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# Conference Paper Globalization and Gender Equality

Beiträge zur Jahrestagung des Vereins für Socialpolitik 2024: Upcoming Labor Market Challenges

#### **Provided in Cooperation with:**

Verein für Socialpolitik / German Economic Association

Suggested Citation: Gründler, Klaus; Potrafke, Niklas; Schmid, Ramona; Sturm, Jan-Egbert (2024): Globalization and Gender Equality, Beiträge zur Jahrestagung des Vereins für Socialpolitik 2024: Upcoming Labor Market Challenges, ZBW - Leibniz Information Centre for Economics, Kiel, Hamburg

This Version is available at: https://hdl.handle.net/10419/302413

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# Globalization and Gender Equality\*

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March 1, 2024

#### Abstract

Legal rights continue to differ between women and men, particularly in developing countries. In this paper, we examine whether economic integration can improve gender equality by the law. We design a novel instrumental variable strategy based on regional waves of globalization, which serve as strong exogenous predictors of national globalization trends. Our main estimate suggests that a one-standard-deviation increase in globalization, equivalent to a permanent transition from Indonesia to the United States, is associated with an 18.3% increase in gender equality, measured by the extent to which men and women are treated equally by law. We also find that this effect is almost entirely driven by de facto globalization. Linking globalization to more than 300,000 individuals from over 100 countries, we provide evidence for a microfoundation of the macroeconomic effects.

JEL-Classification: F68; F61; O11; O57; K38

Keywords: Gender equality; globalization; economic integration; culture.

<sup>\*</sup>We are grateful for constructive comments and feedback from our colleagues. Declaration of interest: No author of this paper has any interest to declare. Declaration of generative AI in scientific writing: There was no AI-based software used to write the text of this paper. Submission declaration and verification: We declare that this work has not been published previously, that it is not under consideration for publication elsewhere, that its publication is approved by all authors and tacitly or explicitly by the responsible authorities where the work was carried out, and that, if accepted, the paper will not be published elsewhere in the same form without the written consent of the copyright-holder.

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## 1 Introduction

Since the end of World War II, the world has seen a remarkable increase in international economic integration ("globalization"). A large and growing literature has examined the consequences of this globalization process (e.g., Potrafke, 2015). While the *economic* effects of globalization—e.g., on economic efficiency, income distribution, or the size of government—are increasingly well understood, the evidence on cultural effects is much scarcer (e.g., Robertson, 1992; Jensen et al., 2011). The dominant question in this strand of literature is whether exposure to other cultures through economic interaction affects national values and norms. Such a mechanism would be particularly important for developing countries. Previous studies have raised the question of whether economic integration can promote the spread of gender equality norms and values. Despite progress over the past years, women in many developing countries are still severely disadvantaged in access to human rights, economic opportunities, and political voice (Eastin, 2018). Given the prevailing discrimination of women under the law, promoting gender equality is an integral part of the Sustainable Development Goals established by the United Nations.

While the empirical evidence to date suggests that globalization and gender equality are positively correlated (e.g., Potrafke and Ursprung, 2012), there is little evidence on the anatomy and economic mechanisms underlying this relationship. In this paper, we provide the most comprehensive evidence to date that globalization promotes gender equality. We establish this result using rich longitudinal data for nearly 190 countries observed over the past five centuries. Our study goes beyond the previous literature in three important ways. First, we design an instrumental variable approach that uses regional waves of globalization as a source of exogenous variation that affects a country's globalization trends. This design allows us to isolate the narrow path from globalization to gender equality from potential endogeneity caused by reverse causation and unobserved confounders. We estimate that a permanent increase in globalization by one relative standard deviation, equivalent to a transition from Indonesia to the United States or from Thailand to Sweden, is associated with an increase in gender equality of 18.3%. Second, we show that the effect of globalization on gender equality is mainly driven by de facto globalization via actual flows and activities rather than de jure globalization trends initiated by trade policies and institutions. The strong impact of de facto globalization is in line with the argument that the shift in cultural norms and values is driven by repeated cross-border interactions. We also show that the impact of globalization on gender equality is largest in countries with lower incomes, underscoring the potential of greater cultural exchange via economic integration to boost gender equality

in developing countries. Finally, we use micro-level data from more than 300,000 individuals and about 100 countries between 1980 and 2021 to examine the impact of globalization on individual-level attitudes toward gender equality. This analysis yields results that are strongly consistent with the effects identified at the macro level. The microfoundation of the link between globalization and gender equality alleviates previous concerns about an ecological fallacy when macroeconomic results obtained through group averages are projected onto the behavior of individuals.

Our results have important policy implications. The substantial impact of globalization on gender equality suggests that increasing cross-national integration may be a useful policy tool to promote equality rights. These findings are particularly important for developing countries, where gender equality still lags behind. Importantly, our results suggest that only those parts of globalization that are materialized through realized flows are crucial for greater gender equality rights. These findings suggest that actual cross-national integration, which leads to repeated cross-cultural interaction, contributes to gender equality. Means of de jure globalization, such as free trade agreements or monetary unions, may be fertile ground for eventual improvements in gender equality but are not sufficient in themselves to promote gender equality.

Contribution to the literature: Our study is related to the literature on the relationship between globalization and gender equality (e.g., Richards and Gelleny, 2007, Neumayer and De Soysa, 2011, Potrafke and Ursprung, 2012, Cho, 2013). This strand of literature has shown that gender equality is positively correlated with globalization, but there is little evidence on the mechanisms underlying this correlation. In particular, the evidence so far provides little indication as to whether the observed correlations reflect a causal effect and whether globalization actually shapes social attitudes toward gender equality at the individual level. Moreover, while previous studies have shown that it is important to distinguish between de facto and de jure elements of institutions, policies, and their outcomes (e.g., Feld and Voigt, 2003, Voigt et al., 2015, Bjørnskov and Voigt, 2021, Berggren and Bjørnskov, 2022, Bjørnskov et al., 2022, and Gutmann et al., 2023), only a few studies have examined differences in de facto versus de jure globalization (e.g., Gygli et al., 2019, Jha and Gozgor, 2019, Fang et al., 2021, Haelg et al., 2022, Berggren and Bjørnskov, 2023, and Berdiev et al., 2023). We contribute to the literature by showing that the positive relationship between globalization and gender equality is robust to endogeneity using an instrumental variable approach. Using data on more than 300,000 individuals living in nearly 100 countries, we find that the individuallevel results are consistent with the macro-level results. Taken together, the results provide strong evidence for a positive effect of globalization on gender equality. Examining the anatomy of this effect, we also find that de facto trends in globalization are more important than de jure trends.

We also examine the role of women in society and contribute new insights to the scarce literature on the cultural consequences of globalization. To date, the literature has focused mainly on the economic consequences of globalization. Regarding the cultural consequences, Berggren and Bjørnskov (2023) investigate whether globalization has suppressed social trust. Using an epidemiological model in which the social trust of first- and second-generation immigrants is related to the level of the KOF Globalization Index of their countries of origin several decades earlier, they guarantee geographical and temporal separation and can thus rule out reverse causality. Overall, they conclude that globalization has not suppressed social trust. Similarly, Berggren and Nilsson (2015) examine whether economic, social, and political globalization affects parents' willingness to teach tolerance to their children. In this context, social globalization is identified as the most important factor in teaching tolerance and cultural proximity.

We also contribute to the literature that examines the determinants of gender equality (e.g., Cooray and Potrafke, 2011, Davis and Williamson, 2022). A crucial part of gender inequalities is reflected in the labor market, where the role of women varies significantly across regions of the world. For example, Joslin and Nordvik (2021) provide evidence on the impact of an economic boom on female labor force participation. Scholars also examine whether female political leaders are more active in promoting gender-sensitive policies than male political leaders (e.g., Carozzi and Gago, 2023). Jung (2022) describes how female leaders influence gender equality in the legal system, showing that female leadership promotes equal laws for men and women. In this context, Reuben and Timko (2018) examine differences in the effectiveness of male and female leaders. They show that, overall, democratically elected leaders are more effective than randomly selected leaders. However, the initial advantage of being elected applies only to male leaders. This gender difference disappears over time, as unsuccessful male leaders are reelected at higher rates than unsuccessful female leaders.

Our study is also related to the literature that examines globalization as a driver of human rights. For example, Dreher et al. (2012) use the KOF Index along with two indices of economic freedom to empirically test whether economic globalization and liberalization affect human rights. The results show that economic freedom and political globalization increase the right to physical integrity.

## 2 Data

## 2.1 Gender equality

We measure gender equality by the Worldbank's Women, Business and Law (WBL) index (Hyland et al., 2020). The WBL index measures gender discrimination by the law in a panel of 190 countries over the period 1970-2022. The main goal of the dataset is to provide information on possible inequality in legislation during a woman's working life. Thereby, the considered topics are chosen on the basis of associations with measures of women's economic empowerment and evidence from economic literature (see for example Roy, 2019).

The information about gender discrimination by law is collected by legal experts, including local experts (e.g., lawyers, judges, civil society representatives, and public officials) and experts working at the World Bank. Overall, around 10,000 experts collaborate on the WBL project. The dataset is based on a total of 35 legislative issues which are, in turn, aggregated into eight sub-indicators. Those eight sub-indicators relate to *Mobility, Workplace, Pay, Marriage, Parenthood, Entrepreneurship, Assets* and *Pensions*.<sup>1</sup>

The data is collected in the form of expert assessments on each of the 35 topics covered by the WBL project. The respondents are experts in different fields of law (e.g., family law, labor law, and criminal law) and include lawyers, judges, academics, and members of civil society organizations across all observed countries. The legal experts within the World Bank receive the expert assessments, refer to the text of the legislation, and guarantee consistency between the responses to the questionnaire with legislative texts.

There are four to five binary questions for each of the eight topics on which the eight sub-indicators are based. The unweighted average of these questions results in the indicator-level score, which is then scaled between 1 and 100. For instance, an index score of 100 would indicate that women are not discriminated against by law regarding any of the included attributes. The unweighted average of all eight indicators reflects the overall index scores of gender equality identified by the WBL project.<sup>2</sup>

In 2020, the global average of the overall WBL index was 75.97, indicating that women enjoyed around 76% of the rights (covered by the index) that men enjoyed. In 2020, full gender equality by law was present in eight countries, in which the WBL index takes on the value 100. These countries were Belgium,

<sup>&</sup>lt;sup>1</sup>A detailed description of the eight sub-indicators and a full list of all 35 legislative issues underlying them is provided in Hyland *et al.* (2020).

<sup>&</sup>lt;sup>2</sup>More information on the WBL methodology with corresponding strengths and limitations is outlined in the WBL 2020 report (World Bank, 2020).

Canada, Denmark, France, Iceland, Latvia, Luxembourg, and Sweden. On the other end of the spectrum, gender discrimination was especially pronounced in Oman, Afghanistan, the Syrian Arab Republic, Kuwait, Qatar, Sudan, Yemen, and in West Bank and Gaza. In these countries, the WBL index reached values of less than 40. Regarding the disparities between men and women within the eight sub-indicators, the highest gaps are identified internationally in the areas of *Parenthood* (53.9) and *Pay* (66.1). The highest values of the WBL sub-indicators can be found in the fields of *Assets* (81.8), *Entrepreneurship* (82.2), and *Mobility* (87.2) (World Bank, 2020).

## 2.2 Globalization

We measure globalization by the new KOF Globalization Index (Dreher, 2006; Gygli et al., 2019). The 2023 version of the KOF index provides indices of globalization for 203 countries between 1970 and 2021. A particular feature of the KOF index is that it distinguishes between de facto and de jure globalization. It also provides fine-grained measures for specific dimensions of globalization, including economic, social, and political globalization.

Constructing composite measures in the social sciences is essentially a three-step process, including the definition of the object that should be classified, the search for relevant data reflecting this definition, and the use of an aggregation scheme that transfers the individual attributes to a uni-dimensional index of the object (e.g., Gründler and Krieger, 2022). When the definition is broad, the estimated parameter in empirical studies might capture many things and are difficult to interpret. In contrast, when the concept is narrow, it might lack discrimination power. The KOF globalization index tackles these methodological issues by providing a series of sub-dimensions covering specific facets of globalization. For each of these sub-dimensions, the KOF database distinguishes between de facto and de jure measures of globalization.

