the dummy variable *Satisfaction with Democracy*. The variable *Satisfaction with Democracy* takes a higher value, the larger is one's reported satisfaction with democracy; the dummy variable *Party Support* takes a value of 1 if the respondent expresses support for the PDS (Party of Democratic Socialism), the successor of the SED (Socialist Unity Party of Germany), ruling the GDR. The variable *No West Germany TV* is a dummy for lack of reception of West German TV. Robust standard errors in parentheses (below: clustered, allowing for arbitrary correlations within counties). Significance levels: 1% \*\*\*, 5% \*\* and 10% \*.

**Table A.8**Job success is important: the role of propaganda II

	(1)	(2)
Born before May 31st	-0.012	-0.010
	(0.021)	(0.032)
East	0.078***	0.065*
	(0.017)	(0.034)
Born before May 31st*East	-0.022	-0.023
	(0.028)	(0.028)
Observations	2,070	2,070
Adjusted R-squared	0.009	0.020
Controls	NO	YES

The sample includes women in birth cohort 1974 - 1983 who responded to the GSOEP in years 1990 - 2004. All the regressions include birth-year dummies. Controls are: age dummies, month of birth (entered linearly), and state of residence dummies. Robust standard errors in parentheses. Significance levels: 1% \*\*\*, 5% \*\* and 10% \*.

 Table A.9

 Job success important. Differences between women and men

	(1)	(2)	(3)	(4)	(5)
		<= 200  km	<= 150  km	<= 100  km	<=50  km
East	0.047	0.011	0.024	0.043	0.068
	(0.011)***	(0.023)	(0.027)	(0.034)	(0.048)
	(0.012)***	(0.033)	(0.039)	(0.049)	(0.067)
Female	-0.194	-0.168	-0.166	-0.164	-0.187
	(0.011)***	(0.017)***	(0.020)***	(0.026)***	(0.037)***
	(0.010)***	(0.013)***	(0.015)***	(0.019)***	(0.026)***
Female*East	0.100	0.070	0.065	0.059	0.075
	(0.017)***	(0.022)***	(0.026)**	(0.032)*	(0.046)
	(0.014)***	(0.018)***	(0.021)***	(0.025)**	(0.034)**
Observations	9,883	7,543	5,602	3,755	1,934
Adjusted R-squared	0.048	0.035	0.031	0.028	0.034
Border segment FE.s	NO	YES	YES	YES	YES

Robust standard errors in parentheses (below: clustered, allowing for arbitrary correlations within counties).

**Table A.10**Job success important. Attitudes measured in 1992

-	(1)	(2)	(3)	(4)
	<= 200  km	<= 150  km	<= 100  km	<= 50  km
East	0.104	0.104	0.147	0.168
	(0.038)**	(0.044)**	(0.057)**	(0.084)**
	(0.044)**	(0.051)**	(0.063)**	(0.095)*
Observations	3,405	2,510	1,654	838
Adjusted R-squared	0.024	0.021	0.019	0.023

Robust standard errors in parentheses (below: clustered, allowing for arbitrary correlations within counties).

 Table A.11

 Job success important. Accounting non-random selection at the border

	(1)	(2)	(2)	(4)	(F)
	(1)	(2)	(3)	(4)	(5)
	OLS		Spatia		<b>701</b>
		<= 200  km	<= 150  km	<= 100  km	<=50  km
	Panel A. N	To counties with	centroid within	ı 10 km from th	ie border
East	0.148	0.075	0.088	0.118	0.210
	(0.013)***	(0.037)**	(0.044)**	(0.059)**	(0.097)**
	(0.015)***	(0.044)*	(0.052)*	(0.070)*	(0.127)
Observations	4,941	3,735	2,752	1,797	860
Adjusted R-squared	0.023	0.019	0.015	0.012	0.018
		Panel B. No cou	inties adjacent	to the border	
East	0.159	0.090	0.107	0.207	0.239
	(0.014)***	(0.043)**	(0.054)**	(0.084)**	(0.248)
	(0.015)***	(0.049)*	(0.059)*	(0.079)**	(0.222)
Observations	4,605	3,400	2,416	1,453	524
Adjusted R-squared	0.026	0.023	0.018	0.018	0.028
		Panel C	. Uniform weig	hting	
East	0.146	0.067	0.072	0.107	0.163
	(0.013)***	(0.031)**	(0.037)*	(0.047**	(0.072)**
	(0.015)***	(0.037)*	(0.042)*	(0.055)*	(0.082)*
Observations	5,059	3,854	2,870	1,915	978
Adjusted R-squared	0.023	0.025	0.019	0.010	0.006
Tal: Will					

In this Table we show estimates of Equation (1) exploring the possibility of non-random selection at the border. Robust standard errors in parentheses (below: clustered, allowing for arbitrary correlations within counties).

Table A.12

Job Success Important: the role of selective migration during the divided years.

	(1)	(2)	(3)
	Women in East in 1949	A	ll women in 1990
		Original	East-West migrants coded
		Sample	as East-Germans
Moved E to W 49-56	-0.314		
	(0.085)***		
	(0.085)***		
Moved E to W 57-89	-0.164		
	(0.093)*		
	(0.093)*		
East		0.143	0.131
		(0.015)***	(0.015)***
		(0.017)***	(0.017)***
Observations	1,878	3,853	3,853
Adjusted R-squared	0.011	0.024	0.020
N movers 49-56	35		
N movers 57-89	29		
$H_0: \beta^{Move49-56} = \beta^{Move57-89}, \text{p-value}$	0.230		

The dependent variable is *Job Success Important*. In column (1), we restrict the sample to women who lived in the East in 1949. The dummies *Moved E to W 49-56* and *Moved E to W 57-89* take on a value of one if a woman migrated from the East to the West during 1949-1956 or during 1957-1989, respectively. Women who did not migrate from East Germany compose the reference group. In column (2) and (3) we report OLS estimates on the entire sample of women (i.e. East and West) within a 200 km bandwidth. In column (3) we code the women who moved from East to West as if they lived in East Germany in 1989. The dummy East takes on the value of one if the respondent lived in East Germany in 1989. ' $H_0: \beta^{Move49-56} = \beta^{Move57-89}$ ,p-value' is the p-value of the equality of coefficients of the variable 'Moved E to W 49-56' and the variable 'Moved E to W 57-89'. Robust standard errors in parentheses (below: clustered, allowing for arbitrary correlations within counties). Significance levels: 1% \*\*\*, 5% \*\* and 10% \*

