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# Globalization and the transmission of social values: The case of tolerance

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## ABSTRACT

Tolerance – respecting those who are different – is arguably of particular importance in an era of globalization, where a potential for economic, social and personal development is increasingly a function of interaction with others different from oneself. We investigate whether globalization induces parents to want to instill tolerance in their children, the main idea being that this quality would equip children for greater success in a more integrated world. Using a survey measure, we indeed find that globalization enhances the willingness to transmit such social values. More precisely, economic and social, but not to the same extent political, globalization has this effect, as shown by using the KOF Index of Globalization in regression analysis of up to 59 countries. Extreme bounds analysis and outlier tests indicate robustness. Overall, our results suggest that certain kinds of globalization seem able to shape values in ways considered desirable by many.

*JEL classification:*

F01, F10, P45, Z13

*Keywords:*

Globalization, Tolerance, Social values, Children, Transmission

## 1. Introduction

Globalization is controversial: while some relate it to trade, freedom and growth, and regard these perceived outcomes as benefits, others believe globalization threatens domestic cultures, social cohesion and stable economies and take a negative position.<sup>1</sup> A first step

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<sup>1</sup> See, e.g., Fischer (2003).

towards resolving contentious policy issues of this kind is to produce more research on the consequences of globalization. Indeed, a growing literature assesses its economic consequences, but knowledge is very limited on if and how globalization affects social attitudes.<sup>2</sup> We believe we are the first to study whether globalization is related to an important social attitude – the willingness to teach children to be tolerant.<sup>3</sup>

Tolerance is arguably important in itself: it enables people to lead the lives they want without social and legal disapprobation, which brings about happiness (Inglehart et al., 2013). This is especially important for minorities of different kinds, who may be strongly affected by the attitudes of the surrounding majority in what they feel they can do and be (Corneo and Jeanne, 2009). But tolerance is also related to economic outcomes. Mokyr (1990, p. 12) has studied economic development in a historical perspective and finds that “innovation requires diversity and tolerance”. Florida (2003, p. 11) explains the logic:

Places that are open and possess *low entry barriers* for people gain creativity advantage from their ability to attract people from a wide range of backgrounds. All else equal, more open and diverse places are likely to attract greater numbers of talented and creative people – the sort of people who power innovation and growth.

There is moreover empirical evidence for an association between tolerance, on the one hand, and income and economic growth, on the other.<sup>4</sup>

If globalization is able to foster tolerance, this means that widely embraced social and economic goals can be better achieved by opening up borders, which would be a reason for taking a more positive view of globalization. Why would globalization relate to a willingness to create tolerant societies? We propose two grounds for such an expectation.

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<sup>2</sup> Like us, many recent studies make use of a relatively new measure of globalization, the KOF Index (for an overview, see Potrafke, 2014). Some of the studies using this index relate globalization to economic growth (Dreher, 2006a; Bergh and Karlsson, 2009), human well-being and life satisfaction (Bjørnskov et al., 2008; Hessami, 2011), inequality (Dreher and Gaston, 2008; Bergh and Nilsson, 2010a), life expectancy (Bergh and Nilsson, 2010b), the protection of human rights (Dreher et al., 2012), female employment (Fischer, 2014) and gender equality (Potrafke and Ursprung, 2012).

<sup>3</sup> We define “globalization” as social, economic and political processes that tend towards integrating people, organizations and nations of the world through lower physical or mental transaction costs. We follow Corneo and Jeanne (2009, p. 691) in defining “tolerance” as “respect for diversity”, and Florida (2003, p. 10), who defines it as “openness, inclusiveness, and diversity to all ethnicities, races, and walks of life”.

<sup>4</sup> See, e.g., Ottaviani and Peri (2006), McGranahan and Wojan (2007), Florida et al. (2008) and Berggren and Elinder (2012).

