

Deepening the divide: Does globalization increase the polarization between winners and losers of globalization?

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Funding information

Deutsche Forschungsgemeinschaft, Grant/
Award Numbers: EXC 2055, Project-ID,
390715649

Abstract

Does globalization increase polarization in attitudes toward international trade, immigration, and international organizations? Research from a variety of fields and disciplines assumes this relationship, but empirical studies are few. In this study, I examine whether globalization increases the attitudinal divide between education groups, with education being one of the main characteristics of social stratification distinguishing winners from losers of globalization. I use data from three waves of the National Identity Module of the International Social Survey Programme (ISSP) from 1995 to 2013 covering 29 countries ($n = 79,101$) to analyze between- and within-country interactions between the level of globalization and education in explaining attitudes toward globalization. The results show that while the attitudinal divide between educational groups is larger in countries with higher levels of globalization (between effect), polarization decreases as the level of globalization increases within countries (within effect), as persons with lower and medium levels of education become more positive toward globalization under increasing levels of globalization. The results are consistent across a wide range of robustness checks, including controlling for occupational class as a further distinction between winners and losers of globalization. The findings

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suggest that the expectations about a widening attitudinal divide between winners and losers of globalization should be treated with more caution.

KEYWORDS

cleavage, divide, education, globalization, polarization, winners and losers

1 | INTRODUCTION

In recent decades, researchers have extensively focused on how globalization affects political attitudes and divides within national societies. Several overlapping strings of research have, for example, analyzed the formation of a new cleavage related to globalization (Bornschieer, 2018; De Wilde et al., 2019; Hooghe & Marks, 2018; Kriesi et al., 2006, 2008, 2012; Teney et al., 2014), the proliferation of cosmopolitan values (Beck, 2000; Mau et al., 2008; Saito, 2011), the emergence of a backlash against globalization (Walter, 2021), or how globalization influences the rise of populism (Manow, 2018; Rodrik, 2018, 2021). In all this literature, globalization is conceptualized as the driving force behind the emergence of new political preferences. Yet our knowledge about the extent to which globalization affects individuals' attitudes toward issues such as international trade, immigration, and international organizations remains incomplete with regard to important aspects.

Previous research suffers from two important omissions. First, while studies from various fields focus on globalization-related political phenomena, the concrete mechanism by which globalization affects political attitudes is often not specified (Saito, 2011). Moreover, there is a general lack of empirical studies that directly analyze the effect globalization has on the formation of globalization attitudes. Second, empirical studies that do analyze it, tend to either not differentiate between different dimensions of globalization or focus exclusively on economic globalization. However, as globalization is a multidimensional process that extends beyond economic globalization (Dreher et al., 2008; Held et al., 1999) and as attitudes toward globalization come in the form of attitudes toward multiple issues (Mader et al., 2020; Weßels and Strijbis, 2019), these studies do not present a full picture of how globalization shapes political attitudes.

For the past two decades, the dominant theoretical approach in political science and sociology for researching how globalization reshapes people's attitudes has been cleavage theory. According to cleavage theory, globalization transforms the social structure, collective identities, and party systems of modern societies, creating a structural antagonism between winners and losers of globalization. This results in political preferences for policies of more integration by the winners and more demarcation by the losers (Kriesi et al., 2006, 2008, 2012), or, respectively, to the adoption of cosmopolitan and communitarian political ideologies (De Wilde et al., 2019; Teney et al., 2014). These political preferences express themselves in attitudes toward specific issues related to globalization, such as international trade, immigration, and international organizations (Mader et al., 2020).

Similar arguments have been made in the sociological research on cosmopolitanism, where globalization is viewed as a fundamental transformation of people's social environment, leading some people to adopt a cosmopolitan orientation as a reaction. The cosmopolitan orientation consists of positive political attitudes toward globalization and, more broadly, of universalistic and multicultural values (Beck, 2000; Beck & Sznaider, 2006; Hannerz, 1990). The people adopting a cosmopolitan orientation tend to be from the upper strata of society, such as elites, highly educated people, or people from the upper middle classes (Calhoun, 2002; Mau et al., 2008; Roudometof, 2005). Implicit in both theoretical arguments is the conceptualization of globalization as the driving factor of the described

changes in people's political attitudes. Yet only few studies working within these frameworks empirically examine the relationship between globalization and globalization attitudes.¹

Another approach for analyzing the political effects of globalization comes from the field of political economy, where scholars have focused on globalization as an explanation for populist and nationalist political preferences (Manow, 2018; Rodrik, 2018, 2021). Globalization is conceptualized as shocks in the form of rapid local increases in foreign trade, an example of which being the stress caused to advanced economies due to the rise of China as a global exporter (Autor et al., 2013). Various studies show how the "China shock" contributed to the rise of populism (Autor et al., 2020; Cerrato et al., 2018; Colantone & Stanig, 2018a, 2018b; Guiso et al., 2019). However, most of these studies tend to focus on vote choice and not attitudes as an outcome, and, more importantly, operationalize globalization only as a specific form of economic globalization.

Lastly, there is a rich empirical literature on attitudes toward specific issues of globalization, which analyzes how individuals' social characteristics influence their attitudes toward international trade (Hainmueller & Hiscox, 2006; Mayda & Rodrik, 2005), immigration (Hainmueller & Hiscox, 2007; Mayda, 2006), or international organizations (Hobolt and de Vries, 2016; Torgler, 2008). Only recently have scholars in these fields begun to analyze how globalization itself affects these attitudes (e.g., Bearce & Jolliff Scott, 2019).

Across these research fields, scholars highlight the impact of educational attainment on being positively or negatively affected by globalization, and, in turn, for developing more positive or negative attitudes toward globalization: from education being one of the key socio-structural characteristics underpinning the integration/demarcation cleavage (Bornschier, 2018; Hooghe & Marks, 2018), over political economists' focus on the differential effects of globalization for high- and low-skilled workers (Mayda & Rodrik, 2005; Walter, 2017), to the central role of education as a predictor for political attitudes toward immigration or international organizations (Hainmueller & Hiscox, 2007; Hobolt and de Vries, 2016). Educational divides around the topics of globalization, nationalism, and immigration are a powerful underpinning of contemporary politics (Bovens & Wille, 2017; Rooduijn, 2022). Following this literature, I use higher and lower levels of education as operationalizations of winners and losers of globalization in this study. I argue below why education should be preferred to occupational class when making such a distinction, which is used in several similar studies (Dochow-Sondershaus & Teney, 2022; Oesch & Rennwald, 2010).²

I go beyond the existing literature by, first, specifying and empirically testing the implicit expectations of theories like cleavage theory about the effect of globalization on attitudes by arguing that globalization increases the polarization between winners and losers of globalization. Specifically, I analyze whether globalization moderates how education as a central divide between winners and losers affects globalization attitudes. Second, I differentiate between economic, socio-cultural, and political globalization, as each dimension potentially has different effects on the divide. Third, existing studies analyzing the globalization divide tend to rely on cross-sectional survey data (e.g., Rooduijn, 2022; Teney et al., 2014; Weßels and Strijbis, 2019). Here, I use repeated cross-sectional data from three waves of the International Social Survey Programme (ISSP) which enables to decompose the globalization effect into changes within countries over time and differences between countries in their overall level of globalization. The results show that while the attitudinal divide between education groups is larger in countries with higher levels of globalization, there is no evidence of these groups becoming more polarized as the level of globalization increases within countries. Instead, persons with lower and medium levels of education tend to become more positive toward issues of globalization as the level of globalization increases, resulting in a decrease in polarization. The results are consistent across a wide range of robustness checks, including controlling for occupational class as a further distinction between winners and losers of globalization. The findings indicate that accounts of growing political polarization as a result of globalization need to be taken with more caution.

2 | THEORY

2.1 | Globalization as a moderator of individual-level variables

Globalization creates new opportunities and risks which are unequally distributed within national societies along socio-structural characteristics (Azmanova, 2011; Rodrik, 2018). The socio-structural position of a person influences whether their life chances are positively or negatively affected by globalization, for example, in the form of wages and labor market positions, access to social networks, cultural capital, or social status. The central characteristics differentiating winners and losers of globalization tend to be education (or skill level), locality (urban vs. rural), occupational class, or sectoral employment (Bornschier, 2018; Hooghe & Marks, 2018). Benefitting or losing from globalization then leads to more positive or more negative attitudes toward globalization (Kriesi et al., 2006). Attitudes toward globalization include the issues of international trade (economic globalization), immigration (socio-cultural globalization), and international organizations (political globalization) (Mader et al., 2020; Walter, 2021). In this study, I use an index comprised of all three attitude dimensions as the main dependent variable.

To explore the implicit expectation from cleavage theory that globalization drives polarization between winners and losers of globalization, this study argues that the extent to which socio-structural characteristics become relevant in the globalized world for determining winners and losers and, in turn, for influencing attitudes, depends on the globalization context (Saito, 2011). Higher levels of globalization lead to an increase in globalization-related opportunities and risks. The characteristics determining whether someone can benefit from the opportunities and avoid the risks become more relevant under these conditions. Characteristics like high levels of education have a greater return in terms of the benefits of globalization the more globalized a country is. In turn, they have a larger effect on attitudes toward globalization. While other mechanisms of how globalization increases the attitudinal divide are likely to also play a role, such as increases in issue salience and politicization of globalization topics increasing polarization (Hutter et al., 2016; Zürn et al., 2012), much of the literature focuses on the heterogenous consequences on individuals' life chances as the driving force (Azmanova, 2011; Hooghe & Marks, 2018). Moreover, as the politicization of globalization in part depends on the existence of underlying differences in life chances caused by globalization (Walter, 2021), I focus on this direct effect of globalization as the main theoretical mechanism.

According to this understanding, globalization creates the context in which individual-level characteristics exert their influence. It moderates the effects of individual-level characteristics on attitudes toward globalization. Thus, the socio-structural and attitudinal globalization divide varies between globalization contexts and is larger in countries with higher levels of globalization. While this argument should apply to many of the socio-structural characteristics delineating winners and losers of globalization, in this study, I focus on education as one of the central characteristics of the divide.

2.2 | Education effect on globalization attitudes

Higher levels of education provide individuals with the necessary skills and resources to take advantage of the opportunities in a globalized world, by increasing the possession of transnational human capital. Transnational human capital consists of foreign language skills, formal degrees, cross-cultural competencies, and cosmopolitan orientations (Gerhards, Hans, & Carlson, 2017). It is the foundational resource for being able to act beyond the nation state, for example, for competing in increasingly international labor markets (Gerhards, Hans, Carlson, et al., 2017) or for being able to interact with foreign nationals and foreign cultural products. Transnational human capital is acquired during socialization, and while part of it is transmitted via the parental background, a large part is acquired through the education system, especially during tertiary education (Carlson et al., 2017). Persons with high levels of education tend to possess higher levels of transnational human capital, thereby being able to gain more from globalization and developing more positive attitudes toward it.

There are additional mechanisms that explain why people with higher levels of education tend to be in favor of globalization, as education increases universalistic (Hainmueller & Hiscox, 2006) and cosmopolitan values (Igarashi & Saito, 2014), as people with tertiary education are more informed and better able to understand complex issues, such as free trade or global governance (Hainmueller & Hiscox, 2006; Strijbis et al., 2019), and as people with higher levels of education adopt pro globalization positions as a strategy for cultural distinction from people with lower levels of education (Koopmans and Zürn, 2019; Strijbis et al., 2019). Correspondingly, the empirical literature finds substantial education effects on attitudes toward international trade (Beaulieu et al., 2011; Hainmueller & Hiscox, 2006; Mayda & Rodrik, 2005), immigration (Hainmueller & Hiscox, 2007; Mayda, 2006; Rooduijn, 2022), and support for international organizations (Bearce & Jolliff Scott, 2019). The first hypothesis is that *people with higher levels of education are more likely to have positive attitudes toward globalization issues* (H1).