#### 2.2.1 De jure and de facto globalization

De facto globalization: Globalization in de facto terms is measured via realized flows and activities. The KOF index includes two main pillars of de facto globalization, distinguishing between de facto trade and de facto financial globalization. De facto trade globalization covers, for example, the exchange of goods and services over long distances (import and exports as a share of GDP). It also considers trading partner diversity. De facto financial globalization covers capital flows and stocks and foreign assets and liabilities. De facto social globalization distinguishes

between de facto interpersonal globalization, de facto informational globalization and de facto cultural globalization. De facto interpersonal globalization captures direct interactions among citizens living in different countries. An example is personal calls across borders which we measure by international voice traffic in minutes per capita using fixed or mobile phones. We also consider migration, tourism and foreign students and international transfers paid and received. De facto informational globalization captures the actual flows of ideas knowledge and images. We use three measures: internet bandwith, international patents and high technology exports. De facto cultural globalization is measured by the stock of trademarks applications by non-residents, trade in cultural goods, and trade in personal, cultural and recreational services. De facto political globalization is measured by participation in UN Peackeeping missions, the number of embassies and international NGOs in a country.

De jure globalization: Globalization in de jure terms includes factors and policies that measure, in principle, enabled flows and activities. The KOF index distinguishes between de jure trade and de jure financial globalization. De jure trade globalization is measured by variables on trade regulation, trade taxes, tariff rates and free trade agreements. De jure financial globalization measures the openness of a country to international financial flows and investments. It includes the Chin-Ito index (Chinn and Ito, 2006, 2008) which measures the openness of the capital account if a country. The second variable is the number of investment agreements. De jure social globalization distinguishes between de jure interpersonal globalization, de jure informational globalization and de jure cultural globalization. De jure interpersonal globalization includes the number of mobile phone and telephone subscriptiones per capita, the percentage of countries for which a country requires a visa from foreign visitors, and the number of airports hosting international flights. De jure informational globalization includes the number of television sets per capita, number of people having access to the internet and the press freedom index. De jure cultural globalization includes the gender parity index on gross primary school enrolment, the human capital index calculated in the Penn World Tables and the civil freedom index. De jure political globalization is measured by three variables: the number of multilateral treaties signed since 1945, the number of memberships in international organizations and treaty partner diversity.

#### 2.2.2 Method of calculation

The KOF index is based on a total of 43 variables. For our baseline measure, we aggregate those variables into an overall index of globalization and two separate

measures gauging de facto and de jure globalization. In complementary analyses, we also examine the role of more fine-grained definitions of globalization, distinguishing between de facto and de jure indices along five sub-dimensions (trade, financial, interpersonal, informational, and cultural), and three broader dimensions (economic, social, and political).

#### 2.3 Other variables

The rest of the variables included in our analyses stem from standard sources often used in empirical macroeconomic analyses. Specifically, we take life expectancy at birth, fertility rates, the share of the population living in urban areas, as well as real per capita GDP from the World Bank's World Development Indicators (World Bank, 2023). We also take figures on net migration from the World Population Prospects compiled by the United Nations Population Division. Measures of education are taken from the updated educational attainment database from Barro and Lee (2013). Classifications of political institutions are collected from the Machine Learning Democracy indicator of Gründler and Krieger (2016, 2021).

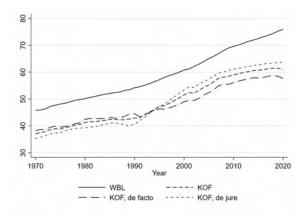
We also manually compile a dummy variable that reflects whether a country has a female leader in place at a given point in time. The underlying data stems from multiple sources, including books, scholarly articles, and online resources.

# 3 Descriptive statistics

## 3.1 Trends in gender equality and globalization over time

Global development, 1970–2020: Figure 1 shows the development of globalization and gender equality, measured via unweighted averages over all countries, between 1970 and 2020. The figure uncovers tremendous progress in gender equality over the past five decades. Over the time span of 50 years, the WBL index shows a steady increase by around 30 points or by 66%. A similar development is present for the overall KOF Globalization Index, which increased by 24 points or by 65% between 1970 and the early 2020s. However, in contrast to the steady improvement of gender equality, the development of globalization proceeded in waves. While the strong increase in globalization during the 1970s and 1980s came to a halt during the early 1990s, we observe a stark and renewed increase in globalization between the mid-1990s and the Financial Crisis of 2007-08. Thereafter, there is only a moderate increase, which even declines slightly towards the end of the observation period. The development of globalization over time suggested by the KOF index

Figure 1 Global trends in gender equality and globalization, 1970-2020



Notes: The figure shows the global development of gender equality (WBL) and globalization (overall, de jure, and de facto) over the past five decades (1970–2020). Data on gender equality comes from the database of the World Bank (2023). Data on overall, de jure, and de facto globalization is taken from the KOF Globalization Index database, compiled by Gygli *et al.* (2019).

is consistent with the theory of globalization waves (e.g., Chase-Dunn et al., 2000; Collier et al., 2002).

Distinguishing between the two sub-indices of de facto and de jure globalization, we observe heterogeneity in the development of both types of globalization over time. While higher values of de facto globalization occurred until the early 1990s, increases in de jure globalization dominated since the start of the new millennium, with the highest total value reached at the end of the observation period in 2020. The differentials in the development of de facto and de jure globalization underline the importance of distinguishing between both concepts.

Regional disparities: Despite pronounced trends on a global scale, we observe strong heterogeneity in the development of both gender equality and globalization across geographic regions (Figure (2)). For the WBL index, the figure shows that gender equality is lowest in the Middle East and North Africa as well as in South Asia. The highest values can be found in North America as well as Europe and Central Asia. Regional differentials are similarly prevalent regarding globalization. Countries in North America, Europe, and Central Asia are particularly globalized, whereas globalization is much less pronounced in South Asia as well as Latin America and the Caribbean. Importantly, there are also distinct differences in the development of globalization over time (see Figure B-1 in the appendix).

Complementary sub-indices on globalization: The KOF globalization index database also provides complementary indices that differentiate between economic,

WBL KOF GI dy KO

Figure 2 Mean of WBL and KOF Indices by region, 1970-2020

Notes: The figure shows the mean values of gender equality (WBL) and globalization (overall, de jure, and de facto) over the past five decades (1970–2020) in regional comparison. Data on gender equality comes from the database of the World Bank (2023). Data on overall, de jure, and de facto globalization is taken from the KOF Globalization Index database, compiled by Gygli et al. (2019).

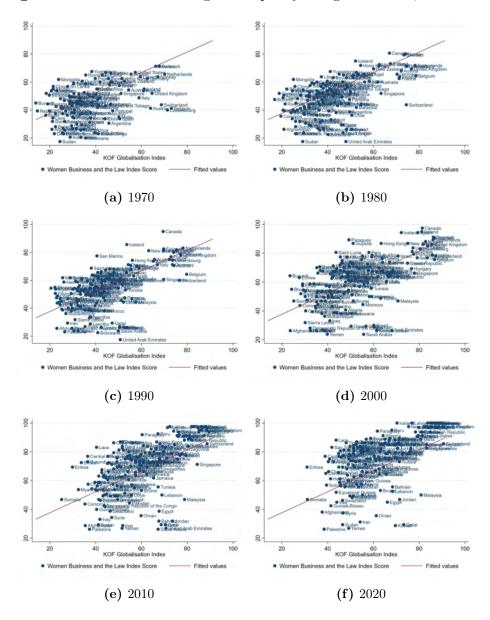
trade, financial, social, political, cultural, informational, and interpersonal globalization between 1970 and 2020. In Figure (B-2) in the appendix, we show how globalization along these dimensions has developed over time. Similar to the patterns found for the overall globalization index, the data shows that on average, there has been an increasing trend in globalization also for other aspects of globalization. Again, we find strong regional heterogeneity in globalization patterns across the globe.

#### 3.2 Unconditional correlations

Figure (3) presents graphical correlational evidence on the relationship between globalization and gender equality. The figure shows correlations separately for each decade covered in the data.

Overall, the descriptive statistics point to a strong positive correlation between globalization and gender equality, which is visible for each decade in our sample. While this general correlation has intensified over time, we again observe pronounced regional heterogeneity in the relationship between globalization and gender equality. For instance, the coefficient of correlation is relatively small in the Middle East and North Africa (0.40). In contrast, the correlation is twice as large in Northern America (0.80). In Figures (B-3) and (B-4) in the appendix, similar patterns can be seen for the correlations between gender equality and de facto globalization as well as de jure globalization.

Figure 3 Correlation between gender equality and globalization, 1970-2020



Notes: The figure shows the unconditional correlation between the global development of gender equality (WBL) and globalization (overall) over the past five decades (1970–2020). Data on gender equality comes from the database of the World Bank (2023). Data on overall, de jure, and de facto globalization is taken from the KOF Globalization Index database, compiled by Gygli et al. (2019).

#### 3.3 Case studies

The overall correlation between globalization and gender equality is also reflected at the country level. In Appendix A, we describe some case studies that show a close relationship between increases in globalization and progress in gender equality for individual countries. These case studies provide complementary evidence for a close correlation between both variables.

## 4 Empirical strategy

The descriptive evidence points to a positive correlation between globalization and gender equality. However, we also uncovered cross-national heterogeneity in the development of gender equality and globalization and the strength of the unconditional correlation between the variables. In the next step, we design an empirical model to account for unobserved country-specific factors and potential confounding factors.

#### 4.1 The baseline OLS model

Our baseline approach to estimating the relationship between globalization and gender equality is a dynamic model for gender equality

Gender Equality<sub>it</sub> = 
$$\alpha_j G_{ijt} + \sum_{\tau=1}^p \gamma_\tau$$
 Gender Equality<sub>it-\tau</sub> +  $\mathbf{X}_{it} \boldsymbol{\beta}_j + \eta_i + \zeta_t + \varepsilon_{ijt}$  (1)

where Gender Equality<sub>it</sub> is our main gender equality measure (WBL index) for country i = 1, ..., 190 at time t = 1, ..., 51. Our key variables of interest are the individual indices of globalization provided by the KOF database, denoted by  $G_{ijt}$ , where j = 1, ..., 18 refers to the jth sub-indicator. The parameter  $\alpha_j$  estimates the correlation between globalization and gender equality conditional on a set of confounding factors that we include in the model.

#### 4.2 Identification

Our main specifications include p lags of gender equality to account for the dynamics in gender equality prior to the observation year. The motivation for the inclusion of gender equality dynamics is the standard assumption of sequential exogeneity underlying linear dynamic panel data models, requiring that globalization and past gender equality are orthogonal to contemporaneous and future shocks to

gender equality and that the error term  $\varepsilon_{ijt}$  is serially uncorrelated. It requires sufficiently many lags of our gender equality measure to be included in the model, both to eliminate the residual serial correlation and to eliminate the positive trend observable in the time series of gender equality (e.g., Hamilton, 2018; Acemoglu et al., 2019; Gründler and Potrafke, 2019). The results of our model are consistent if T is large and the process of the dependent variable is stationary. To ensure this requirement, our preferred specification includes four lags (p = 4) of gender equality (as suggested by, for example, Hamilton, 2018), but we also present variants of our model estimations for other lag structures in our set of robustness tests.

Our baseline model in Equation (1) encounters several additional threats to the validity of our estimates. First, as we have seen in the descriptive analysis, there is heterogeneity across countries in both the development of gender equality and the relationship between globalization and gender equality. Part of these differences seem to be country-specific, potentially rooted in differential cultural norms and values, historical and geographic factors, as well as fundamental differentials in institutions and the level of development. To the extent that these factors are time-invariant over the period of observation covered by our data, we absorb these factors by a full set of country-level fixed effects  $\eta_i$ . These effects also account for the substantially lower levels of gender equality in traditional oil-producing countries (e.g., Ross, 2008; Awoa et al., 2022) and the important role of religion (e.g., Becker and Woessmann, 2008; Norton and Tomal, 2009; Cooray and Potrafke, 2011; Potrafke and Ursprung, 2012).

