Hard Times, Hard Attitudes? The Effect of Economic Downturns on Gender Norms

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Abstract

This paper examines the impact of economic fluctuations on social norms, specifically exploring the link between changes in unemployment and shifts in attitudes toward gender roles in the labor market. The results are not immediately obvious, as the literature suggests several potential mechanisms with conflicting outcomes. Using microdata from the World Values Survey for a panel of 103 countries that cover close to 90% of the world population, we estimate individual-level probability models of agreement with traditional gender roles over the period 1995 to 2021, including country and year fixed effects. We find that an increase in unemployment is associated to more conservative views about gender roles in the labor market. This result is remarkably robust across different groups and specifications. We also find that some contextual factors matter. In particular, the link between higher unemployment and more conservative views on gender roles is stronger in countries with, on average, higher gender inequality and lower female labor force participation. Overall, this study contributes to a growing body of research on the complex relationship between economic conditions, gender norms, and social change.

JEL Classification: J16, J21, J22, Z1
Keywords: gender values, social norms, attitudes, unemployment, gender.

1 Introduction

Gender norms, which are societal expectations, beliefs and attitudes about appropriate behaviors and roles for men and women, play a significant role in shaping individual behaviors and interactions, thereby affecting various socioeconomic outcomes. Although gender norms often feel stable and deeply ingrained, they are shaped by cultural, economic, political, and social contexts that evolve over time. While norms and values are certainly affected by long-term structural factors, such as technological innovations, demographic changes or social movements, they can also be modified by short-term factors, such as economic fluctuations.

Do gender norms react to short-term changes in the economic situation, and if so, in what direction? In this paper, we aim to contribute to answering these questions by analyzing the impact of economic fluctuations on social norms and values related to gender roles in the labor market. The expected results are not immediately obvious, as the literature suggests several potential mechanisms pointing to different directions. On the one hand, economic downturns may increase conservative beliefs, especially among male workers who feel the threat of heightened competition from women entering the labor market. On the other hand, periods of relatively high unemployment disrupt established gender norms by forcing new roles and responsibilities for both men and women. In particular, economic shocks can potentially spur an increase in female labor force participation. As more women seek employment to offset financial hardships, this could challenge traditional beliefs about women's roles being confined to the household. As a result of contrasting arguments, it is challenging to predict a universal outcome for the relationship between changes in economic conditions and gender norms.

To shed light on how social norms can be influenced by economic fluctuations, we exploit panel data from the World Values Survey (WVS) for 103 countries covering nearly 90% of the world population. The WVS allows us to construct measures of attitudes regarding gender roles. Our main outcome variable is built from people's reactions to the following proposition: "When jobs are scarce, men should have more right to a job than women". We also use other questions from the WVS as proxies for gender norms, in line with Bussolo et al. (2024). Our main variable to capture economic conditions is the national unemployment rate drawn from the International Labour Organization (ILO, 2023), standardized using country-specific means and standard deviations, following the approach of Arellano-Bover (2020). Our methodological approach is simple: we run linear probability models at the individual-level linking agreement with a specific statement concerning gender roles to the national unemployment rate, while accounting for country and year fixed effects, and several controls. Although we are aware that these conditional correlations are not enough to derive causal propositions, we believe that they provide interesting insights into the actual empirical relationship between economic fluctuations and changes in attitudes toward gender roles at the global scale. Robust and well-documented conditional correlations are helpful to contribute to the debate and understanding of the

complex relationship between economic conditions, gender norms, and social change.

Our main finding is that higher national unemployment is associated with more conservative views about gender roles in the labor market. The size of the effect is far from negligible: a one-point increase in the standardized national unemployment rate is associated with a 2.25-point decrease in the share of disagreement with the traditional gender-role statement. This result implies that a country in a severe downturn may experience a substantial shift in its gender norms. Our estimates suggest that if a country experiences an unemployment surge equivalent to the 90th percentile of changes recorded in our panel, its expected jump in ranking among 103 countries in terms of conservative gender views would be ten positions.

The shift toward more traditional views on gender roles during times of higher national unemployment appears to be widespread across various groups, including men and women, the employed and non-employed, as well as younger and older individuals. Remarkably, both the direction and magnitude of the effect are quite similar across these groups.

Interestingly, we do find some differences when splitting the sample based on country-level characteristics, which allows us to explore how broader structural contexts influence the relationship between unemployment and gender role attitudes across countries. Specifically, we find that the association between higher unemployment and more conservative views on gender roles is stronger in countries that, on average, were initially more traditional according to their level of gender inequality and female labor force participation rate.[1]

We organize the rest of the paper as follows. Section 2 briefly reviews the literature and discusses the main arguments behind shifting gender norms along the business cycle. Section 3 introduces the data and the methodological strategy and discusses their strengths and limitations. Section 4 presents the main results of the paper, Section 5 explores potential heterogeneities, while Section 6 extends the analysis to other questions in the WVS on gender norms. We conclude in Section 7 with a discussion of the main findings.

2   Gender norms and economic fluctuations

Gender norms are key in defining behaviors and roles in families, workplaces, and communities, thereby affecting various economic outcomes, such as labor force participation, occupational choices, and career advancement (Akerlof and Kranton, 2000; Bertrand, 2020), as well as the support for different policies aimed at promoting gender equality (Bursztyn et al., 2023).

Social norms are not immutable, as they are shaped by cultural, economic, political, and social contexts that evolve over time. Throughout history, there are numerous examples of the evolution of social norms. For instance, norms around marriage, gender roles,

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[1]The literature highlights social norms as an important driver of female outcomes and gender inequalities (Bussolo et al., 2024).

racial equality, and LGBTQ+ rights have changed significantly in many societies over the past century. Social norms also vary widely between cultures. What is considered normal behavior in one culture may be seen as unusual or even unacceptable in another (Inglehart and Norris, 2003).

Norms are affected by long-term structural factors, such as technological innovations, demographic changes or social movements. For instance, it is well-documented that changes in technology and access to household appliances were pivotal in increasing female labor force participation in the past century (Greenwood et al., 2005).

Also, demographic changes, such as fertility rates and population aging, have influenced the roles of men and women in society (Goldin, 2006). Social movements and political changes, although partly endogenous, have played significant roles in shaping gender norms (Bargain et al., 2019). Additionally, there is evidence that large shocks, such as wars, can impact gender norms, as seen in the increased labor force participation of women when men are displaced from the workforce (Acemoglu et al., 2004; Goldin, 1991). Social norms also adapt in response to changes in social, economic, and environmental conditions. For instance, norms around work and family roles have shifted significantly as more women have entered the workforce and as ideas about work-life balance have evolved (Fortin, 2005; Berniell et al., 2023).

Gender norms tend to evolve slowly (Alesina et al., 2013). However, while these norms and values are certainly shaped by long-term structural factors and large shocks, they could also be modified by short-term factors, such as economic fluctuations. Do gender norms react to short-term changes in the economic situation, and if so, in what direction? The expected results are not immediately obvious, as the literature suggests several potential mechanisms pointing to different directions.

On the one hand, economic downturns can lead to an increase in conservative beliefs, particularly among certain groups, such as male workers who may perceive a heightened threat from increased competition as more women enter the labor market. Economic downturns can create an atmosphere of uncertainty and insecurity in the job market, prompting individuals to seek stability and security in their beliefs and values. This often leads to a strengthening of conservative ideologies, as people may become more resistant to change and more protective of their existing societal roles and norms. In this context, there is often a stronger adherence to traditional roles and norms, as individuals seek to protect their existing positions and reduce the perceived risks associated with change (Giuliano and Spilimbergo, 2014; Margalit, 2013; Seguino, 2007).