Part of the cleavage literature focuses on occupational class position instead of education as the key socio-structural characteristic distinguishing winners and losers of globalization (Bornschiefer, 2018; Dochow-Sondershaus & Teney, 2022; Oesch & Rennwald, 2010). Specifically, they follow Oesch (2006) in arguing that the inherent work logics of different occupational classes drive positive and negative attitudes toward globalization issues. In this study, I focus on education and not occupation for conceptual and methodological reasons. First, from a conceptual perspective, I argue that education is more closely related to the concept of globalization, for example, by being correlated with foreign language skills or by educational degrees often being necessary for access to foreign labor markets, whereas Oesch's class scheme is more closely related to other societal transformations such as post-industrialization. Compared to occupational class, education is also more widely used in fields outside of cleavage theory, for example, in political economy. Second, considering methodological concerns, operationalizing Oesch's class scheme with the ISSP dataset results in a substantial loss of cases and sometimes even of whole country-year samples due to missing data. Therefore, I focus on education in the main part of the study but conduct a comprehensive robustness analysis that includes occupational class in the models.

2.3 | Globalization as a moderator of the education effect

As the level of globalization increases in a country, the possession of transnational human capital becomes more valuable. It becomes more in-demand in labor markets (Gerhards, Hans, Carlson, et al., 2017), there are more opportunities for going abroad (Gerhards & Hans, 2013), more foreign cultural products becoming available, and more foreign nationals coming to the country. On the flip side, the lack of transnational human capital becomes increasingly detrimental as more and more sectors of the society become globalized. The empirical literature on globalization moderating education effects on globalization attitudes is contradictory, as studies have found positive, null, and negative interaction effects (Bearce & Jolliff Scott, 2019; Colantone & Stanig, 2018c; Weßels and Strijbis, 2019). As these studies have different dependent variables, different forms of measuring globalization, and use data from different countries, their results must be interpreted with caution. Following the theoretical literature, I expect that globalization moderates the education effect, whereby the educational differences in globalization attitudes are larger under higher levels of globalization.

This expectation can have two meanings. On the one hand, it refers to the attitudinal differences between education groups being larger in countries with higher levels of globalization. This would be a cross-sectional or between-countries effect. On the other hand, it refers to the attitudinal differences becoming larger as the level of globalization increases within countries over time. This would be a longitudinal or within-countries effect. A within-countries effect is arguably the more substantial finding, as it is more plausibly directly related to globalization itself and not caused by other county-level characteristics (Fairbrother, 2014; Schmidt-Catran & Fairbrother, 2016). Moreover, both effects should be closely related, since if within-country changes lead to a growing attitudinal divide (within effect), the divide should also be larger in countries with higher levels of globalization (between effect). Accordingly, I expect that *the differences in attitudes toward globalization between persons with higher and lower levels*

of education are larger in countries with higher levels of globalization than in countries with lower levels of globalization (between effect) (H2a) and that the differences in attitudes toward globalization between persons with higher and lower levels of education increase as countries become more globalized (within effect) (H2b).

2.4 | Differences between the globalization dimensions

Globalization is a multidimensional process that affects different parts of society and thus different aspects of individuals' life chances (Dreher et al., 2008; Held et al., 1999). For example, increased economic competition with workers in other countries, more and more foreign cultural products and symbols diffusing the national culture, and more political decision-making power being transferred to international organizations might trigger different attitudinal responses. However, there is no prior research on whether the different globalization dimensions impact the divide between winners and losers differently.

One argument could be that political globalization has less of an impact on the divide compared to the other dimensions, as it is a process transforming political systems and institutions, and thus not directly impacting the life chances of individuals. This difference between the globalization dimensions is reflected in the way globalization is measured, as (aggregated) individual-level characteristics are included in globalization indices such as the KOF Index only for economic and socio-cultural but not for political globalization (Dreher et al., 2008; Gygli et al., 2019). On the other hand, there are indirect ways through which political globalization affects individuals: from memberships in supranational organizations influencing the value of a country's citizenship in terms of enabling transnational mobility for its citizens (Kochenov & Lindeboom, 2017; Shachar, 2009), over political denationalization impacting national attachments and identities (Wang, 2016), to international organizations being less accountable to the general public and potentially enacting policies that tend to favor the interests of the winners of globalization (Börzel & Zürn, 2021; Zürn, 2022). Considering the lack of prior research and these competing arguments, I formulate an agnostic and exploratory expectation that *economic, socio-cultural, and political globalization differ in their moderation of the education effect on attitudes toward globalization (H3).*

3 | DATA & METHODS

The analysis is based on cumulative data from three waves (1995, 2003, 2013) of the National Identity Module of the International Social Survey Programme (ISSP) (ISSP Research Group, 2020). The dataset used for the analysis consists of 29 countries that were at least surveyed in two waves of the module and where the questionnaires contained all items used for the analysis, resulting in a total number of 71 individual country-year samples and 79,101 respondents (see Appendix A.1 for an overview of the sampled countries). The national samples are probability samples representative of the country's population living in private households, age 18 or older. Some of the countries have been surveyed in all three waves, while others have only been included in two waves, and within the latter group, countries have different combinations of included waves. As the inclusion of countries with different numbers of waves and waves at different time points might influence the results, a model reproducing the main analysis only for countries with three waves shows consistent results with the main results based on all countries (see Appendix A.7).

3.1 | Dependent variable(s): Attitudes toward globalization

The dependent variable of this analysis is attitudes toward globalization. Attitudes toward globalization consist of attitudes toward issues related to economic, socio-cultural, and political globalization (Mader et al., 2020; Walter, 2021).³ Based on items related to the three subdimensions, an overall index of attitudes toward globalization is constructed.

Attitudes toward economic globalization are measured with an item concerning restrictions on international trade, attitudes toward socio-cultural globalization with an item concerning the cultural impact of immigrants on the society, and attitudes toward political globalization with an item on the authority of international organizations (see Appendix A.2 for the wording of the items). Due to data limitations, only few alternative items are available across all three waves and these alternatives tend to fit the respective attitudinal subdimension less well than the selected items. However, see below (and Appendix A.9) for the robustness check concerning different operationalizations of the dependent variable.

All individual items are measured on five-point Likert-scales ranging from 1 (“Agree strongly”) to 5 (“Disagree strongly”) and have, if needed, been reversed so that higher values indicate positive attitudes toward globalization. The overall index is constructed by taking the harmonic mean of the three individual attitude items, which tends to punish lower values more compared to the arithmetic mean. Thus, having a low value on any of the three items results in a lower overall score compared to using the arithmetic mean. The idea behind constructing the overall index in this way is for it to be less compensatory, with high values on one item not being able to compensate for low values on another item, understanding the three attitude dimensions more as necessary conditions for overall attitudes toward globalization. The three individual items and the attitude index have been normalized for the analysis.

3.2 | Predictor and moderator variables: Education and globalization

Education is operationalized as the highest completed level of education. The education level of the respondents has been measured with varying items across waves and countries in the ISSP data. The cumulated variable comes closest to the ISCED-97 categorization but differentiates six instead of seven education levels. ISCED level 5 (“first stage of tertiary education”) and 6 (“second stage of tertiary education”) have been combined in the ISSP dataset. I construct an education variable with three levels: *low* (no formal education, primary education, and lower secondary education), *medium* (upper-secondary and post-secondary, non-tertiary education), and *high* (tertiary education).⁴

Globalization is measured using the 2020 version of the KOF Globalization Index (Gygli et al., 2019), which measures countries' yearly levels of globalization. The index is the aggregate of three subindices measuring the three globalization dimensions. Economic globalization is measured by trade and investment flows, and by restrictions on trade and capital such as tariff rates. Socio-cultural globalization is measured by three categories of indicators: personal contacts such as international telephone traffic and tourism; information flows, for example, the number of internet users of a country; and cultural proximity, for example, trade in foreign books or the number of McDonalds restaurants per capita. Political globalization is captured by the number of embassies in the country, memberships in international organizations, the number of UN peace missions the country has participated in, and the number of international treaties signed since 1945 (Dreher, 2006; Dreher et al., 2008). All four indices range from 1 to 100, with higher values indicating a higher degree of globalization. For the countries in the ISSP data, the economic and socio-cultural dimensions correlate quite strongly with each other (0.73), while political globalization correlates with economic (0.27) and socio-cultural globalization (0.41) at a much lower level.

3.3 | Analysis plan

The results are estimated using hierarchical linear regression models with three levels: respondents are nested within country years, which are nested within countries (Schmidt-Catran et al., 2019; Schmidt-Catran & Fairbrother, 2016). The models have random intercepts at both cluster levels and random slopes for education at the country-year level, as including a random slope for the lower-level variable in a cross-level interaction leads to less biased standard errors (Heisig & Schaeffer, 2019). On the individual level, I control for age, gender, citizenship, and parental citizenship as individual-level confounders of the effect of education on globalization attitudes. On the country-year level, I control

for the year of the survey to control for any wave-specific period effects. All models include survey weights on the individual level and weights on the country-year level equaling the sample sizes.

Hypothesis H2a and H2b differentiate between the attitudinal divide between education groups being larger in more globalized countries (between effect) and the attitudinal divide becoming larger as a country's level of globalization increases (within effect). To disentangle the within from the between effect, the absolute level of globalization of a country (between estimator) and the within-country changes of globalization over time (within estimator) are simultaneously included in the regression models as two separate variables. The between estimator is constructed as a country's mean level of globalization across the different survey waves and thus captures a country's average level of globalization between 1995 and 2013. The within estimator is constructed by subtracting a country's mean level of globalization across survey years (between estimator) from the level of globalization at the respective survey years. For example, a country with a value of 60 on the KOF Index in 1995, 70 in 2003, and 80 in 2013 has the value of 70 on the between estimator and the values of -10, 0, and 10 on the within estimator. In other words, the between estimator is the mean level of globalization over time and the within estimator is the de-measured level of globalization at different time points. To estimate whether education interacts with the between or the within estimator (or both), respective interaction terms between education and the between and within estimators are included in the models (for the underlying methodology, see Fairbrother, 2014; Giesselmann & Schmidt-Catran, 2019).⁵ All estimators have been standardized for the analysis. See Appendix A.3 for descriptive statistics for all variables used in the analyses.

4 | RESULTS

4.1 | The effect of education on globalization attitudes

The first set of results tests hypothesis H1, which expects that persons with higher levels of education hold more positive attitudes toward globalization issues compared to persons with lower levels of education. Figure 1 shows the results of four separate regression models, one with the overall globalization attitude index as the dependent variable, and three with the respective attitudes toward international trade, immigration, and international organizations as the dependent variables.