Another potential source of bias might be posed by global shocks and trends that impact the development of both globalization and gender equality. Prime examples are global economic crises (e.g., the Financial Crisis of 2007-08), health crises (e.g., the COVID-19 pandemic), and military conflicts that affect a large number of countries and regions. We account for such cross-national shocks and trends via a set of period fixed period effects  $\zeta_t$ .

We also account for a set of time-variant factors that might correlate simultaneously with globalization and gender equality and which might drive the positive unconditional correlation between the variables reported in the descriptive analysis. These potential sources of confounding are stacked in the matrix  $\mathbf{X}_{it}$ . For instance, previous work has shown that on average, democracies promote gender equality more than autocracies (e.g., Beer, 2009; Cooray and Potrafke, 2011; Andersen, 2023), and that democracy also correlates with globalization (e.g., Li and Reuveny, 2003). To account for this relationship, our set of controls includes the ML Democracy Index compiled by Gründler and Krieger (2016, 2021, 2022).

Our set of controls also accounts for the entanglement of female leaders and gender equality. On the one hand, it has been shown that female leaders, on average, engage more than male leaders in enhancing gender equality in the legal system (Jung, 2022). On the other hand, female leadership might be an outcome of greater gender equality.

We also control for economic and population dynamics over our sample period, including the logarithmic level of per capita GDP, the fraction of the population living in urban areas, net migration, as well as the logarithm of the fertility rate and life expectancy at birth. All of these variables have been shown to be related to the development of gender equality (e.g., Norton and Tomal, 2009; Jung, 2022).

Any shock not covered by fixed country and fixed period effects, as well as by time-varying controls is absorbed by the idiosyncratic error  $\varepsilon_{ijt}$ . We estimate the model with Ordinary Least Squares (OLS) and standard errors robust to heteroskedasticity.

## 4.3 Instrumental variable approach

Our OLS estimates control for dynamics in gender equality and the influence of observable characteristics, as well as time-invariant unobserved characteristics. A remaining threat to identification comes from unobserved time-varying factors. Relatedly, the direction of impact underlying a potential correlation between the variables is unclear. In principle, a more open-minded society might also open its economy and intensify trade relations with other nations. Also, countries with good human rights records and small gender disparities might have an advantage in attracting foreign direct investments (e.g., Harms and Ursprung, 2002, Busse and Hefeker, 2007, Busse and Nunnenkamp, 2009), in which case the direction of influence would (also) run from greater gender equality to globalization.

To estimate the narrow path from globalization to gender equality and to deal with time-varying omitted variables, we develop an instrumental variable strategy that uses waves of globalization in nearby countries as a source of external variation in national globalization. Our IV approach also accounts for possible measurement errors in globalization. The fundamental building block underlying our approach is that throughout the past 2.5 centuries, global tendencies and reversals of integration mostly came in waves (Chase-Dunn et al., 2000).

As discussed by many observers, e.g. from the World Bank (Collier *et al.*, 2002), the emergence of the "new globalizers" during the early 1980s, when many developing countries broke into the world markets, has highlighted that globalization often occurs in regional waves. The strong increase in the share of exporting manufacturing firms in the developing world, which rose from about one quarter in early 1980

to more than 80% in early 2000, is said to be the third wave of globalization (Collier et al., 2002), with the first (roughly 1870–1914) and second (roughly 1945–1980) waves sharing some similarities but being driven by different fundamentals (e.g., Baldwin and Martin, 1999). In 2019, the Annual Meeting of the World Economic Forum in Davos focused on "Globalization 4.0", discussing a potential fourth wave that centers around digital foods and services.

Figure (4) shows the existence of globalization waves in our data. Panel (a) shows trends and cyclical movements of globalization across countries. The identified patterns are consistent with the theories of globalization waves globally. In Panel (b), we inspect regional disparities, computing the standard deviation between the mean level of globalization per region on the globe. The regional classification, which is taken from Gründler and Krieger (2022), distinguishes each continent into four homogeneous sub-regions. We find that the standard deviation between regions changes substantially over time, suggesting that the waves of globalization proceed differently across regions.

The main argument underlying our instrumental variable approach is that regional waves of globalization can serve as exogenous variations impacting national globalization trends, and hence can serve as instrumental variables for national globalization. The important assumption underlying this strategy is that conditional on lags of gender equality, year and country fixed effects, as well as a number of observed time-varying confounding factors, the regional level of globalization ( $G_{it}^{reg}$ ) has no direct effect on gender equality of country i at time t ("exclusion restriction"). Economically, this means that regional waves are significant determinants of national globalization, but are not themselves caused by national changes in gender equality.

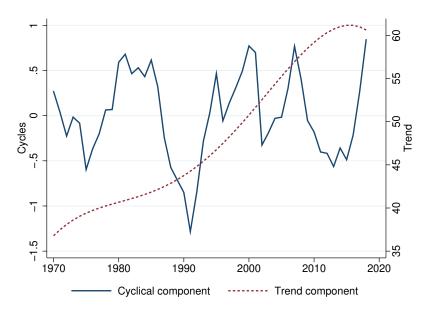
One important element of the exclusion restriction is that our instrument for country i of region r excludes i's globalization level and uses trends only from other countries that are located in r. To operationalize this design, we compute jack-knife regional averages of globalization via

$$G_{it}^{\mathbf{reg}} = \frac{1}{|\mathcal{R}|} \sum_{w \in \mathcal{R}} G_{w,t} \quad \text{and} \quad \mathcal{R} = \{w : w \neq i, r_w = r_i\}.$$
 (2)

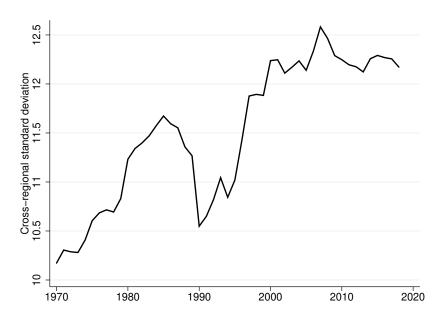
The remaining threat to the validity of our IV approach is a potential correlation between regional gender equality and regional globalization, which does not work through the effect of a country's own globalization on its level of gender equality. To verify that our results are not driven by such correlated regional trends, all estimates are presented both with and without controlling for a range of other factors that may also spread across countries in the same region.

Figure 4 Trends in globalization and cross-regional disparities, 1970-2020

#### (a) Global waves in globalization



#### (b) Cross-regional differences



Notes: The figure shows the global development of globalization and regional disparities. Panel (a) shows trends in globalization and globalization waves across countries. Panel (b) shows disparities in the development of globalization across regions. Data on globalization is taken from the KOF Globalization Index database, compiled by Gygli et al. (2019). Trends are obtained using a de-trending approach that is based on a polynomial function of globalization of degree four. Cross-regional disparities are computed based on the standard deviation across mean levels for regions. The regional classification is taken from Gründler and Krieger (2022).

#### 5 Results

#### 5.1 Baseline

Table (1) reports our baseline OLS results on the relationship between globalization and gender equality. In Panel A, we present estimates obtained from a parsimonious model that only accounts for globalization and dynamics in gender equality before the observation year. Panel B reports results from comprehensive models that augment the parsimonious specifications of Panel A with a set of control variables (see section 4).

The main result, which appears similarly in the parsimonious and the full model specifications, is that globalization is positively associated with gender equality. The results also suggest that this relationship is driven primarily by  $de\ facto$  globalization rather than by  $de\ jure$  globalization. Column (I) shows estimates for the overall globalization index, uncovering a significant relationship between globalization and gender equality, both in statistical and economic terms (t=5.11).

In Columns (II)–(IV), we inspect whether de facto or de jure globalization is the main driver behind the substantial relationship between globalization and gender equality. While both variables are positively correlated with gender equality, the parameter estimates for de facto globalization are larger than for de jure globalization, both in the parsimonious and the full model specification. Column (IV) presents results from a horse race between both types of globalization, accounting for the fact that the de jure sub-index correlates with elements of de facto globalization and vice versa. When we include both types of globalization in the same model, we find that de facto globalization is the stronger correlate with gender equality, while the coefficient on de jure globalization becomes close to zero. Using a Wald test, we verify that the parameter estimate for de facto globalization is statistically different from the parameter estimate obtained for de jure globalization (p-value 0.004).

#### 5.2 Robustness

We conduct sensitivity checks to examine the robustness of our baseline results to changes in the model specification. Tables (C-1)–(C-5) show the results of different specifications regarding the lag structure variable. Thereby the number of lags ranges between p=1 and p=6. In comparison to our baseline model, where the preferred specification p=4 is applied, no major changes occur. In all specifications, overall globalization has a positive effect on gender equality. Further, the impact of de facto globalization is larger than de jure globalization in both the parsimonious and the full model.

Table 1 Globalization and Gender Equality—Baseline Results

Dependent variable: Gender equali	ity index				
	(I)	(II)	(III)	(IV)	
	Panel A: Parsimonious model specifications				
Globalization Index	0.0358*** (0.007)	•			
Globalization Index de jure		0.0198*** (0.006)		0.00799 $(0.006)$	
Globalization Index de facto			0.0283*** (0.006)	0.0258*** (0.006)	
Observations	8332	8332	8332	8332	
Units (# of countries)	186	186	186	186	
R-Squared (overall)	0.986	0.986	0.986	0.986	
Country-Level Fixed Effects	Yes	Yes	Yes	Yes	
Period Fixed Effects	Yes	Yes	Yes	Yes	
	Panel B: Full model specifications				
Globalization Index	0.0262*** (0.010)				
Globalization Index de jure		$0.0145^*$ $(0.008)$		0.00898 $(0.009)$	
Globalization Index de facto			0.0180** (0.007)	0.0159** (0.008)	
Observations	6236	6236	6236	6236	
Units (# of countries)	157	157	157	157	
R-Squared (overall)	0.985	0.985	0.985	0.985	
Country-Level Fixed Effects	Yes	Yes	Yes	Yes	
Period Fixed Effects	Yes	Yes	Yes	Yes	
Controls	Yes	Yes	Yes	Yes	

Notes: The table shows the baseline results of our estimations on the relationship between globalization and gender equality (Equation 1), with robust standard errors (clustered on the country level) reported in parentheses. Panel A reports the results from a parsimonious model in which we only account for globalization and dynamics in gender equality. Panel B augments the parsimonious model with a set of control variables that include net migration, per capita GDP, life expectancy, fertility rates, the share of population living in urban areas, the level of democracy, a dummy variable that measures whether a female leader has been in office, and the share of the population that completed at least secondary education. All estimations include fixed effects for countries and years.

<sup>\*\*\*</sup> Significant at the 1 percent level

<sup>\*\*</sup> Significant at the 5 percent level,

<sup>\*</sup> Significant at the 10 percent level

## 5.3 Evidence for types of globalization

In Tables (C-6)–(C-13) in the appendix, we provide evidence for the individual dimensions of globalization covered by the KOF Globalization Index. The patterns identified in the baseline models reappear similarly for most of the individual dimensions of globalization. In particular, we find that de facto globalization dominates de jure trends regarding economic globalization, trade globalization, social globalization, cultural globalization, and political globalization. The strong effect of cultural globalization suggests that repeated interaction with other cultures, which potentially put greater emphasis on equality questions, might be a transmission channel via which globalization contributes to gender equality. Such a channel might also explain the much weaker effects found for informational globalization, as the mere exchange of information should be less decisive for improvements in gender equality compared to personal experiences and interactions.

