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## Globalization and Social Justice in OECD Countries

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## Abstract

Social justice is a topic of importance to social scientists and also political decision makers. We examine the relationship between globalization and social justice as measured by a new indicator for 31 OECD countries. The results show that countries that experienced rapid globalization enjoy social justice. When the KOF index of globalization increases by one standard deviation, the social justice indicator increases by about 0.4 points (on a scale from 1 to 10). The policy implication is that permitting a national economy to become globally integrated is consistent with and promotes social justice.

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Keywords: globalization, social justice, economic integration.

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# 1 Introduction

For social scientists, social justice is a topic of prime concern, because of the quest for social justice in itself and because of the trade-off between efficiency and social justice (e.g., Hillman 2009: chapter 7). Social justice is also a prominent topic in public discourse and political attention: politicians promise to achieve social justice when elected to office. Political parties use the term justice frequently in their party platforms.

Globalization has been a much studied phenomenon and there have been concerns whether globalization is consistent with social justice. The debate has been controversial (for an overview of the debate see Hillman 2008). We examine the relationship between globalization and social justice as measured by a new social justice indicator.

John Rawls' "Theory of justice" in 1971 viewed social justice in terms of a social contract chosen behind a veil of ignorance when individuals do not yet know the positions they will have in society. The citizens thus decide from a neutral perspective. Rawls endorses equal rights "to the most extensive basic liberty compatible with a similar liberty for others" and inequalities that are "to be of the greatest benefit of the least-advantaged members of society" while "offices and positions must be open to everyone under conditions of fair equality of opportunity". Rawls thus considers both procedural and distributive aspects of social justice.<sup>3</sup>

In response to Rawls' egalitarian position Robert Nozick took a libertarian view of social justice ("Anarchy, state and utopia", 1974). Starting from a state of nature, a "dominant protection agency" emerges based on voluntary contracts. This dominant protection agency is the minimal state. Nozick thus considers an allocation as fair when the allocation is based on

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<sup>3</sup> Formally, Rawls' view of social justice as focused on the well-being of the worst-off in a society requires behavioral assumptions because a rational expected-utility maximizing individual would choose a Bentham social welfare function behind a veil of ignorance. See Hillman (2009, chapter 6).

free and mutual exchange, even if large inequalities result. Nozick thus views social justice as procedural justice.<sup>4</sup>

Friedrich August von Hayek took the position that only procedural justice is possible in a market economy (“The mirage of social justice”, 1976). A fair distribution is not achievable as in a market economy no one distributes income. Social justice is thus a superstition that has to be opposed when the term is used to justify coercion of some by others. Amartya Sen (“Equality of what?”, 1979 and “Development as freedom”, 2000) suggests basic capability equality. The capability approach focuses on what individuals are capable of and thus includes for example political freedom and social opportunities rather than solely income.

The different concepts of social justice show that social justice is difficult to define and consequently difficult to measure unambiguously. Moreover, social justice ex post is multifaceted. The Bertelsmann Stiftung has compiled new data on social justice in OECD countries. The data include quantitative and qualitative indicators based on expert opinions. The social justice indicator of the Bertelsmann Stiftung received prominent attention in the public debate on social justice.<sup>5</sup>

An important question concerns what gives rise to or impedes social justice. We focus on how globalization is associated with social justice. Advocates of the dark side of globalization believe that globalization exerts negative effects on social justice. Joseph Stiglitz, for example, proposes that poor people are left behind and so disadvantaged in the course of globalization. “Also in industrialized countries unskilled workers learn what is going on.”<sup>6</sup> Paul Krugman, by contrast, does not hold globalization responsible for social injustice in the United States, but claims that market-oriented policies of the political right

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<sup>4</sup> Mezzetti (1987) portrays the nexus between Pareto efficiency and the theories of Rawls and Nozick. For an experimental investigation of distributive justice see Traub et al. (2005). On equality of opportunity see Hansson (2004), Roemer (2002), Roemer et al. (2003), and Sugden (2004).

<sup>5</sup> The article in the German newspaper *Frankfurter Allgemeine Zeitung* (3 January 2011): “Lücken in der sozialen Gerechtigkeit” elaborated on the social justice indicator in detail.

<sup>6</sup> Interview with *Die Welt* on 30 September 2006.

increased inequality: “Growing international trade plays some role in growing inequality, but it is, literally, a fraction of a fraction of the story.”<sup>7</sup> Indeed, income inequality is often used as synonym for social injustice. We elaborate on theoretical predictions and empirical findings on why globalization is expected to threaten or promote social justice in section 2.

Social justice encompasses sub-dimensions such as distributive justice and procedural justice. Poverty prevention, access to education, or intergenerational justice are also sub-dimensions of social justice. Globalization may well influence sub-dimensions of social justice differently. By using the KOF index of globalization and the social justice indicators of the Bertelsmann Stiftung, we examine how globalization is associated with different dimensions of social justice.

## **2 Globalization and social justice**

The standard Heckscher–Ohlin model of international trade predicts that a country’s relatively abundant factors gain and a country’s relatively scarce factors lose from globalization. In high-income countries, skilled workers should thus gain from globalization, and unskilled workers should lose from globalization. Social injustice in consequence of globalization should thus be prevalent in high-income countries (see Hillman 2008: 181). The relation between globalization and social justice is, however, controversial.<sup>8</sup>

Some commentators believe that global trade and changing power relations in the course of globalization are inimical to social justice. The market economy is only legitimized if institutions ensure redistribution; but growing “authorities beyond the state” result in erosion of such institutions (Strange 1996: 197). The social-welfare maximizing redistributive state may thus be indefensible against globalization. “From Sweden through Austria to Spain, there is essentially the same programme of reducing public expenditure, cutting real wages

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<sup>7</sup> Blog entry on *The conscience of a liberal* (*New York Times*) on 13 March 2006.

<sup>8</sup> See Jones (2010) for an overview of “key thinkers” of globalization. On “dark sides” of globalization, focusing on non-economic issues in developing countries, see Heine and Thakur (2011). On inequality and social justice see, for example, Arrow et al. (2000) and Gandolfo and Marzano (1999).

and eliminating social services” (Martin and Schumann 1997: 6). Advocates of the dark side of globalization have tended to assume that social justice is jeopardized when social expenditures and thus income redistribution decrease or labor markets are deregulated (e.g., through lax minimum wage legislation and employment protection). The “most serious challenge for the world economy” may thus lie “in making globalization compatible with domestic social and political stability” (Rodrik 1997: 2). Some commentators also believe that trade liberalization has been “pushed too far, too fast”, and at the expense of increased unemployment (Stiglitz 2002: 53-54, 59). The problem “is not with globalization itself, but in the way globalization has been managed” (Stiglitz 2006: 4). The policy prescription is thus that governments “have the right to protect their social arrangements, and when this right clashes with the requirements of the global economy, it is the latter that should give way” (Rodrik 2011: xix).