**Table A.13**Job success important. Long-term analysis

	(1)	(2)	(3)	(4)	(5)
	OLS				
		<= 200 km	<= 150 km	<= 100 km	<= 50 km
_					
East	0.146	0.071	0.070	0.079	0.104
	(0.013)***	(0.022)***	(0.025)***	(0.032)**	(0.046)**
	(0.015)***	(0.036)**	(0.041)*	(0.052)	(0.079)
year92	-0.028	-0.042	-0.039	-0.029	-0.029
	(0.013)**	(0.019)**	(0.023)*	(0.030)	(0.044)
	(0.010)***	(0.014)***	(0.016)**	(0.020)	(0.032)
year94	-0.044	-0.066	-0.072	-0.067	-0.012
	(0.013)***	(0.020)***	(0.024)***	(0.030)**	(0.045)
	(0.012)***	(0.018)***	(0.022)***	(0.030)**	(0.043)
year95	-0.005	-0.020	-0.020	-0.009	0.008
	(0.013)	(0.020)	(0.024)	(0.030)	(0.045)
	(0.011)	(0.016)	(0.018)	(0.022)	(0.030)
year98	-0.073	-0.098	-0.109	-0.110	-0.096
	(0.014)***	(0.021)***	(0.025)***	(0.032)***	(0.048)**
	(0.013)***	(0.021)***	(0.026)***	(0.034)*	(0.049)
year99	-0.083	-0.086	-0.091	-0.089	-0.058
	(0.014)***	(0.021)***	(0.026)***	(0.033)***	(0.049)
	(0.013)***	(0.019)***	(0.023)***	(0.031)***	(0.045)
year04	-0.055	-0.067	-0.067	-0.066	-0.056
	(0.015)***	(0.023)***	(0.028)**	(0.035)*	(0.052)
	(0.014)***	(0.022)***	(0.027)**	(0.035)*	(0.052)
year08	-0.082	-0.079	-0.057	-0.012	0.036
	(0.017)***	(0.025)***	(0.030)*	(0.038)	(0.055)
	(0.018)***	(0.032)**	(0.038)	(0.047)	(0.071)
year12	-0.087	-0.081	-0.076	-0.056	-0.029
	(0.019)***	(0.029)***	(0.036)**	(0.044)	(0.063)
	(0.020)***	(0.029)***	(0.034)**	(0.040)	(0.053)
EastXyear92	-0.002	0.024	0.025	0.019	0.021
•	(0.019)	(0.026)	(0.030)	(0.037)	(0.054)
	(0.015)	(0.019)	(0.022)	(0.027)	(0.043)
EastXyear94	-0.014	0.023	0.031	0.030	-0.037
	(0.020)	(0.027)	(0.031)	(0.038)	(0.056)
	(0.019)	(0.025)	(0.029)	(0.038)	(0.059)

EastXyear95	-0.027	-0.005	-0.004	-0.013	-0.042
	(0.020)	(0.027)	(0.031)	(0.038)	(0.056)
	(0.019)	(0.024)	(0.027)	(0.032)	(0.044)
EastXyear98	-0.008	0.033	0.047	0.063	0.053
	(0.022)	(0.028)	(0.033)	(0.040)	(0.060)
	(0.022)	(0.030)	(0.036)	(0.046)	(0.069)
EastXyear99	-0.011	0.011	0.019	0.026	-0.001
	(0.022)	(0.029)	(0.033)	(0.041)	(0.061)
	(0.021)	(0.027)	(0.032)	(0.042)	(0.064)
EastXyear04	-0.038	-0.018	-0.016	-0.008	0.007
	(0.024)	(0.031)	(0.036)	(0.044)	(0.065)
	(0.021)	(0.029)	(0.034)	(0.043)	(0.066)
EastXyear08	-0.077	-0.081	-0.101	-0.125	-0.148
	(0.027)***	(0.035)**	(0.040)**	(0.049)**	(0.071)**
	(0.028)	(0.039)	(0.045)	(0.055)	(0.083)
EastXyear12	-0.105	-0.102	-0.104	-0.105	-0.093
	(0.031)***	(0.040)**	(0.046)**	(0.056)*	(0.080)
	(0.032)***	(0.040)***	(0.045)**	(0.052)	(0.072)
Observations	28,754	21,774	16,150	10,719	5,385
Border segment FE.s	NO	YES	YES	YES	YES

The dependent variable is *Job Success Important*, constructed using answers to the question on how important is career success for the woman's personal satisfaction. We group the answers "unimportant" and "not very important" under "0", and "very important" and "important" under "1". We estimate a linear probability model. The dummy East takes on the value of one if the respondent lived in East Germany in 1989. Robust standard errors in parentheses (below: clustered, allowing for arbitrary correlations within counties). Significance levels: 1% \*\*\*, 5% \*\* and 10% \*

**Table A.14**Job success important. Cohort-level analysis

	(1)	(2)	(3)	(4)	(5)
		<= 200  km	<= 150  km	<= 100  km	<=50  km
East	-0.007	-0.044	-0.026	0.004	0.105
	(0.028)	(0.045)	(0.052)	(0.064)	(0.095)
	(0.033)	(0.056)	(0.064)	(0.078)	(0.116)
Born 1935-1949	0.335	0.387	0.397	0.412	0.458
	(0.023)***	(0.034)***	(0.040)***	(0.050)***	(0.069)***
	(0.027)***	(0.038)***	(0.046)***	(0.056)***	(0.070)***
Born 1950-1961	0.370	0.407	0.408	0.387	0.399
	(0.023)***	(0.034)***	(0.041)***	(0.054)***	(0.081)***
	(0.026)***	(0.035)***	(0.043)***	(0.056)***	(0.090)***
Born 1962-1976	0.496	0.524	0.512	0.490	0.487
	(0.021)***	(0.031)***	(0.038)***	(0.049)***	(0.069)***
	(0.025)***	(0.035)***	(0.044)***	(0.058)***	(0.081)***
East*Born 1935-1949	0.235	0.170	0.156	0.126	0.017
	(0.035)***	(0.046)***	(0.052)***	(0.064)*	(0.092)
	(0.039)***	(0.051)***	(0.060)***	(0.075)*	(0.102)
East*Born 1950-1961	0.196	0.146	0.138	0.145	0.055
	(0.035)***	(0.046)***	(0.053)***	(0.067)**	(0.100)
	(0.040)***	(0.053)***	(0.061)**	(0.077)*	(0.116)
East*Born 1962-1976	0.045	0.007	0.015	0.027	-0.015
	(0.035)	(0.044)	(0.051)	(0.064)	(0.092)
	(0.038)	(0.050)	(0.059)	(0.076)	(0.110)
Observations	5,058	3,853	2,870	1,915	978
Adjusted R-squared	0.220	0.247	0.241	0.226	0.193
Border segment FE.s	NO	YES	YES	YES	YES