For the overall attitude index, as well as for attitudes toward international trade and immigration, the effects of education correspond to the expectations. Persons with higher levels of education tend to hold more positive attitudes toward globalization overall, economic globalization (international trade), and socio-cultural globalization (immigration) than persons with lower levels. For these three dependent variables, the results show large and statistically significant differences between persons with lower and medium levels, and between persons with medium and higher levels of education. For example, persons with higher levels of education are more positive toward globalization compared to persons with lower levels of education by 0.11 on a normalized scale, indicating that the size of the education effect encapsulates 11% of the scale of the attitude index.⁶ These effects are not found concerning attitudes toward political globalization (international organizations), where there are no statistically significant differences between any of the three education groups. The differences between the effects on the three different subdimensions of globalization attitudes show, that the effects on the overall attitudes index are driven by attitudes toward economic and socio-cultural globalization, not by attitudes toward political globalization. While the results concerning attitudes toward political globalization are somewhat surprising in light of the existing literature, the results generally lend support for H1.⁷

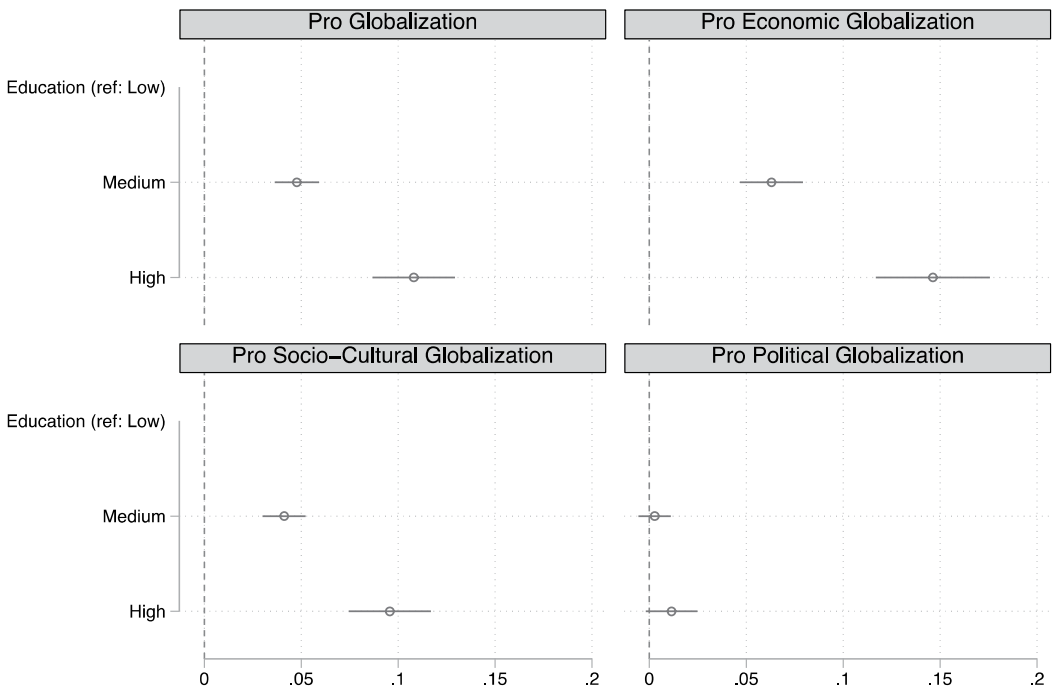


FIGURE 1 Effect of education on globalization attitudes. Results from multilevel regression models. The dependent variable “pro globalization” is the attitude index based on the remaining three attitude items. See Appendix A.4 for the full regression outputs.

4.2 | The interaction effect between globalization and education

The main goal of the study is to analyze, whether globalization moderates the education effect. For that, the analysis looks at whether the attitudinal gaps between the education groups are larger in more globalized countries (H2a-between effect) and whether they increase as countries become more globalized (H2b-within effect). Figure 2 plots the predicted marginal means for the respective interactions between education and the between and within estimators from a regression model with the globalization attitude index as the dependent variable. The left panel shows the predicted margins for the education groups depending on the countries' average level of globalization (between effect). It shows that all education groups tend to have more positive attitudes toward globalization in countries with higher average levels of globalization. More importantly, the respective increases for the education groups are larger for persons with medium than for persons with lower levels of education, and the largest for persons with higher levels of education. This results in the attitudinal gaps between the three education groups being statistically significantly larger in countries with higher average levels of globalization, thus lending support for hypothesis H2a concerning the between effect.

The panel on the right of Figure 2 shows the predicted margins for the education groups depending on the within-country changes in the level of globalization, operationalized as the de-meaned level of globalization in each given survey year (within effect). The effects run contrary to the expectations. There is no evidence of a growing attitudinal gap between the education groups. Instead, persons with lower and medium levels of education become more positive toward globalization. For persons with higher levels of education, the changes are not statistically significant. In addition, the increase for persons with lower levels of education is statistically significantly larger than for the other two groups, resulting in a decrease in the attitudinal divide with increasing levels of globalization.

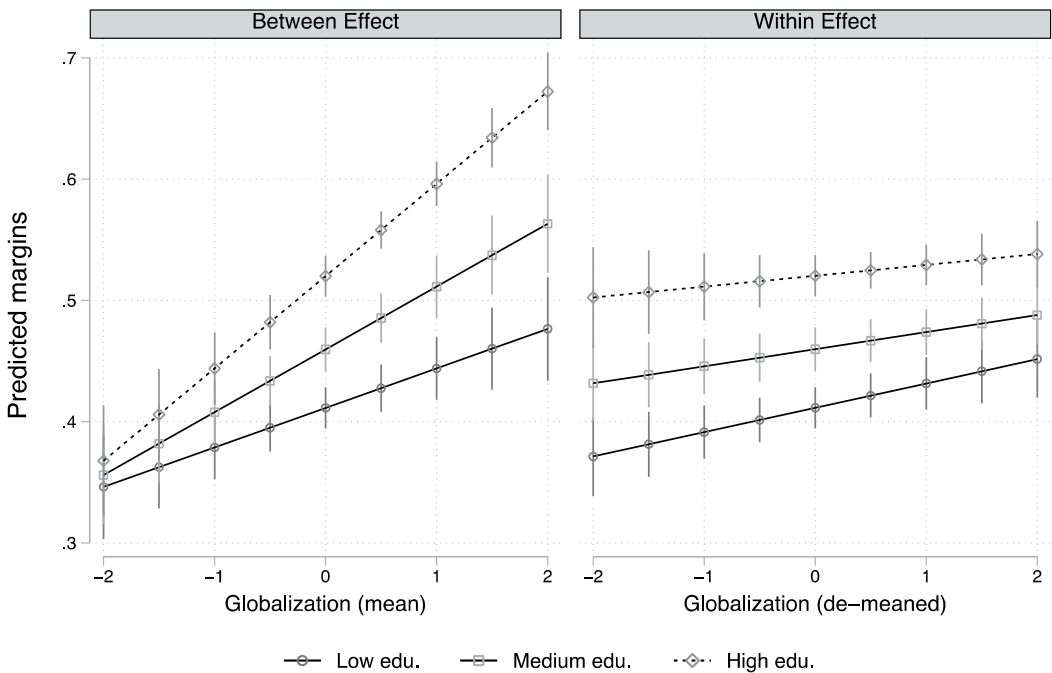


FIGURE 2 Between- and within-interactions of globalization and education. Predicted margins from a multilevel regression model with the attitude index as the dependent variable. See Appendix A.5 for the full results (regression output, marginal effects, and Wald tests).

These results contradict hypothesis H2b as well as the main assumptions from cleavage theory that the polarization between winners and losers of globalization increases with the level of globalization.

4.3 | Differentiating between economic, socio-cultural, and political globalization

Concerning the different effects of the globalization dimensions Figure 3 plots the predictive margins for the within effects from a regression model with the attitude index as the dependent variable and respective between and within interactions between education and the three subindices of the KOF Globalization Index concerning economic, socio-cultural, and political globalization. In line with the expectations, there are differences between the three dimensions.

Within-country changes in economic globalization increase the positive attitudes of all education groups, neither increasing nor decreasing the attitudinal gap between the groups. Socio-cultural globalization leads to more positive attitudes for persons with lower levels of globalization, but not for the other two education groups. Thus, socio-cultural globalization leads to a statistically significant reduction in the attitudinal gap between the education groups. Lastly, the results for political globalization deviate from the other two dimensions, as they do not lead to a statistically significant change in attitudes for any of the three education groups. In sum, the three globalization dimensions differ in their effects on the attitudinal divide between the education groups.

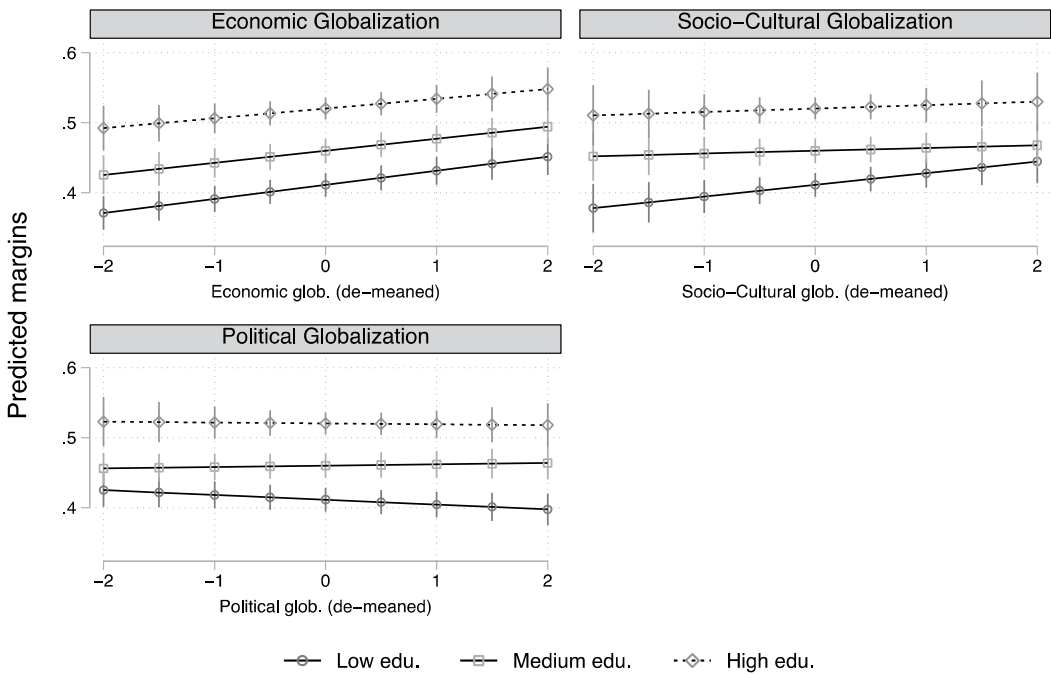


FIGURE 3 Within interactions of education and different globalization dimensions. Predicted margins of the within effects from a multilevel regression model with the attitude index as the dependent variable and the three globalization dimensions as respective moderators of the education effect. See Appendix A.6 for the full results (regression output, marginal effects, and Wald tests).

4.4 | Controlling for occupational class and additional robustness checks

As many studies focus on occupational class position as the key socio-structural characteristic distinguishing winners from losers of globalization, I test whether the education effects are robust to controlling for occupational class. I include Oesch's (2006) five-class-scheme into the models, both as a single variable in the H1 model and as interactions with the globalization estimators in the H2 model.⁸ The results from the H1 model concerning the main effect of education on the attitudinal index show that occupational class mediates part of the education effect, as the effect of education is slightly reduced, but still substantial and statistically significant. Occupational class itself has a statistically significant effect on globalization attitudes, as, for example, members of the "Higher-grade service class" hold more positive attitudes toward globalization than "Unskilled workers," although the effect size is smaller than for education (see Figure A1). Concerning the H2 model, the within effect of education is not altered by the inclusion of interactions between globalization and occupational class position in the model (Figure 4). The results for occupational class are similar, as there is no increase in polarization between the classes. In contrast to education, all classes become more positive toward globalization, not resulting in decreased polarization. In sum, globalization does not increase the attitudinal divide between winners and losers of globalization, neither between education groups nor occupational classes.