The opponents of globalization, however, may well hold globalization responsible for developments not caused by globalization: it is conceivable that technical change rather than globalization has caused declining real wages (Bhagwati 2004: 29-30, 122-123; see also Wolf 2005: 170 and Norberg 2003: 140). Advocates of the positive side of globalization propose that globalization has reduced the number and share of people living in extreme poverty, and that globalization has improved indicators of human welfare, such as life expectancy or literacy (Wolf 2005: 157-166, 171, see also Norberg 2003: 25-30). People may also enjoy lower prices for goods and services in the course of globalization and thus a higher standard of living (Kitching 2001: 30-31). It is conceivable that globalization improves the situation of women, as measured for example by education or labor-market participation (Norberg 2003: 43-46, see also Bhagwati 2004: chapter 7); “environmental standards are actually rising” in the course of globalization (World Bank 2002: 3, see also Kitching 2001: 310). Labor standards may not be eroded by globalization as the “pressures from trade and outgoing investments on our standards are simply not substantial enough” (Bhagwati 2004: 131).

We now elaborate on how globalization has influenced attributes associated with social justice. The efficiency hypothesis is that globalization reduces the size of the government and the welfare state: countries compete for mobile factors by reducing tax rates and thus reduce public expenditures. Consequently, globalization is expected to reduce social cohesion (see, for example, Sinn 1997 and 2003). The compensation hypothesis, by contrast, is that higher demand for social insurance because of risks from international competition induces an extended welfare state. Globalization may thus well increase government size. Empirical studies provide mixed evidence. In (western) OECD countries, social expenditures increased in the course of globalization (Rodrik 1998 and 2011, see also Meinhard and Potrafke 2012). Using social expenditure data for 25 OECD countries over the period 1980-2008, the results of Gaston and Rajaguru (2013) indicate, however, that economic globalization was negatively correlated with welfare state spending. In Western Europe, globalization was positively correlated with the share of social expenditures in public spending; in Eastern Europe, globalization was negatively correlated with the share of social expenditures (Leibrecht et al. 2011).<sup>9</sup> The results of Dreher et al. (2008b), by contrast, did not show that globalization influenced budget composition.<sup>10</sup>

Income equality is usually viewed one of the most important determinants of social justice. Studies of how globalization influences inequality find mixed evidence.<sup>11</sup> Freedom to trade, social globalization, and deregulation have – in contrast to political globalization – exacerbated income inequality (Bergh and Nilsson 2010). In OECD countries, in particular, previous studies have shown that globalization was positively correlated with income inequality (Dreher and Gaston 2008). However, Doerrenberg and Peichl (2014) use Gini

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<sup>9</sup> The share of low-skilled workers and thus the labors' bargaining power may also influence how globalization affects welfare spending, in particular in developing countries (Rudra 2002).

<sup>10</sup> On the globalization-welfare state nexus see Schulze and Ursprung (1999) and Ursprung (2008). On how globalization has influenced capital tax rates see Dreher (2006a).

<sup>11</sup> On how to measure inequality see, for example, Milanovic (2005). See Acosta and Montes-Rojas (2008) for how trade reforms have influenced inequality in Mexico and Argentina, and Kumar and Mishra (2008) for how trade liberalization has influenced inequality in India. Das (2005) portrays the nexus between globalization and inequality theoretically. For further discussions see, for example, Richardson (1995) and Wood (1995).

coefficients based on micro data and do not conclude that globalization has been positively correlated with income inequality in OECD countries. Berggren (1999) shows that trade liberalization and financial deregulation were negatively correlated with income inequality. Also Savvides (1998) finds that globalization was not correlated with income inequality in developed countries, but was positively correlated with income inequality in developing countries. The results of Edwards (1997), in turn, do not show that trade liberalization induced income inequality in developing countries.

Studies also examine how globalization influences social cohesion and equality in other dimensions than income inequality. Opponents of globalization maintain that globalization jeopardizes gender equality and human rights. Governments are required to reduce social standards to improve global competitiveness. Proponents of globalization, by contrast, see globalization as improving gender equality and human rights. Economic globalization is expected to reduce discrimination as investors are concerned with productivity and governments are concerned with tax bases independently of gender or race. Social globalization may also improve gender equality and human rights because increasing information flows (e.g., through the internet) enable societies to learn about living conditions in other countries (see, for example, De Soysa and Vadlamannati 2011 and Dreher et al. 2012). Empirical studies show that globalization had positive effects by promoting gender equality and improving human rights. Globalization and gender income inequality show an inverted u-shaped relationship (Kilby and Scholz 2011). In low-income countries, globalization has increased gender equality as measured by the OECD Social Institutions and Gender Index (Potrafke and Ursprung 2012). Globalization as measured by trade openness and foreign direct investment has improved conditions for women such as participation in parliamentary office, literacy, and life expectancy (Gray et al. 2006). By using the Cingranelli–Richards (CIRI) Human Rights Dataset, globalization has been shown to improve women’s economic and social rights and human rights as measured by physical integrity



rights (Cho 2013, De Soysa and Vadlamannati 2011, and Dreher et al. 2012). Globalization has also been shown to enhance the willingness to transmit tolerance (Berggren and Nilsson 2014).

The efficiency and the compensation hypothesis may also explain how globalization influences labor market institutions. Globalization may induce a “race to the bottom” in labor market regulation as governments compete e.g. for foreign direct investment (Sinn 2003). It is, however, also conceivable that globalization induces a higher demand for labor market regulation because of increased uncertainty in a global market. The results of Potrafke (2010 and 2013) do not show that globalization has reduced labor market regulation. The results of Davies and Vadlamannati (2013), however, show that countries compete in labor practices (enforcement), but not in labor laws. In low-income countries, globalization has been shown to improve labor rights (Vadlamannati 2015).<sup>12</sup> Poverty prevention is another important aspect of social justice. Absolute income poverty has been shown to be lower in more globalized countries (Bergh and Nilsson 2014).