The dependent variable is *Job Success Important*, constructed using answers to the question on how important is career success for the woman's personal satisfaction. We group the answers "unimportant" and "not very important" under "0", and "very important" and "important" under "1". We estimate a linear probability model. The dummy East takes on the value of one if the respondent lived in East Germany in 1989. Robust standard errors in parentheses (below: clustered, allowing for arbitrary correlations within counties). Significance levels: 1% \*\*\*, 5% \*\* and 10% \*

**Table A.15**Gender role attitudes, spatial RD estimates

	(1)	(2)	(3)	(4)				
	< 200  km	$<150\ km$	$<100~\rm km$	< 50 km				
Agreement with "Working woman: warm relationship with child"								
East	0.148***	0.188***	0.217***	0.228***				
	(0.033)	(0.039)	(0.048)	(0.083)				
	(0.026)	(0.023)	(0.023)	(0.023)				
Male	-0.059***	-0.059***	-0.070***	-0.065*				
	(0.016)	(0.018)	(0.022)	(0.035)				
	(0.013)	(0.015)	(0.018)	(0.027)				
Observations	2,432	1,881	1,216	544				
i	Disagreement wit	th "Working w	voman: small o	child suffers''				
East	0.229***	0.210***	0.197***	0.095				
	(0.049)	(0.057)	(0.071)	(0.123)				
	(0.054)	(0.059)	(0.067)	(0.080)				
Male	-0.037*	-0.038	-0.040	-0.029				
	(0.022)	(0.025)	(0.031)	(0.050)				
	(0.021)	(0.024)	(0.029)	(0.042)				
Observations	2,427	1,876	1,212	540				
Δ	Agreement with "	Working wom	an• hetter mot	ther for child"				
East	0.249***	0.251***	0.268***	0.430***				
Lust	(0.047)	(0.055)	(0.067)	(0.118)				
	(0.047)	(0.068)	(0.078)	(0.088)				
Male	-0.144***	-0.149***	-0.158***	-0.163***				
Marc	(0.022)	(0.025)	(0.030)	(0.048)				
	(0.022)	(0.022)	(0.026)	(0.046)				
Observations	2,426	1,879	1,214	542				
	_,	-,	-,	<del>-</del>				
Disagreement with "Wife: important to help husband with his career"								
East	0.001	-0.015	-0.020	-0.007				
	(0.047)	(0.054)	(0.066)	(0.111)				
	(0.050)	(0.054)	(0.064)	(0.113)				
Male	0.025	0.028	0.027	0.023				
	(0.021)	(0.024)	(0.030)	(0.047)				
	(0.019)	(0.022)	(0.028)	(0.049)				
Observations	2,426	1,876	1,212	541				

**Table A.15** (continued)

	(1)	(2)	(3)	(4)
	< 200 km	$<150\ km$	< 100  km	< 50 km
Disag	reement with "	Wife: better st	ay home and l	ook after family''
East	0.127***	0.115**	0.127*	0.226*
	(0.048)	(0.056)	(0.070)	(0.122)
	(0.050)	(0.056)	(0.066)	(0.100)
Male	-0.033	-0.036	-0.037	-0.021
	(0.022)	(0.025)	(0.031)	(0.049)
	(0.018)	(0.021)	(0.026)	(0.049)
Observations	2,425	1,877	1,213	542
Disa	igreement with	"Wife: should	give up work	after marriage''
East	0.023	0.009	0.031	-0.055
	(0.049)	(0.057)	(0.071)	(0.123)
	(0.049)	(0.054)	(0.069)	(0.121)
Male	-0.012	-0.018	-0.018	0.003
	(0.022)	(0.026)	(0.032)	(0.051)
	(0.021)	(0.024)	(0.031)	(0.054)
Observations	2,427	1,878	1,213	541
Counties	109	81	50	23
Border segment FE.s	s YES	YES	YES	YES

The dependent variables are constructed using answers to the gender role attitudes summarized at the top of each panel. We recode the answers so that increasing values of the dependent variable denote less traditional gender role attitudes. The dummy East takes on the value of one if the respondent lived in East Germany in 1989. Robust standard errors in parentheses (below: clustered, allowing for arbitrary correlations within counties). Significance levels: 1% \*\*\*, 5% \*\* and 10%

\*

**Table A.16**Gender role attitudes, spatial RD estimates by gender

	(1)	(2)	(3)	(4)
	< 200 km	< 150 km	< 100 km	< 50 km
Agre	eement with "Wo	_	: warm relationshi	p with child"
_		Wom		
East	0.142***	0.180***	0.231***	0.281**
	(0.043)	(0.052)	(0.066)	(0.113)
	(0.041)	(0.044)	(0.056)	(0.089)
Observations	1,246	966	625	274
		Mei	n	
East	0.153***	0.192***	0.203***	0.171
	(0.050)	(0.058)	(0.071)	(0.130)
	(0.035)	(0.036)	(0.041)	(0.061)
Observations	1,186	915	591	270
1	Disagreement wii	th "Working w Wom	voman: small chile	d suffers"
East	0.154**	0.122	0.150	0.093
Last	(0.070)	(0.081)	(0.103)	(0.181)
	(0.070)	(0.081)	(0.103)	(0.121)
Observations	1,243	963	622	271
Observations	1,243	903 Mei		2/1
Foot	0.214***	0.310***		0.127
East	0.314***		0.271***	0.127
	(0.070)	(0.081)	(0.099)	(0.171)
01	(0.058)	(0.067)	(0.079)	(0.145)
Observations	1,184	913	590	269
A	Agreement with "	Working wom	an: better mother	for child''
		Wom	en	
East	0.280***	0.292***	0.306***	0.541***
	(0.063)	(0.074)	(0.093)	(0.165)
	(0.065)	(0.074)	(0.086)	(0.125)
Observations	1,241	964	623	272
		Mei	n	
East	0.219***	0.213***	0.241**	0.328*
	(0.070)	(0.081)	(0.098)	(0.170)
	(0.081)	(0.090)	(0.104)	(0.106)
	()	()	(/	(/