On the other hand, periods of hard economic conditions can disrupt established gender norms by changing roles and responsibilities for both men and women. For instance, economic downturns often compel women to enter or re-enter the workforce to help mitigate financial strain, shifting the traditional view that women's roles should be limited to household duties (Fernández, 2013). This increased female labor force participation during times of economic difficulty can challenge deeply ingrained societal beliefs about gender roles, promoting a shift towards greater gender equality in both the public and

private spheres (Bertrand et al., 2015). Additionally, widespread unemployment can alter conventional power dynamics within households. When men face significant job losses, their status as the primary breadwinner may be undermined, leading to a reevaluation of traditional household roles and a more equitable distribution of responsibilities between men and women. Such shifts can contribute to changing social norms.

Given these contrasting forces, predicting a universal outcome for the relationship between economic conditions and gender norms is challenging. For this reason, it is particularly useful to provide empirical evidence on this relationship.

3 Data and empirical strategy

3.1 Data

In this paper, we aim to examine the relationship between gender norms and economic conditions. To construct measures of these norms, we draw on data from the World Values Survey (WVS), a large initiative that periodically gathers information on values, norms, and attitudes from people around the world. The WVS samples are representative of individuals aged 18 and older in each country. Specifically, we focus on the level of disagreement—i.e., disagree, neither agree nor disagree, or agree—with the statement: "When jobs are scarce, men should have more right to a job than women." This question has been consistently included in various WVS waves since the early 1990s, spanning over 100 countries. We use all individual responses to this question. Consequently, our dataset is an unbalanced panel of 103 countries that represent close to 90% of the world population, with individual-level data for approximately 1,000 individuals per country and year, covering the period from 1995 to 2021. Table A.1 in the Online Appendix provides a detailed list of the countries and years included in our sample, along with the average number of observations per country over the years.

Previous research has employed this question to examine variations in gender norms across countries and their evolution over time (e.g., Bussolo et al., 2024). In this context, a lower proportion of disagreement with the statement "When jobs are scarce, men should have more right to a job than women" indicates a more traditional or conservative attitude towards gender roles. Consequently, we will use the terms "more conservative" or "more traditional" to describe a reduced level of disagreement with this statement.

Figure A.1 presents the ranking of the 103 countries in our sample based on the percentage of disagreement with the statement. Countries are arranged from least traditional to most traditional. For instance, Egypt, located at the far right, is the most traditional, with only 4% of respondents disagreeing with the statement. Conversely, Sweden, positioned at the far left, is the least traditional, with 93% of respondents disagreeing.

We also use other questions from the WVS as proxies for attitudes toward gender roles. These include the statements: "Problem if women have more income than husband," "A university education is more important for a boy than for a girl," "On the

whole, men make better political leaders than women do," and "On the whole, men make better business executives than women do." Moreover, we explore other variables that capture traditional versus less traditional attitudes on broader topics beyond gender roles. For example, respondents are asked whether they believe homosexuality or divorce is justifiable, their opinion on whether a democratic political system is a good way of governing the country, their self-positioning on a political scale, and whether, when jobs are scarce, employers should prioritize people of the country over immigrants. From the WVS, we also obtain other individual characteristics to be used as controls, such as gender, age, educational level, marital status, and religion. We use re-scaled survey weights throughout our analysis.[2]

As we will discuss in the next subsection, our main independent variable is the national unemployment rate, which characterizes the economic conditions of each country at the time the different waves of the WVS were conducted. The national unemployment rates are drawn from the International Labour Organization (ILO) (ILO, 2023). We standardize this variable using country-specific means and standard deviations as in Arellano-Bover (2020).[3] In addition to the contemporaneous national unemployment rate, we construct an alternative measure: the national average unemployment rate over the past 5 years. We also use another measure obtained directly from ILO: the contemporaneous unemployment rate specific to each gender and age group (below or above 25 years old) within each country. As with the contemporaneous unemployment rate, these variables were also standardized. In the first case, we used country-specific means and standard deviations, while in the second case, we used means and standard deviations for each group within the country.

Table A.2 presents the basic descriptive statistics of the main variables. For the statement "When jobs are scarce, men should have more right to a job than women," 44.3% of respondents in our sample disagree, 38.9% agree, and 16.8% neither agree nor disagree. The overall unemployment rate, averaged across all countries and years, is 8.5%, while the standardized national unemployment rate averages 0.08 standard deviations above the mean. Regarding the other variables at the individual level, the average age is 41.4 years, with women comprising 52.1% of the sample. In terms of education, 27.4% have low education, 43.7% medium, and 28.9% high education. In terms of marital status, 63.7% are married or living together, while 24.7% are not married. For religion, 23.4% identify as Roman Catholic, and 25.4% identify as Muslim, among other religious affiliations.

3.2 Methodology

Our empirical strategy is simple: we run linear probability models at the individual-level linking agreement with a specific statement concerning gender roles to the national

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[2]The WVS provides sampling weights that are adjusted to add up to 1,000 within each country-year. We use these weights to avoid results being disproportionally determined by more populous countries.

[3]We perform the standardization using the 1991 to 2021 national unemployment rate series. We then combine the standardized unemployment rates with the WVS database. Table A.1 shows the years covered by the WVS in each country.

unemployment rate, while accounting for country and year fixed effects, as well as several controls. Formally, the model is given by:

$$TN_{r,ict} = \alpha + \beta \times U_{ct} + \delta \times X_{ict} + \lambda_c + \theta_t + \epsilon_{ict}, \tag{1}$$

where $TN_{r,ict}$ represents the level of agreement of individual i in country c in year t with the traditional gender norm statement: "When jobs are scarce, men should have more right to a job than women." Respondents are asked to choose among three options: $r = Disagree$, $r = Neutral$ (i.e., neither agree nor disagree), and $r = Agree$. To simplify the interpretation of the results, we opt to use a linear probability model for each outcome, rather than employing a categorical variable and estimating a multinomial model.[4] We thus define three binary indicators: $TN_{Disagree}$—which indicates whether the respondent disagrees with the statement (1 if disagree, 0 otherwise)—, $TN_{Neutral}$—which indicates whether the respondent neither agrees nor disagrees with the statement (1 if neutral or indifferent, 0 otherwise), and TN_{Agree}—which indicates whether the respondent agrees with the statement (1 if agree, 0 otherwise).

Our primary independent variable, U_{ct}, represents the national unemployment rate in country c and year t, standardized in deviations from the country mean. We believe that the national unemployment rate reflects the economic conditions that shape societal norms and attitudes. Beyond the economic circumstances affecting specific population groups, gender norms are likely to be influenced by the overall context. For example, even if unemployment is high among men and low among women, the broader context of job competition and perceived scarcity may still shape women's attitudes towards gender norms. However, unemployment rates specific to particular groups may also play a role. We assess the robustness of our main findings by using the unemployment rate relevant to each individual's group.

On the right-hand side, the model also includes the vector X_{ict}, which contains individual-level controls such as age, age squared, gender, education level, marital status, and religion. It also includes country fixed effects (λ_c) and calendar year fixed effects (θ_t).

The parameter of interest is β, which captures the change in the probability of agreeing—or disagreeing, or remaining neutral—with the traditional gender-role statement for a one-standard-deviation increase in the national unemployment rate, holding all other factors constant. If higher unemployment is associated with a decreased probability of disagreement and an increased probability of agreement or indifference to the statement, we interpret that when economic conditions are tougher, gender norms become more conservative. Despite these conditional correlations are not enough to derive causal propositions, we believe that they provide interesting insights into the actual empirical relationship between economic fluctuations and changes in gender roles at the global scale.

We estimate equation 1 by OLS for the pooled sample of 103 countries using the

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[4]We check the robustness of our results using a multinomial logistic model. Our results are discussed in Section 4

responses of all individuals spanning the period 1995 to 2022. We then conduct a heterogeneity analysis between men and women, also using the pooled sample. Additionally, we perform further heterogeneity analyses by splitting the pooled sample based on individual characteristics—e.g., age, education, employment status—and on countries' characteristics—initial gender inequality, female labor force participation level, and unemployment rate.

4   Main results

We begin by presenting the results of a linear probability model introduced in the previous section, using binary variables for the responses to the WVS question on rights to jobs during economic downturns as the outcome variable, with the contemporaneous standardized unemployment rate as the main right-hand-side variable. At the end of this section, we examine the robustness of these results by considering alternative variables and model specifications.