As further validations of the results, I conduct four additional sets of robustness checks, focusing on whether the within effects lead to increased polarization. First, using different attitude items to operationalize the dependent variable, either substituting the original items or using multiple items for each attitudinal subdimension does not lead to different results concerning increases in polarization (see Appendix A.9). Second, as part of the literature emphasizes the role of globalization shocks, that is, rapid increases in globalization as drivers of the globalization backlash (Autor et al., 2020; Colantone & Stanig, 2019), I test for two alternative operationalizations of globalization in the

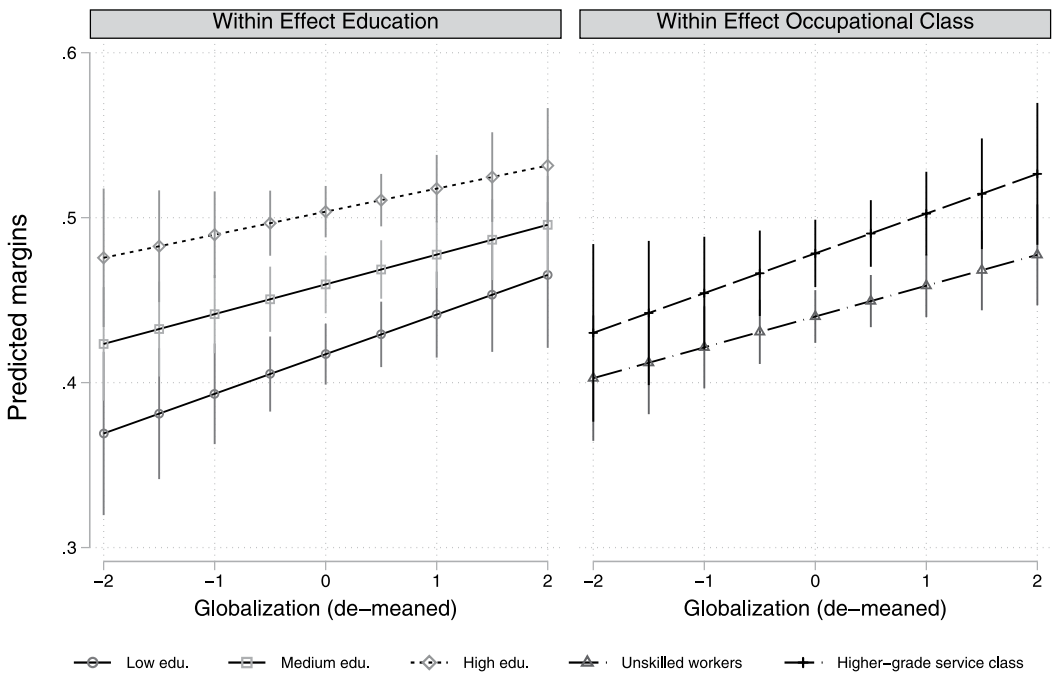


FIGURE 4 Respective within-interactions of education and occupational class with globalization. Predicted margins from a multilevel regression model with the attitude index as the dependent variable. For clarity, only the effects for the highest and lowest occupational classes are shown; the effects for the other classes run similarly. See Appendix A.8 for the full results (regression output, marginal effects).

form of relative changes in the level of globalization. Neither changes in the level of globalization compared to 1990 nor to five years prior to the respective survey year lead to statistically significant increases in polarization between the education groups (see Appendices A.10 and A.11). Third, does the globalization effect differ between countries? Neither differentiating between more traditionally globalized and more recently globalized countries nor between different world regions results in statistically significant increases in polarization for any of the subsets of the country sample (see Appendices A.12 and A.13). Fourth, as indicators like the KOF index tend to be highly correlated with other country characteristics, their effects are prone to omitted variable bias (Schmidt-Catran & Fairbrother, 2016). I control for GDP per capita (Mayda & Rodrik, 2005) and welfare state spending (Hays et al., 2005; Rooduijn, 2022) as other potential moderators of individuals' attitudinal responses to globalization that are discussed in the literature. Neither variable alters the within effect between globalization and education, and neither variable itself interacts statistically significantly with education (see Appendices A.14 and A.15).

5 | DISCUSSION

The goal of this study was to test implicit assumptions in different research fields about how globalization affects people's political attitudes. Specifically, the goal was to test the argument from theories like cleavage theory that globalization leads to an increasing attitudinal polarization between winners and losers of globalization. Using education groups as an operationalization of winners and losers of globalization and repeated cross-sectional survey data from the ISSP for 29 countries, I analyzed whether globalization moderates the differences between education groups in attitudes toward globalization. A central aim of the analysis was to differentiate between-country differences in

the level of globalization from within-country changes, as well as to differentiate between economic, socio-cultural, and political globalization.

The main finding of the study is that contrary to expectations, there is no evidence that globalization increases the attitudinal polarization between winners and losers. On the contrary, as globalization increases within countries, the attitudinal gap between education groups decreases due to persons with lower and medium levels of education becoming more positive toward globalization while persons with higher levels of education remain the same. The main finding does not change when differentiating between the dimensions of globalization. While economic, socio-cultural, and political globalization have different effects, none lead to an increase in polarization. Moreover, this finding is consistent across a wide variety of robustness checks. The inclusion of occupational class into the models supports the main finding, as it shows no increase in polarization for any of the two definitions of the winners and losers of globalization. The findings concerning education and occupational class also inform a debate within the cleavage literature concerning the structural dimension of the globalization divide, indicating that both characteristics play a role independently of each other.

There is evidence for the attitudinal differences between winners and losers being substantially larger in more globalized countries (between effect), which poses the question of how these two results relate to each other. How can more globalized countries be more polarized when globalization does not increase polarization? One could speculate, that either globalization has had a different effect when these countries experienced the bulk of their increase in globalization, or, that other factors are causing the polarization in these highly globalized countries.

In general, the findings contradict the expectations about a growing divide between winners and losers of globalization. How can we make sense of this finding? On the one hand, one could argue that there is simply no increased divide or polarization of globalization attitudes to explain, as, for example, some recent studies have argued for the case of Germany (Dochow-Sondershaus & Teney, 2022; Teney & Rupieper, 2023). Others argue that there is an increasing polarization on topics like immigration or European integration, but that these issues are part of a larger socio-cultural cleavage between people with universalistic and particularistic values, which is not necessarily primarily influenced by globalization but by other societal trends like post-industrialization, social class, and value-change (Langsæther & Stubager, 2019). While both questions cannot be resolved based on the results from this study and further research exploring the relationship between globalization and polarization along issues related to this new cultural cleavage is warranted, the findings show that globalization does indeed influence attitudes on these issues and thus cannot be discounted as an explanatory variable, even if the way globalization is affecting attitudes runs counter to common expectations.

Concerning the effect of globalization, future research should especially focus on the decrease in polarization under within-country changes. Why do the losers of globalization become more positive toward globalization? On the one hand, their positive attitudinal response could be the result of not being negatively affected by globalization. While running contrary to the established literature, globalization might generally have positive effects on life chances across the population and not produce losers in the first way. On the other hand, globalization might objectively produce losers, but this does not translate into a negative attitudinal response. Here, future research should analyze the relationship between being objectively negatively affected by globalization, the subjective experience of globalization, and the attitudinal response (Steiner et al., 2023). A further avenue for future research could be focusing on the consequences of the within effect and whether globalization creates a feedback loop, whereby it produces a convergence in attitudes and support for pro-globalization policies across the population, which, once enacted, result in further increases in globalization processes.

The results of this study must be interpreted with some caution. Irrespective of the within-countries operationalization of globalization and the robustness checks, the globalization effect might still be vulnerable to omitted variable bias because of the relatively low number of countries in the analysis and the potentially high correlations with unobserved country characteristics. Similarly, the effect of education on globalization attitudes could be biased due to potential confounding by the parental background (Kuhn et al., 2021; Lancee & Sarrasin, 2015), about which information does not exist in the ISSP data. Moreover, as the ISSP is a repeated cross-sectional study and not a panel

study, the composition of the educational groups in each country is not stable over time, thus making the education coefficients potentially biased to unobserved compositional differences. In sum, the effects of globalization and education should not be interpreted as causal effects.

There are three core implications of this study: First, the role that globalization processes play in the emergence of a cleavage related to globalization, or, respectively, for a universalism/particularism cleavage and the accompanying socio-political polarization is still not well understood. Accounts of a growing attitudinal divide as a result of globalization need to be taken with some caution. Second, globalization is not a unidimensional process but consists of interlinked transformations across different societal domains, that differ in their impact on individuals' life chances and attitudes. Future globalization research should pay more attention to these differences between the globalization dimensions. Third, much of what we know about how globalization affects political attitudes and polarization is based on research conducted on cross-sectional data from countries in Western Europe and North America. This study has shown that expectations derived from these contexts do not necessarily hold true when including a longitudinal perspective and looking at a larger set of countries, emphasizing the value of empirically testing theoretical assumptions and results from prior research across as many heterogeneous contexts as possible.

ACKNOWLEDGEMENTS

I am very grateful to Heiko Giebler, Céline Teney, Lukas Antoine, and Stephan Dochow-Sondershaus, who commented on previous versions of the paper, as well as to Ana Karalashvili, Anna Kamenskikh, and Ade Ajayi for research assistance. Research for this contribution is part of the Cluster of Excellence "Contestations of the Liberal Script (SCRIPTS)" (EXC 2055, Project-ID: 390715649), funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) under Germany's Excellence Strategy.

Open Access funding enabled and organized by Projekt DEAL.

CONFLICT OF INTEREST STATEMENT

I have no conflicts of interest to disclose.

DATA AVAILABILITY STATEMENT

The analysis is based on publicly available data from the International Social Survey Programme (ISSP). Replication syntax files (for Stata) can be provided on request.

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ENDNOTES

- ¹ Notable exceptions are Teney et al. (2014) and Weßels and Strijbis (2019).
- ² Empirically, I also test the robustness of my findings by including social class, enabling a discussion with and between both strands of literature. Interestingly, my findings on the role of education are robust for such a more complex specification.
- ³ Weßels and Strijbis (2019) also include attitudes toward climate change and human rights as additional issue dimensions of globalization attitudes.
- ⁴ The use of the labels "low" and "high" does not reflect judgment on which type of educational attainment is better or worse but the different levels of the ISCED ranking.
- ⁵ The models also include an additional control variable in the form of the mean level of education per country. These models only control for effect heterogeneity in education and not in the globalization variable. Following Giesselmann and Schmidt-Catran (2019), controlling for effect heterogeneity in the individual-level variable is likely to be more important in country-comparative multilevel models.
- ⁶ This effect size is the largest for any individual-level variable in the model and more than twice as large than the next largest effect (parental citizenship).

- ⁷ One reason for this null finding could be the wording of the item measuring attitudes toward international organizations, which mentions environmental protection as an example of the influence of international organizations. The item might thus not solely measure attitudes toward political globalization (see also the robustness check below concerning the use of different attitude items).
- ⁸ The inclusion of occupational class results in a loss of 22,936 cases (29% of the sample) due to missing values.
- ⁹ The samples from South Africa are excluded due to missing items in the 2003 questionnaire, one of the two country waves. The samples from Taiwan are excluded due to missing data from the KOF index.
- ¹⁰ <https://data.worldbank.org/indicator/NY.GDP.MKTP.CD>.
- ¹¹ https://stats.oecd.org/Index.aspx?datasetcode=SOCX_AGG#.

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How to cite this article: Ollroge, R. (2023). Deepening the divide: Does globalization increase the polarization between winners and losers of globalization? *The British Journal of Sociology*, 74(5), 873–914. <https://doi.org/10.1111/1468-4446.13060>

APPENDICES

A.1 | Country samples⁹

See Table A1.

TABLE A1 Number of cases per country-year sample.

Country	Wave 1 (1995)	Wave 2 (2003)	Wave 3 (2013)	Total
Australia	2257	1952	-	4209
Austria	850	895	-	1745
Bulgaria	581	691	-	1272
Canada	1330	963	-	2293
Czech Republic	882	988	1752	3622
Denmark	-	1114	1242	2356
Finland	-	1135	1027	2162
France	-	1430	1799	3229
Germany	1519	1086	1520	4125
Hungary	851	856	919	2626
Ireland	930	991	1086	3007
Israel	-	1142	978	2120
Japan ^a	-	816	955	1771
Latvia	762	865	911	2538
Netherlands	1776	1549	-	3325
New Zealand	882	886	-	1768
Norway	1179	1256	1349	3784
Philippines	1150	1153	1162	3465
Poland	1162	993	-	2155
Portugal	-	1267	865	2132
Russia	1090	1648	1248	3986
Slovak Republic	1111	997	1043	3151
Slovenia ^b	782	-	892	1674
South Korea	-	1241	1267	2508
Spain	964	1080	1088	3132
Sweden	1041	1008	912	2961
Switzerland	-	973	1180	2153
United Kingdom	930	772	751	2453
United States	1125	1135	119	2379
Total (respondents)	23,154	30,882	25,065	79,101
Total (country year samples)	21	28	22	71

^aThe 1995 sample from Japan is excluded due to missing items in the questionnaire.