## 5.4 Heterogeneity across development levels

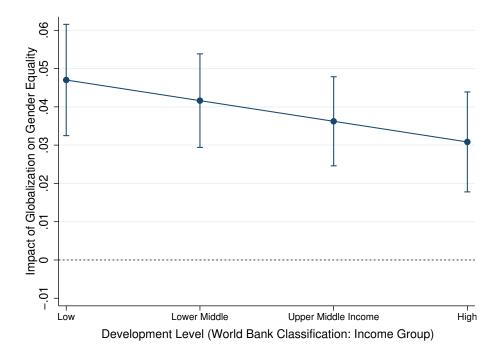
Our data on gender equality shows that disparities between women and men are particularly strong in developing countries. Applying the income level classification by the World Bank, we found that the average level of gender equality for countries with low-income levels is 48.5, while it 55.0 is for lower-middle-income countries, 59.7 for upper-middle-income countries, and 68.7 for high-income countries. Given these differentials, we examine whether the impact of globalization differs across development levels.

We augment our baseline model with an interaction term between globalization and the income level classified by the World Bank. The results are depicted in Figure (5). We find that globalization has a positive impact on gender equality in all country groups, but also uncover that this impact is largest in countries with lower income levels. These results suggest that increased cultural exchange via economic integration can be a boost for gender equality particularly in developing countries.

#### 5.5 Instrumental variable results

Our estimation strategy so far has controlled for dynamics of gender equality prior to the observation year, a range of variables that correlate simultaneously with globalization and gender equality, as well as a full set of country and year fixed effects. In this section, we account for the remaining threat of unobserved timevarying confounders and reverse causation via our instrumental variable approach that rests on globalization waves. Table (2) presents the results of our instrumental

Figure 5 Impact of Globalization on Gender Equality Across Development Levels



Notes: The figure shows estimates of our baseline model, where globalization is interacted with the development level, classified using the World Bank classification of income levels ("Low income", "Lower middle income"; "Upper middle income"; "High income"). Results refer to the overall index of globalization. Data on globalization is taken from the KOF Globalization Index database, compiled by Gygli  $et\ al.\ (2019)$ .

variable regressions. The table follows the similar logic as the presentation of our OLS results, with estimates for the parsimonious model reported in Panel A and results for a comprehensive model that includes control variables reported in Panel B.

First-stage results and instrument diagnostics: The first-stage relations that underlie our instrumental variable results uncover a strong impact of regional globalization waves on national levels of globalization. Regarding our overall index of globalization, the first stage coefficient on regional globalization waves is 0.3079 (t=18.73). The first-stage results are similarly strong for de jure globalization (0.3692, 22.41) and de facto globalization (0.2801, t=14.23). The sizable F-statistics for the excluded instruments, which are reported in the lower parts of Panels A and B (labeled "Kleibergen-Paap F-Stat") provide further indication that regional waves of globalization have a strong influence on globalization trends in countries located in that region.

 Table 2 Globalization and Gender Equality—Instrumental Variable Results

Dependent variable: Gender equali	ty index				
	(I)	(II)	(III)	(IV)	
	Panel A: Parsimonious model specifications				
Globalization Index	0.0713*** (0.024)				
Globalization Index de jure		0.0467*** (0.017)		0.0195 $(0.019)$	
Globalization Index de facto			0.0817*** (0.026)	0.0630** (0.028)	
Observations	8332	8332	8332	8332	
Units ( $\#$ of countries)	186	186	186	186	
R-Squared (overall)	0.874	0.875	0.873	0.873	
Kleibergen-Paap F-Stat	350.7	502.1	202.4	137.8	
Anderson-Rubin p-val.	0.002	0.005	0.001	0.004	
Country-Level Fixed Effects	Yes	Yes	Yes	Yes	
Period Fixed Effects	Yes	Yes	Yes	Yes	
	Panel B: Full model specifications				
Globalization Index	$   \begin{array}{c}     \hline     0.0411 \\     (0.027)   \end{array} $				
Globalization Index de jure		0.0157 $(0.022)$		-0.0172 $(0.030)$	
Globalization Index de facto			$0.0531^*$ $(0.029)$	$0.0642^*$ $(0.038)$	
Observations	6236	6236	6236	6236	
Units (# of countries)	157	157	157	157	
R-Squared (overall)	0.855	0.855	0.855	0.854	
Kleibergen-Paap F-Stat	588.4	782.2	302.7	102.5	
Country-Level Fixed Effects	Yes	Yes	Yes	Yes	
Period Fixed Effects	Yes	Yes	Yes	Yes	
Controls	Yes	Yes	Yes	Yes	

Notes: The table shows the baseline results of our estimations on the relationship between globalization and gender equality (Equation 1), with robust standard errors (clustered on the country level) reported in parentheses. Panel A reports the results from a parsimonious model in which we only account for globalization and dynamics in gender equality. Panel B augments the parsimonious model with a set of control variables that include net migration, per capita GDP, life expectancy, fertility rates, the share of population living in urban areas, the level of democracy, a dummy variable that measures whether a female leader has been in office, and the share of the population that completed at least secondary education. All estimations include fixed effects for countries and years. The row labeled "Kleibergen-Paap F-Stat" reports the first-stage F statistic under robust standard errors (Kleibergen-Paap Wald rk test).

<sup>\*\*\*</sup> Significant at the 1 percent level

<sup>\*\*</sup> Significant at the 5 percent level,

<sup>\*</sup> Significant at the 10 percent level

Second-stage results: Panel A reports the results of our main instrumental variable approach for the parsimonious model that replicates the OLS specification of our baseline table. The Panel uncovers the identical pattern that we found in our OLS models, suggesting that (i) globalization is, in general, positively related to gender equality, and that (ii) this relation is driven by trends in de facto globalization. Numerically, the parameter estimates are somewhat larger compared to our OLS specification. In Panel B, we present estimates of our full model specification that includes a set of control variables. Most importantly, this set includes factors such as GDP and migration patterns, which might correlate with regional globalization waves. Accounting for such effects has very little impact on the results.

Our second-stage results allow us to compute the cumulative long-run effect of a permanent change in globalization by one relative standard deviation ( $\sigma_{\text{de facto}}$ ) on gender equality via (see Acemoglu *et al.*, 2019)

$$\frac{\alpha_{\text{de facto}} \times \sigma_{\text{de facto}}}{1 - \sum_{\tau=1}^{p} \gamma_{\tau}}.$$
 (3)

We estimate that a permanent change of one relative standard deviation (31% of our globalization index), equivalent to a change in the most recent globalization index from Thailand to Sweden or from Indonesia to the United States, increases gender equality by 18.3%. This long-run effect is numerically equivalent between the parsimonious model and the comprehensive model specification.

## 6 Micro-foundation of the main results

Our macroeconomic results provide evidence for a positive effect of globalization on gender equality that is driven by de facto trends in globalization rather than by de jure developments. For globalization to impact gender-related attitudes, possible effects of globalization should materialize on the level of individuals. We next inspect whether the macro-level patterns are visible also on the micro-level. Examining the micro-foundation of our main results also alleviates possible concerns about an ecological fallacy, which may occur when inferences about the behavior of individuals are deduced from inferences about the group to which the individuals belong.

#### 6.1 Data

The data for our micro-level analysis is taken from the World Value Survey (WVS). The WVS is the most extensive cross-country collection of individual-level data intended to measure individuals' beliefs, values, and well-being. After the collection

of its most recent wave (wave 7), the WVS covers data for a total of 120 countries, which are representative of 94.5% of the world population. We use data on all available waves of the WVS, which allows us to construct a repeated cross-sectional dataset that spans the period 1981 to 2021. The available data allows us to estimate the relationship between globalization and gender equality based on 312,078 individuals from 93 countries.

Gender equality: The WVS includes measures for cultural values towards gender equality according to Welzel (2013), who provides both a theoretical explanation and empirical tests for their cross-cultural reliability and validity. The measures are based on answers to subjective questions asking for respondents' agreement to three dimensions of gender equality:

- 1. **Gender equality: job** is based on answers to the question "if jobs are scarce, men should have more right to a job than women".
- 2. **Gender equality: politics** is based on the degree to which respondents agree that "men make better political leaders than women do".
- 3. **Gender equality: education** is based on the degree to which respondents agree that "university is more important for a boy than for a girl".

We use the mean over all three dimensions of gender equality to obtain the main variable of interest for our micro-level analysis.

Socio-economic characteristics: The WVS also measures a wide range of socio-economic and demographic characteristics of its participants. These characteristics include a range of observable factors (such as employment status, income, age, level of education, year of birth, and migratory status) as well as measures for subjective norms and values (such as religiosity and cultural attitudes).

## 6.2 Estimation strategy

Our micro-economic framework combines individual-level data from the WVS with the KOF Globalization Index in the respondents' country of residence at the time the survey was conducted. We then relate these globalization scores to attitudes towards gender equality, conditional on a wide range of economic and demographic factors via

Gender Equality<sub>ijt</sub> = 
$$\delta G_{it} + \mathbf{X}_{ijt} \boldsymbol{\beta} + \eta_i + \varphi_t + \mu_e + \omega_m + \varepsilon_{ijt}$$
, (4)

where Gender Equality<sub>ijt</sub> is our measure for cultural values towards gender equality of individual i living in country j at time t. Our main variable of interest,  $G_{it}$ , is the level of globalization in i's country of residence at time t, with the parameter  $\delta$  estimating the impact of globalization on gender equality values of i.

On the micro-level, the relationship between globalization and gender equality might be confounded by a set of variables that correlate simultaneously with globalization and i's attitudes towards gender equality. We account for observable economic and demographic characteristics of i via the matrix  $\mathbf{X}_{ijt}$ , which includes gender, age, income, and the highest education level. We also include i's self-reported level of religiosity to address gender roles shaped by religious beliefs. Our estimation framework also includes fixed effects for countries  $(\eta_i)$  and years  $(\varphi_t)$ , as well as a full set of fixed effects  $\mu_e$  for the employment status e of i (full-time, part-time, self-employed, student, unemployed, retired, or widowed). An important threat to the validity of our estimates is that respondents originally migrated to the resident country j, in which case the globalization level for j might be less decisive for i's gender-related values. Our model hence also accounts for migratory status  $\omega_m$ .

The fundamental assumption underlying the validity of the estimated parameter  $\hat{\delta}$  is that conditional on the set of controls and fixed effects included in our model, globalization does not correlate with other unobserved factors that impact gender equality values of i. This is a strong assumption, but it is not implausible. Most importantly, globalization in i's country of residence should be exogenous to her individual attitudes towards gender equality.

#### 6.3 Results

Table (3) reports our micro-level results. The structure of the table is analogous to the models presented for the macro-level relationship. Column (I) shows estimates for the overall globalization index, Columns (II) and (III) specifically report results for the de facto and the de jure sub-indices. Column (IV), our preferred model, presents the results of a horse race between de jure and de facto globalization.

Consistent with the evidence found for the macro level, the results in Table (3) uncover a strong relationship between globalization and gender equality values also on the level of individuals. Most importantly, the results again suggest that the economically and statistically significant correlation between the overall index of globalization and values towards gender equality is driven by de facto globalization rather than by de jure globalization.

Taken together, the consistency between the micro-level evidence and the evidence found on the country level provides strong implications that our main results

 Table 3 Globalization and Gender Equality—Micro-Levels Results

Dependent variable: Attitudes towards gender equality							
	(I)	(II)	(III)	(IV)			
Globalization Index	0.0745*** (0.021)						
Globalization Index de jure		0.0180 $(0.017)$		-0.00296 $(0.020)$			
Globalization Index $de\ facto$			$0.0853^{***}$ (0.019)	$0.0872^{***}$ (0.022)			
Observations	312,078	312,078	312,078	312,078			
Units ( $\#$ of countries)	93	93	93	93			
R-Squared (overall)	0.287	0.289	0.287	0.287			
Country-Level Fixed Effects	Yes	Yes	Yes	Yes			
Period Fixed Effects	Yes	Yes	Yes	Yes			
Employment Status Fixed effects	Yes	Yes	Yes	Yes			
Migration Status Fixed Effects	Yes	Yes	Yes	Yes			
Individual-level controls	Yes	Yes	Yes	Yes			

Notes: The table shows the results of our estimations on the relationship between globalization and gender equality on the micro level (Equation 4), with robust standard errors reported in parentheses. All estimations include fixed effects for countries and years, as well as fixed effects for migratory status and employment status. Individual-level data is taken from the World Value Survey. Gender equality values are measured based on the definition of Welzel (2013). Globalization is measured using the KOF Globalization Index, developed by Gygli et al. (2019).

are indeed driven by globalization shifting individuals' norms and values towards more pro-female attitudes.