Overall, how globalization affects social justice remains as an undetermined empirical question.

### **3 Data and empirical strategy**

#### **3.1 Data on social justice**

We use the dataset collected by the Bertelsmann Stiftung on social justice (<http://www.sgi-network.org>). The data are available for 31 countries: Australia, Austria, Belgium, Canada, Chile, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, South Korea, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.

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<sup>12</sup> Globalization also increased protection in the agricultural sector (Garmann 2014).

The social justice indicator is based on five sub-indicators: poverty prevention, equitable access to education, labor market inclusiveness, social cohesion and equality, and intergenerational justice.

These five sub-indicators are based on 18 quantitative measures such as the Gini coefficient, unemployment rates, public expenditures on research and development, and seven qualitative measures such as expert opinions on education policy. Table A1 shows the individual measures and their descriptions. The quantitative measures relate to data for the years 2008-2010 and are mostly taken from OECD databases. The Bertelsmann Stiftung asked 70 experts from several countries to collect opinions on qualitative social justice measures. Both the quantitative and the qualitative measures are normalized and aggregated. Following Merkel (2007) and Merkel and Giebler (2009), the Bertelsmann Stiftung attaches a higher weight to the first three sub-dimensions describing social justice (poverty prevention, equitable access to education, and labor market inclusiveness) to distinguish a weighted and an unweighted social justice measure. The overall indicator of social justice (weighted and unweighted) and the five sub-indicators take on values between 0 (minimum of social justice) and 10 (maximum of social justice). For a more encompassing portrait of the indicators see Bertelsmann Stiftung (2010). We acknowledge that the social justice indicator, as any indicator, may capture social justice roughly and thus serves only as a proxy for social justice.

The indicators reveal that social justice was most pronounced in the Scandinavian countries. The weighted social justice indicator is highest for Iceland (8.54), Sweden (8.41), Denmark (8.36), Norway (8.05), and Finland (7.94), and lowest for Turkey (3.85), Greece (5.03), Mexico (5.05), Chile (5.29), and Ireland (5.35). Table A2 reports the data in detail.

### **3.2 Data on globalization**

We measure globalization with the help of the KOF index. The KOF index explicitly acknowledges that globalization is a multifaceted concept that cannot be entirely captured by

an individual “representative” economic indicator such as international trade as a share of GDP, the volume or stock of received foreign direct investments per capita, or the severity of capital account restrictions. The KOF index (see Dreher 2006b, Dreher et al. 2008a) represents an attempt to measure globalization in the broad sense that has been accepted in the empirical literature (see Potrafke 2014).<sup>13</sup> The 2013 KOF index covers 207 countries, includes 23 variables, and portrays the economic, social, and political dimensions of globalization. Each of these three dimensions is composed of further sub-dimensions. For example, economic globalization is measured by actual flows and stocks (trade, foreign direct investments, portfolio investments, and income payments to foreign nationals, each measured as a percentage of GDP) and restrictions (mean tariff rates, hidden import barriers, taxes on international trade, and capital account restrictions). Social globalization covers, among others, items such as international tourism, the number of internet users, and the number of McDonald’s restaurants and IKEA stores (per capita). Political globalization is measured by the number of foreign embassies, membership in international organizations, the participation in U.N. Security Council missions, and international treaties (see Dreher et al. 2008a, 43-44, for further details). The KOF index measures globalization on a scale of 1 to 100, where higher values represent higher levels of globalization. We use the 2013 KOF index of globalization.

### **3.3 Correlation of globalization and social justice**

To illustrate the association of globalization and social justice, we present correlations of the social justice indicators with averaged globalization. Since the components of the social justice indicators are based on data from the 2008-2010 period, we relate the social justice indicators to averaged globalization over the 1991-2007 period.<sup>14</sup> For robustness tests we also

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<sup>13</sup> See Martens et al. (2014) on new directions in measuring globalization.

<sup>14</sup> The KOF index is not available for the Czech Republic and the Slovak Republic until 1992. We thus average the KOF index over 15 rather than 17 years for the Czech Republic and the Slovak Republic.

relate the social justice indicators to averaged globalization over the 1975-2007 period and to globalization in the year 2007. The disadvantage of using data over the 1975-2007 period is that the sample is reduced to only 23 countries because of lacking data for government ideology for some countries.<sup>15</sup>

Globalization was positively correlated with overall social justice: the correlation coefficients between globalization and the weighted and unweighted social justice indicators are 0.63 and 0.64 (Figures 1 and 2). The correlation coefficient between globalization and the poverty prevention sub-indicator is 0.65. The correlation coefficient between globalization and the equitable access to education sub-indicator is 0.23, 0.10 with the labor market inclusiveness sub-indicator, 0.73 with the social cohesion and equality sub-indicator, and 0.54 with the intergenerational justice sub-indicator.

### 3.4 The empirical model

The base-line econometric model has the following form:

$$Social\ justice_{ij} = \alpha_j Globalization_i + \sum_k \beta_{jk} X_{ik} + u_{ij}$$

$$\text{with } i=1,\dots,31; j=1,\dots,7, k=1,\dots,6$$

where the dependent variable  $Social\ justice_{ij}$  denotes the social justice indicator  $j$  in country  $i$ .  $Globalization_i$  describes the globalization variable.  $\sum_k X_{ik}$  contains six economic control variables. Political parties may well promote different concepts of social justice.<sup>16</sup> We include

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<sup>15</sup> The countries with lacking data are Chile, the Czech Republic, Hungary, Mexico, Poland, the Slovak Republic, South Korea, and Turkey. The ideology index is not available for Portugal until 1975 and Spain until 1976. We thus average the ideology index over 32 and 31 rather than 33 years for Portugal and Spain.

<sup>16</sup> Raphael (2001) distinguishes between concepts of distributive justice that focus on merit and concepts that focus on equality. “As in the days of Plato and Aristotle, right-wing political parties tend to stress the merit conception, while left-wing political parties stress the equality conception” (Raphael 2001: 6). Left-wing governments appeal more to their labor base; right-wing governments appeal more to capital owners (Hibbs 1977, Alesina 1987). Left-wing governments have expanded the welfare state (e.g., Hicks and Swank 1984, Bradley et al. 2003). Under left-wing governments, inequality has reduced growth rates; under right-wing governments, inequality has increased growth rates (Bjørnskov 2008). Growth rates have been higher in right-

the ideology indices by Potrafke (2009) and Bjørnskov and Potrafke (2011), which are based on the index of governments' ideological positions by Budge et al. (1993) and updated by Woldendorp et al. (1998, 2000). These indices place the cabinet on a left-right scale with values between 1 (right-wing government) and 5 (left-wing government). Data for Chile, Mexico, South Korea, and Turkey are not available in the datasets by Potrafke (2009) and Bjørnskov and Potrafke (2011). We therefore follow their coding procedure to code government ideology in Chile, Mexico, South Korea, and Turkey.<sup>17</sup> We use averaged government ideology over the 1991-2007 period.