^bThe 2003 sample from Slovenia is excluded due to missing items in the questionnaire.

A.2 | Wording of the attitude items

See Table A2.

TABLE A2 Wording of the attitude items.

Globalization dimension	Variable name in the ISSP dataset	Item wording
Economic globalization	v30	(Country) should limit the import of foreign products in order to protect its national economy.
Socio-cultural globalization	v45	Immigrants improve (Country's nationality) society by bringing new ideas and cultures. (R)
Political globalization	v31	For certain problems, like environmental pollution, international bodies should have the right to enforce solutions. (R)

Note: (R) indicates the items that have been reversed for the analysis.

A.3 | Variable description and descriptive statistics

See Table A3.

TABLE A3 Variable description and descriptive statistics.

Variable description	Manifestation	Weighted value in used sample
Dependent variables		
Pro globalization (attitude index)	Mean	0.45
Normalized (range 0–1)	SD	0.21
Pro free trade	Mean	0.38
Normalized (range 0–1)	SD	0.30
Pro immigration	Mean	0.56
Normalized (range 0–1)	SD	0.27
Pro international organizations	Mean	0.70
Normalized (range 0–1)	SD	0.26
Explanatory variables—individual level		
Educational attainment		
1) Lower: ISCED-97 level 0, 1, 2	Low	39.20%
2) Medium: ISCED-97 level 3, 4	Medium	41.22%
3) Higher: ISCED-97 level 5, 6	High	19.57%
Gender		
	Male	49.50%
	Female	50.50%
Age		
	Mean	45.36
	SD	16.86
Citizenship		
	No	3.25%
	Yes	96.75%
Parental citizenship		
	At least one parent is no citizen	10.46%
	Both parents are citizens	89.54%
Occupational class position (5-class scheme based on Oesch, 2006) ^a		
	Unskilled workers	16.18
	Skilled workers	36.04
	Small business owners	11.05
	Lower-grade service class	18.69

(Continues)

TABLE A3 (Continued)

Variable description	Manifestation	Weighted value in used sample
	Higher-grade service class	18.05
Explanatory variables—country level		
Globalization ^b	Mean	77.45
(min = 53.49; max = 90.32)	SD	9.14
Globalization between estimator (country mean across waves)	Mean	77.45
(min = 61.39; max = 89.05) Standardized for the analysis	SD	7.82
Globalization within estimator (de-meaned country-year values)	Mean	0
(min = -12.59; max = 12.59) Standardized for the analysis	SD	4.76
Economic globalization	Mean	69.74
(min = 40.37; max = 90.19)	SD	11.62
Economic globalization between estimator (country mean across waves)	Mean	69.74
(min = 48.14; max = 88.81) Standardized for the analysis	SD	10.21
Economic globalization within estimator (de-meaned country-year values)	Mean	0
(min = -16.21; max = 13.93) Standardized for the analysis	SD	5.57
Socio-cultural globalization	Mean	76.25
(min = 38.64; max = 91.75)	SD	11.15
Socio-cultural globalization between estimator (country mean across waves)	Mean	76.25
(min = 48.72; max = 89.71) Standardized for the analysis	SD	9.64
Socio-cultural globalization within estimator (de-meaned country-year values)	Mean	0
(min = -11.41; max = 13.38) Standardized for the analysis	SD	5.65
Political globalization (min = 42.23; max = 89.24)	Mean	86.36
	SD	11.36
Political globalization between estimator (country mean across waves)	Mean	86.35
(min = 54.61; max = 97.50) Standardized for the analysis	SD	10.46
Political globalization within estimator (de-meaned country-year values)	Mean	0.01
(min = -17.71; max = 17.71) Standardized for the analysis	SD	4.44
Average educational attainment (country mean across waves)	Mean	0.81
	SD	0.22
Average occupational class position (country mean across waves)	Mean	3.10
	SD	0.30
Globalization 1990	Mean	64–98
	SD	11.99
Globalization: Change relative to 1990	Mean	13.05
	SD	6.40
Globalization: Change relative to 5 years prior	Mean	0.06
	SD	0.07

TABLE A3 (Continued)

Variable description	Manifestation	Weighted value in used sample
Globalization: Change relative to 5 years prior between estimator	Mean	0.06
	SD	0.04
Globalization: Change relative to 5 years prior within estimator	Mean	0.00
	SD	0.05
GDP per capita (in current US\$) ^c (min = 1048; max = 102,913.5)	Mean	26,577.79
	SD	19,613.04
GDP per capita between estimator (country mean across waves) (min = 1710.79; max = 68,789.94) Standardized for the analysis	Mean	26,602.65
	SD	17,161.99
GDP per capita within estimator (de-meanded country-year values) (min = -27765.64; max = 40,272.1) Standardized for the analysis	Mean	-24.86
	SD	9547.55
Welfare spending ^d (min = 1048; max = 102,913.5)	Mean	7417.44
	SD	3427.95
Welfare spending between estimator (country mean across waves) (min = 1710.79; max = 68,789.94) Standardized for the analysis	Mean	7420.23
	SD	3183.52
Welfare spending within estimator (de-meanded country-year values) (min = -27765.64; max = 40,272.1) Standardized for the analysis	Mean	-2.79
	SD	1283.04

^aThe Iscogen stata module (Jann, 2019) was used for the coding of the variable.

^bAll globalization figures are based on the KOF Globalization Index 2020 (Gygli et al., 2019).

^cThe GDP per capita data is from the World Bank: <https://data.worldbank.org/indicator/NY.GDP.MKTP.CD>.

^dThe welfare state spending data is from the OECD: https://stats.oecd.org/Index.aspx?datasetcode=SOCX_AGG#.

A.4 | Results related to H1 (Figure 1)

See Table A4.

TABLE A4 Results from multilevel regression models.

	M1-attitude index		M2-international trade		M3-immigration		M4-international organizations	
	b	se	b	se	b	se	b	se
	Medium edu. (ref: low)	0.048***	(0.006)	0.063***	(0.008)	0.041***	(0.006)	0.003
High edu. (ref: low)	0.108***	(0.011)	0.146***	(0.015)	0.096***	(0.011)	0.011	(0.007)
Female (ref: male)	-0.010**	(0.003)	-0.045***	(0.005)	0.010*	(0.005)	0.008*	(0.003)
Age	-0.002**	(0.000)	-0.001	(0.001)	-0.001*	(0.001)	-0.001	(0.000)
Age ²	0.000	(0.000)	-0.000	(0.000)	0.000	(0.000)	0.000	(0.000)
Citizenship (ref: no)	-0.020**	(0.008)	-0.018*	(0.009)	-0.039**	(0.013)	0.000	(0.007)
Both parents citizens (ref: no)	-0.047***	(0.005)	-0.047***	(0.005)	-0.081***	(0.006)	-0.012	(0.007)
Wave 2003 (ref: 1995)	0.018	(0.009)	0.037***	(0.011)	-0.014	(0.016)	-0.031**	(0.009)
Wave 2013 (ref: 1995)	0.016	(0.010)	0.045***	(0.012)	-0.008	(0.019)	-0.067***	(0.012)
Intercept	0.537***	(0.013)	0.492***	(0.020)	0.670***	(0.023)	0.752***	(0.016)
Variance of REs								
Country level intercept	0.003***	(0.001)	0.005***	(0.001)	0.006***	(0.001)	0.002***	(0.001)

(Continues)

TABLE A4 (Continued)

	M1-attitude index		M2-international trade		M3-immigration		M4-international organizations	
	b	se	b	se	b	se	b	se
Medium edu. RE	0.001***	(0.000)	0.002***	(0.001)	0.001***	(0.000)	0.000***	(0.000)
High edu. RE	0.003***	(0.001)	0.005***	(0.002)	0.003***	(0.001)	0.001***	(0.000)
Country-year level intercept	0.001***	(0.000)	0.001***	(0.000)	0.002***	(0.000)	0.001***	(0.000)
Individual level intercept	0.035***	(0.001)	0.074***	(0.002)	0.062***	(0.003)	0.062***	(0.003)
Model statistics								
Countries	29		29		29		29	
Country-years	71		71		71		71	
Individuals	79,101		79,101		79,101		79,101	
AIC	-39308.12		19,090.15		5656.865		4614.259	
BIC	-39168.94		19,229.32		5796.042		4753.437	
ICC (country level)	0.0738493		0.062533		0.0837419		0.0332407	
ICC (country-year level)	0.0925934		0.0774618		0.1097737		0.0453645	
Log likelihood	19,669.06		-9530.073		-2813.432		-2292.13	
Degrees of freedom	9		9		9		9	

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

A.5 | Results related to H2 (Figure 2)

See Table A5.

TABLE A5 Results from multilevel regression model.

	M5-attitude index	
	b	se
Medium edu. (ref: low)	0.048***	(0.004)
High edu. (ref: low)	0.109***	(0.007)
Between effect		
Globalization	0.033**	(0.010)
Glob. × medium edu.	0.019***	(0.004)
Glob. × high edu.	0.044***	(0.008)
Within effect		
Globalization	0.020**	(0.007)
Glob. × medium edu.	-0.006*	(0.003)
Glob. × high edu.	-0.011**	(0.004)
Average education level	0.011	(0.036)
Female (ref: male)	-0.010**	(0.003)
Age	-0.002**	(0.000)
Age ²	0.000	(0.000)
Citizenship (ref: no)	-0.020**	(0.007)
Both parents citizens (ref: no)	-0.047***	(0.005)
Wave 2003 (ref: 1995)	-0.015	(0.010)

TABLE A5 (Continued)

	M5-attitude index	
	b	se
Wave 2013 (ref: 1995)	-0.035*	(0.015)
Intercept	0.556***	(0.035)
Variance of REs		
Country level intercept	0.002***	(0.000)
Medium edu. RE	0.001***	(0.000)
High edu. RE	0.001***	(0.000)
Country-year level intercept	0.001***	(0.000)
Individual level intercept	0.035***	(0.001)
Model statistics		
Countries	29	
Country-years	71	
Individuals	79,101	
AIC	-39402.3	
BIC	-39198.18	
ICC (country level)	0.0461402	
ICC (country-year level)	0.0622046	
Log likelihood	19,723.15	
Degrees of freedom	16	

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

See Table A6.

TABLE A6 Average marginal effects of the between- and within-interactions.

	Between effect	Within effect
Lower education	0.033** (0.010)	0.020** (0.007)
Medium education	0.052*** (0.009)	0.014* (0.005)
Higher education	0.076*** (0.009)	0.009 (0.008)
N	79,101	79,101

Note: Standard errors in parentheses.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

See Table A7.

TABLE A7 Chi² figures from Wald tests of effect size differences for the between- and within-interactions.

	Between effect	Within effect
Lower edu. = medium edu.	19.75***	4.30*
Lower edu. = higher edu.	28.25***	8.96**
Medium edu. = higher edu.	21.85***	1.50

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

A.6 | Results related to H3 (Figure 3)

See Table A8.

TABLE A8 Results from multilevel regression model.