<sup>\*\*\*</sup> Significant at the 1 percent level

<sup>\*\*</sup> Significant at the 5 percent level,

<sup>\*</sup> Significant at the 10 percent level

## 7 Conclusion

In recent decades, the pace of globalization has been tremendous. An important question is whether the observed trends toward greater integration also shape the norms and cultural values of a society. In this paper, we examine the impact of globalization on an important cultural dimension—gender equality. Our main contribution is to show that globalization is generally positively associated with gender equality, but that this relationship is driven by de facto developments rather than de jure trends in globalization.

Our main estimates are obtained at the macroeconomic level, where we account for endogeneity in the form of unobserved confounding and reverse causality through a novel instrumental variable strategy that uses waves of globalization as an exogenous source of variation driving national globalization trends. We also show that the patterns obtained at the macro level are consistent with the evidence at the micro level, suggesting that there is a plausible micro basis for the macroeconomic results.

Our results have important policy implications. While much of the public debate on the effects of globalization focuses on the pros and cons of trade agreements, we show that such de jure changes affect gender equality to a lesser extent than actual developments in de facto globalization. More broadly, our results provide the most comprehensive evidence to date that globalization promotes gender equality. These results imply that while globalization trends lead to redistributive effects that may be unfavorable for some individuals, they also induce more pro-emancipative values in society as a whole. From a societal perspective, therefore, globalization may be more beneficial than its critics often emphasize.

## References

- ACEMOGLU, D., NAIDU, S., RESTREPO, P. and ROBINSON, J. A. (2019). Democracy does cause growth. *Journal of Political Economy*, **127** (1), 47–100.
- Andersen, T. B. (2023). Does democracy cause gender equality? *Journal of Institutional Economics*, **19** (2), 210–228.
- AWOA, P. A., ONDOA, H. A. and TABI, H. N. (2022). Women's political empowerment and natural resource curse in developing countries. *Resources Policy*, **75**, 102442.
- Baldwin, R. and Martin, P. (1999). Two waves of globalisation: superficial similarities, fundamental differences. *NBER Working Paper No.6904*.
- BARRO, R. J. and LEE, J. W. (2013). A new data set of educational attainment in the world, 1950–2010. *Journal of Development Economics*, **104**, 184–198.
- BECKER, S. O. and WOESSMANN, L. (2008). Luther and the girls: Religious denomination and the female education gap in nineteenth-century Prussia. *Scandinavian Journal of Economics*, **110** (4), 777–805.
- BEER, C. (2009). Democracy and gender equality. Studies in Comparative International Development, 44, 212–227.
- BERDIEV, A. N., GOMES, B. and SAUNORIS, J. W. (2023). Revisiting the nexus between globalisation and the shadow economy: Untying the influences of de jure versus de facto globalisation. *World Economy*, **46** (1), 27–54.
- BERGGREN, N. and BJØRNSKOV, C. (2022). Academic freedom, institutions, and productivity. *Southern Economic Journal*, **88** (4), 1313–1342.
- and BJØRNSKOV, C. (2023). Does globalization suppress social trust? *Journal of Economic Behavior & Organization*, **214**, 443–458.
- and Nilsson, T. (2015). Globalization and the transmission of social values: The case of tolerance. *Journal of Comparative Economics*, **43** (2), 371–389.
- BJØRNSKOV, C. and VOIGT, S. (2021). Is constitutionalized media freedom only window dressing? Evidence from terrorist attacks. *Public Choice*, **187** (3-4), 321–348.
- —, Voigt, S. and Khesali, M. (2022). Unconstitutional states of emergency. Journal of Legal Studies, **51** (2), 455–481.

- Busse, M. and Hefeker, C. (2007). Political risk, institutions and foreign direct investment. *European Journal of Political Economy*, **23** (2), 397–415.
- and Nunnenkamp, P. (2009). Gender disparity in education and the international competition for foreign direct investment. *Feminist Economics*, **15** (3), 61–90.
- CAROZZI, F. and GAGO, A. (2023). Who promotes gender-sensitive policies? *Journal of Economic Behavior & Organization*, **206**, 371–405.
- CHASE-DUNN, C., KAWANO, Y. and BREWER, B. D. (2000). Trade globalization since 1795: Waves of integration in the world-system. *American Sociological Review*, pp. 77–95.
- CHINN, M. D. and ITO, H. (2006). What matters for financial development? capital controls, institutions, and interactions. *Journal of Development Economics*, **81** (1), 163–192.
- and (2008). A new measure of financial openness. *Journal of Comparative Policy Analysis*, **10** (3), 309–322.
- Cho, S.-Y. (2013). Integrating equality: Globalization, women's rights, and human trafficking. *International Studies Quarterly*, **57** (4), 683–697.
- COLLIER, P., DOLLAR, D. et al. (2002). Globalization, Growth, and Poverty: Building an inclusive World Economy. World Bank Policy Research Report. Washington, D.C.: World Bank.
- COORAY, A. and POTRAFKE, N. (2011). Gender inequality in education: Political institutions or culture and religion? *European Journal of Political Economy*, **27** (2), 268–280.
- DAVIS, L. S. and WILLIAMSON, C. R. (2022). Individualism and women's economic rights. *Journal of Economic Behavior & Organization*, **198**, 579–597.
- DREHER, A. (2006). Does globalization affect growth? Evidence from a new index of globalization. *Applied Economics*, **38** (10), 1091–1110.
- —, Gassebner, M. and Siemers, L.-H. (2012). Globalization, economic freedom, and human rights. *Journal of Conflict Resolution*, **56** (3), 516–546.
- EASTIN, J. (2018). Climate change and gender equality in developing states. World Development, 107, 289–305.

- FANG, J., GOZGOR, G. and YAN, C. (2021). Does globalisation alleviate polarisation? World Economy, 44 (4), 1031–1052.
- FELD, L. P. and VOIGT, S. (2003). Economic growth and judicial independence: Cross-country evidence using a new set of indicators. *European Journal of Political Economy*, **19** (3), 497–527.
- GRÜNDLER, K. and KRIEGER, T. (2016). Democracy and growth: Evidence from a machine learning indicator. *European Journal of Political Economy*, **45**, 85–107.
- and Krieger, T. (2021). Using Machine Learning for measuring democracy: A practitioners guide and a new updated dataset for 186 countries from 1919 to 2019. European Journal of Political Economy, **70**, 102047.
- and KRIEGER, T. (2022). Should we care (more) about data aggregation? *European Economic Review*, **142**, 104010.
- and Potrafke, N. (2019). Corruption and economic growth: New empirical evidence. European Journal of Political Economy, **60**, 101810.
- GUTMANN, J., METELSKA-SZANIAWSKA, K. and VOIGT, S. (2023). The comparative constitutional compliance database. *Review of International Organizations*, pp. 1–21.
- Gygli, S., Haelg, F., Potrafke, N. and Sturm, J.-E. (2019). The KOF globalisation index-revisited. *Review of International Organizations*, **14**, 543–574.
- HAELG, F., POTRAFKE, N. and STURM, J.-E. (2022). The determinants of social expenditures in OECD countries. *Public Choice*, **193** (3-4), 233–261.
- Hamilton, J. D. (2018). Why you should never use the hodrick-prescott filter. Review of Economics and Statistics, 100 (5), 831–843.
- HARMS, P. and URSPRUNG, H. W. (2002). Do civil and political repression really boost foreign direct investments? *Economic Inquiry*, **40** (4), 651–663.
- HYLAND, M., DJANKOV, S. and GOLDBERG, P. K. (2020). Gendered laws and women in the workforce. *American Economic Review: Insights*, **2** (4), 475–490.
- JENSEN, L. A., ARNETT, J. J. and McKenzie, J. (2011). Globalization and cultural identity. Springer.
- JHA, P. and GOZGOR, G. (2019). Globalization and taxation: Theory and evidence. European Journal of Political Economy, **59**, 296–315.

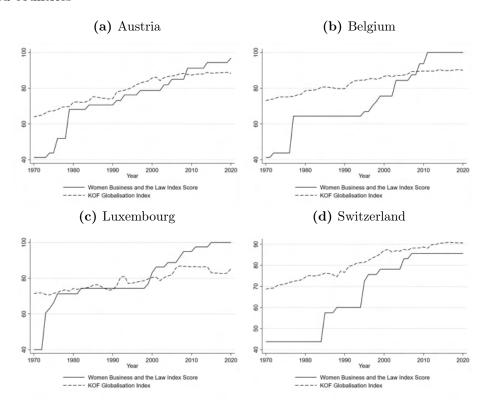
- JOSLIN, K.-E. and NORDVIK, F. M. (2021). Does religion curtail women during booms? Evidence from resource discoveries. *Journal of Economic Behavior & Organization*, **187**, 205–224.
- Jung, H. (2022). Female leaders and gendered laws: A long-term global perspective. *International Political Science Review*, p. 01925121221095439.
- LI, Q. and REUVENY, R. (2003). Economic globalization and democracy: An empirical analysis. *British Journal of Political Science*, **33** (1), 29–54.
- LOZANO, L., RANEHILL, E. and REUBEN, E. (2020). Gender and preferences in the labor market: Insights from experiments. In K. F. Zimmermann (ed.), *Handbook of Labor*, *Human Resources and Population Economics*, Cham: Springer International Publishing, pp. 1–34.
- NEUMAYER, E. and DE SOYSA, I. (2011). Globalization and the empowerment of women: an analysis of spatial dependence via trade and foreign direct investment. World Development, **39** (7), 1065–1075.
- NORTON, S. W. and TOMAL, A. (2009). Religion and female educational attainment. *Journal of Money, Credit and Banking*, **41** (5), 961–986.
- POTRAFKE, N. (2015). The evidence on globalisation. World Economy, **38** (3), 509–552.
- and URSPRUNG, H. W. (2012). Globalization and gender equality in the course of development. *European Journal of Political Economy*, **28** (4), 399–413.
- REUBEN, E. and TIMKO, K. (2018). On the effectiveness of elected male and female leaders and team coordination. *Journal of the Economic Science Association*, 4 (2), 123–135.
- RICHARDS, D. L. and GELLENY, R. (2007). Women's status and economic globalization. *International Studies Quarterly*, **51** (4), 855–876.
- ROBERTSON, R. (1992). Globalization: Social theory and global culture. *Globalization*, pp. 1–224.
- Ross, M. L. (2008). Oil, islam, and women. American Political Science Review, 102 (1), 107–123.
- Roy, S. (2019). Discriminatory Laws Against Women: A Survey of the Literature. World Bank Policy Research Working Paper 8719, World Bank.

- Voigt, S., Gutmann, J. and Feld, L. P. (2015). Economic growth and judicial independence, a dozen years on: Cross-country evidence using an updated set of indicators. *European Journal of Political Economy*, **38**, 197–211.
- Welzel, C. (2013). Freedom rising. Cambridge University Press.
- WORLD BANK (2020). Women, Business and the Law 2020. Washington, DC: World Bank. http://hdl.handle.net/10986/32639 License: CC BY 3.0 IGO.
- WORLD BANK (2023). World Development Indicators. Database, The World Bank, Washington, D.C.
- YANG, H. (2021). Gender equality: Korea has come a long way, but there is more work to do. *OECD Reports*, accessed December 29, 2023.

## Appendix A: Case Studies

We examine a set of country case studies to provide a fine-grained descriptive analysis regarding the link between globalization and gender equality. Figure (3) presents the development of globalization and gender equality for four selected European countries. With substantial reforms in family law in the mid-1970s, the WBL index starts to increase in most of these countries (e.g., 1975-1978 reforms in Austria). In Switzerland, women are granted only in 1971 the right to vote at the federal level. Thereafter, in 1981, the principle of equal treatment of women and men and the right of equal pay for equal work was enshrined in the constitution and since 1988 the new marriage law guarantees women equal rights as men.