Figure 1 displays the results for the pooled sample of 103 countries. Each panel shows the results of a model for each possible response—disagree, indifferent, agree—, using different sets of control variables. The first model includes controls for age and age squared, gender, education dummies, as well as year and country fixed effects. The second model adds controls for marital status, while the third model further includes dummies for religion. The figure presents the point estimates along with the corresponding 90% confidence intervals, calculated using clustered standard errors at the country level.

The first panel reveals that an increase in the national unemployment rate is associated with a significant reduction in the likelihood of disagreeing with the statement "When jobs are scarce, men should have more right to a job than women." The second and third panels indicate that as unemployment rises, the probability of respondents being indifferent to or agreeing with this traditional gender-role statement increases, although the latter is not statistically significant. Overall, the results in Figure 1 suggests that a higher national unemployment rate is linked to a significant shift in gender norms towards more conservative attitudes, at least concerning the labor market. As will be documented at the end of this section, these results are robust to using the unemployment rate over the last five years (instead of the contemporaneous rate) and to other specifications.

Figure 1: Effect on attitudes about gender roles. All countries.
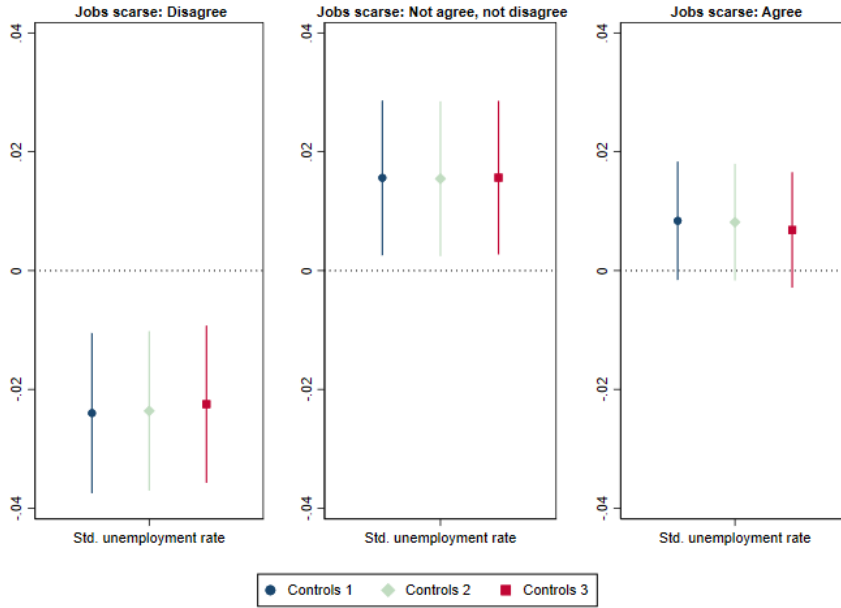
The size of the effect is far from negligible. Based on the regression with the fullest set of controls (model 3), our estimates suggest that a one-point increase in the standardized national unemployment rate is associated with a 2.25-point decrease in the share of disagreement with the traditional gender-role statement. In fact, in our pooled sample of 103 countries, the mean change in unemployment is very close to 1 (1.01). To further illustrate the magnitude of the estimates, we calculate the expected change in a country's global ranking regarding attitudes toward gender roles (from least to most conservative) following an increase in unemployment. For instance, if a country is at the 20th percentile on the conservative ladder—as seen in Figure A.1 in the Online Appendix—and experiences an increase in unemployment similar to the mean change in our panel, we expect it to move up four steps on that ladder. If the same country experiences an unemployment surge equivalent to the 90th percentile of the changes recorded in our panel, the expected jump in its conservative ranking would be ten steps. Figure A.2 in the Online Appendix presents other examples.

Remarkably, the tendency to hold more traditional or conservative views regarding gender roles seems widespread across genders. Figure 2 displays the results of estimating equation 1 for men and women, separately. In contrast to our prior beliefs, the differences are statistically non-significant.

To assess the robustness of our results, we re-estimated equation 1 using two alternative measures of the unemployment rate: the national average unemployment rate over the past 5 years and the contemporaneous unemployment rate specific to each gender and age

Figure 2: Effect on attitudes about gender roles. Men vs. women, all countries.
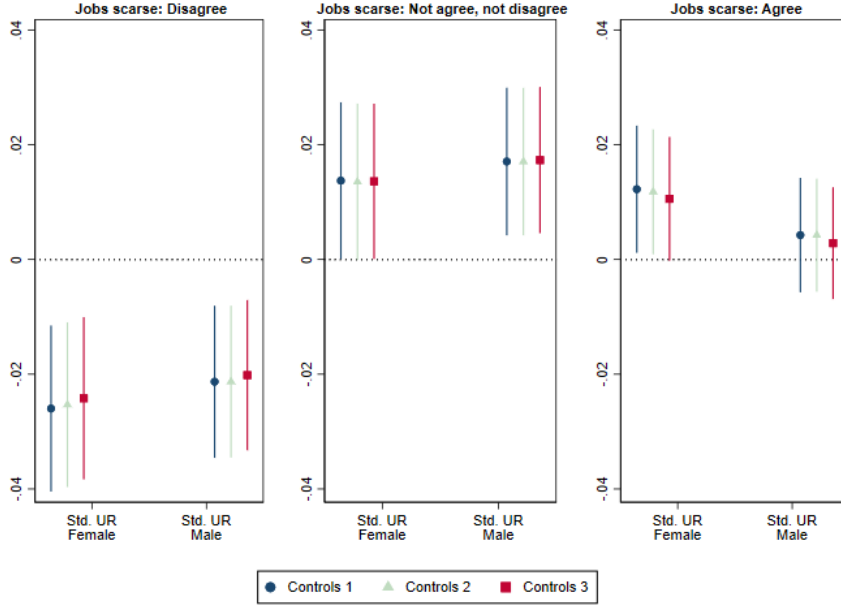
Notes: The figures show coefficients β and the corresponding 90% confidence intervals from estimating equation 1 separately for men and women, using the pooled sample of countries. The first model includes controls for age and age squared, gender, education dummies, as well as year and country fixed effects. The second model adds controls for marital status, while the third model further includes dummies for religion.

group (below or above 25 years old) within each country. As with the contemporaneous unemployment rate in our baseline specification, these variables were also standardized. In the first case, we used country-specific means and standard deviations, while in the second case, we used means and standard deviations for each group within the country. Figure A.3 presents the results, which remain consistent with our main findings: higher unemployment rates are associated with more conservative attitudes toward gender roles.

Lastly, we checked the robustness of our results by estimating a multinomial logistic model, where the dependent variable from equation 1 is treated as a categorical variable with three possible outcomes. Our findings remain consistent: higher unemployment rates are associated with a greater likelihood of choosing the "Agree" (9.4% increase) and "Neutral" (16.5% increase) options relative to "Disagree" option with the traditional statement that "When jobs are scarce, men should have more right to a job than women."[5]

5 Heterogeneities

In this section we carry out two complementary exercises to explore heterogeneities in the effects of unemployment rates on gender role attitudes. The first exercise focuses on heterogeneity at the individual level, where we estimate the model separately for groups of individuals who share a common characteristic. This approach allows us to examine how individuals' responses vary according to their specific traits, providing insight into

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[5]Estimation results from the multinomial logistic model are available upon request.

within-country differences. The second exercise focuses on heterogeneity at the country level, where we split the sample based on country-level characteristics. This allows us to investigate how the broader structural context influences the relationship between unemployment and gender role attitudes across countries. These exercises capture different dimensions of heterogeneity: the former highlights variation within countries, while the latter examines how contextual factors at the country level influence these effects.