We include the logarithm of real GDP per capita (PPP converted, average over the 1991-2007 period) and the legal origin variables by La Porta et al. (1999). We distinguish between five different legal origins: British (reference category), French, German, Socialist, and Scandinavian. Table A3 shows descriptive statistics. We estimate the model by using OLS with standard errors robust to heteroskedasticity (Huber/White/sandwich standard errors – see Huber 1967 and White 1980).

To be sure, we acknowledge that 31 observations describe a small sample and that the properties of the OLS estimator (as nearly all estimators) only hold for a large number of observations. We therefore keep the number of explanatory variables small to not further reduce the degrees of freedom.

## **4 Results**

### **4.1 Basic results**

Table 1 reports the regression results when we use the weighted social justice indicator. We include the explanatory variables separately to show that inferences regarding the

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wing societies (Bjørnskov 2005). Government ideology has not explained life satisfaction (Bjørnskov et al. 2008).

<sup>17</sup> Coding governments in OECD countries on a left-right scale is not controversial. Experts have used several indicators for government ideology in OECD countries to investigate the influence on economic policy-making and stressed that results are not sensitive to the choice of the government ideology indicator (e.g., Pickering and Rockey 2011).

globalization variable do not change when individual explanatory variables are included/excluded. The KOF index of globalization is statistically significant at the 5% or 1% level in columns (1) to (5). The numerical meaning of the coefficients is that when the KOF index of globalization increases by one point (on a scale from 1 to 100), the social justice indicator increases by about 0.04 to 0.08 points (on a scale from 1 to 10). In other words, when the KOF index of globalization increases by one standard deviation, the social justice indicator increases by about 0.37 to 0.76 points (on a scale from 1 to 10). Globalization thus had a numerically important effect on social justice. Government ideology, by contrast, has not been associated with the weighted social justice indicator. The coefficients of the government ideology variable lack statistical significance in columns (2) to (5). The coefficients of the log real GDP per capita variable are statistically significant at the 5% level in columns (4) and (5) and have a positive sign. The numerical meaning of the coefficients is that the social justice indicator increases by about 0.009 points, when real GDP per capita increases by 1%. The French, German, and Socialist legal origin variables in column (5) lack statistical significance, whereas the Scandinavian legal origin variable is statistically significant at the 1% level with the expected positive sign. The numerical meaning is that, compared to countries with British legal origin, the weighted social justice indicator was about 1.7 points higher in countries with Scandinavian legal origin.<sup>18</sup> This effect is numerically important and perfectly corresponds with the descriptive statistics.

Column (1) of Table 2 reports the regression results when we use the unweighted social justice indicator. The results are very similar to the results in Table 1. Columns (2) to (6) of Table 2 show the results for the social justice sub-indicators. Globalization has been associated with the sub-indicators on poverty prevention, social cohesion and equality, and intergenerational justice, while government ideology has not. Both globalization and

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<sup>18</sup> Scandinavian countries may enjoy higher levels of social justice as social trust has been shown to induce larger welfare states (Bergh and Bjørnskov 2011). We include social trust for robustness tests (see section 4.2).

government ideology have not been associated with the sub-indicators on equitable access to education and labor market inclusiveness.

Our results support the compensation hypothesis (see section 2). Countries that experienced rapid globalization enjoy social justice. Regarding the sub-indicators our results support the compensation hypothesis for poverty prevention, social cohesion and equality, and intergenerational justice. The poverty prevention and intergenerational justice indicators are based on economic-policy measures which governments directly influence. Governments are likely to design these economic-policy measures to gratify their electorate. Globalization has already been shown to increase social cohesion and equality (Gray et al. 2006, Potrafke and Ursprung 2012). The equitable access to education indicator consists of future-oriented measures and the labor market inclusiveness indicator consists of market outcomes. It is conceivable that governments are less future-oriented but election-motivated and that governments do not directly influence market outcomes.

#### **4.2 Robustness tests**

We tested the robustness of our results in several ways. When we consider only the 24 established industrialized countries over the 1991-2007 period (that is excluding Chile, the Czech Republic, Hungary, Mexico, Poland, the Slovak Republic, and Turkey), globalization lacks statistical significance in two more specifications (replicating the specifications including globalization in Tables 1 and 2) as compared to our baseline model. When we consider only the 24 oldest OECD member states over the 1991-2007 period (that is excluding Chile, the Czech Republic, Hungary, Mexico, Poland, the Slovak Republic, and South Korea), globalization lacks statistical significance in one more specification (replicating the specifications including globalization in Tables 1 and 2) as compared to our baseline model. Inferences regarding globalization and social justice do however not change.

We also tested whether the results depend on the time period considered. We therefore replaced the averaged globalization, government ideology, and log real GDP per capita variables over the 1991-2007 period by averaged globalization, government ideology, and log real GDP per capita variables over the 1975-2007 period. The sample is reduced to only 23 countries because we cannot code government ideology for Chile, the Czech Republic, Hungary, Mexico, Poland, the Slovak Republic, South Korea, and Turkey for the entire period. The sample thus resembles the sample when we consider only the established industrialized countries or the oldest OECD member states. The effect of globalization on social justice in the 1975-2007 period is less pronounced as compared to the 1991-2007 period, indicating that the positive effect of globalization on social justice has become stronger over time. As compared to our baseline model, globalization lacks statistical significance in four more specifications (replicating the specifications including globalization in Tables 1 and 2), when we consider the 1975-2007 period. We also replaced the averaged globalization, government ideology, and log real GDP per capita variables over the 1991-2007 period by globalization, government ideology, and log real GDP per capita variables in the year 2007. Inferences regarding globalization and social justice do however not change as compared to the 1991-2007 period.