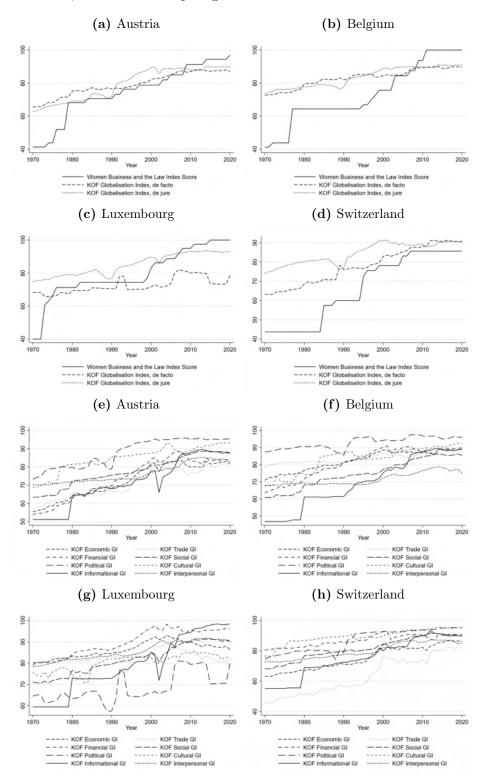
Figure A-1 Case study evidence: Development of globalization and gender equality in selected countries



Notes: The figure shows the unconditional correlation between the global development of gender equality (WBL) and globalization (overall) over the past five decades (1970–2020) for selected countries. Data on gender equality comes from the database of the World Bank (2023). Data on overall globalization is taken from the KOF Globalization Index database, compiled by Gygli  $et\ al.\ (2019)$ .

Figures (A-2) show additional results for de facto and de jure developments in globalization in the case study countries, along with developments of the individual dimensions of globalization, suggesting that the co-movement can be seen similarly for several dimensions.

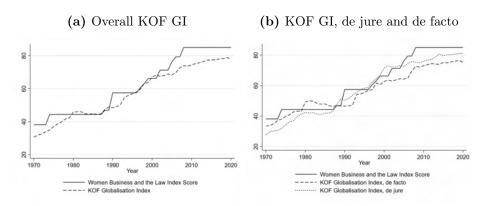
**Figure A-2** Case study evidence: Development of globalization and gender equality in selected countries, de facto and de jure globalization and individual dimensions.



Notes: The figure shows the unconditional correlation between the global development of gender equality (WBL) and de jure as well as de facto globalization over the past five decades (1970–2020) for selected countries. Data on gender equality comes from the database of the World Bank (2023). Data de jure, and de facto globalization is taken from the KOF Globalization Index database, compiled by Gygli et al. (2019).

The 1980s brought about a wave of globalization that particularly affected developing countries. A prime example of this development is South Korea, which is depicted in Figure (A-3). Showing rapidly proceeding developments in terms of globalization, it is worthwhile to have a closer look at South Korea. Starting with the Five-year Economic and Social Development Plans in the 1960s to increase wealth and strengthen political stability, the Korean government conducted significant efforts to facilitate export-driven economic growth. While the demand for male labor force increased in the manufacturing industry, female labor force participation in the mid-1980s was still relatively low (43.9%). However, with the observed rapid industrialization and the introduced birth-control policy, young Korean women were provided with more equal conditions for education and better job opportunities. By joining the OECD, South Korea additionally increased its participation in global value chains (Yang, 2021). Further, the Equal Employment Act enacted in 1987, the Act on the Prevention of Domestic Violence and for the Protection of the Victims in 1997, and the Act against Gender Discrimination and for the Victim Assistance in 1999 additionally improved the situation of Korean women.

**Figure A-3** Case study evidence: Development of globalization and gender equality in South Korea



Notes: The figure shows the unconditional correlation between the global development of gender equality (WBL) and globalization (overall, de jure and de facto) over the past five decades (1970–2020) for South Korea. Data on gender equality comes from the database of the World Bank (2023). Data on overall, de jure, and de facto globalization is taken from the KOF Globalization Index database, compiled by Gygli et al. (2019).

The globalization process in South Korea was ultimately accompanied by an increase in the labor force participation of Korean women, which gained substantial pace in the early 1990s (see Figure A-4).<sup>3</sup> It is argued that the globalization of the Korean economy largely contributed to improving gender equality in Korean society and led to a significant change in social awareness of the role played by women (Yang, 2021).

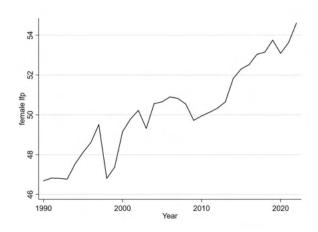


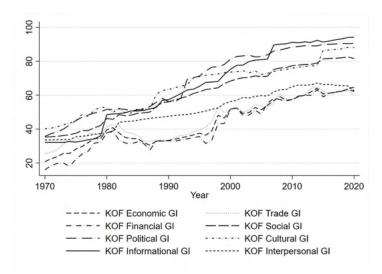
Figure A-4 Female labour force participation, 1990-2020

Notes: The figure shows the development of female labor force participation (1990–2020) in South Korea. The Data is taken from the World Bank database.

Further evidence can be drawn from the sub-indices of the KOF overall index. Figure (A-5) shows the development of additional sub-fields in relation to globalization. Especially political, cultural, and social globalization increased in the corresponding period and remained at the end at a high value.

<sup>&</sup>lt;sup>3</sup>Despite the fact that, due to a higher female labor force participation the economic standing of women improves, within the labor market still significant gender differences remain. Possible causes that explain gender differences in educational and career choices as well as earnings are described in Lozano *et al.* (2020).

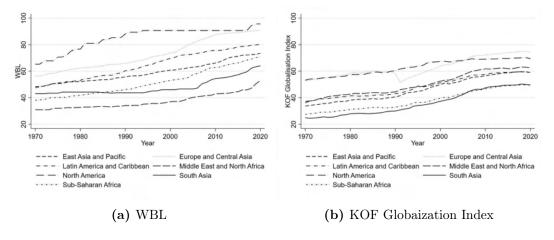
Figure A-5 KOF sub-indices South-Korea, 1970-2020



Notes: The figure shows the eight sub-indices of globalization over the past five decades (1970–2020) for South Korea. The Data is taken from the KOF Globalization Index database, compiled by Gygli *et al.* (2019).

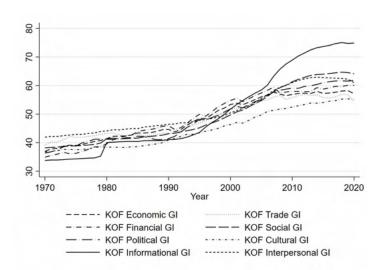
## Appendix B: Supplementary Figures

Figure B-1 Regional trends in globalization and gender equality over time



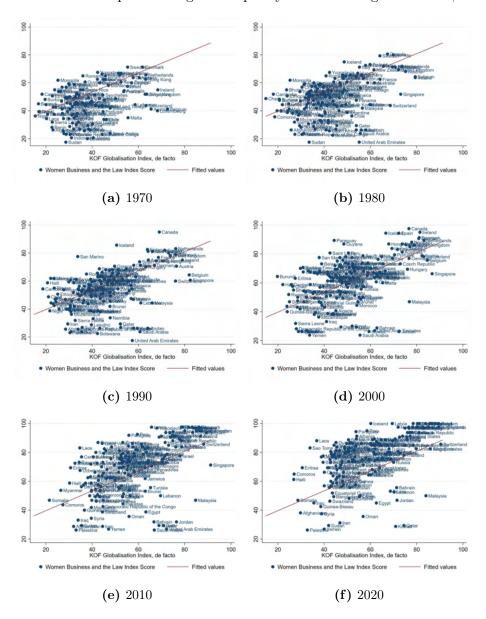
Notes: The figure shows development of gender equality (WBL) and globalization (overall) over the past five decades (1970–2020) for different regions worldwide. Data on gender equality comes from the database of the World Bank (2023). Data on overall globalization is taken from the KOF Globalization Index database, compiled by Gygli et al. (2019).

**Figure B-2** Development of the individual dimensions of globalization measured by the KOF Globalization Index over time, 1970-2020



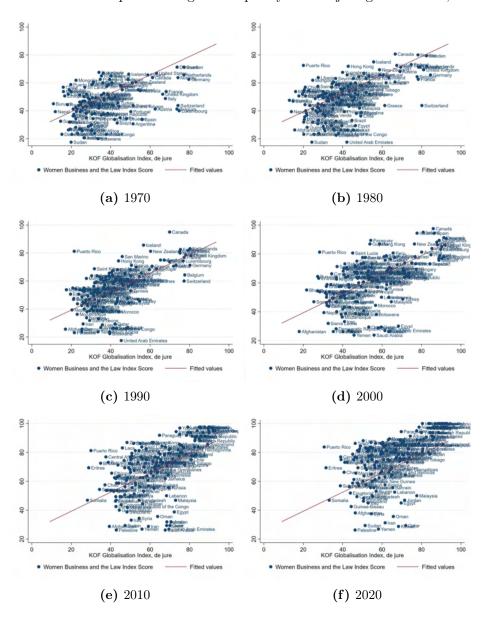
Notes: The figure shows the development of the eight sub-indices of globalization over the past five decades (1970–2020). The data is taken from the KOF Globalization Index database, compiled by Gygli  $et\ al.\ (2019)$ .

Figure B-3 Relationship between gender equality and de facto globalization, 1970-2020



Notes: The figure shows the unconditional correlation between the global development of gender equality (WBL) and de facto globalization over the past five decades (1970–2020). Data on gender equality comes from the database of the World Bank (2023). Data on overall, de jure, and de facto globalization is taken from the KOF Globalization Index database, compiled by Gygli et al. (2019).

Figure B-4 Relationship between gender equality and de jure globalization, 1970-2020



Notes: The figure shows the unconditional correlation between the global development of gender equality (WBL) and de jure globalization over the past five decades (1970–2020). Data on gender equality comes from the database of the World Bank (2023). Data on overall, de jure, and de facto globalization is taken from the KOF Globalization Index database, compiled by Gygli et al. (2019).

## Appendix C: Supplementary Tables

**Table C-1** Globalization and Gender Equality – Robustness, Alternative Specification of Dynamics (one Lag)

Dependent variable: Gender equali	ty index				
	(I)	(II)	(III)	(IV)	
	Panel A.	Parsimoniou	is model spec	cifications	
Globalization Index	0.0349*** (0.007)				
Globalization Index de jure		0.0202*** (0.006)		$0.00850 \\ (0.006)$	
Globalization Index de facto			0.0276*** (0.006)	0.0248*** (0.006)	
Observations	8736	8814	8736	8736	
Units (# of countries)	186	186	186	186	
R-Squared (overall)	0.986	0.986	0.986	0.986	
Country-Level Fixed Effects	Yes	Yes	Yes	Yes	
Period Fixed Effects	Yes	Yes	Yes	Yes	
	Panel B: Full model specifications				
Globalization Index	0.0224** (0.010)				
Globalization Index de jure		0.0115 $(0.008)$		0.00664 $(0.009)$	
Globalization Index $de\ facto$			$0.0158** \\ (0.007)$	$0.0143^*$ $(0.008)$	
Observations	6496	6496	6496	6496	
Units (# of countries)	157	157	157	157	
R-Squared (overall)	0.985	0.985	0.985	0.985	
Country-Level Fixed Effects	Yes	Yes	Yes	Yes	
Period Fixed Effects	Yes	Yes	Yes	Yes	
Controls	Yes	Yes	Yes	Yes	

Notes: The table shows the results of our estimations on the relationship between gender equality and overall globalization (Equation 1) using a lag specification of p=1, with robust standard errors (clustered on the country level) reported in parentheses. Panel A reports the results from a parsimonious model in which we only account for globalization and dynamics in gender equality. Panel B augments the parsimonious model with a set of control variables that include net migration, per capita GDP, life expectancy, fertility rates, the share of population living in urban areas, the level of democracy, a dummy variable that measures whether a female leader has been in office, and the share of the population that completed at least secondary education. All estimations include fixed effects for countries and years.