**Table A.16** (continued)

	(1)	(2)	(3)	(4)	
	< 200  km	$<150\;\mathrm{km}$	< 100  km	< 50 km	
Observations	1,185	915	591	270	
Disagi	reement with "Wi	fe: important	to help husband	with his career''	
		Wome	en		
East	0.052	0.043	0.051	0.048	
	(0.066)	(0.077)	(0.096)	(0.162)	
	(0.074)	(0.083)	(0.100)	(0.184)	
Observations	1,241	962	622	271	
		Mer	1		
East	-0.043	-0.063	-0.071	-0.034	
	(0.066)	(0.076)	(0.093)	(0.157)	
	(0.059)	(0.066)	(0.084)	(0.153)	
Observations	1,185	914	590	270	
Disa	igreement with "V	Vife: better st	ay home and look	k after family''	
		Wome	en		
East	0.127*	0.121	0.122	0.099	
	(0.067)	(0.078)	(0.099)	(0.171)	
	(0.063)	(0.070)	(0.088)	(0.146)	
Observations	1,243	964	623	272	
		Mer	1		
East	0.132*	0.118	0.156	0.399**	
	(0.069)	(0.080)	(0.097)	(0.174)	
	(0.066)	(0.074)	(0.077)	(0.101)	
Observations	1,182	913	590	270	
Dis	sagreement with '	'Wife: should	give up work afte	er marriage''	
		Wome	en		
East	0.049	0.049	0.124	0.163	
	(0.069)	(0.081)	(0.103)	(0.179)	
	(0.050)	(0.054)	(0.066)	(0.112)	
Observations	1,242	963	622	271	
		Mer	1		
East	0.003	-0.020	-0.032	-0.229	
	(0.071)	(0.082)	(0.100)	(0.170)	
	(0.079)	(0.092)	(0.115)	(0.213)	

**Table A.16** (continued)

	(1)	(2)	(3)	(4)
	< 200  km	< 150  km	< 100  km	< 50 km
Observations	1,185	915	591	270
Counties	109	81	50	23
Border segment FE.s	YES	YES	YES	YES

The dependent variables are constructed using answers to the gender role attitudes summarized at the top of each panel. We recode the answers so that increasing values of the dependent variable denote less traditional gender role attitudes. The dummy East takes on the value of one if the respondent lived in East Germany in 1989. Robust standard errors in parentheses (below: clustered, allowing for arbitrary correlations within counties). Significance levels: 1% \*\*\*, 5% \*\* and 10%

 Table A.17

 Gender role attitudes, differences between women and men, OLS

	(1)	(2)	(3)	(4)	(5)	(6)
	Working woman:	Working woman:	Working woman:	Wife:	Wife:	Wife:
	Warm relationship	Small child	Better mother	Important to help	Better stay home	Should give up
	with child.	suffers.	for child.	husband career.	and look after family.	work after marriage.
	Agree	Disagree	Agree	Disagree	Disagree	Disagree
East	0.163***	0.295***	0.302***	0.092***	0.253***	0.117***
	(0.018)	(0.025)	(0.025)	(0.023)	(0.024)	(0.025)
Female	0.073***	0.083***	0.173***	0.011	0.087***	0.045**
	(0.017)	(0.018)	(0.019)	(0.018)	(0.019)	(0.020)
East X Female	-0.042*	-0.064*	-0.054	-0.006	-0.041	0.002
	(0.024)	(0.035)	(0.035)	(0.032)	(0.033)	(0.034)
Age	0.003	-0.000	0.009***	-0.003	-0.004*	0.001
	(0.002)	(0.003)	(0.003)	(0.002)	(0.003)	(0.003)
Age sq	-0.000**	-0.000*	-0.000***	-0.000**	-0.000*	-0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	3,300	3,295	3,292	3,292	3,290	3,293

Table A.18
GSS Sample: Source Countries of US Immigrants

Country of family	,	
origin	Count	Percent
Austria	156	0.906
Belgium	63	0.366
Czechoslovakia	405	2.353
Denmark	237	1.377
Finland	156	0.906
France	681	3.956
Greece	127	0.738
Hungary	163	0.947
Ireland	4,365	25.356
Italy	1,823	10.590
Lithuania	94	0.546
Netherlands	522	3.032
Norway	610	3.543
Poland	917	5.327
Portugal	101	0.587
Romania	37	0.215
Spain	273	1.586
Sweden	590	3.427
UK	5,895	34.243
Total	17,215	100.000

This table reports the count of immigrants from each country. The GSS question on the country of origin reads: "From what countries or part of the world did your ancestors come?". The individual can list up to three countries by order of preference. We select the country of origin which the individual feels the closest to. The CEECs in our sample are in red.

**Table A.19**GSS Sample Description

CEECs, Bef	CEECs, Aft	WECs, Bef	WEC- AG
	, J.	WECS, Dej	WECs, Aft
1526	90	15075	524
3	27	15	178
364	41	889	175
681	18	2906	147
478	4	11265	24
812	49	8141	300
	3 364 681 478	3 27 364 41 681 18 478 4	3 27 15 364 41 889 681 18 2906 478 4 11265

	Panel B: Summary Statistics				
	Mean	Std. Dev.	Min.	Max.	
Better for Man to Work, Woman Tend Home	2.7	0.84	1	4	

The attitudinal variable is coded in such a way that increasing values denote less traditional attitudes about the appropriateness of a segregation of male and female roles, i.e. disagreement with the statement in the question. Specifically, gender-role attitudes are measured by the following question: "Please tell me whether you strongly agree, agree, disagree, or strongly disagree with the following statement. It is much better for everyone involved if the man is the achiever outside the home and the woman takes care of home and family". We recode the answers to this question, "Strongly Agree", "Agree", "Don't Know", "Disagree", and "Strongly Disagree" as, respectively, 1, 2, 2.5, 3, and 4. The analysis on the selection of immigrants uses the full sample. The analysis on the effect of state-socialism on attitudes uses the sample of respondent to the question "Better for Man to Work, Woman Tend Home". Not all of the immigrants answered the question "Better for Man to Work, Woman Tend Home," because it is only asked in certain years.