	Attitude index	
	b	se
Medium edu. (ref: low)	0.049***	(0.004)
High edu. (ref: low)	0.109***	(0.006)
Between effect (econ. glob.)		
Economic glob.	0.008	(0.012)
Econ. glob. × medium edu.	0.003	(0.007)
Econ. glob. × high edu.	0.005	(0.011)
Within effect (econ. glob.)		
Economic globalization	0.020***	(0.005)
Econ. glob. × medium edu.	-0.003	(0.003)
Econ. glob. × high edu.	-0.006	(0.006)
Between effect (soc.-cul. glob.)		
Socio-cultural glob.	0.016	(0.019)
Soc.-cul. glob. × medium edu.	0.011	(0.007)
Soc.-cul. glob. × high edu.	0.031**	(0.012)
Within effect (soc.-cul. glob.)		
Socio-cultural globalization	0.017*	(0.007)
Soc.-cul. glob. × medium edu.	-0.013**	(0.005)
Soc.-cul. glob. × high edu.	-0.012	(0.009)
Between effect (pol. glob.)		
Political glob.	0.021**	(0.007)
Pol. glob. × medium edu.	0.012*	(0.005)
Pol. glob. × high edu.	0.020**	(0.007)
Within effect (pol. glob.)		
Political globalization	-0.007	(0.004)
Pol. glob. × medium edu.	0.009***	(0.002)
Pol. glob. × high edu.	0.006	(0.005)
Average education level	0.014	(0.038)
Female (ref: male)	-0.010**	(0.003)
Age	-0.002**	(0.000)

TABLE A8 (Continued)

	Attitude index	
	b	se
Age ²	0.000	(0.000)
Citizenship (ref: no)	-0.020**	(0.007)
Both parents citizens (ref: no)	-0.047***	(0.005)
Wave 2003 (ref: 1995)	-0.033**	(0.011)
Wave 2013 (ref: 1995)	-0.058**	(0.019)
Intercept	0.567***	(0.038)
Variance of REs		
Country level intercept	0.002***	(0.000)
Medium edu. RE	0.000***	(0.000)
High edu. RE	0.001***	(0.000)
Country-year level intercept	0.001***	(0.000)
Individual level intercept	0.035***	(0.001)
Model statistics		
Countries	29	
Country-years	71	
Individuals	79,101	
AIC	-39413.31	
BIC	-39153.51	
ICC (country level)	0.0456111	
ICC (country-year level)	0.0593405	
Log likelihood	19,734.65	
Degrees of freedom	28	

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

See Table A9.

TABLE A9 Average marginal effects of the within-interactions.

	Economic globalization	Socio-cultural globalization	Political globalization
Lower education	0.020*** (0.005)	0.017* (0.007)	-0.007 (0.004)
Medium education	0.017*** (0.005)	0.004 (0.007)	0.002 (0.004)
Higher education	0.014* (0.007)	0.005 (0.010)	-0.001 (0.008)
N	79,101	79,101	79,101

Note: Standard errors in parentheses.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

See Table A10

TABLE A10 Chi² figures from Wald tests of effect size differences for the between- and within-interactions.

	Economic globalization	Socio-cultural globalization	Political globalization
Lower edu. = medium edu.	0.815	7.624**	16.283***
Lower edu. = higher edu.	1.180	1.844	1.324
Medium edu. = higher edu.	0.347	0.024	0.360

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

A.7 | Robustness check of including only countries with three waves

As the inclusion of countries with different numbers of waves and waves at different time points might influence the results, this model reproduces the main analysis (H2) only with the 13 countries that have been included in all three waves. This includes the Czech Republic, Germany, Hungary, Ireland, Latvia, Norway, the Philippines, Russia, Slovakia, Spain, Sweden, the UK, the USA (Table A11).

TABLE A11 Results from multilevel regression model (H2).

	Attitude index	
	b	se
Medium edu. (ref: low)	0.042***	(0.003)
High edu. (ref: low)	0.098***	(0.007)
Between effect		
Globalization	0.032*	(0.016)
Glob. × medium edu.	0.023***	(0.004)
Glob. × high edu.	0.049***	(0.009)
Within effect		
Globalization	0.023***	(0.004)
Glob. × medium edu.	-0.008***	(0.003)
Glob. × high edu.	-0.010	(0.005)
Average education level	-0.009	(0.050)
Female (ref: male)	-0.008	(0.005)
Age	-0.002**	(0.001)
Age ²	0.000	(0.000)
Citizenship (ref: no)	-0.029***	(0.007)
Both parents citizens (ref: no)	-0.049***	(0.008)
Wave 2003 (ref: 1995)	-0.020*	(0.010)
Wave 2013 (ref: 1995)	-0.039***	(0.012)
Intercept	0.594***	(0.054)
Variance of REs		
Country level intercept	0.002***	(0.000)
Medium edu. RE	0.000***	(0.000)
High edu. RE	0.001***	(0.000)
Country-year level intercept	0.000***	(0.000)
Individual level intercept	0.034***	(0.001)

TABLE A 11 (Continued)

	Attitude index	
	b	se
Model statistics		
Countries	13	
Country-years	39	
Individuals	42,229	
AIC	-23455.17	
BIC	-23342.71	
ICC (country level)	0.0466622	
ICC (country-year level)	0.0567348	
Log likelihood	11,740.58	
Degrees of freedom	12	

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

See Table A12.

TABLE A 12 Average marginal effects of the within-interaction.

	Between effect	Within effect
Low education	0.052*** (0.011)	0.022*** (0.004)
Medium education	0.073*** (0.013)	0.014** (0.004)
High education	0.093*** (0.014)	0.013 (0.008)
N	38,764	38,764

Note: Standard errors in parentheses.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

A.8 | Analysis including occupational class

Oesch's (2006) five-class-variable is included in the models, both as a single variable in the H1 model and as interactions with the globalization estimators in the H2 model. The occupational class variable is constructed using the Iscogen stata module (Jann, 2019). Due to missing data, the following country-year samples have been excluded: the Netherlands 2013, the Philippines 1995, Sweden 1995, the UK 1995, the USA 1995 (Table A13).

TABLE A 13 Results from multilevel regression model (H1).

	Attitude index	
	b	se
Medium edu. (ref: low)	0.043***	(0.005)
High edu. (ref: low)	0.085***	(0.009)
Skilled workers (ref: Unskilled workers)	0.004	(0.004)
Small business owners (ref: Unskilled workers)	0.000	(0.003)
Lower-grade service class (ref: Unskilled workers)	0.024***	(0.004)

(Continues)

TABLE A13 (Continued)

	Attitude index	
	b	se
Higher-grade service class (ref: Unskilled workers)	0.035***	(0.006)
Female (ref: male)	-0.010**	(0.003)
Age	-0.001	(0.001)
Age ²	-0.000	(0.000)
Citizenship (ref: no)	-0.018*	(0.008)
Both parents citizens (ref: no)	-0.048***	(0.006)
Wave 2003 (ref: 1995)	0.019	(0.013)
Wave 2013 (ref: 1995)	0.016	(0.014)
Intercept	0.502***	(0.016)
Variance of random effects		
Country level intercept	0.003***	(0.001)
Medium edu. RE	0.001***	(0.000)
High edu. RE	0.002***	(0.001)
Skilled workers RE	0.000***	(0.000)
Small business owners RE	0.000***	(0.000)
Lower-grade service class RE	0.000***	(0.000)
Higher-grade service class RE	0.001***	(0.000)
Country-year level intercept	0.001***	(0.000)
Individual level intercept	0.036***	(0.001)
Model statistics		
Countries	29	
Country-years	66	
Individuals	56,165	
AIC	-27137.36	
BIC	-26931.83	
ICC (country level)	0.0811015	
ICC (country-year level)	0.0992027	
Log likelihood	13,591.68	
Degrees of freedom	13	

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

See Figure A1.

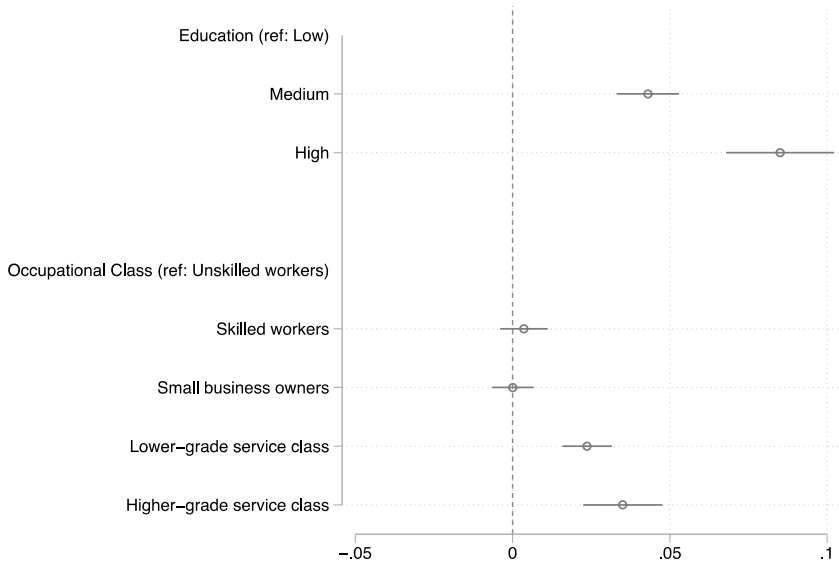


FIGURE A1 Effects of education and occupational class on the attitude index.

See Table A14.

TABLE A14 Results from multilevel regression model (H2).

	Attitude index	
	b	se
Medium edu. (ref: low)	0.042***	(0.004)
High edu. (ref: low)	0.086***	(0.007)
Skilled workers (ref: Unskilled workers)	0.004	(0.004)
Small business owners (ref: Unskilled workers)	0.001	(0.003)
Lower-grade service class (ref: Unskilled workers)	0.025***	(0.004)
Higher-grade service class (ref: Unskilled workers)	0.038***	(0.005)
Between effect		
Globalization	0.034**	(0.012)
Glob. × medium edu.	0.011*	(0.005)
Glob. × high edu.	0.028**	(0.009)
Glob. × skilled workers	0.003	(0.005)
Glob. × small business owners	0.004	(0.003)
Glob. × lower-grade service class	0.008*	(0.003)
Glob. × higher-grade service class	0.021***	(0.005)
Within effect		
Globalization	0.023*	(0.010)
Glob. × medium edu.	-0.006	(0.006)
Glob. × high edu.	-0.010*	(0.005)

(Continues)

TABLE A14 (Continued)

	Attitude index	
	b	se
Glob. × skilled workers	-0.003	(0.003)
Glob. × small business owners	0.004	(0.003)
Glob. × lower-grade service class	0.001	(0.004)
Glob. × higher-grade service class	0.005	(0.005)
Average education level	0.015	(0.045)
Average occupational class	0.006	(0.039)
Female (ref: male)	-0.009**	(0.004)
Age	-0.001	(0.001)
Age2	-0.000	(0.000)
Citizenship (ref: no)	-0.018*	(0.008)
Both parents citizens (ref: no)	-0.048***	(0.006)
Wave 2003 (ref: 1995)	-0.021	(0.015)
Wave 2013 (ref: 1995)	-0.047*	(0.021)
Intercept	0.506***	(0.144)
Variance of random effects		
Country level intercept	0.002***	(0.000)
Medium edu. RE	0.000***	(0.000)
High edu. RE	0.001***	(0.000)
Skilled workers RE	0.000***	(0.000)
Small business owners RE	0.000***	(0.000)
Lower-grade service class RE	0.000***	(0.000)
Higher-grade service class RE	0.000***	(0.000)
Country-year level intercept	0.001***	(0.000)
Individual level intercept	0.036***	(0.001)
Model statistics		
Countries	29	
Country-years	66	
Individuals	56,165	
AIC	-27213.75	
BIC	-26963.54	
ICC (country level)	0.0479994	
ICC (country-year level)	0.0636686	
Log likelihood	13,634.87	
Degrees of freedom	28	

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

See Table A15.

TABLE A15 Average marginal effects of the between- and within-interactions.