First, globalization could influence the values of adults such that they internalize a positive outlook on others who are different. This could come about in different ways, through cultural influences and through economic interaction, where people come to realize that others who are different can be decent and honest.<sup>5</sup> This in effect means that globalization could instill a taste for tolerance in adults. And if they think that their own preferences are desirable for the new generation, they may consequently, in an “imperialistic” fashion, consider it important for their offspring to be tolerant as well. Second, globalization implies that children likely become more successful in life if they interact freely with others irrespective of characteristics such as gender, ethnicity, nationality, sexual orientation and religion. In a world that is increasingly integrated – economically, socially and politically – tolerance is arguably an important asset for the new generation to have. In meeting people who are different from themselves, both in their home countries and when travelling, studying or working abroad, today’s children will then be better equipped to adapt and make use of their productive talents. Adults who realize this could wish their offspring to be tolerant (irrespective of whether the adults are tolerant themselves), on altruistic grounds. Both of the described mechanisms could be at work and establish a link between globalization and a widespread view that it is important to teach kids tolerance.

We provide an empirical study of whether there is such a link. Our dependent variable is the share of people in different countries that replies that it is important to teach kids tolerance (as reported by the World Values Survey and the European Values Study). Taking a multidimensional perspective, our main explanatory variables of interest, from the KOF Index of Globalization, are economic, social and political globalization and their sub-components. Adding various control variables used in previous studies on tolerance, and performing both cross-sectional, panel-data and first-difference analyses, we indeed find that globalization enhances the willingness to transmit tolerance to children. More precisely, in our cross-sectional analysis, we find that economic and social, but not political, globalization correlate with our tolerance variable. Panel-data and the first-difference analyses largely confirm baseline findings. To further test the robustness of these findings, we conduct extreme bounds analysis (EBA), perform outlier tests, vary the year for which the dependent variable is measured and change the lag length. The EBA confirms the robustness of baseline findings

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<sup>5</sup> There are studies that document an international transmission of norms, e.g., with regard to corruption (Sandholtz and Gray, 2003), obesity (Mendez and Popkin, 2004), education (Huisman and Smits, 2009), the use of child labor (Congdon Fors, 2014) and immigration (Swank and Betz, 2003). Other studies find that television affects values and behavior (e.g., DellaVigna and Kaplan, 2007; Jensen and Oster, 2009).

with respect to model specification: in fact, globalization, economic globalization and social globalization are statistically significant at the 5 percent level in all regressions! Likewise, outliers do not drive the results, and the results stand when years of measurement and lag length are varied. Using an instrumental-variable approach, we find some indications of the relationship between globalization and the willingness to transmit tolerance to children being causal, although this cannot be affirmed conclusively. Lastly, we find some indications of altruism (rather than imperialism) being the more important basis, on average, for parents' willingness to teach children tolerance: They seem to wish to do so because they think a tolerant outlook will benefit their offspring in the future (not necessarily because they themselves are tolerant). In all, our findings seem to robustly confirm that certain dimensions of the globalization process shape social values about how to bring up children, in ways considered desirable by many.

Our study can be placed not only among studies of the effects of globalization, several of which were cited above, but also among studies of the determinants of tolerance.<sup>6</sup> This literature, as well as our study, belongs to an emerging field in economics where cultural and social factors, such as tolerance, religiosity and social trust, are studied, both as determinants and consequences of economic variables and formal institutions.<sup>7</sup> This study also relates to a literature on the transmission of values to children. For our dependent variable, which conveys the attitude that it is important to teach tolerance, to be relevant it is required that adults are actually able to transmit values to children, at least to some extent. Reassuringly, there are indications of this, e.g., when it comes to female labor force participation (Fernández et al., 2004), work ethic (Bogt et al., 2005), party choice (Settle et al., 2009), attitudes towards euthanasia, homosexuality and ethnic minorities (Jaspers, 2008), generosity (Wilhelm et al., 2008), cognitive and non-cognitive skills (Coneus et al., 2012), trust (Butler et al., 2012; Dahmen et al., 2012; Ljunge, 2014) and risk attitudes (Dahmen et al., 2012). Parent-child attitudes are by no means perfectly correlated, but neither are they uncorrelated.<sup>8</sup> It bears

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<sup>6</sup> Among previous factors found to be relevant for tolerance, the following bears mentioning: free trade (Spitz, 2004), inequality (Andersen and Fetner, 2008), GDP per capita and becoming a new member state of the European Union (Corneo and Jeanne, 2009) and monetary stability and the rule of law (Berggren and Nilsson, 2012). Note, however, that our dependent variable is not tolerance as such but the share of people that holds the view that tolerance should be taught to kids. The latter arguably affects but does not totally determine the former.