5.1 Heterogeneity at the individual level

The tendency to hold more traditional or conservative views regarding gender roles in harder economic times seems widespread across different groups in society. We have already shown that differences across genders are not statistically significant (Figure 2). Panel A of Figure 3 shows that the results are also similar across groups based on age, education and marital status. Moreover, we find no significant differences when comparing employed individuals with those who are not working, nor between those who are afraid of losing their jobs and those who do not.[6]

We also examined if our results hold when splitting the sample by other WVS variables that capture traditional versus less traditional attitudes on broader topics beyond gender roles. For example, respondents are asked whether they believe homosexuality or divorce is justifiable, their opinion on whether a democratic political system is a good way of governing the country, their self-positioning on a political scale, and whether, when jobs are scarce, employers should prioritize people of the country over immigrants. Based on these questions, we divided individuals in our pooled sample into two groups: "traditional" and "non-traditional."[7] Panel B in Figure 3 shows that results remain consistent regardless of the group, with higher unemployment being associated with more conservative attitudes toward gender roles. While the effect is somewhat stronger for the more traditional group, the difference with the non-traditional group is not statistically significant. The only exception is for individuals with non-traditional opinions regarding immigrants, where we find some indication that when unemployment increases they tend to adopt less traditional attitudes regarding gender roles. A possible conjectural explanation for this could be that these individuals become more radicalized during periods of high unemployment, intensifying their opposition to perceived inequalities, which may lead them to express even stronger support for gender equality in times of economic crisis.

5.2 Heterogeneity at the country level

We next explore whether the relationship between economic downturns and gender norms varies among countries with different levels of unemployment, gender inequality, and female labor force participation (FLFP). The results are shown in Figure 4. First, we divide


[6]For the latter classification we only have data on 78 out of the 103 countries.

[7]We acknowledge that the boundary between categories may be shifting with changes in unemployment, and this seems particularly plausible for the questions about employment status and fear of losing a job, as well as for the question about immigrants.

Figure 3: Effect on attitudes about gender roles. Individual-level heterogeneities, all countries.

A. By age, education level, marital status, employment status, and job loss fear.
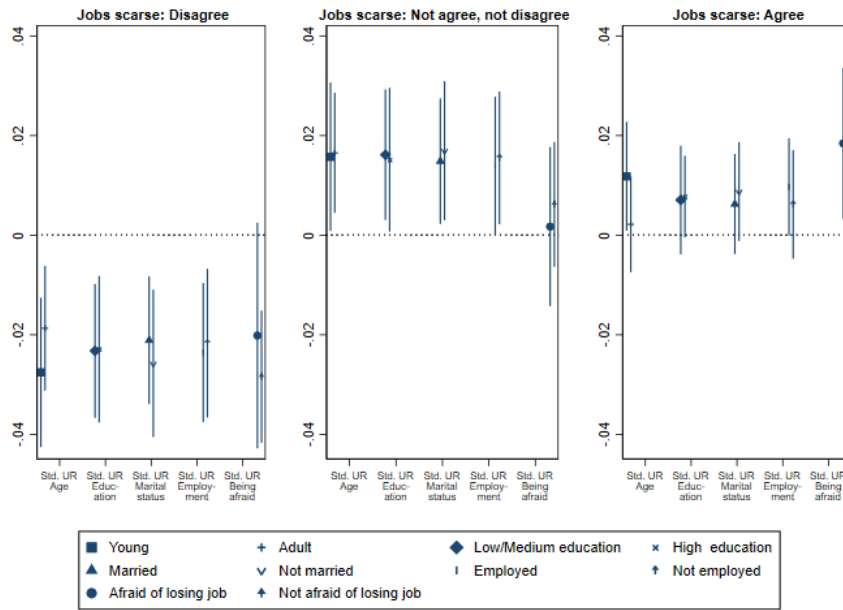

B. Traditional vs. non-traditional views.
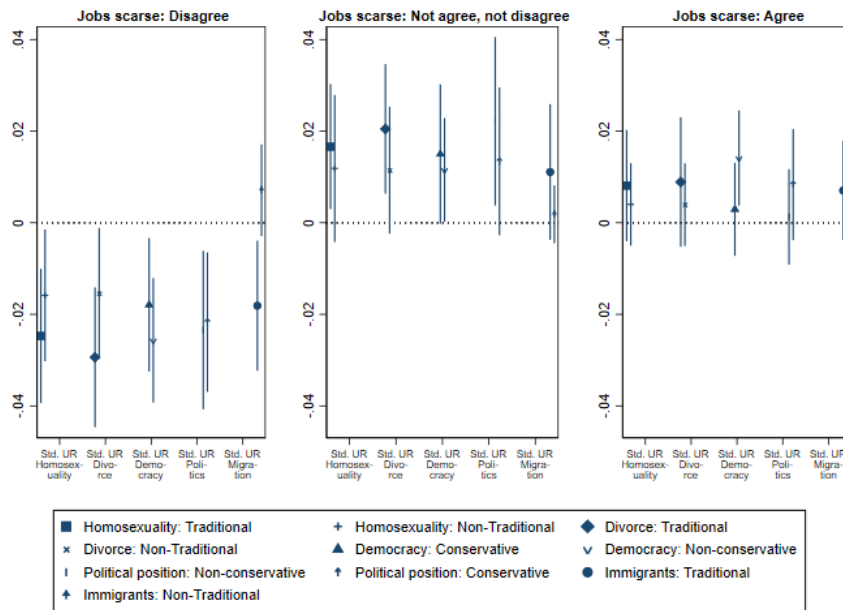
Notes: The figures present the coefficients β along with the corresponding 90% confidence intervals, obtained by estimating equation 1 separately for different population groups using the pooled sample of countries. Panel A shows heterogeneities by age—young (up to 34 years) vs. adults (35 years and older)—, education level—low-to-medium education (early childhood, primary, lower secondary, upper secondary, and post-secondary non-tertiary education) vs. high education (short-cycle tertiary, bachelor's, master's, and doctoral)—, marital status—married vs. unmarried individuals, employment status—employed vs. not employed individuals—, and whether individuals fear losing their jobs. For the latter, the sample is limited to 78 countries. In panel B respondents are classified as "traditional/conservative" or "non-traditional/non-conservative" based on different questions: whether homosexuality or divorce is justifiable—1 = never justifiable to 10 = always justifiable, respondents were classified as "traditional" if they answered 1, 2, or 3—; whether a democratic political system is a good way of governing the country—very good, fairly good, fairly bad, or very bad, individuals were considered "non-conservative" if they answered "very good"—; self-positioning on the political scale—1 = left to 10 = right, respondents were labeled "conservative" if they answered between 6 and 10—; and whether, when jobs are scarce, employers should prioritize people of this country over immigrants—agree, neutral, or disagree, respondents were categorized as "traditional" if they answered "agree" or "neutral." In all cases, the results are based on the model with the full set of controls (model 3), which includes age and age squared, gender, education dummies, marital status (when possible) and dummies for religions, as well as year and country fixed effects.

economies into two groups based on the initial (mean 1990–1995) national unemployment rate. We find no differences between the two groups of countries. An increase in the unemployment rate is associated with a shift toward more conservative gender norms in both countries with initially low unemployment rates (below the median) and those with initially high unemployment rates (above the median). These results suggest that, regardless of the macroeconomic context, gender role attitudes may be similarly responsive to changes in the economic situation in both low and high unemployment countries. Viewing the historical unemployment rate as a proxy for job insecurity, our findings are consistent with Figure 3, which shows no significant differences in gender role attitudes between individuals who are afraid of losing their jobs and those who are not afraid.