	Between effect	Within effect
Low education	0.0411*** (0.0118)	0.0240* (0.0110)
Medium education	0.0520*** (0.0106)	0.0181** (0.00686)
High education	0.0692*** (0.0107)	0.0140 (0.00900)
Unskilled workers	0.0452*** (0.0103)	0.0187* (0.00779)
Skilled workers	0.0478*** (0.00959)	0.0157* (0.00709)
Small business owners	0.0492*** (0.0114)	0.0231* (0.00904)
Lower-grade service class	0.0532*** (0.0108)	0.0199* (0.0101)
Higher-grade service class	0.0663*** (0.0133)	0.0241* (0.0113)

Note: Standard errors in parentheses.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

A.9 | Robustness check with different operationalizations of the attitude index

The ISSP dataset is somewhat limited regarding items measuring attitudes toward the three subdimensions of globalization, due to some items not having been included in all three waves. However, there are some alternatives to the three used items that have been included in all waves, especially when it comes to measuring attitudes toward socio-cultural globalization (see the table below for the used items and possible alternatives). For economic globalization, v30 was chosen as it directly addresses limits on foreign trade, whereas the alternative v33 (foreigners buying land) is less directly related to the core of economic globalization. Similarly, items v43 and v44 are somewhat related to the economic dimension but focus on immigration which is usually considered to be related to socio-cultural globalization. For socio-cultural globalization, v45 was chosen because it covers both immigration and culture, whereas the alternatives focus on either one of the two aspects of socio-cultural globalization (e.g., v34 focuses on culture and the other items on immigration). For political globalization, v31 was chosen due to being directly related to the power of international organizations, while the alternative v32 does address a country's relations with other countries but without considering international organizations (Table A16).

TABLE A16 Wording of the used and of additional attitude items.

Globalization dimension	Variable name in the ISSP dataset	Item wording
Economic globalization	v30 (used in the main analysis)	(Country) should limit the import of foreign products in order to protect its national economy.
	v33	Foreigners should not be allowed to buy land in (country).
Socio-cultural globalization	v45 (used in the main analysis)	Immigrants improve (Country's nationality) society by bringing new ideas and cultures. (R)
	v34	(Country's nationality) television should give preference to (Country's nationality) films and programs.
	v39	It is impossible for people who do not share (Country's nationality) customs and traditions to become fully (Country's nationality).
	v42	Immigrants increase crime rates.
	v43	Immigrants are generally good for (Country's) economy. (R)
	v44	Immigrants take jobs away from people who were born in (country).
	v48	Do you think the number of immigrants to (country) nowadays should be ... increased a lot/increased a little/remain the same as it is/reduced a little/reduced a lot? (R).
Political globalization	v31 (used in the main analysis)	For certain problems, like environmental pollution, international bodies should have the right to enforce solutions. (R)
	v32	(Country) should follow its own interests, even if this leads to conflicts with other nations.

Note: (R) indicates the items that have been reversed for the analysis.

Even though the three used items measure attitudes toward the three subdimensions more directly than the alternatives, I conduct a set of robustness checks testing whether using the alternative items to construct the dependent variable leads to different results. First, for each of the alternative items listed above, I test whether substituting the used item with the alternative for operationalizing the respective attitudinal subdimension of the overall attitude index makes a difference. Second, I use two items instead of one for operationalizing each subdimension (v30 and v33 for economic globalization, v45 and v34 for socio-cultural globalization, v31 and v32 for political globalization). As with the other robustness checks, the focus is on whether the within effect shows an increase in polarization. The following table shows the average marginal effects for the within effect for each of the different operationalizations of the dependent variable. In none of the different operationalizations does the within effect show an increase in polarization (Table A17).

TABLE A17 Average marginal effects of the within effect on alternative dependent variables.

Dependent variable	Low education		Medium education		High education	
	ame	se	ame	se	ame	se
v33 as economic globalization	0.025***	(0.007)	0.024**	(0.008)	0.023*	(0.010)
v43 as economic globalization	0.027***	(0.007)	0.026***	(0.007)	0.024**	(0.008)
v44 as economic globalization	0.031***	(0.006)	0.024***	(0.006)	0.023***	(0.006)
v34 as socio-cultural globalization	-0.001	(0.005)	-0.012*	(0.005)	-0.015	(0.008)

TABLE A 17 (Continued)

Dependent variable	Low education		Medium education		High education	
	ame	se	ame	se	ame	se
v39 as socio-cultural globalization	0.004	(0.004)	-0.001	(0.005)	-0.004	(0.006)
v42 as socio-cultural globalization	0.024***	(0.007)	0.016*	(0.007)	0.010	(0.008)
v43 as socio-cultural globalization	0.012*	(0.006)	0.006	(0.005)	0.002	(0.007)
v44 as socio-cultural globalization	0.014**	(0.005)	0.004	(0.005)	0.001	(0.006)
v48 as socio-cultural globalization	0.019***	(0.006)	0.014*	(0.006)	0.008	(0.006)
v32 as political globalization	0.008	(0.007)	0.001	(0.006)	-0.004	(0.009)
v30 and v33 as economic globalization, v45 and v34 as socio-cultural globalization, v31 and v32 as political globalization	0.005	(0.005)	-0.002	(0.005)	-0.005	(0.007)

Note: Standard errors in parentheses.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

A.10 | Robustness check with operationalizing globalization as changes relative to 1990

For each country year, the KOF value for 1990 is subtracted from the KOF value for the respective country year. These differences to 1990 are used as the within estimator, while the KOF value of 1990 is used as the between estimator. Due to missing data in the KOF index for 1990, the following countries have been excluded: Slovenia, the Czech Republic, and Slovakia (Table A18).

TABLE A 18 Results from multilevel regression model (H2).

	Attitude index	
	b	se
Medium edu. (ref: low)	0.050***	(0.004)
High edu. (ref: low)	0.112***	(0.006)
Between effect		
Globalization	0.062***	(0.013)
Glob. × medium edu.	0.015**	(0.005)
Glob. × high edu.	0.043***	(0.011)
Within effect		
Globalization	0.047***	(0.010)
Glob. × medium edu.	-0.011***	(0.003)
Glob. × high edu.	-0.009	(0.006)
Average education level	0.012	(0.039)
Female (ref: male)	-0.010**	(0.003)
Age	-0.001**	(0.000)
Age ²	0.000	(0.000)
Citizenship (ref: no)	-0.023**	(0.007)
Both parents citizens (ref: no)	-0.046***	(0.006)
Wave 2003 (ref: 1995)	-0.032**	(0.012)
Wave 2013 (ref: 1995)	-0.062***	(0.016)
Intercept	0.573***	(0.037)

(Continues)

TABLE A18 (Continued)

	Attitude index	
	b	se
Variance of REs		
Country level intercept	0.002***	(0.000)
Medium edu. RE	0.000***	(0.000)
High edu. RE	0.001***	(0.000)
Country-year level intercept	0.001***	(0.000)
Individual level intercept	0.035***	(0.001)
Model statistics		
Countries	26	
Country-years	63	
Individuals	70,654	
AIC	-35016.43	
BIC	-34814.78	
ICC (country level)	0.0509137	
ICC (country-year level)	0.0663397	
Log likelihood	17,530.21	
Degrees of freedom	16	

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

See Table A19.

TABLE A19 Average marginal effects of the between- and within-interactions.

	Between effect	Within effect
Low education	0.0618*** (0.0127)	0.0469*** (0.00985)
Medium education	0.0771*** (0.0114)	0.0357*** (0.0104)
High education	0.105*** (0.0116)	0.0380*** (0.00987)
N	70,654	70,654

Note: Standard errors in parentheses.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

A.11 | Robustness check with operationalizing globalization as changes relative to 5 years prior

For each country year, the KOF value for five years prior is subtracted from the KOF value at the respective country year (1990 for 1995; 1998 for 2003; 2008 for 2013). The country mean of these values is the between estimator, whereas the de-meaned country year values are the within estimator. Due to missing data in the KOF index for 1990, the following country year samples have been excluded: Slovenia 1995, the Czech Republic 1995, and Slovakia 1995 (Table A20).

TABLE A20 Results from multilevel regression model (H2).

	Attitude index	
	b	se
Medium edu. (ref: low)	0.049***	(0.005)
High edu. (ref: low)	0.109***	(0.009)
Between effect		
Globalization	-0.029***	(0.009)
Glob. × medium edu.	-0.012*	(0.005)
Glob. × high edu.	-0.033**	(0.011)
Within effect		
Globalization	-0.012	(0.008)
Glob. × medium edu.	0.008**	(0.002)
Glob. × high edu.	0.010*	(0.004)
Average education level	-0.035	(0.035)
Female (ref: male)	-0.010**	(0.003)
Age	-0.002**	(0.000)
Age ²	0.000	(0.000)
Citizenship (ref: no)	-0.021**	(0.007)
Both parents citizens (ref: no)	-0.047***	(0.005)
Wave 2003 (ref: 1995)	-0.004	(0.010)
Wave 2013 (ref: 1995)	-0.017	(0.019)
Intercept	0.583***	(0.036)
Variance of REs		
Country level intercept	0.002***	(0.000)
Medium edu. RE	0.001***	(0.000)
High edu. RE	0.002***	(0.001)
Country-year level intercept	0.001***	(0.000)
Individual level intercept	0.035***	(0.001)
Model statistics		
Countries	29	
Country-years	68	
Individuals	76,326	
AIC	-38211.81	
BIC	-38008.46	
ICC (country level)	0.0485488	
ICC (country-year level)	0.0692736	
Log likelihood	19,127.9	
Degrees of freedom	16	

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

See Table A21.

TABLE A21 Average marginal effects of the between- and within-interactions.

	Between effect	Within effect
Low education	-0.0287*** (0.00858)	-0.0120 (0.00822)
Medium education	-0.0407*** (0.0101)	-0.00397 (0.00767)
High education	-0.0612*** (0.0142)	-0.00245 (0.0106)
N	76,326	76,326

Note: Standard errors in parentheses.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

A.12 | Robustness check with separate analyses for countries with low and high levels of globalization in 1990

Countries are separated into two groups based on the mean 1990 level of the KOF Index in the sample (68). Due to missing data in the KOF index for 1990, the following countries have been excluded: Slovenia, the Czech Republic, and Slovakia. Less globalized countries are Latvia, the Philippines, Russia, Bulgaria, South Korea, Poland, Japan, Israel, Hungary, Portugal, Spain, New Zealand, and Australia. More globalized countries are the US, Canada, Finland, Germany, Ireland, France, Austria, Norway, Sweden, Switzerland, the UK, Denmark, and the Netherlands (Table A22).

TABLE A22 Results from multilevel regression model (H2).

	Attitude index - less globalized countries (1990)		Attitude index - more globalized countries (1990)	
	b	se	b	se
Medium edu. (ref: low)	0.039***	(0.006)	0.054***	(0.012)
High edu. (ref: low)	0.095***	(0.008)	0.129***	(0.014)
Between effect				
Globalization	0.040	(0.024)	0.031	(0.030)
Glob. × medium edu.	0.013	(0.007)	0.018	(0.011)
Glob. × high edu.	0.036*	(0.014)	0.028	(0.017)
Within effect				
Globalization	0.035***	(0.010)	0.001	(0.029)
Glob. × medium edu.	-0.007**	(0.002)	-0.032***	(0.009)
Glob. × high edu.	-0.009	(0.006)	-0.025	(0.015)
Average education level	0.003	(0.071)	0.010	(0.066)
Female (ref: male)	-0.004	(0.004)	-0.014**	(0.005)
Age	-0.002***	(0.001)	-0.000	(0.001)
Age ²	0.000*	(0.000)	-0.000	(0.000)
Citizenship (ref: no)	-0.032**	(0.010)	-0.016	(0.009)
Both parents citizens (ref: no)	-0.039***	(0.007)	-0.052***	(0.008)
Wave 2003 (ref: 1995)	-0.036	(0.024)	0.008	(0.027)
Wave 2013 (ref: 1995)	-0.063*	(0.031)	-0.011	(0.034)
Intercept	0.605***	(0.050)	0.525***	(0.070)

TABLE A 22 (Continued)

	Attitude index - less globalized countries (1990)		Attitude index - more globalized countries (1990)	
	b	se	b	se
Variance of REs				
Country level intercept	0.002***	(0.001)	0.002***	(0.001)
Medium edu. RE	0.000***	(0.000)	0.001***	(0.000)
High edu. RE	0.000***	(0.000)	0.001***	(0.000)
Country-year level intercept	0.000***	(0.000)	0.001***	(0.000)
Individual level intercept	0.033***	(0.001)	0.038***	(0.002)
Model statistics				
Countries	13		13	
Country-years	31		32	
Individuals	33,682		36,972	
AIC	-19672.51		-15552.96	
BIC	-19571.42		-15450.74	
ICC (country level)	0.0563255		0.0513727	
ICC (country-year level)	0.0752661		0.0615285	
Log likelihood	9848.256		7788.478	
Degrees of freedom	12		12	

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

See Table A23.