<sup>\*\*\*</sup> Significant at the 1 percent level

<sup>\*\*</sup> Significant at the 5 percent level,

<sup>\*</sup> Significant at the 10 percent level

**Table C-2** Globalization and Gender Equality – Robustness, Alternative Specification of Dynamics (2 Lags)

Dependent variable: Gender equali	ty index			
	(I)	(II)	(III)	(IV)
	Panel A.	: Parsimoniou	ıs model spec	cifications
Globalization Index	0.0364*** (0.007)			
Globalization Index de jure		0.0202*** (0.006)		0.00763 $(0.006)$
Globalization Index de facto			0.0293*** (0.006)	0.0269*** (0.006)
Observations	8604	8679	8604	8604
Units (# of countries)	186	186	186	186
R-Squared (overall)	0.986	0.986	0.986	0.986
Country-Level Fixed Effects	Yes	Yes	Yes	Yes
Period Fixed Effects	Yes	Yes	Yes	Yes
	Panel B.	Full model s	pecifications	
Globalization Index	0.0241** (0.010)			
Globalization Index de jure		0.0115 $(0.008)$		0.00592 $(0.009)$
Globalization Index de facto			$0.0177** \\ (0.007)$	0.0163** (0.008)
Observations	6410	6410	6410	6410
Units (# of countries)	157	157	157	157
R-Squared (overall)	0.985	0.985	0.985	0.985
Country-Level Fixed Effects	Yes	Yes	Yes	Yes
Period Fixed Effects	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes

Notes: The table shows the results of our estimations on the relationship between gender equality and overall globalization (Equation 1) using a lag specification of p=2, with robust standard errors (clustered on the country level) reported in parentheses. Panel A reports the results from a parsimonious model in which we only account for globalization and dynamics in gender equality. Panel B augments the parsimonious model with a set of control variables that include net migration, per capita GDP, life expectancy, fertility rates, the share of population living in urban areas, the level of democracy, a dummy variable that measures whether a female leader has been in office, and the share of the population that completed at least secondary education. All estimations include fixed effects for countries and years.

<sup>\*\*\*</sup> Significant at the 1 percent level

<sup>\*\*</sup> Significant at the 5 percent level,

<sup>\*</sup> Significant at the 10 percent level

**Table C-3** Globalization and Gender Equality – Robustness, Alternative Specification of Dynamics (3 Lags)

Dependent variable: Gender equali	ty index				
	(I)	(II)	(III)	(IV)	
	Panel A.	Parsimoniou	s model spec	cifications	
Globalization Index	0.0380*** (0.007)				
Globalization Index de jure		0.0212*** (0.006)		0.00811 $(0.006)$	
Globalization Index de facto			0.0304*** (0.006)	0.0278*** (0.006)	
Observations	8468	8540	8468	8468	
Units (# of countries)	186	186	186	186	
R-Squared (overall)	0.986	0.986	0.986	0.986	
Country-Level Fixed Effects	Yes	Yes	Yes	Yes	
Period Fixed Effects	Yes	Yes	Yes	Yes	
	Panel B: Full model specifications				
Globalization Index	0.0260*** (0.010)	*			
Globalization Index de jure		0.0132 $(0.008)$		0.00731 $(0.009)$	
Globalization Index de facto			0.0187** (0.007)	0.0169** (0.008)	
Observations	6323	6323	6323	6323	
Units (# of countries)	157	157	157	157	
R-Squared (overall)	0.985	0.985	0.985	0.985	
Country-Level Fixed Effects	Yes	Yes	Yes	Yes	
Period Fixed Effects	Yes	Yes	Yes	Yes	
Controls	Yes	Yes	Yes	Yes	

Notes: The table shows the results of our estimations on the relationship between gender equality and overall globalization (Equation 1) using a lag specification of p=3, with robust standard errors (clustered on the country level) reported in parentheses. Panel A reports the results from a parsimonious model in which we only account for globalization and dynamics in gender equality. Panel B augments the parsimonious model with a set of control variables that include net migration, per capita GDP, life expectancy, fertility rates, the share of population living in urban areas, the level of democracy, a dummy variable that measures whether a female leader has been in office, and the share of the population that completed at least secondary education. All estimations include fixed effects for countries and years.

<sup>\*\*\*</sup> Significant at the 1 percent level

<sup>\*\*</sup> Significant at the 5 percent level,

<sup>\*</sup> Significant at the 10 percent level

**Table C-4** Globalization and Gender Equality – Robustness, Alternative Specification of Dynamics (5 Lags)

Dependent variable: Gender equali	ty index				
	(I)	(II)	(III)	(IV)	
	Panel A	: Parsimoniou	us model spec	cifications	
Globalization Index	0.0376*** (0.007)	*			
Globalization Index de jure		0.0228*** (0.006)		$0.0113^*$ $(0.006)$	
Globalization Index de facto			0.0282*** (0.006)	0.0247*** (0.006)	
Observations	8195	8261	8195	8195	
Units (# of countries)	186	186	186	186	
R-Squared (overall)	0.986	0.986	0.986	0.986	
Country-Level Fixed Effects	Yes	Yes	Yes	Yes	
Period Fixed Effects	Yes	Yes	Yes	Yes	
	Panel B: Full model specifications				
Globalization Index	0.0252*** (0.010)	*			
Globalization Index de jure		0.0167** (0.009)		0.0123 $(0.009)$	
Globalization Index de facto			0.0155** (0.007)	$0.0126* \\ (0.008)$	
Observations	6148	6148	6148	6148	
Units ( $\#$ of countries)	157	157	157	157	
R-Squared (overall)	0.985	0.985	0.985	0.985	
Country-Level Fixed Effects	Yes	Yes	Yes	Yes	
Period Fixed Effects	Yes	Yes	Yes	Yes	
Controls	Yes	Yes	Yes	Yes	

Notes: The table shows the results of our estimations on the relationship between gender equality and overall globalization (Equation 1) using a lag specification of p=5, with robust standard errors (clustered on the country level) reported in parentheses. Panel A reports the results from a parsimonious model in which we only account for globalization and dynamics in gender equality. Panel B augments the parsimonious model with a set of control variables that include net migration, per capita GDP, life expectancy, fertility rates, the share of population living in urban areas, the level of democracy, a dummy variable that measures whether a female leader has been in office, and the share of the population that completed at least secondary education. All estimations include fixed effects for countries and years.

<sup>\*\*\*</sup> Significant at the 1 percent level

<sup>\*\*</sup> Significant at the 5 percent level,

<sup>\*</sup> Significant at the 10 percent level

**Table C-5** Globalization and Gender Equality – Robustness, Alternative Specification of Dynamics (6 Lags)

Dependent variable: Gender equali	ty index				
	(I)	(II)	(III)	(IV)	
	Panel A.	Parsimoniou	s model spec	cifications	
Globalization Index	0.0388*** (0.007)				
Globalization Index de jure		0.0231*** (0.006)		$0.0112^*$ $(0.007)$	
Globalization Index de facto			0.0292*** (0.006)	0.0257*** (0.006)	
Observations	8056	8119	8056	8056	
Units (# of countries)	186	186	186	186	
R-Squared (overall)	0.986	0.986	0.986	0.986	
Country-Level Fixed Effects	Yes	Yes	Yes	Yes	
Period Fixed Effects	Yes	Yes	Yes	Yes	
	Panel B: Full model specifications				
Globalization Index	0.0255** <sup>*</sup> (0.010)	*			
Globalization Index de jure		0.0160* (0.009)		0.0111 $(0.009)$	
Globalization Index de facto			0.0163** (0.007)	$0.0136^*$ $(0.008)$	
Observations	6059	6059	6059	6059	
Units ( $\#$ of countries)	157	157	157	157	
R-Squared (overall)	0.985	0.985	0.985	0.985	
Country-Level Fixed Effects	Yes	Yes	Yes	Yes	
Period Fixed Effects	Yes	Yes	Yes	Yes	
Controls	Yes	Yes	Yes	Yes	

Notes: The table shows the results of our estimations on the relationship between gender equality and overall globalization (Equation 1) using a lag specification of p=6, with robust standard errors (clustered on the country level) reported in parentheses. Panel A reports the results from a parsimonious model in which we only account for globalization and dynamics in gender equality. Panel B augments the parsimonious model with a set of control variables that include net migration, per capita GDP, life expectancy, fertility rates, the share of population living in urban areas, the level of democracy, a dummy variable that measures whether a female leader has been in office, and the share of the population that completed at least secondary education. All estimations include fixed effects for countries and years.

<sup>\*\*\*</sup> Significant at the 1 percent level

<sup>\*\*</sup> Significant at the 5 percent level,

<sup>\*</sup> Significant at the 10 percent level

Table C-6 Gender Equality and Economic Globalization

Dependent variable: Gender equali	ty index			
	(I)	(II)	(III)	(IV)
	Panel A	: Parsimonia	ous model spec	ifications
Globalization Index	0.0136*** (0.005)			
Globalization Index de jure		0.00501 $(0.004)$		0.00334 $(0.004)$
Globalization Index de facto			0.00980*** (0.004)	0.00860** (0.004)
Observations	8261	8116	8257	8064
Units (# of countries)	186	186	186	186
R-Squared (overall)	0.986	0.986	0.986	0.986
Country-Level Fixed Effects	Yes	Yes	Yes	Yes
Period Fixed Effects	Yes	Yes	Yes	Yes
	Panel B.	: Full model	specifications	
Globalization Index	0.0124* (0.006)			
Globalization Index de jure		$0.00900* \\ (0.005)$		0.00801 $(0.005)$
Globalization Index de facto			0.00623 $(0.004)$	0.00532 $(0.004)$
Observations	6236	6236	6236	6236
Units ( $\#$ of countries)	157	157	157	157
R-Squared (overall)	0.985	0.985	0.985	0.985
Country-Level Fixed Effects	Yes	Yes	Yes	Yes
Period Fixed Effects	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes

Notes: The table shows the results of our estimations on the relationship between gender equality and economic globalization (Equation 1), with robust standard errors (clustered on the country level) reported in parentheses. Panel A reports the results from a parsimonious model in which we only account for globalization and dynamics in gender equality. Panel B augments the parsimonious model with a set of control variables that include net migration, per capita GDP, life expectancy, fertility rates, the share of population living in urban areas, the level of democracy, a dummy variable that measures whether a female leader has been in office, and the share of the population that completed at least secondary education. All estimations include fixed effects for countries and years.

<sup>\*\*\*</sup> Significant at the 1 percent level

<sup>\*\*</sup> Significant at the 5 percent level,

<sup>\*</sup> Significant at the 10 percent level

Table C-7 Gender Equality and Trade Globalization

Dependent variable: Gender equalit	y index			
	(I)	(II)	(III)	(IV)
	Panel A	1: Parsimonia	ous model spe	cifications
Globalization Index $0.00903^{**}$				
	(0.004)			
Globalization Index de jure		-0.000620 $(0.003)$		-0.00144 $(0.003)$
Globalization Index $de\ facto$			0.00793*** (0.003)	0.00632** (0.003)
Observations	8257	7824	8257	7791
Units (# of countries)	186	186	186	186
R-Squared (overall)	0.986	0.986	0.986	0.986
Country-Level Fixed Effects	Yes	Yes	Yes	Yes
Period Fixed Effects	Yes	Yes	Yes	Yes
	Panel I	B: Full model	specifications	
Globalization Index	0.00486 $(0.005)$			
Globalization Index $de jure$		0.000222 $(0.004)$		-0.0000110 (0.004)
Globalization Index $de\ facto$			0.00273 $(0.003)$	0.00221 $(0.004)$
Observations	6236	6093	6236	6093
Units (# of countries)	157	157	157	157
R-Squared (overall)	0.985	0.985	0.985	0.985
Country-Level Fixed Effects	Yes	Yes	Yes	Yes
Period Fixed Effects	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes

Notes: The table shows the results of our estimations on the relationship between gender equality and trade globalization (Equation 1), with robust standard errors (clustered on the country level) reported in parentheses. Panel A reports the results from a parsimonious model in which we only account for globalization and dynamics in gender equality. Panel B augments the parsimonious model with a set of control variables that include net migration, per capita GDP, life expectancy, fertility rates, the share of population living in urban areas, the level of democracy, a dummy variable that measures whether a female leader has been in office, and the share of the population that completed at least secondary education. All estimations include fixed effects for countries and years.