Figure 4: Effect on attitudes about gender roles. Country-level heterogeneities.
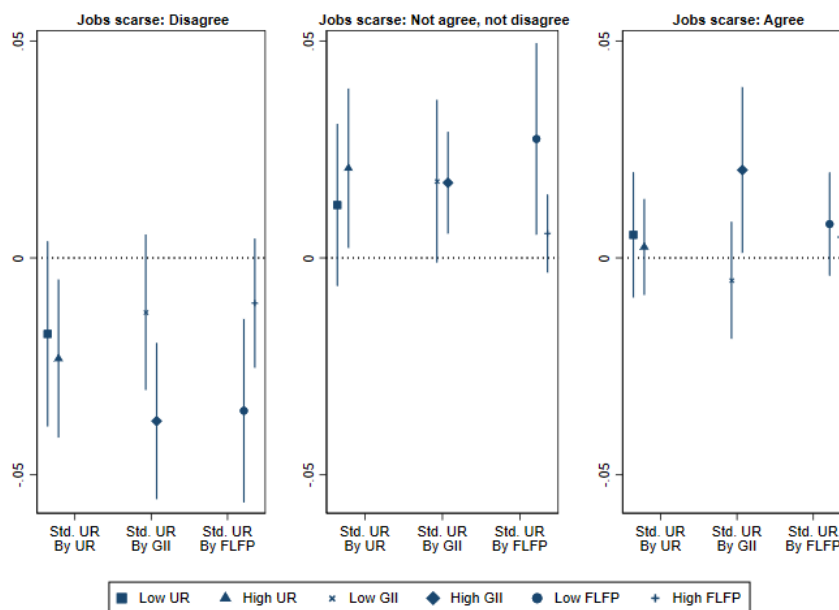
Notes: The figures show coefficients β and the corresponding 90% confidence intervals from estimating equation 1 separately for different groups of countries. The groups are defined as follow: (i) countries with low and high historical unemployment rates; (ii) countries with low and high gender inequality; and (iii) countries with low and high historical levels of female labor force participation (FLFP). Classification (i) is defined by whether the average unemployment rate over the period 1990-1995 is above or below the median value within our sample. Classification (ii) is determined by whether the 1990 Gender Inequality Index (GII) is below or above the median within our sample, while classification (iii) is based on whether a country falls below or above the median FLFP value within our sample. The FLFP (for women aged 15 and older) and unemployment data is sourced from the WDI and averaged for each country over the period 1990-1995. The 1990 GII comes from the UNDP. In all cases, the results are based on the model with the full set of controls (model 3), which includes age and age squared, gender, education dummies, marital status (when possible) and dummies for religions, as well as year and country fixed effects.

Next, we examine potential heterogeneity based on the initial gender inequality level of each country. We classify countries as either "high inequality" or "low inequality" based on the Gender Inequality Index (GII) from the United Nations Development Programme (UNDP). The GII measures gender-based disadvantage across three dimensions: reproductive health, empowerment, and labor market participation.[8] A low GII value indicates

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[8]The reproductive health dimension is based on indicators such as maternal mortality and adolescent birth rates; empowerment includes the share of seats in parliament held by each sex and the percentage of the female and male population with at least some secondary education; finally, the labor market dimension encompasses labor force participation rates of women and men.

low inequality between women and men, and vice versa. Using the initial (1990) GII values, countries are divided into two groups depending on whether their GII is below or above the world median.[9] The results of estimating model 1 separately for the two groups are also shown in Figure 4. We again observe a contrast between more traditional and less traditional groups. Interestingly, the differences are now more pronounced than those that emerged from comparing more and less traditional groups based on individual-level variables. Moreover, in countries with a high GII, both the negative effect on the probability of disagreeing and the positive effect on the probability of agreeing are statistically significant, while the effects for countries with a low GII are never statistically significant. This suggests that while higher unemployment reinforces more conservative gender norms, the impact is greater in societies with already high gender inequality. Additionally, when we estimate separate models for men and women both in high and low gender inequality countries, the main results hold. In less traditional countries, the impact of higher unemployment is statistically non-significant in most cases, while in more traditional countries, gender norms become even more conservative, with no differences across genders (see Figure A.4 in the Online Appendix).

Finally, we replicate the analysis using the initial level of FLFP to distinguish between more or less traditional countries regarding gender norms. Specifically, we use the average FLFP for the period 1990–1995, as reported in the World Development Indicators. We find that in countries with initially low FLFP (below the world median), gender norms become more conservative as unemployment rises. Figure 4 shows that in these societies, the share of disagreement significantly increases, while the proportion of indifference also rises. In contrast, in countries with higher FLFP (above the world median), the point estimates suggest only a slight and statistically insignificant movement towards more conservative gender norms. Again, we find no differences across genders when estimating separate models for men and women both in high and low FLFP countries (see Figure A.4 in the Online Appendix).

6 Hard times, hard attitudes?

As discussed in Section 2, economic downturns could lead to an increase in conservative beliefs, as individuals seek stability in the face of uncertainty. However, these crises can also challenge entrenched gender norms by encouraging increased female labor force participation and shifting traditional household dynamics. Our results indicate that the first argument predominates, revealing a tendency towards more conservative attitudes during periods of economic hardship.

To further assess the robustness of these findings against alternative proxies of attitudes toward gender roles, we re-estimated our model using different questions from the WVS. These include the statements: "Problem if women have more income than hus-

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[9] For 23 countries lacking GII data, we impute the missing values using the average GII of the region to which the country belongs.

band," "A university education is more important for a boy than for a girl," "On the whole, men make better political leaders than women do," and "On the whole, men make better business executives than women do." For the first question, respondents can select from the same options previously considered—"Agree," "Indifferent," and "Disagree"—while for the remaining statements, responses are grouped as "Agree" or "Strongly agree" and "Disagree" or "Strongly disagree." The results shown in panel A of Figure 5 confirm that our main findings remain qualitatively robust: increases in unemployment are associated with more conservative attitudes toward gender norms, although these effects are statistically insignificant in most cases.[10]

These results raise critical questions about how societies negotiate the tension between traditional roles and the potential for progressive change in economically challenging contexts. For instance, when we analyze questions that do not explicitly pit men against women, such as "Being a housewife is just as fulfilling as having a paid job," we observe a reversal in the relationship—i.e., higher unemployment is associated with less conservative attitudes (see panel B of Figure 5). We also find a similar pattern, albeit with virtually null effects, for the question "Pre-school child suffers with working mother." This finding goes in the opposite direction of our main results.

A possible explanation for these dynamics is that when questions frame men and women as competitors for resources, attitudes often shift towards conservatism, as individuals may feel compelled to preserve traditional roles in the face of scarcity. Conversely, when questions focus solely on women's roles—such as their identities as housewives or mothers—the experience of women taking on new responsibilities during crises may foster a recognition of the value of their contributions beyond domestic spheres, potentially resulting in less conservative attitudes. This effect could persist over time, as suggested in Berniell et al. (2023). In sum, our findings are consistent with a situation in which society reacts to higher unemployment acknowledging the value of women's work outside the household as long as they do not compete with men for the same job. In other words, the shift towards a more progressive stance on women's roles might be consistent with occupational segregation, reflecting an incomplete transition away from conservative attitudes. Of course, these are merely conjectures that require further research.

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[10]While these questions are available for all countries in our sample, they are not consistently available across all years. We re-estimated all these models, including the main results, using data from the 2010–2021 period, which provides a complete set of outcomes across all countries. Overall, the findings remain largely consistent.
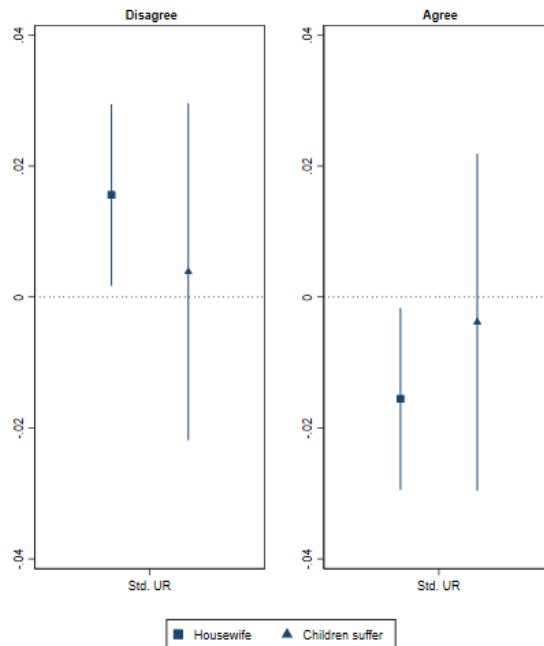
Figure 5: Effect on attitudes about gender roles. Alternative outcome variables, all countries.