We replaced the overall KOF index of globalization by the sub-indices on economic, social, and political globalization. Social globalization was most strongly associated with social justice. The coefficients of the KOF index of social globalization are statistically significant in most regressions, but lack statistical significance when we use the social justice sub-indicators on equitable access to education, labor market inclusiveness, and intergenerational justice as the dependent variable (similar to the results of the overall KOF index of globalization). The KOF index of economic globalization shows a similar pattern to the KOF index of social globalization but has an overall somewhat weaker effect in terms of statistical significance and numerical meaning of the coefficients: as compared to our baseline



model, globalization lacks statistical significance in three more specifications (replicating the specifications including globalization in Tables 1 and 2). The KOF index of political globalization, by contrast, does not turn out to be statistically significant in any regression equation (except column 4 of Table 2).

We tested whether the results are sensitive to including social trust by using the data on social trust compiled by Bjørnskov and Méon (2013). Table 3 shows the results for the weighted social justice indicator (compare Table 1). Social trust is statistically significant at the 1% level in columns (1) to (4), but lacks statistical significance in column (5). Including social trust renders the globalization variable to be statistically significant only at the 10% level in column (4), but does not change the inferences regarding the globalization variable in columns (1), (3), and (5). These findings perfectly correspond with our expectations, as the correlation coefficient between social trust and the weighted social justice indicator is 0.77, the correlation coefficient between social trust and globalization is 0.50, and social trust and legal origin are highly correlated (the correlation coefficient between social trust and the Scandinavian legal origin, for example, is 0.69).

It is conceivable that the global financial crisis influenced social justice in individual countries. For most of the OECD countries, the effects of the crisis were most pronounced in 2009. We tested whether the crisis influenced social justice by including the annual real GDP per capita growth rate in 2009 (PPP converted) as a control variable. Replicating Tables 1 and 2, inferences regarding globalization do not change. The annual real GDP per capita growth rate in 2009 does not turn out to be statistically significant in any specification, except when we replicate column (5) of Table 2 (results not shown).

We tested whether the reported effects are driven or mitigated by idiosyncratic circumstances in individual countries. For this reason, we tested whether the results are sensitive to including/excluding individual countries. Our results (not reported here) indicate that this is not the case. Only when we exclude Japan globalization lacks statistical

significance in two more specifications (replicating the specifications including globalization in Tables 1 and 2) as compared to our baseline model.

## **5 Conclusions**

By employing the new social justice indicators of the Bertelsmann Stiftung, we have investigated the relationship between globalization and social justice in OECD countries. The results show that countries that experienced rapid globalization enjoy social justice. The results are important because advocates of the dark side of globalization propagate the view that globalization reduces social justice.

It is conceivable that globalization enhances social justice because voters demand more active governments when globalization is proceeding rapidly. The relationship between globalization and social justice is pronounced for poverty prevention, social cohesion and equality, and intergenerational justice, and thus supports the compensation hypothesis.

Globalization, however, was not associated with the indicators on equitable access to education and labor market inclusiveness. These findings are plausible because the equitable access to education indicator is based on future-oriented measures and election-motivated governments are more concerned about the present than the future. Governments also do not directly influence market outcomes on which the labor market inclusiveness indicator is based.

Future studies may corroborate our findings by using survey/micro data. An issue is who is adamant in maintaining that globalization induces social justice. Per capita income and political preferences are likely to influence views on social justice. When micro data including personal views on social justice are available, studies may well include the KOF globalization indices and interact the KOF globalization indices with personal characteristics such as per capita income and political preferences to describe views on social justice.

Our results suggest that governments should not be influenced by social-justice arguments to adopt policies that impede or counter globalization. Of course, with policy determined by political competition (Ursprung 1991), the policy implications relate to perceptions by voters of their personal costs and benefits from globalization. Voters concerned with their own welfare and with broad objectives of social justice may well support pro-globalization policies.

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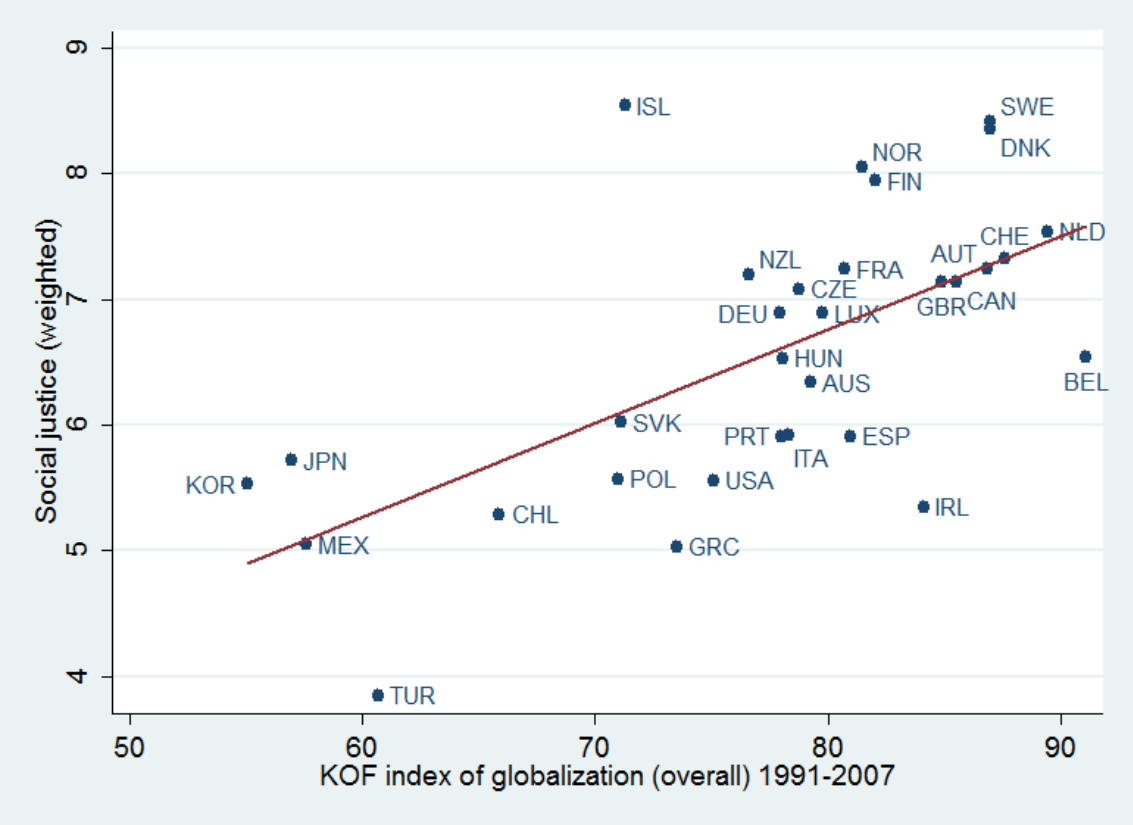
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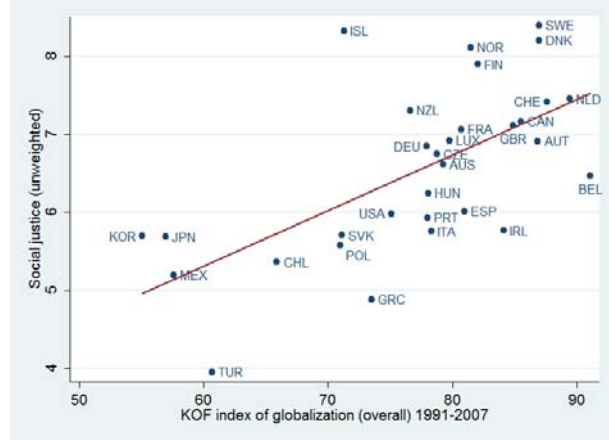
Figure 1: Social justice (weighted) and overall globalization. 31 OECD countries