Table A.20
Correlation between gender-role attitudes of US Immigrants and Attitudes in their Source Country

	(1)	(2)	(3)
	(1) Immigrants'	(2) Immigrants'	(5) Immigrants'
VARIABLES	attitudes 1990	attitudes 1945	attitudes 1990
Average gender-role attitudes in home country WVS 199		0.034	0.335
Average gender-role attitudes in nome country w v3 177	(0.063)***	(0.043)	(0.106)***
	[0.000]***	[0.500]	[0.013]***
Male	-0.154*	-0.213***	-0.086
Truic .	(0.083)	(0.015)	(0.075)
Age	-0.050	0.005	-0.061*
5-	(0.036)	(0.004)	(0.033)
Age squared	0.001	-0.000***	0.001*
81	(0.000)	(0.000)	(0.000)
Married	0.129	-0.089***	0.252**
	(0.106)	(0.025)	(0.109)
Satisfied with financial situation	-0.165**	-0.021	-0.117
	(0.063)	(0.012)	(0.071)
Employed	0.190**	0.109***	0.296***
• •	(0.075)	(0.022)	(0.085)
Children	-0.051	-0.039***	-0.086
	(0.057)	(0.007)	(0.051)
Education (yrs)	0.074***	0.069***	0.045***
	(0.008)	(0.002)	(0.015)
Politically Conservative			-0.109***
			(0.033)
Household Income (categ.)			-0.009
			(0.027)
Mother's Education			0.008
nd Ant d			(0.033)
Father's Education			-0.001
C-4-1'-			(0.014)
Catholic			-0.285
Protestant			(0.188) -0.231
Protestant			(0.178)
Jew			0.014
Jew			(0.267)
Other Religion			-0.439*
Other Rengion			(0.225)
			(0.220)
Observations	331	8,838	212
Adjusted R-squared	0.145	0.190	0.163
Regional and Generation Dummies	YES	YES	YES
Number of Countries	17	19	17
Adj R2	0.139	0.193	0.141
Mean y	2.856	2.706	2.884
Mean Average attitudes home country	3.014	2.949	2.988
SD Average attitudes home country	0.250	0.203	0.262

In this Table, we document the extent to which gender-role attitudes among immigrants up to the fourth generation mirror those in their country of origin. The dependent variables are in (1) and (3) gender-role attitudes inherited by US immigrants in the period 1990; in (2) gender-role attitudes inherited by US immigrants in the period 1945. The dependent variables are constructed using the answers to the GSS question "Better for Man to Work, Woman Tend Home". The variable "Average Home Country Attitudes" is the average level of gender-role attitudes in the source country of the US immigrants in the period 1990 and is obtained using the answers to the WVS question "Do you agree or disagree: husband and wife should both contribute to income". Reference group in Column 3: non-religious. Standard Errors clustered by country of origin in parentheses. For the variable of interest ("Average Home Country Attitudes")we report in brackets the p-value obtained using the bootstrap procedure the procedure developed by Cameron et al (2008). Significance levels: 1% \*\*\*, 5% \*\* and 10% \*. Source: General Social Survey 1977-2012; World Values Survey wave 1990.

**Table A.21**Inherited Gender-role Attitudes in 1945: Disagreement with "Better for Man to Work, Woman Tend Home"

	(1)	(2)
Country of origin	` /	· /
	K ancestors: Re	eference
Austria	0.178***	-0.052
	(0.027)	(0.033)
Belgium	-0.118***	-0.273***
	(0.012)	(0.011)
Czechoslovakia	0.132***	0.139***
	(0.019)	(0.012)
Denmark	0.083***	-0.007
	(0.006)	(0.009)
Finland	0.025	0.049***
	(0.018)	(0.014)
France	0.067***	-0.008
	(0.003)	(0.004)
Greece	0.132***	-0.152***
	(0.018)	(0.026)
Hungary	0.154***	-0.056
	(0.029)	(0.047)
Ireland	0.076***	0.059***
	(0.004)	(0.006)
Italy	0.150***	0.036
•	(0.029)	(0.033)
Lithuania	0.387***	0.221***
	(0.035)	(0.046)
Netherlands	-0.088***	0.057***
	(0.005)	(0.007)
Norway	0.073***	0.039***
	(0.008)	(0.012)
Poland	0.215***	0.135***
	(0.026)	(0.026)
Portugal	0.138***	0.080***
	(0.021)	(0.025)
Romania	0.409***	-0.039
	(0.031)	(0.071)
Spain	-0.011*	0.038**
	(0.006)	(0.016)
Sweden	0.099***	0.021
	(0.009)	(0.013)
Observations	8,953	6,161
Adjusted R-squared	0.051	0.234
Additional Controls	NO	YES
The dependent variable is	the gender-role att	itudes of US immigrants from the

The dependent variable is the gender-role attitudes of US immigrants from the period 1945. Gender-role attitudes are measured using the answers to the GSS question "Better for Man to Work, Woman Tend Home". Baseline controls (included in both columns): male, generation dummies and regional dummies. Additional controls: age, education, marital status, satisfaction with the financial situation of the household, employment status, number of kids, income, mother's and father's education, religion and political views. OLS regressions with robust standard errors clustered at the country level. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Source: General Social Survey 1977-2014.

**Table A.22** GSS, Main Estimation Sample, Summary Statistics

Variable	Mean	(Std. Dev.)	Min.	Max.	N
Better for Man to Work, Woman Tend Home	2.712	(0.843)	1	4	9302
First Generation Immigrant	0.01	(0.101)	0	1	9302
Second Generation Immigrant	0.078	(0.268)	0	1	9302
Third Generation Immigrant	0.221	(0.415)	0	1	9302
Fourth Generation Immigrant	0.691	(0.462)	0	1	9302
Male	0.447	(0.497)	0	1	9302
Education (yrs)	13.666	(2.832)	0	20	9294
Married	0.545	(0.498)	0	1	9300
Household Income (categ.)	10.785	(2.23)	1	12	8430
Satisfied with financial situation	2.099	(0.744)	1	3	9288
Employed	0.61	(0.488)	0	1	9301
Children	1.866	(1.657)	0	8	9284
Mother's Education	11.589	(3.276)	0	20	8337
Father's Education	11.538	(4.012)	0	20	7397
Catholic	0.278	(0.448)	0	1	9278
Protestant	0.559	(0.497)	0	1	9278
Jew	0.012	(0.109)	0	1	9278
Orthodox	0.002	(0.041)	0	1	9278
Other Religion	0.031	(0.173)	0	1	9279
Politically Conservative	4.185	(1.378)	1	7	9277

Table A.23
State-socialism and Attitudes Toward gender-role, Diff-in-Diff Placebo Regressions:
Disagreement with "Better for Man to Work, Woman Tend Home"

	(1)	(2)
CEEC	-0.123	0.125
	(0.167)	(0.125)
Post-1900	0.665***	0.237***
	(0.027)	(0.053)
CEEC x Post-1900	0.188	-0.029
	(0.187)	(0.141)
Male	-0.183***	-0.229***
	(0.017)	(0.018)
Observations	7,592	5,205
Adjusted R-squared	0.151	0.241
Regional Dummies	YES	YES
Generation Dummies	YES	YES
Additional Controls	NO	YES
Number of Countries	19	19

This Table provides support to the identifying assumption that, absent the state-socialist regime, the evolution of gender attitudes in CEECs would have followed a path that cannot, on average, be distinguished from that in WECs. Specifically, we run placebo regressions where we estimate our main equation 2 using 1900 as the date of the imposition of state-socialist regimes in CEECs rather than the true date of 1945. Gender-role attitudes are measured by the following question: "Please tell me whether you strongly agree, agree, disagree, or strongly disagree with the following statement. It is much better for everyone involved if the man is the achiever outside the home and the woman takes care of home and family". We recode the answers to this question, "Strongly Agree", "Agree", "Don't Know", "Disagree", and "Strongly Disagree" as, respectively, 1, 2, 2.5, 3, and 4. Reference group in Column 2: non-religious. Estimation method: OLS. Standard Errors clustered at country-period level in parentheses. Significance levels: 1% \*\*\*, 5% \*\* and 10% \*.