A. Questions that frame men and women as competitors.
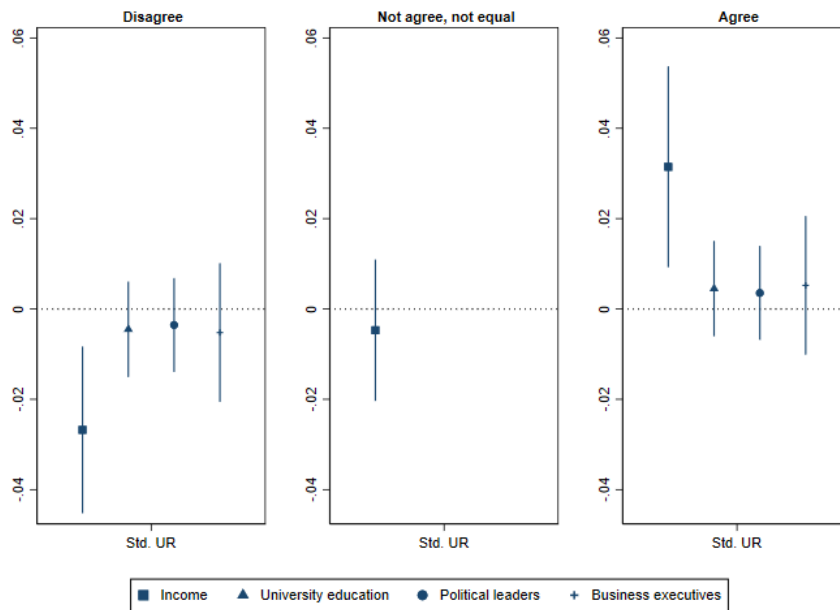
B. Questions on women's roles.

Notes: The figures present the coefficients β along with the corresponding 90% confidence intervals, obtained by estimating equation 1 with alternative outcome variables using the pooled sample of countries. The upper panel shows the results for the statements: "Problem if women have more income than husband," "A university education is more important for a boy than for a girl," "On the whole, men make better political leaders than women do," and "On the whole, men make better business executives than women do," while the lower panel shows the results for "Being a housewife is just as fulfilling as having a paid job" and "Pre-school child suffers with working mother." For the first question, respondents chose from three options: "Agree," "Indifferent," and "Disagree". For the remaining questions, there were four options, which we grouped into two categories: "Agree" or "Strongly agree" and "Disagree" or "Strongly disagree." In all cases, the results are based on the model with the full set of controls (model 3), which includes age and age squared, gender, education dummies, marital status (when possible) and dummies for religions, as well as year and country fixed effects.

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7   Concluding remarks

By exploiting panel data from the World Values Survey covering a large sample of countries, we provide indicative evidence on the relationship between economic fluctuations and gender norms. Our findings suggest that economic downturns, particularly rising unemployment rates, may result in a regression in attitudes toward gender equality, with individuals becoming less supportive of gender-equal norms: economic hardship appears to be linked to harder views, especially concerning gender equality in labor market access. Notably, this shift toward more traditional or conservative views on gender roles is prevalent across most demographic groups, suggesting that economic insecurity has a broad impact on societal beliefs about the roles of men and women.

However, our results also underscore the importance of contextual factors, as countries that were initially more gender-unequal and had lower female labor force participation exhibit a stronger reaction to unemployment shocks. This finding suggests that while economic conditions are influential, the cultural baseline of a society significantly moderates how those conditions affect gender norms. In areas where traditional values are more deeply ingrained, economic hardship may reinforce existing beliefs rather than challenge them.

Although our study reveals strong empirical correlations, we acknowledge its limitations, particularly in establishing causal relationships. Nevertheless, we believe that robust correlations, like those presented in this paper, contribute to our understanding of the complex interplay between economic conditions, norms, and social changes. As economies worldwide continue to fluctuate, gaining insight into these dynamics will be critical in advancing the debate on promoting gender equity.

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Online Appendix: Tables and Figures

Table A.1: Countries, years and observations

	Years	Avg. Obs
Albania	1998, 2002	955
Algeria	2002, 2014	1,198
Argentina	1995, 1999, 2006, 2013, 2017	1,056
Armenia	1997, 2011, 2021	1,399
Australia	1995, 2005, 2012, 2018	1,504
Azerbaijan	1997, 2011	1,462
Bangladesh	1996, 2002, 2018	1,374
Belarus	1996, 2011	1,700
Bolivia	2017	2,047
Bosnia and Herzegovina	1998, 2001	1,166
Brazil	1991, 1997, 2006, 2014, 2018	1,471
Bulgaria	1997, 2006	981
Burkina Faso	2007	1,384
Canada	2000, 2006, 2020	2,654
Chile	1996, 2000, 2006, 2012, 2018	997
China	2001, 2007, 2013, 2018	1,910
Colombia	1998, 2012, 2018	1,987
Cyprus	2006, 2011, 2019	994
Czech Republic	1998	1,038
Dominican Republic	1996	375
Ecuador	2013, 2018	1,185
Egypt, Arab Rep.	2001, 2008, 2013, 2018	2,191
El Salvador	1999	1,240
Estonia	1996, 2011	1,235
Ethiopia	2007, 2020	1,337
Finland	1996, 2005	985
France	2006	988
Georgia	1996, 2009, 2014	1,547
Germany	1997, 2006, 2013, 2018	1,850
Ghana	2007, 2012	1,520
Greece	2017	1,178
Guatemala	2004, 2020	1,078
Haiti	2016	1,904
Hong Kong SAR, China	2005, 2014, 2018	1,407
Hungary	1998, 2009	803
India	1995, 2001, 2006, 2012	2,293
Indonesia	2001, 2006, 2018	2,040
Iran, Islamic Rep.	2000, 2007, 2020	2,118
Iraq	2004, 2006, 2013, 2018	1,808
Italy	2005	972
Japan	2000, 2005, 2010, 2019	1,370
Jordan	2001, 2007, 2014, 2018	1,202
Kazakhstan	2011, 2018	1,320
Kenya	2021	1,236
Korea, Rep.	1996, 2001, 2005, 2010, 2018	1,200
Kuwait	2014	1,194
Kyrgyz Republic	2003, 2011, 2020	1,228
Latvia	1996	1,116
Lebanon	2013, 2018	1,150
Libya	2014	2,056

Table A.1 (cont.): Countries, years and observations

	Years	Avg. Obs
Lithuania	1997	937
Macao SAR, China	2019	800
Malaysia	2006, 2012, 2018	1,270
Maldives	2021	1,027
Mali	2007	1,279
Mexico	1996, 2000, 2005, 2012, 2018	1,608
Moldova	1996, 2002, 2006	959
Mongolia	2020	1,638
Montenegro	1996, 2001	614
Morocco	2001, 2007, 2011, 2021	1,197
Myanmar	2020	1,198
Netherlands	2006, 2012	1,343
New Zealand	1998, 2004, 2011, 2020	886
Nicaragua	2020	1,199
Nigeria	1995, 2000, 2012, 2017	1,723
North Macedonia	1998, 2001	985
Norway	1996, 2007	1,068
Pakistan	1997, 2001, 2012, 2018	1,468
Peru	1996, 2001, 2006, 2012, 2018	1,322
Philippines	1996, 2001, 2012, 2019	1,196
Poland	1997, 2005, 2012	994
Puerto Rico	1995, 2001, 2018	973
Qatar	2010	1,053
Romania	1998, 2005, 2012, 2018	1,345
Russian Federation	1995, 2006, 2011, 2017	1,963
Rwanda	2007, 2012	1,499
Saudi Arabia	2003	1,478
Serbia	1996, 2001, 2006, 2017	1,123
Singapore	2002, 2012, 2020	1,810
Slovak Republic	1998	1,049
Slovenia	1995, 2005, 2011	997
South Africa	1996, 2001, 2006, 2013	2,913
Spain	1995, 2000, 2007, 2011	1,159
Sweden	1996, 1999, 2006, 2011	1,026
Switzerland	1996, 2007	1,137
Tajikistan	2020	1,189
Tanzania	2001	1,072
Thailand	2007, 2013, 2018	1,359
Trinidad and Tobago	2006, 2010	980
Tunisia	2013, 2019	1,174
Türkiye	1996, 2001, 2007, 2011, 2018	2,033
Uganda	2001	986
Ukraine	1996, 2006, 2011, 2020	1,428
United Kingdom	2005	976
United States	1995, 1999, 2006, 2011, 2017	1,693
Uruguay	1996, 2006, 2011	970
Uzbekistan	2011	1,459
Venezuela, RB	1996, 2000, 2021	1,168
Vietnam	2001, 2006, 2020	1,204
West Bank and Gaza	2013	989
Yemen, Rep.	2014	975
Zambia	2007	1,425
Zimbabwe	2001, 2012, 2020	1,232

Source: World Value Surveys.