Correlation coefficient: 0.63. Source: Bertelsmann Stiftung (2010), Dreher (2006b), and Dreher et al. (2008a)

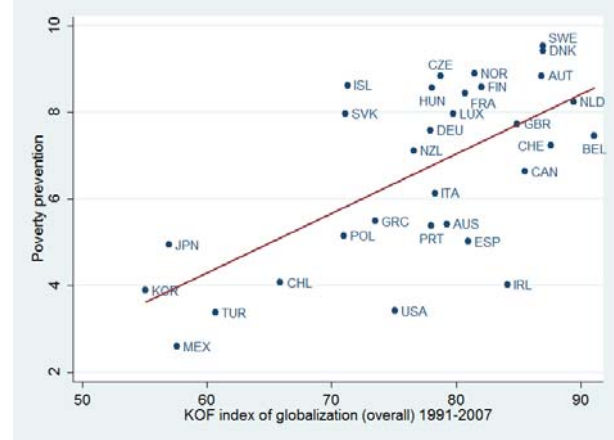
Figure 2: Social justice (unweighted), sub-indicators, and overall globalization. 31 OECD countries

Social justice (unweighted) and overall globalization



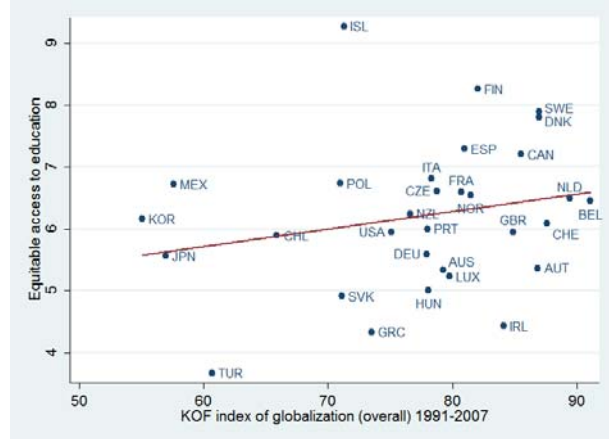
Correlation coefficient: 0.64

Poverty prevention sub-indicator and overall globalization



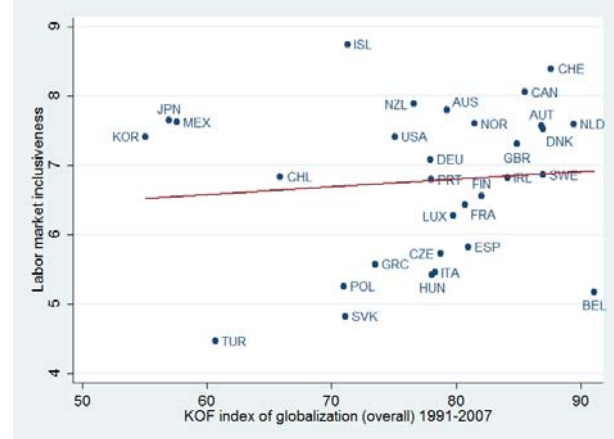
Correlation coefficient: 0.65

Equitable access to education sub-indicator and overall globalization



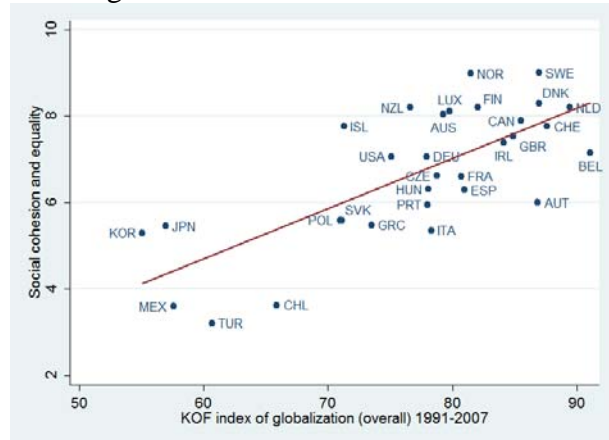
Correlation coefficient: 0.23

Labor market inclusiveness sub-indicator and overall globalization



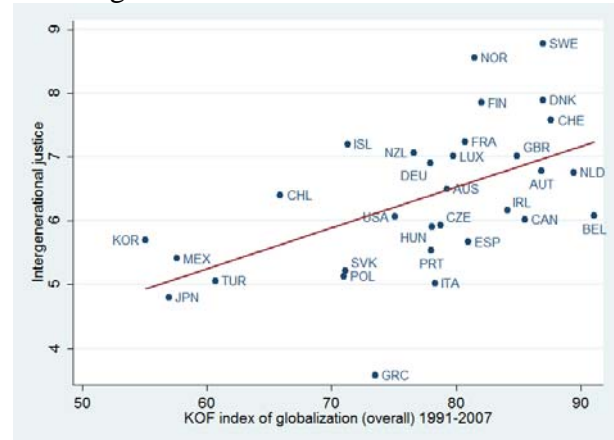
Correlation coefficient: 0.10

Social cohesion and equality sub-indicator and overall globalization



Correlation coefficient: 0.73

Intergenerational justice sub-indicator and overall globalization



Correlation coefficient: 0.54

Source: Bertelsmann Stiftung (2010), Dreher (2006b), and Dreher et al. (2008a)

Table 1: Regression results.