 Table A.24

 Selection of immigrants on observables: difference in changes between CEECs and WECs. OLS Estimates

DEP. VARIABLES	Male	Age	Education (Cat.)	Married	Household Income (Cat.)	Satisfied with financial situation	Employed	Children
CEEC x post-1945	0.046	3.274*	0.657*	0.069	-0.195	-0.172**	0.003	-0.135
CLLC x post-1743	(0.035)	(1.669)	(0.351)	(0.056)	(0.215)	(0.068)	(0.050)	(0.186)
Observations	17,215	17,215	17,202	17,213	15,680	16,330	14,326	17,186
Adjusted R-squared	0.001	0.141	0.033	0.005	0.016	0.005	0.037	0.030
Mean y control	0.448	48.60	13.59	0.562	10.64	2.099	0.586	1.865
DEP. VARIABLES	Mother's Education	Father's Education	Catholic	Protestant	Jew	Orthodox	Other Religion	Politically Conservative
CEEC x post-1945	1.224** (0.581)	0.746 (0.916)	-0.176 (0.144)	0.060 (0.114)	0.096*** (0.026)	-0.015 (0.017)	0.001 (0.026)	-0.284* (0.140)
Observations	15,386	13,681	17,171	17,171	17,171	17,171	17,173	15,971
Adjusted R-squared	0.138	0.086	0.168	0.158	0.046	0.006	0.006	0.014
Mean y control	11.55	11.43	0.254	0.596	0.00521	0.00167	0.0295	4.198

In this table we investigate the extent of differential selection on a rich set of observable variables. The Table shows coefficients and standard errors from OLS regressions of each individual characteristic on CEEC, post-1945, CEEC x post-1945, regional dummies and generation dummies. Standard Errors clustered by country-period (38). Results are very similar when clustering by country.

 Table A.25

 Selection of immigrants on observables: difference in changes between CEECs and WECs. Within estimates.

DEP. VARIABLES	Male	Age	Education (Cat.)	Married	Household Income (Cat.)	Satisfied with financial situation	Employed	Children
CEEC x post-1945	0.053	1.731	0.392	0.062	-0.225	-0.177***	0.003	-0.149
	(0.038)	(2.144)	(0.377)	(0.060)	(0.231)	(0.058)	(0.051)	(0.213)
Observations	17,215	17,215	17,202	17,213	15,680	16,330	14,326	17,186
Adjusted R-squared	0.003	0.172	0.044	0.006	0.018	0.010	0.044	0.039
Mean y control	0.448	48.60	13.59	0.562	10.64	2.099	0.586	1.865
DEP. VARIABLES	Mother's Education	Father's Education	Catholic	Protestant	Jew	Orthodox	Other Religion	Politically Conservative
CEEC x post-1945	0.902 (0.566)	0.286 (0.807)	-0.042 (0.057)	-0.033 (0.050)	0.047 (0.042)	-0.010 (0.008)	0.009 (0.015)	-0.250** (0.122)
Observations	15,386	13,681	17,171	17,171	17,171	17,171	17,173	15,971
Adjusted R-squared	0.145	0.093	0.283	0.257	0.095	0.090	0.024	0.020
Mean y control	11.55	11.43	0.254	0.596	0.00521	0.00167	0.0295	4.198

Mean y control 11.55 11.43 0.254 0.596 0.00521 0.00167 0.0295 4.198

In this table we investigate the extent of differential selection on a rich set of observable variables. The Table shows coefficients and standard errors from within-country regressions of each individual characteristic on post-1945, CEEC x post-1945, regional dummies and generation dummies. Standard Errors clustered by country-period (38). Results are very similar when clustering by country.

 Table A.26

 Disagreement with "Better for Man to Work, Woman Tend Home", Within Estimates

			Post-1945:	1945-1967
	(1)	(2)	(3)	(4)
Post-1945	0.438***	-0.020	0.451***	-0.010
1 000 17 10	(0.059)	(0.054)	(0.055)	(0.045)
CEEC x Post-1945	0.156	0.285**	0.205**	0.297**
	(0.096)	(0.119)	(0.097)	(0.114)
Male	-0.153***	-0.218***	-0.154***	-0.220***
	(0.015)	(0.017)	(0.015)	(0.017)
Observations	9,302	6,387	9,150	6,297
Adjusted R-squared	0.050	0.230	0.052	0.232
Regional Dummies	YES	YES	YES	YES
Generation Dummies	YES	YES	YES	YES
Additional Controls	NO	YES	NO	YES
Number of Countries	19	19	19	19

The Table reports estimates of equation 2 in which the within transformation is used to remove country effects. This addresses the possibility that our estimates are affected by the changing composition of the population of immigrants over time in terms of country of origin. SE clustered at country-period level in parentheses. In column 3-4 the "Post-1945" period is restricted to 1945-1967. \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1.

**Table A.27**State-socialism and Female Employment, Diff-in-Diff Estimation

			Post-1945:	1945-1967
	(1)	(2)	(3)	(4)
CEEC	0.047***	0.039***	0.047***	0.038**
	(0.011)	(0.014)	(0.011)	(0.014)
Post-1945	-0.022	-0.086	0.005	-0.064
	(0.064)	(0.097)	(0.070)	(0.097)
CEEC x Post-1945	0.178**	0.188**	0.112	0.155*
	(0.067)	(0.086)	(0.077)	(0.084)
Observations	2,888	1,999	2,871	1,991
Mean y control	0.710	0.732	0.711	0.733
Adjusted R-squared	0.002	0.107	0.001	0.108
Regional Dummies	YES	YES	YES	YES
Generation Dummies	YES	YES	YES	YES
Additional Controls	NO	YES	NO	YES

This table reports estimates of equation 2 with employment as dependent variable. We restrict the sample to women between 30 and 45 years old who were born in the United States. For estimation details, see notes to Table III