Table A.2: Descriptive statistics

	Mean	Std. Dev.
Jobs scarce: Disagree	0.443	0.497
Jobs scarce: Not agree, not disagree	0.168	0.374
Jobs scarce: Agree	0.389	0.488
Std. Unemployment rate	0.080	0.955
Unemployment rate (%)	8.486	5.904
Age	41.354	16.237
Female	0.521	0.500
Low education	0.274	0.446
Medium education	0.437	0.496
High education	0.289	0.453
Marital status: Married/living together	0.637	0.481
Marital status: Divorced/separated	0.055	0.228
Marital status: Widowed	0.060	0.237
Marital status: Single/never married	0.247	0.432
Does not belong to a religion	0.177	0.382
Belongs to a religion: Roman catholic	0.234	0.423
Belongs to a religion: Protestant	0.121	0.326
Belongs to a religion: Orthodox	0.120	0.325
Belongs to a religion: Jew	0.003	0.051
Belongs to a religion: Muslim	0.254	0.435
Belongs to a religion: Hindu	0.017	0.131
Belongs to a religion: Buddhist	0.037	0.188
Belongs to a religion: Other christian	0.017	0.129
Belongs to a religion: Other	0.021	0.142

Source: World Value Surveys.

Figure A.1: Proportion of individuals responding "Disagree", "Neither agree nor disagree", or "Agree" to the statement: "When jobs are scarce, men should have more right to a job than women", by country.
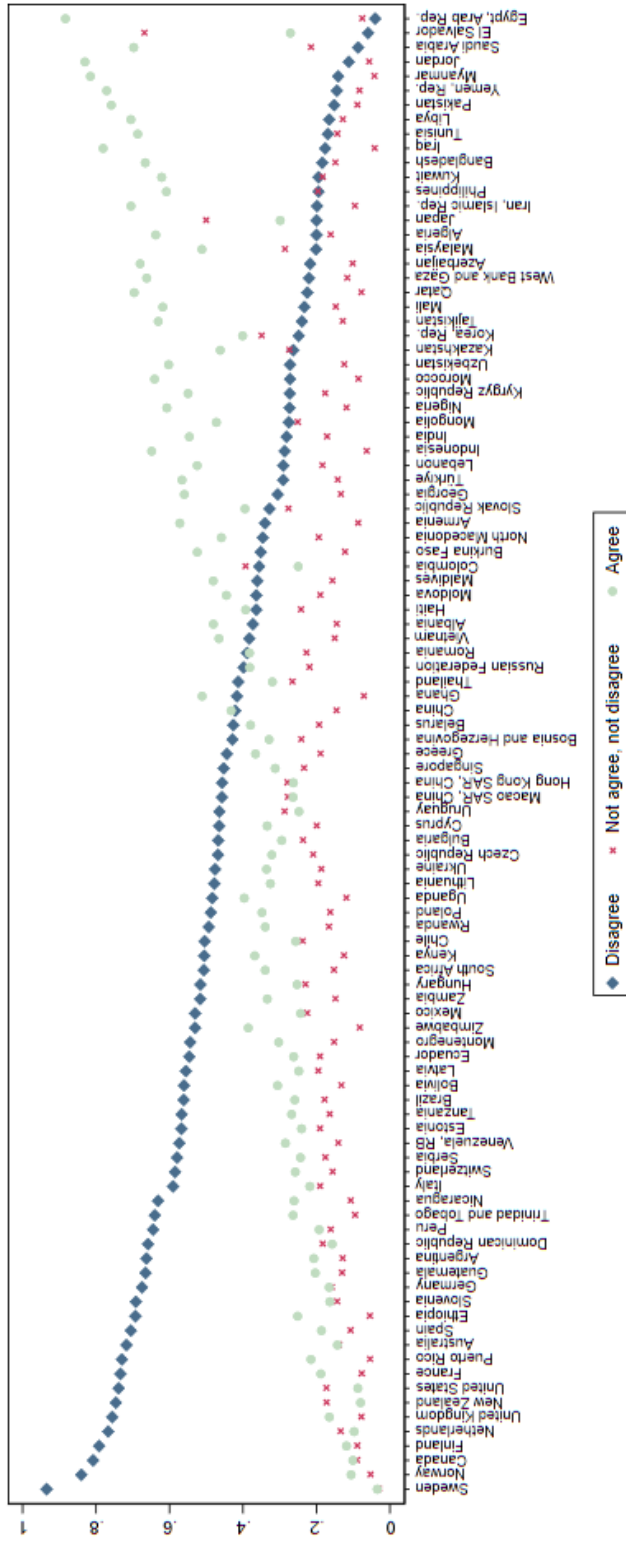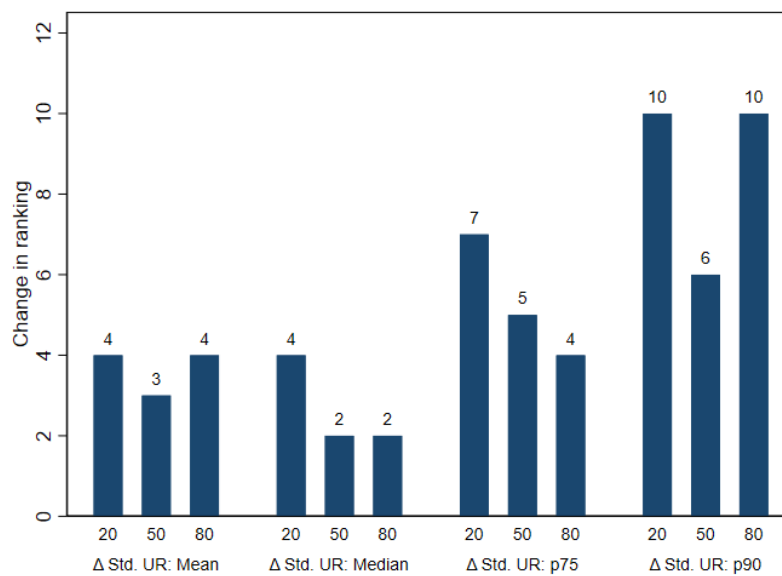
Figure A.2: Expected change in ranking of conservative attitudes about gender roles after an increase in unemployment


Notes: The figure shows the expected change in a country's global ranking according to attitudes toward gender roles, from least conservative (20th percentile of the ranking shown in Figure A.2) to most conservative (80th percentile of the ranking), after an increase in unemployment, based on the coefficients β estimated in equation 1 for the pooled sample of countries with the largest set of controls.

Figure A.3: Effect on attitudes about gender roles. Alternative unemployment measures, all countries.