TABLE A 23 Average marginal effects of the between- and within-interactions.

	Less globalized countries (1990)		More globalized countries (1990)	
	Between effect	Within effect	Between effect	Within effect
Low education	0.0401 (0.0241)	0.0353*** (0.01000)	0.0308 (0.0304)	0.00114 (0.0291)
Medium education	0.0530** (0.0199)	0.0287** (0.0107)	0.0489 (0.0310)	-0.0313 (0.0300)
High education	0.0761*** (0.0179)	0.0267** (0.00860)	0.0584** (0.0208)	-0.0241 (0.0288)
N	33,682	33,682	36,972	36,972

Note: Standard errors in parentheses.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

A.13 | Robustness check with separate analyses for different regions

The countries are categorized into three Regions: Western Europe (Austria, Denmark, Finland, France, Germany, Ireland, Israel, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the UK), Central and Eastern Europe (Bulgaria, the Czech Republic, Hungary, Latvia, Poland, Russia, Slovakia, and Slovenia), and non-European countries (Australia, Canada, Japan, New Zealand, the Philippines, South Korea, and the US) (Table A24).

TABLE A24 Results from multilevel regression model (H2).

	Attitude index–western Europe		Attitude index–central and eastern Europe		Attitude index–non-European	
	b	se	b	se	b	se
Medium edu. (ref: low)	0.036***	(0.009)	0.033***	(0.004)	0.052***	(0.007)
High edu. (ref: low)	0.098***	(0.010)	0.080***	(0.009)	0.120***	(0.010)
Between effect						
Globalization	0.042*	(0.020)	−0.007	(0.016)	−0.001	(0.010)
Glob. × medium edu.	0.036***	(0.010)	−0.001	(0.007)	0.031***	(0.003)
Glob. × high edu.	0.056***	(0.014)	0.006	(0.015)	0.076***	(0.006)
Within effect						
Globalization	−0.003	(0.014)	−0.003	(0.014)	0.027***	(0.008)
Glob. × medium edu.	−0.023*	(0.010)	−0.003	(0.003)	−0.013	(0.007)
Glob. × high edu.	−0.003	(0.015)	−0.008*	(0.003)	−0.035**	(0.013)
Average education level	−0.030	(0.051)	−0.133*	(0.061)	0.016	(0.069)
Female (ref: male)	−0.014**	(0.005)	−0.006	(0.006)	−0.007	(0.004)
Age	−0.000	(0.000)	−0.003***	(0.001)	−0.002	(0.001)
Age2	−0.000	(0.000)	0.000*	(0.000)	0.000	(0.000)
Citizenship (ref: no)	−0.020	(0.010)	−0.024	(0.020)	−0.020	(0.013)
Both parents citizens (ref: no)	−0.047***	(0.010)	−0.050***	(0.009)	−0.047***	(0.005)
Wave 2003 (ref: 1995)	0.015	(0.018)	0.044	(0.039)	−0.046***	(0.013)
Wave 2013 (ref: 1995)	−0.008	(0.022)	0.058	(0.056)	−0.030	(0.024)
Intercept	0.537***	(0.048)	0.598***	(0.060)	0.572***	(0.077)
Model statistics						
Country level intercept	0.002***	(0.001)	0.001***	(0.000)	0.001***	(0.000)
Medium edu. RE	0.001***	(0.000)	0.000***	(0.000)	0.000***	(0.000)
High edu. RE	0.001***	(0.000)	0.001***	(0.000)	0.000***	(0.000)
Country-year level intercept	0.000***	(0.000)	0.000***	(0.000)	0.000***	(0.000)
Individual level intercept	0.037***	(0.002)	0.035***	(0.001)	0.032***	(0.002)
Countries	14		8		7	
Country-years	34		21		16	
Individuals	38,684		21,024		19,393	
AIC	−17132.01		−11979.76		−10526.48	
BIC	−17020.69		−11916.14		−10471.38	
ICC (country level)	0.0488925		0.0151952		0.0202961	
ICC (country-year level)	0.0606234		0.0287152		0.0294928	
Log likelihood	8579.007		5997.881		5270.242	
Degrees of freedom	13		7		6	

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

See Table A25.

TABLE A25 Average marginal effects of the between- and within-interactions.

	Western Europe		Central and eastern Europe		Non-European	
	Between effect	Within effect	Between effect	Within effect	Between effect	Within effect
Low education	0.0418* (0.0200)	-0.00315 (0.0143)	-0.00655 (0.0157)	-0.00317 (0.0139)	-0.00101 (0.0104)	0.0268*** (0.00757)
Medium education	0.0776*** (0.0203)	-0.0258 (0.0198)	-0.00715 (0.0195)	-0.00570 (0.0117)	0.0298** (0.0113)	0.0136* (0.00609)
High education	0.0980*** (0.0131)	-0.00570 (0.0224)	-0.000647 (0.0259)	-0.0116 (0.0144)	0.0754*** (0.00867)	-0.00851 (0.0136)
N	38,684	38,684	21,024	21,024	19,393	19,393

Note: Standard errors in parentheses.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

A.14 | Robustness check with controlling for GDP per capita

To control for GDP per capita, World Bank data¹⁰ are used to construct between and within estimators analogous to the globalization estimators. The between estimator is the country mean of GDP per capita across waves and the within estimator is the de-meaned country year values. The following model includes respective interactions between education and the between and within estimators for GDP, as between education and the between and within estimators for globalization (Table A26).

TABLE A26 Results from multilevel regression model (H2).

	Attitude index	
	b	se
Medium edu. (ref: low)	0.048***	(0.004)
High edu. (ref: low)	0.108***	(0.007)
Between effect globalization		
Globalization	0.005	(0.015)
Glob. × medium edu.	0.022**	(0.007)
Glob. × high edu.	0.041**	(0.013)
Within effect globalization		
Globalization	0.018*	(0.008)
Glob. × medium edu.	-0.001	(0.003)
Glob. × high edu.	-0.006	(0.004)
Between effect GDP		
GDP	0.033*	(0.014)
GDP × medium edu.	-0.004	(0.006)
GDP × high edu.	0.003	(0.010)
Within effect GDP		
GDP	-0.001	(0.008)
GDP × medium edu.	-0.011***	(0.003)
GDP × high edu.	-0.010*	(0.005)
Average education level	-0.045	(0.053)

(Continues)

TABLE A26 (Continued)

	Attitude index	
	b	se
Female (ref: male)	-0.010**	(0.003)
Age	-0.002**	(0.000)
Age ²	0.000	(0.000)
Citizenship (ref: no)	-0.020**	(0.008)
Both parents citizens (ref: no)	-0.047***	(0.005)
Wave 2003 (ref: 1995)	-0.011	(0.015)
Wave 2013 (ref: 1995)	-0.026	(0.028)
Intercept	0.597***	(0.048)
Variance of REs		
Country level intercept	0.001***	(0.000)
Medium edu. RE	0.000***	(0.000)
High edu. RE	0.001***	(0.000)
Country-year level intercept	0.001***	(0.000)
Individual level intercept	0.035***	(0.001)
Model statistics		
Countries	29	
Country-years	71	
Individuals	79,101	
AIC	-39406.92	
BIC	-39147.13	
ICC (country level)	0.039787	
ICC (country-year level)	0.0558498	
Log likelihood	19,731.46	
Degrees of freedom	22	

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

See Table A27.

TABLE A27 Average marginal effects of the between- and within-interactions.

	Globalization		GDP	
	Between effect	Within effect	Between effect	Within effect
Low education	0.00491 (0.0153)	0.0178* (0.00751)	0.0327* (0.0137)	-0.00114 (0.00810)
Medium education	0.0266 (0.0166)	0.0169** (0.00608)	0.0291 (0.0163)	-0.0126 (0.00855)
High education	0.0463** (0.0165)	0.0115 (0.00871)	0.0353* (0.0176)	-0.0112 (0.00669)
N	79,101	79,101	79,101	79,101

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

A.15 | Robustness check with controlling for welfare state spending

To control for welfare state spending, OECD data on per head social expenditure, at constant prices (2015) and constant PPPs (2015), in US dollars¹¹ are used to construct between and within estimators analogous to the globalization estimators. The between estimator is the country mean of welfare spending across waves and the within estimator the de-meanded country year values. The following model includes respective interactions between education and the between and within estimators for welfare spending, as well as with the between and within estimators for globalization. Due to missing data on welfare spending, the country samples for Bulgaria, the Philippines, Russia, and the country year sample for Hungary 1995 have been excluded (Table A28).

TABLE A 28 Results from multilevel regression model (H2).

	Attitude index	
	b	se
Medium edu. (ref: low)	0.054***	(0.005)
High edu. (ref: low)	0.120***	(0.007)
Between effect globalization		
Globalization	0.035	(0.018)
Glob. × medium edu.	0.000	(0.008)
Glob. × high edu.	0.011	(0.017)
Within effect globalization		
Globalization	0.016**	(0.005)
Glob. × medium edu.	-0.001	(0.006)
Glob. × high edu.	-0.007	(0.008)
Between effect welfare spending		
Welfare spending	-0.006	(0.021)
Welfare spending × medium edu.	0.017	(0.009)
Welfare spending × high edu.	0.026	(0.016)
Within effect welfare spending		
Welfare spending	0.000	(0.007)
Welfare spending × medium edu.	-0.006	(0.007)
Welfare spending × high edu.	-0.003	(0.010)
Average education level	0.019	(0.043)
Female (ref: male)	-0.013***	(0.003)
Age	-0.001*	(0.001)
Age ²	0.000	(0.000)
Citizenship (ref: no)	-0.021**	(0.008)
Both parents citizens (ref: no)	-0.047***	(0.005)
Wave 2003 (ref: 1995)	-0.014	(0.013)
Wave 2013 (ref: 1995)	-0.031	(0.024)
Intercept	0.554***	(0.039)
Variance of REs		
Country level intercept	0.002***	(0.000)
Medium edu. RE	0.001***	(0.000)
High edu. RE	0.001***	(0.000)
Country-year level intercept	0.001***	(0.000)

(Continues)

TABLE A28 (Continued)

	Attitude index	
	b	se
Individual level intercept	0.035***	(0.001)
Model statistics		
Countries	29	
Country-years	71	
Individuals	69,527	
AIC	-34598.31	
BIC	-34369.57	
ICC (country level)	0.0420643	
ICC (country-year level)	0.569,041	
Log likelihood	17,324.15	
Degrees of freedom	22	

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

See Table A29.

TABLE A29 Average marginal effects of the between- and within-interactions.

	Globalization		Welfare spending	
	Between effect	Within effect	Between effect	Within effect
Low education	0.0348 (0.0184)	0.0159** (0.00536)	-0.00650 (0.0209)	0.0000793 (0.00694)
Medium education	0.0352* (0.0178)	0.0147*** (0.00426)	0.0105 (0.0193)	-0.00610 (0.00792)
High education	0.0460* (0.0202)	0.00902 (0.00891)	0.0191 (0.0193)	-0.00286 (0.00948)
N	69,527	69,527	69,527	69,527

Note: Standard errors in parentheses.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.