<sup>\*\*\*</sup> Significant at the 1 percent level

<sup>\*\*</sup> Significant at the 5 percent level,

<sup>\*</sup> Significant at the 10 percent level

Table C-8 Gender Equality and Financial Globalization

Dependent variable: Gender equali	ty index				
	(I)	(II)	(III)	(IV)	
	Panel A.	: Parsimonia	ous model spe	$\overline{cifications}$	
Globalization Index	0.00930* (0.004)	*			
Globalization Index de jure		$0.00527^* \ (0.003)$		0.00449 $(0.003)$	
Globalization Index de facto			$0.00574^{**}$ (0.003)	$0.00473^{*}$ $(0.003)$	
Observations	8313	8278	8305	8230	
Units (# of countries)	186	186	186	186	
R-Squared (overall)	0.986	0.986	0.986	0.986	
Country-Level Fixed Effects	Yes	Yes	Yes	Yes	
Period Fixed Effects	Yes	Yes	Yes	Yes	
	Panel B: Full model specifications				
Globalization Index	0.0105** (0.005)				
Globalization Index de jure		$0.00707^* $ $(0.004)$		0.00611 $(0.004)$	
Globalization Index de facto			$0.00576* \\ (0.003)$	0.00474 $(0.003)$	
Observations	6236	6093	6236	6093	
Units ( $\#$ of countries)	157	157	157	157	
R-Squared (overall)	0.985	0.985	0.985	0.985	
Country-Level Fixed Effects	Yes	Yes	Yes	Yes	
Period Fixed Effects	Yes	Yes	Yes	Yes	
Controls	Yes	Yes	Yes	Yes	

Notes: The table shows the results of our estimations on the relationship between gender equality and financial globalization (Equation 1), with robust standard errors (clustered on the country level) reported in parentheses. Panel A reports the results from a parsimonious model in which we only account for globalization and dynamics in gender equality. Panel B augments the parsimonious model with a set of control variables that include net migration, per capita GDP, life expectancy, fertility rates, the share of population living in urban areas, the level of democracy, a dummy variable that measures whether a female leader has been in office, and the share of the population that completed at least secondary education. All estimations include fixed effects for countries and years.

<sup>\*\*\*</sup> Significant at the 1 percent level

<sup>\*\*</sup> Significant at the 5 percent level,

<sup>\*</sup> Significant at the 10 percent level

Table C-9 Gender Equality and Social Globalization

Dependent variable: Gender equali	ty index			
	(I)	(II)	(III)	(IV)
	Panel A:	Parsimoniou	us model spec	cifications
Globalization Index	0.0309*** (0.006)	۲		
Globalization Index de jure		0.0207*** (0.006)		0.0151** (0.006)
Globalization Index de facto			$0.0194^{***}$ (0.005)	0.0150** (0.006)
Observations	8401	8401	8283	8283
Units (# of countries)	186	186	186	186
R-Squared (overall)	0.986	0.986	0.986	0.986
Country-Level Fixed Effects	Yes	Yes	Yes	Yes
Period Fixed Effects	Yes	Yes	Yes	Yes
	Panel B:	Full model s	pecifications	
Globalization Index	0.0237** (0.009)			
Globalization Index de jure		0.00761 $(0.008)$		0.00231 $(0.009)$
Globalization Index de facto			0.0195*** (0.007)	0.0190*** (0.007)
Observations	6236	6236	6236	6236
Units (# of countries)	157	157	157	157
R-Squared (overall)	0.985	0.985	0.985	0.985
Country-Level Fixed Effects	Yes	Yes	Yes	Yes
Period Fixed Effects	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes

Notes: The table shows the results of our estimations on the relationship between gender equality and social globalization (Equation 1), with robust standard errors (clustered on the country level) reported in parentheses. Panel A reports the results from a parsimonious model in which we only account for globalization and dynamics in gender equality. Panel B augments the parsimonious model with a set of control variables that include net migration, per capita GDP, life expectancy, fertility rates, the share of population living in urban areas, the level of democracy, a dummy variable that measures whether a female leader has been in office, and the share of the population that completed at least secondary education. All estimations include fixed effects for countries and years.

<sup>\*\*\*</sup> Significant at the 1 percent level

<sup>\*\*</sup> Significant at the 5 percent level,

<sup>\*</sup> Significant at the 10 percent level

Table C-10 Gender Equality and Interpersonal Globalization

	(I)	(II)	(III)	(IV)
	Panel A:	Parsimoniou	is model sp	ecifications
Globalization Index	0.0230*** (0.007)			
Globalization Index de jure		$0.0140^{***}$ (0.005)		0.0129*** (0.005)
Globalization Index de facto			$0.0114^*$ $(0.006)$	0.00813 $(0.006)$
Observations	8401	8353	8353	8305
Units (# of countries)	186	186	186	186
R-Squared (overall)	0.986	0.986	0.986	0.986
Country-Level Fixed Effects	Yes	Yes	Yes	Yes
Period Fixed Effects	Yes	Yes	Yes	Yes
	Panel B:	Full model s	pecification	s
Globalization Index	0.0118 (0.009)			
Globalization Index de jure		0.00815 $(0.006)$		0.00769 $(0.006)$
Globalization Index de facto			0.00526 $(0.008)$	0.00387 $(0.009)$
Observations	6236	6236	6236	6236
Units (# of countries)	157	157	157	157
R-Squared (overall)	0.985	0.985	0.985	0.985
Country-Level Fixed Effects	Yes	Yes	Yes	Yes
Period Fixed Effects	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes

Notes: The table shows the results of our estimations on the relationship between gender equality and interpersonal globalization (Equation 1), with robust standard errors (clustered on the country level) reported in parentheses. Panel A reports the results from a parsimonious model in which we only account for globalization and dynamics in gender equality. Panel B augments the parsimonious model with a set of control variables that include net migration, per capita GDP, life expectancy, fertility rates, the share of population living in urban areas, the level of democracy, a dummy variable that measures whether a female leader has been in office, and the share of the population that completed at least secondary education. All estimations include fixed effects for countries and years.

<sup>\*\*\*</sup> Significant at the 1 percent level

<sup>\*\*</sup> Significant at the 5 percent level,

<sup>\*</sup> Significant at the 10 percent level

Table C-11 Gender Equality and Informational Globalization

Dependent variable: Gender equali	ity index			
	(I)	(II)	(III)	(IV)
	Panel A:	Parsimoniou	is model spec	ifications
Globalization Index	0.0168*** (0.004)	:		
Globalization Index de jure		0.0161*** (0.004)		0.0161*** (0.005)
Globalization Index de facto			0.00701** (0.003)	0.00399 $(0.003)$
Observations	8392	8401	8139	8139
Units (# of countries)	186	186	186	186
R-Squared (overall)	0.986	0.986	0.986	0.986
Country-Level Fixed Effects	Yes	Yes	Yes	Yes
Period Fixed Effects	Yes	Yes	Yes	Yes
	Panel B:	Full model si	pecifications	
Globalization Index	0.0183*** (0.006)	:		
Globalization Index de jure		0.0162*** (0.006)		0.0153** (0.006)
Globalization Index de facto			0.00602 $(0.004)$	0.00504 $(0.004)$
Observations	6236	6236	6173	6173
Units (# of countries)	157	157	157	157
R-Squared (overall)	0.985	0.985	0.985	0.985
Country-Level Fixed Effects	Yes	Yes	Yes	Yes
Period Fixed Effects	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes

Notes: The table shows the results of our estimations on the relationship between gender equality and informational globalization (Equation 1), with robust standard errors (clustered on the country level) reported in parentheses. Panel A reports the results from a parsimonious model in which we only account for globalization and dynamics in gender equality. Panel B augments the parsimonious model with a set of control variables that include net migration, per capita GDP, life expectancy, fertility rates, the share of population living in urban areas, the level of democracy, a dummy variable that measures whether a female leader has been in office, and the share of the population that completed at least secondary education. All estimations include fixed effects for countries and years.

<sup>\*\*\*</sup> Significant at the 1 percent level

<sup>\*\*</sup> Significant at the 5 percent level,

<sup>\*</sup> Significant at the 10 percent level

Table C-12 Gender Equality and Cultural Globalization

	(I)	(II)	(III)	(IV)
	Panel A	: Parsimoniou	is model spec	cifications
Globalization Index	0.0147** (0.004)	*		
Globalization Index de jure		0.00294 $(0.003)$		0.00138 $(0.003)$
Globalization Index de facto			$0.0107^{***}$ (0.003)	0.0105*** (0.003)
Observations	8310	8276	8174	8097
Units (# of countries)	186	186	186	186
R-Squared (overall)	0.986	0.986	0.986	0.986
Country-Level Fixed Effects	Yes	Yes	Yes	Yes
Period Fixed Effects	Yes	Yes	Yes	Yes
	Panel B.	: Full model s	pecifications	
Globalization Index	0.00503 (0.006)			
Globalization Index de jure		-0.00803* (0.004)		-0.00860** (0.004)
Globalization Index de facto			0.0106*** (0.004)	0.0113*** (0.004)
Observations	6236	6211	6236	6211
Units (# of countries)	157	157	157	157
R-Squared (overall)	0.985	0.985	0.985	0.985
Country-Level Fixed Effects	Yes	Yes	Yes	Yes
Period Fixed Effects	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes

Notes: The table shows the results of our estimations on the relationship between gender equality and cultural globalization (Equation 1), with robust standard errors (clustered on the country level) reported in parentheses. Panel A reports the results from a parsimonious model in which we only account for globalization and dynamics in gender equality. Panel B augments the parsimonious model with a set of control variables that include net migration, per capita GDP, life expectancy, fertility rates, the share of population living in urban areas, the level of democracy, a dummy variable that measures whether a female leader has been in office, and the share of the population that completed at least secondary education. All estimations include fixed effects for countries and years.

<sup>\*\*\*</sup> Significant at the 1 percent level

<sup>\*\*</sup> Significant at the 5 percent level,

<sup>\*</sup> Significant at the 10 percent level

Table C-13 Gender Equality and Political Globalization

Dependent variable: Gender equali	ty index			
	(I)	(II)	(III)	(IV)
	Panel A: Parsimonious model specifications			
Globalization Index	0.0181*** (0.004)	•		
Globalization Index de jure		0.0111*** (0.004)		$0.00717^* $ $(0.004)$
Globalization Index de facto			$0.0127^{***}$ (0.003)	0.0106*** (0.004)
Observations	8401	8401	8401	8401
Units (# of countries)	186	186	186	186
R-Squared (overall)	0.986	0.986	0.986	0.986
Country-Level Fixed Effects	Yes	Yes	Yes	Yes
Period Fixed Effects	Yes	Yes	Yes	Yes
	Panel B: Full model specifications			
Globalization Index	0.00784 (0.006)			
Globalization Index de jure		0.00495 $(0.006)$		0.00345 $(0.006)$
Globalization Index de facto			0.00507 $(0.004)$	0.00426 $(0.004)$
Observations	6236	6236	6236	6236
Units ( $\#$ of countries)	157	157	157	157
R-Squared (overall)	0.985	0.985	0.985	0.985
Country-Level Fixed Effects	Yes	Yes	Yes	Yes
Period Fixed Effects	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes

Notes: The table shows the results of our estimations on the relationship between gender equality and political globalization (Equation 1), with robust standard errors (clustered on the country level) reported in parentheses. Panel A reports the results from a parsimonious model in which we only account for globalization and dynamics in gender equality. Panel B augments the parsimonious model with a set of control variables that include net migration, per capita GDP, life expectancy, fertility rates, the share of population living in urban areas, the level of democracy, a dummy variable that measures whether a female leader has been in office, and the share of the population that completed at least secondary education. All estimations include fixed effects for countries and years.

<sup>\*\*\*</sup> Significant at the 1 percent level

<sup>\*\*</sup> Significant at the 5 percent level,

<sup>\*</sup> Significant at the 10 percent level