A. Average national unemployment rate over the last 5 years.
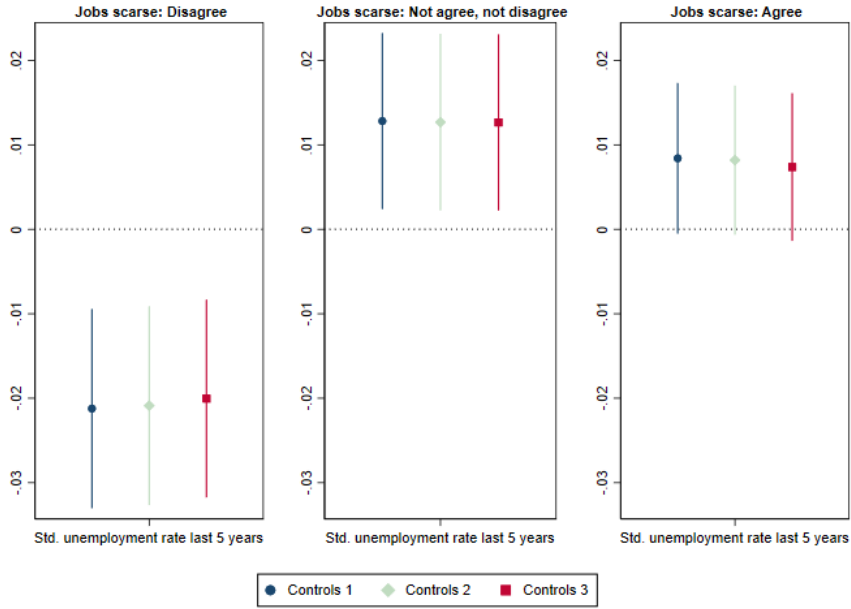
B. Contemporaneous unemployment rates specific to each gender and age group.
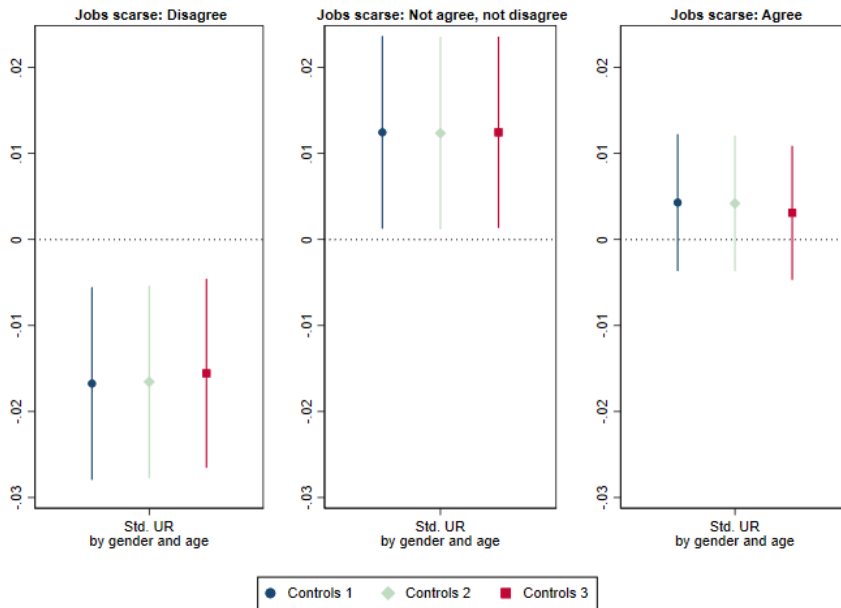
Notes: The figures present the coefficients β along with the corresponding 90% confidence intervals, obtained by estimating equation 1 with alternative measures of the unemployment rate using the pooled sample of countries. The upper panel displays the results when the unemployment variable on the right-hand side is the average unemployment rate over the last 5 years, as opposed to the contemporaneous unemployment rate used in our main results. The lower panel presents the results using unemployment rates specific to each gender and age group (below or above 25 years old) within countries. In both cases, the variables are standardized using country or country-group-specific means and standard deviations. The first model includes controls for age and age squared, gender, education dummies, as well as year and country fixed effects. The second model adds controls for marital status, while the third model further incorporates dummies for religion.

Figure A.4: Effect on attitudes about gender roles. Difference across genders.

A. High vs. low gender inequality countries.
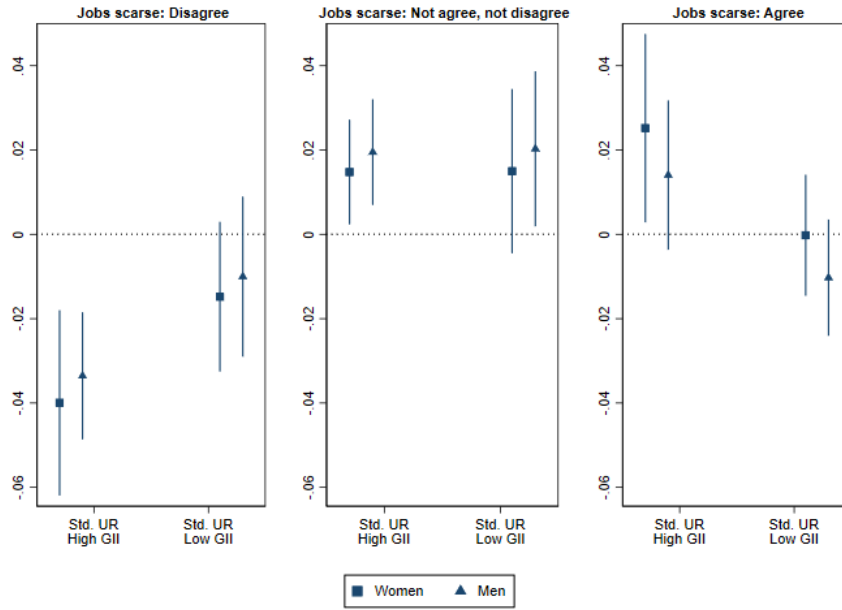
B. High vs. low female labor participation countries.
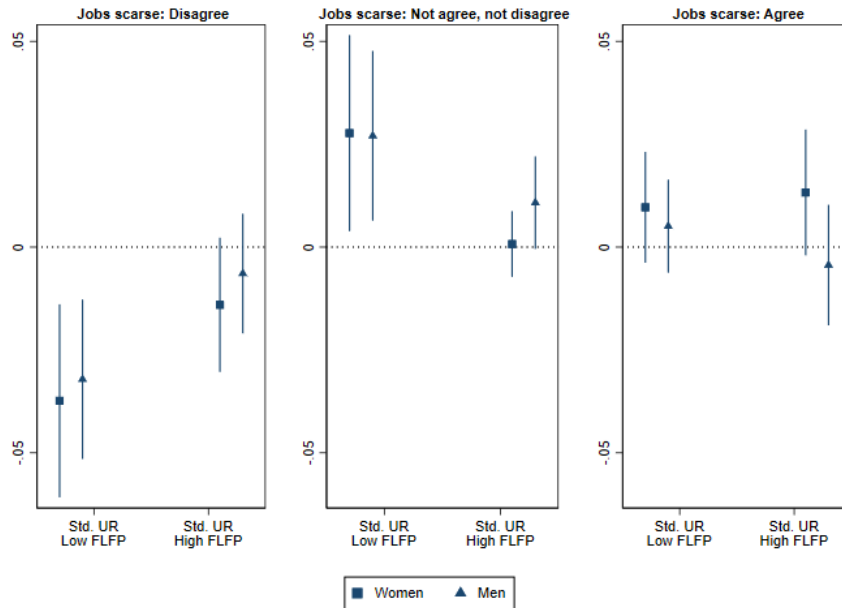
Notes: The figures show coefficients β and the corresponding 90% confidence intervals from estimating equation 1 using the full set of controls (third model). In panel A, countries are first categorized into high and low gender inequality groups based on whether the Gender Inequality Index (GII) is above or below the world median. In panel B, countries are first categorized into high and low female labor force participation (FLFP) based on whether their historical levels of FLFP fall above or below the median within our sample. The FLFP data is sourced from the WDI for women aged 15 and older, averaged for each country over the period 1990-1995. Within each of these groups, the model is estimated separately for men and women.