**Table A.28**Women as a Percentage of the Labor Force

	Central and Eastern Europe											
Year				Chzecosl.	Hungary	Poland	Romania					
1950				38.4		$33^c$						
1960				42.8	32.5	32.8	27.1					
1970				46.7	40.6	40	30.1					
1974				47.8	42.6	42.1	34.0					
1978				45.3		43.8	36.2					
					Wes	tern Euro	pe					
Year	Aust	Belg	Den	Finl	Italy	Norway	Spain	Sweden	UK			
1950	31.7	$22.5^{a}$	$27.4^{c}$	32.5	23.1	24.1	14.2	26.7	$30.8^{b}$			
1960	$34.9^{d}$	25.3	29.3	34.1	23.4	21.1	16.7	29.5	35.4			
1970	$35.8^{e}$	28.4	33.8	39.7	26.1	26.2	18.8	36.7	37.0			
1974	37.2	32.4	38.3	$45.6^{f}$	25.6	$35.0^{g}$		40.8				
1978	38.7	34.7	40.5	$42.8^{h}$	30.3	38.9	26.0	44.0				

This table shows the number of women as a percentage of the labor force in the state-socialist countries in our sample and other European countries, for the period 1950-1978. Source: Table 3 p.452 in Wolchik (1981), that is produced by the author combining data from both the International Labor Office and individual national institutes of statistics. Data for France, Greece, Ireland, Lithuania, Portugal, Netherlands are not reported in Wolchik (1981). West European figures exclude auxiliary family workers. East and Central European figures are for the socialized sectors of the economies only. a.1947 b.1951 c.1955 d.1961 e.1971 f.1973 g.1975 h.1976.

**Table A.29** GDP per capita before and after 1945

			Cei	ntral and E	Eastern Eur	rope					
Year		Chzecosl.	Hungary	Poland	Romania	_		Average			
1900		1729	1682	1536	1415			1590.50			
1922		2006	1811 <sup>a</sup>	$2117^{b}$	$1258^{c}$			1797.88			
		(16%)	(8%)	(38%)	(-11%)			(13%)			
1945		$3088^d$	$1721^{e}$	$2447^{f}$	816 <sup>g</sup>			2018.00			
		(54%)	(-5%)	(16%)	(-35%)			(12%)			
1967		5964	4894	4103	2743			4426.00			
		(93%)	(184%)	(68%)	(236%)			(119%)			
1990		8513	6459	5113	3511			5899.00			
		(43%)	(32%)	(25%)	(28%)			(33%)			
Western Europe											
Year	Aust	Belg	Den	Finl	France	Greece	Ireland				
1900	2882	3731	3017	1668	2876	1237	$2736^{h}$				
1922	2877	4413	4166	2058	3610	1963	2598				
	(-0%)	(18%)	(38%)	(23%)	(26%)	(59%)	(-5%)				
1945	1725	4333	5066	3450	2573	938	3019				
	(-40%)	(-2%)	(22%)	(68%)	(-29%)	(-52%)	(16%)				
1967	8297	9072	11437	7947	9907	4951	5352				
	(381%)	(109%)	(126%)	(130%)	(285%)	(428%)	(77%)				
1990	16859	17197	18452	16866	17647	10015	11818				
	(103%)	(90%)	(61%)	(112%)	(78%)	(102%)	(121%)				
				Westeri	1 Europe						
Year	Italy	Netherld	Norway	Portugal	Spain	Sweden	UK	Average			
1900	1855	3329	1877	1302	1786	2083	4492	2490.79			
1922	2231	4599	2678	1430	2284	3054	4637	3042.71			
	(20%)	(38%)	(43%)	(10%)	(28%)	(47%)	(3%)	(22%)			
1945	1609	2686	3980	1804	2102	5145	7056	3249.00			
	(-28%)	(-42%)	(49%)	(26%)	(-8%)	(68%)	(52%)	(7%)			
1967	7872	10341	9423	4481	5334	11219	10049	8263.00			
	(389%)	(285%)	(137%)	(148%)	(154%)	(118%)	(42%)	(154%)			
1990	16313	17262	18466	10826	12055	17609	16430	15558.21			
	(107%)	(67%)	(96%)	(142%)	(126%)	(57%)	(63%)	(88%)			

This table shows the GDP per capita levels (in 1990 Int. Geary-Khamis \$) of CEECs and WECs in our sample for specific years before and after 1945. Growth rates from the immediately previous specified year is shown in parenthesis. Source: The Maddison-Project, http://www.ggdc.net/maddison/maddison-project/home.htm, 2013 version. Data for Lithuania and data for East and West Germany separately is not reported in the data source. The GDP value of the closest year available is reported here. *a.* avg(1919,1924) *b.* 1929 *c.* 1926 *d.* 1948 *e.* 1946 *f.* 1950 *g.* 1948 *h.* 1913.

Table A.30
US immigration data by country of last residence before and after 1945

			Co	entral and l	Eastern E	urope		
Period			Chzecosl.	Hungary	Poland	Romania		Total
1931-1940			14393	7861	17026	3871		43151
1941-1950			8347	3469	7571	1076		20463
			(-42%)	(-56%)	(-56%)	(-72%)		(-53%)
1951-1960			918	36637	9985	1039		48579
			(-89%)	(956%)	(32%)	(-3%)		(137%
1961-1970			3273	5401	53539	2531		64744
			(257%)	(-85%)	(436%)	(144%)		(33%)
1971-1980			6023	6550	37234	12393		62200
			(84%)	(21%)	(-30%)	(390%)		(-4%)
1981-1990			7227	6545	83252	30857		12788
			(20%)	(-0%)	(124%)	(149%)		(106%
				Wester	n Europe			
Period		Aust	Belg	Den	France	Greece	Ireland	
1931-1940		3563	4817	2559	12623	9119	10973	
1941-1950		24860	12189	5393	38809	8973	19789	
		(598%)	(153%)	(111%)	(207%)	(-2%)	(80%)	
1951-1960		67106	18575	10984	51121	47608	48362	
		(170%)	(52%)	(104%)	(32%)	(431%)	(144%)	
1961-1970		20621	9192	9201	45237	85969	32966	
		(-69%)	(-51%)	(-16%)	(-12%)	(81%)	(-32%)	
1971-1980		9478	5329	4439	25069	92369	11490	
		(-54%)	(-42%)	(-52%)	(-45%)	(7%)	(-65%)	
1981-1990		18340	7066	5370	32353	38377	31969	
		(94%)	(33%)	(21%)	(29%)	(-58%)	(178%)	
				Wester	n Europe			
Period	Italy	Netherld	Norway	Portugal	Spain	Sweden	UK	Total
1931-1940	68028	7150	4740	3329	3258	3960	31572	16569
1941-1950	57661	14860	10100	7423	2898	10665	139306	352920
	(-15%)	(108%)	(113%)	(123%)	(-11%)	(169%)	(341%)	(113%
1951-1960	185491	52277	22935	19588	7894	21697	202824	756462
	(222%)	(252%)	(127%)	(164%)	(172%)	(103%)	(46%)	(114%
1961-1970	214111	30606	15484	76065	44659	17116	213822	815049
	(15%)	(-41%)	(-32%)	(288%)	(466%)	(-21%)	(5%)	(8%)
1971-1980	129368	10492	3941	101710	39141	6531	137374	57673
	(-40%)	(-66%)	(-75%)	(34%)	(-12%)	(-62%)	(-36%)	(-29%)
1981-1990	67254	12238	4164	40431	20433	11018	159173	448180
	(-48%)	(17%)	(6%)	(-60%)	(-48%)	(69%)	(16%)	(-22%)