Dependent variable: Social justice (weighted).

OLS model with standard errors robust to heteroskedasticity

(Huber/White/sandwich standard errors)

	(1)	(2)	(3)	(4)	(5)
KOF index of globalization	0.075*** (0.016)		0.078*** (0.015)	0.046** (0.021)	0.038** (0.015)
Ideology (left-wing)		0.303 (0.652)	-0.278 (0.514)	0.105 (0.495)	0.320 (0.337)
log GDP per capita (real)				0.937** (0.435)	0.850** (0.328)
Legal origin (French)					-0.092 (0.416)
Legal origin (German)					0.535 (0.388)
Legal origin (Socialist)					0.784 (0.489)
Legal origin (Scandinavian)					1.684*** (0.415)
Constant	0.796 (1.261)	5.664*** (1.950)	1.320 (1.863)	-6.734* (3.928)	-6.330* (3.250)
Observations	31	31	31	31	31
R-squared	0.400	0.012	0.409	0.496	0.804

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 2: Regression results.

OLS model with standard errors robust to heteroskedasticity

(Huber/White/sandwich standard errors)

	(1)	(2)	(3)	(4)	(5)	(6)
	Social justice (unweighted)	Poverty prevention	Equitable access to education	Labor market inclusiveness	Social cohesion and equality	Inter- generational justice
KOF index of globalization	0.032** (0.013)	0.111*** (0.030)	-0.011 (0.026)	-0.028 (0.022)	0.045** (0.019)	0.043** (0.018)
Ideology (left-wing)	0.351 (0.270)	-0.025 (0.600)	0.627 (0.634)	0.589 (0.416)	0.205 (0.225)	0.355 (0.325)
log GDP per capita (real)	0.842*** (0.281)	1.117* (0.595)	0.558 (0.801)	0.674 (0.484)	1.796*** (0.323)	0.061 (0.547)
Legal origin (French)	-0.350 (0.357)	1.080 (0.841)	0.123 (0.490)	-1.370*** (0.364)	-1.055** (0.378)	-0.515 (0.488)
Legal origin (German)	0.257 (0.322)	1.742* (0.886)	0.006 (0.367)	0.047 (0.395)	-0.821 (0.500)	0.317 (0.310)
Legal origin (Socialist)	0.300 (0.406)	3.542*** (1.047)	0.335 (0.823)	-1.873*** (0.453)	0.124 (0.380)	-0.628 (0.492)
Legal origin (Scandinavian)	1.412*** (0.327)	3.105*** (0.768)	2.032*** (0.631)	-0.152 (0.428)	0.564* (0.323)	1.523*** (0.288)
Constant	-5.628* (2.809)	-14.729** (5.549)	-0.811 (7.914)	1.165 (5.036)	-15.128*** (2.753)	1.364 (4.706)
Observations	31	31	31	31	31	31
R-squared	0.829	0.768	0.480	0.637	0.899	0.679

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 3: Regression results (including social trust).  
 Dependent variable: Social justice (weighted).  
 OLS model with standard errors robust to heteroskedasticity  
 (Huber/White/sandwich standard errors)

	(1)	(2)	(3)	(4)	(5)
KOF index of globalization	0.039*** (0.012)		0.040*** (0.014)	0.037* (0.019)	0.034** (0.015)
Ideology (left-wing)		0.236 (0.365)	-0.047 (0.399)	-0.005 (0.432)	0.243 (0.342)
log GDP per capita (real)				0.126 (0.412)	0.720* (0.415)
Legal origin (French)					0.128 (0.428)
Legal origin (German)					0.553 (0.377)
Legal origin (Socialist)					0.981* (0.488)
Legal origin (Scandinavian)					1.437** (0.606)
Social trust	0.045*** (0.008)	0.057*** (0.007)	0.045*** (0.008)	0.043*** (0.008)	0.016 (0.020)
Constant	1.855** (0.759)	3.748*** (1.180)	1.939* (1.126)	0.829 (3.660)	-5.166 (3.745)
Observations	31	31	31	31	31
R-squared	0.671	0.594	0.671	0.672	0.812

Robust standard errors in parentheses  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## Appendix

Table A1: Social justice sub-indicators consist of quantitative measures and expert opinions

Indicator	Description
<b>Poverty prevention</b>	
Poverty rate	Share of population with less than 50% of the average national net household income
Child poverty	Share of population below 18 with less than 50% of the average national net household income
Old-age poverty	Share of population above 65 with less than 50% of the average national net household income
<b>Equitable access to education</b>	
<u>Education policy</u>	Political performance in providing valuable, efficient, and just education
Socioeconomic background	Product of strength and slope of the socioeconomic gradient
Early childhood education	Public expenditures for pre-school education in percent of GDP
<b>Labor market inclusiveness</b>	
Employment rate	Employed population relative to population of working age (15-64)
Employment rate (older people)	Employed population 55-64 relative to total population 55-64
Employment relation (immigrants/natives)	Employment rate of migrants relative to employment rate of native population
Employment relation (sex)	Employment rate of women relative to employment rate of men
Unemployment	Number of unemployed relative to dependent civil labor force
Long-term unemployment	Long-term unemployed (above 12 months) relative to labor force 15-64
Youth unemployment	Unemployment rate 15-24 relative to unemployment rate of total population
Unemployment (low-skilled)	Unemployment rate without higher school or university degree relative to total unemployment rate
<b>Social cohesion and equality</b>	
<u>Social inclusion</u>	Assessment of social policy regarding strengthening social cohesion
Gini coefficient	Income distribution
<u>Non-discrimination</u>	Assessment of public measures for avoiding discrimination
Income differences (women/men)	Incomes of women relative to incomes of men
<u>Integration policy</u>	Assessment of political performance regarding the integration of migrants
<b>Intergenerational justice</b>	
<u>Family policy</u>	Political performance regarding compatibility of family and work
<u>Pension policy</u>	Political perf. reg. poverty avoiding, generationally just, and fiscally sustainable pensions
<u>Environmental policy</u>	Political performance regarding sustainable dealing with resources and the environment
CO <sub>2</sub> emissions	CO <sub>2</sub> emissions per unit of GDP
Expenditures for research and development	Public expenditures for research and development in percent of GDP
Debt level	Debt of public households in percent of nominal GDP