This table shows the number of immigrants into the US from CEECs and WECs in our sample for specific intervals before and after 1945. Growth rates from the immediately previous specified period is shown in parenthesis. Source: Table 2 in Statistical Yearbook of the Naturalization Service, 2001. Data for Lithuania, Finland and data for East and West Germany separately is not reported in the data source.

**Table A.31**Sex ratio for the age group of 25-54 before and after WW II

			Cer	ntral and I	Eastern Euro	pe					
Year		Chzecosl.b	Hungary <sup>c</sup>	Poland	Romania $^f$			Average			
1930		94.2	91.0	89.3	94.2			91.5			
1951		97.6	$90.0^{d}$	$85.2^{a,e}$	$91.5^{a,e}$			88.9			
		(4%)	(-1%)	(-5%)	(-3%)			(-3%)			
Western Europe											
Year	Aust	Belg	$\mathrm{Den}^h$	$Finl^i$	France	Greece	Ireland $^m$				
1930	$88.9^{g}$	98.6	93.0	92.3	$91.8^{j}$	$92.9^{l}$	$105.7^{j}$				
1951	81.9	$100.0^{a}$	97.3	88.4	$99.8^{a,e,k}$	92.6	103.7				
	(-8%)	(1%)	(5%)	(-4%)	(9%)	(-2%)	(-2%)				
				Wester	n Europe						
Year	Italy	Netherld	Norway	Portugal	Spain	$Sweden^q$	$UK^r$	Average			
1930	$88.6^{n}$	96.4	92.0	$84.7^{o}$	$93.3^{p}$	95.3	88.1	93.0			
1951	94.9	$96.3^{a,k}$	$99.0^{a,e}$	$90.7^{a,e}$	$90.1^{a,e}$	100.6	$96.6^{k,s}$	95.1			
	(7%)	(0%)	(8%)	(7%)	(-3%)	(6%)	(10%)	(2%)			

This table shows the sex ratio for the age group of 25-54 of CEECs and WECs in our sample for specific years before and after WW II. Growth rates from the immediately previous specified year is shown in parenthesis. Source when not indicated otherwise: United Nations, Demographic Yearbook 1949-50, p.137-159, Table 4., a: Source: UNSD Demographic Statistics, http://data.un.org/Data.aspx?d=POP&f=tableCode%3A22, b: The results are for the age group of 15-49 due to data restrictions, source: Czech Statistical Office, Czech Demographic Handbook - 2011, Table 1-10 Population by main age group: 1920 - 2011, 1 July, https://www.czso.cz/csu/czso/czech-demographic-handbook-2011-ze615mbr32 Hungarian Central Statistical Office, Table 1.1.2.1 http://www.ksh.hu/nepszamlalas/tables\_regional\_00, d: 1949, e: 1950, f: The results are for the age group of 15-44 due to data restrictions, g: 1934, Statistics Austria, http://www.statistik.at/web\_de/downloads/webkarto/bevoelkerungspyramide\_1869\_2011/, h: Denmark, Population and elections, Table HISB5: Mid-year population by sex and age (5 years age groups) (DISCONTINUED) http://www.statbank.dk/statbank5a/default.asp?w=1366, i: Statistic Finland's PX-Web Databases, Population according to age (5-year) and sex in the whole country 1865 - 2014, http://pxnet2.stat.fi/PXWeb/pxweb/en/ StatFin/StatFin\_vrm\_vaerak/120\_vaerak\_tau\_105.px/?rxid=28b33b93-cad2-4c81-a782-9ce39890f76e, j: 1936, k: Estimate, l: 1928; Ministry of National Economy, General Statistical Service of Greece.(1935)Resultats statistiques du ecensement de la population de la Grece du 15-16 Mai 1928, p.1 $\zeta$ , Table 7. http://dlib.statistics. gr/portal/page/portal/ESYE/showdetails?p\_id=10095547&p\_derive=book&p\_topic=10007862, Central Statistics Office, Table CNA15: Population by Age Group, Sex, Year and Statistic, http://www.cso.ie/px/ pxeirestat/statire/SelectVarVal/Define.asp?Maintable=CNA15&PLanguage=0, n: 1931 from Istat, Table 2.2.1, http://search.istat.it/search?q=census+1910+gender+age&submit.x=0&submit.y=0&output=xml\_no\_ dtd&client=istat\_fe\_en&proxystylesheet=istat\_fe\_en&sort=date%253AD%253AL%253Ad1&oe=UTF-8&ie= UTF-8&ud=1&site=istat\_en&ulang=hu&entqrm=0&entsp=a\_\_istat\_policy&wc=200&wc\_mc=1&exclude\_apps=1, o: Statistisc Portugal, Censos - População de facto agrupada por idades - 1930, Vol. 2. p.4, Table 1. https://www.ine.pt/ xportal/xmain?xpid=INE&xpgid=ine\_publicacoes&PUBLICACOESpub\_boui=72364315&PUBLICACOESmodo=2, p: Insituto Nacional de Estadistica: Censo de 1930/ Tomo II. Resúmenes generales de la nación, Clasificación de los habitantes inscritos en la población de HECHO, por edades ano por ano, combinado con el sexo y estado civil, Resumen general de la Nación http://www.ine.es/inebaseweb/pdfDispacher.do?td=194349&ext=.pdf, q: Statistics Sweden, Swedish Population (in one-year groups) 1860-2014, http://www.scb.se/en\_/Finding-statistics/Statistics-by-subject-area/ Population/Population-composition/Population-statistics/Aktuell-Pong/25795/, r: Due to data restrictions only England and Wales are included, s: United Nations, Demographic Yearbook 1952, p.146, Tale 4.,