Source: Bertelsmann Stiftung (2010)

Table A2: Social justice indicators are highest in Northern Europe

Country	Social justice (weighted)	Social justice (unweighted)	Poverty prevention	Equitable access to education	Labor market inclusiveness	Social cohesion and equality	Inter-generational justice
1. Iceland	8.54	8.32	8.62	9.27	8.74	7.76	7.20
2. Sweden	8.41	8.39	9.53	7.81	6.86	8.99	8.78
3. Denmark	8.36	8.20	9.42	7.90	7.52	8.28	7.89
4. Norway	8.05	8.11	8.89	6.54	7.60	8.98	8.56
5. Finland	7.94	7.89	8.58	8.26	6.56	8.19	7.85
6. Netherlands	7.54	7.45	8.24	6.49	7.59	8.19	6.76
7. Switzerland	7.33	7.41	7.23	6.08	8.39	7.76	7.58
8. France	7.24	7.06	8.44	6.59	6.43	6.60	7.24
9. Austria	7.24	6.91	8.84	5.36	7.57	5.99	6.78
10. New Zealand	7.20	7.30	7.11	6.24	7.88	8.19	7.07
11. Canada	7.14	7.16	6.63	7.20	8.05	7.88	6.02
12. United Kingdom	7.14	7.11	7.73	5.95	7.30	7.53	7.02
13. Czech Republic	7.08	6.74	8.83	6.61	5.72	6.61	5.93
14. Luxembourg	6.89	6.92	7.97	5.23	6.27	8.11	7.01
15. Germany	6.89	6.84	7.58	5.59	7.08	7.06	6.91
16. Belgium	6.54	6.46	7.46	6.45	5.17	7.14	6.08
17. Hungary	6.53	6.24	8.57	5.00	5.42	6.30	5.90
18. Australia	6.34	6.61	5.42	5.33	7.79	8.03	6.50
19. Slovak Republic	6.02	5.70	7.97	4.91	4.82	5.58	5.21
20. Italy	5.92	5.75	6.13	6.81	5.45	5.35	5.02
21. Portugal	5.91	5.93	5.38	6.00	6.79	5.95	5.54
22. Spain	5.91	6.01	5.01	7.29	5.82	6.28	5.67
23. Japan	5.72	5.68	4.94	5.56	7.65	5.45	4.80
24. Poland	5.57	5.57	5.15	6.73	5.25	5.58	5.13
25. United States	5.56	5.98	3.41	5.95	7.41	7.06	6.06
26. South Korea	5.53	5.69	3.88	6.16	7.41	5.29	5.70
27. Ireland	5.35	5.76	4.02	4.43	6.82	7.38	6.16
28. Chile	5.29	5.36	4.06	5.89	6.83	3.62	6.40
29. Mexico	5.05	5.19	2.59	6.72	7.62	3.59	5.41
30. Greece	5.03	4.88	5.48	4.33	5.57	5.47	3.58
31. Turkey	3.85	3.95	3.37	3.67	4.46	3.20	5.06

Source: Bertelsmann Stiftung (2010)

Table A3: Descriptive Statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max	Source
Social justice (weighted)	31	6.55	1.14	3.85	8.54	Bertelsmann Stiftung (2010)
Social justice (unweighted)	31	6.54	1.08	3.95	8.39	Bertelsmann Stiftung (2010)
Poverty prevention	31	6.66	2.05	2.59	9.53	Bertelsmann Stiftung (2010)
Equitable access to education	31	6.21	1.19	3.67	9.27	Bertelsmann Stiftung (2010)
Labor market inclusiveness	31	6.77	1.11	4.46	8.74	Bertelsmann Stiftung (2010)
Social cohesion and equality	31	6.69	1.54	3.20	8.99	Bertelsmann Stiftung (2010)
Intergenerational justice	31	6.35	1.15	3.58	8.78	Bertelsmann Stiftung (2010)
KOF index of globalization (overall) 1991-2007	31	77.21	9.69	55.06	91.10	Dreher (2006b), Dreher et al. (2008a)
KOF index of globalization (economic) 1991-2007	31	74.26	12.59	42.60	96.24	Dreher (2006b), Dreher et al. (2008a)
KOF index of globalization (social) 1991-2007	31	73.48	12.86	41.98	88.44	Dreher (2006b), Dreher et al. (2008a)
KOF index of globalization (political) 1991-2007	31	86.60	9.59	58.12	96.91	Dreher (2006b), Dreher et al. (2008a)
KOF index of globalization (overall) 1975-2007	23	74.19	8.47	50.06	85.50	Dreher (2006b), Dreher et al. (2008a)
KOF index of globalization (economic) 1975-2007	23	70.75	12.63	36.05	95.21	Dreher (2006b), Dreher et al. (2008a)
KOF index of globalization (social) 1975-2007	23	70.80	9.62	45.93	85.41	Dreher (2006b), Dreher et al. (2008a)
KOF index of globalization (political) 1975-2007	23	83.77	11.61	53.96	96.26	Dreher (2006b), Dreher et al. (2008a)
Ideology (left-wing) 1991-2007	31	2.93	0.42	2.18	4.00	Potrafke (2009), Bjørnskov and Potrafke (2011), further own calculations
Ideology (left-wing) 1975-2007	23	2.88	0.29	2.09	3.39	Potrafke (2009), Bjørnskov and Potrafke (2011), further own calculations
GDP per capita (real) 1991-2007	31	26640.51	11277.71	8061.47	61060.84	PWT 7.1: Heston et al. (2012)
GDP per capita (real) 1975-2007	23	27082.80	6515.87	15043.55	46706.39	PWT 7.1: Heston et al. (2012)
Legal origin (British)	31	0.19	0.40	0	1	La Porta et al. (1999)
Legal origin (French)	31	0.36	0.49	0	1	La Porta et al. (1999)
Legal origin (German)	31	0.16	0.37	0	1	La Porta et al. (1999)
Legal origin (Socialist)	31	0.13	0.34	0	1	La Porta et al. (1999)
Legal origin (Scandinavian)	31	0.16	0.37	0	1	La Porta et al. (1999)
Social trust	31	37.05	15.30	8.99	68.08	Bjørnskov and Méon (2013)
Annual GDP per capita (real) growth rate 2009	31	-0.05	0.03	-0.13	0.02	PWT 7.1: Heston et al. (2012)