<sup>7</sup> See, e.g., Licht et al. (2007), Guiso et al. (2009), Tabellini (2010), Berggren and Bjørnskov (2011), Fernández (2011) and Klasing (2013).

<sup>8</sup> For a survey documenting how parents transmit traits through socialization, see Bisin and Verdier (2011).

noting, however, that even if the effect of attempts to teach kids tolerance was *de facto* non-existent, parents could still, if they did not know that such attempts were futile, consider it important to teach kids tolerance.

## 2. Theoretical expectations

In this section, we present theoretical reasoning about why and how globalization (in its different forms) is expected to affect the attitudes of adults with respect to teaching kids tolerance.<sup>9</sup> Our theory does not imply that a willingness to teach kids tolerance is either sufficient or necessary for tolerance to appear, but the assumption is that such willingness is *related to* attempts to actually teach tolerance and to tolerance as such later on.

### 2.1. Two basic grounds for a relationship

Why might adults think it important to teach children tolerance? We propose two bases for such an attitude: one “imperialistic” – which stems from a desire to impose on children the kind of value system which the adults themselves value – and one “altruistic” – which stems from a desire to help children do as well as possible.<sup>10</sup> In *the imperialistic case*, parents have certain preferences and want the children to adopt traits and make choices that satisfy the parents’ preferences, irrespective of whether this raises or lowers the utility of the children. If the parents value tolerance or intolerance, they think the children should do so as well, period. This social attitude could, e.g., build on a concern for community and union in the family; or it could be the result of an automatic, unreflected and a-consequentialist way of thinking.

In *the altruistic case*, parents want their children to be as well off as possible and hence experience increased utility if their children do so. This is a consequentialist outlook, where parents will do their best to encourage their children to adopt traits and make choices that maximize their children’s utility. If parents believe that a tolerant outlook brings with it greater chances for good outcomes in life, then they will try to teach their children tolerance

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<sup>9</sup> Although we primarily talk about parents, the attitudes of adults that we discuss could also be present in non-parents that care about children.

<sup>10</sup> Doepke and Zilibotti (2012) model the intergenerational transmission of patience and risk attitudes for different parental types, somewhat akin to our distinction here.

(but again, if they think that the children will benefit from intolerance, they will try to make the children intolerant).

The imperialistic basis may be seen as akin to the modeling of parents by Bisin and Verdier (2001) and Bisin et al. (2004); the altruistic basis follows the modeling of parents by Corneo and Jeanne (2009). We posit that parents in general are both imperialistic and altruistic, to varying degrees.

## 2.2. *A positive effect of globalization*

What interests us here is how globalization might affect parents' willingness to transmit tolerance to their offspring. More specifically, we distinguish between three dimensions of globalization: economic, social and political. The mechanisms at work differ for the three types, but also for the imperialistic and altruistic bases for wanting to socialize one's children. We therefore discuss these cases in turn and explain why we expect globalization to affect parents to want to teach kids tolerance.

*Economic globalization* entails both actual economic activities (such as trade, capital flows and investments), and the institutions and policies that regulate these activities: the more of the activities and the more liberal the regulations, the more globalization there is. First, there is reason to expect an internalization effect in favor of tolerance for parents with an imperialistic motive. Internalization is a process of developing a way of reacting and thinking that produces a spontaneous and unreflected tendency to assess, in our case, people that are different in a generous way. We primarily expect the economic activities to affect parents' tolerance and hence the teaching of their kids to be tolerant. The mechanism is that a practice of commercial interaction and trade induces people to understand others and to not see them as threatening. In a society that increasingly experiences this, more tolerance could be the result.<sup>11</sup> Second, both imperialistic and altruistic parents also look out, in a conscious way, for what is in their or their children's best interest. As economic opportunities across borders manifest themselves, parents may realize that they and their children benefit from interaction and exchange with numerous others, at home and abroad (cf. Bowles, 1998: 100

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<sup>11</sup> This is akin to Montesquieu's *doux commerce* thesis. Henrich et al. (2001) find experimental evidence for market integration explaining much of behavioral variations across societies. The idea is that the more people engage in market transactions, the more they will experience abstract sharing principles concerning behaviors toward strangers.

ff).<sup>12</sup> By being intolerant, by not being open to and not letting in people that are different from oneself into one's life or into society, one foregoes a chance for enrichment. Intolerance comes at a cost, which will tend to discourage it.<sup>13</sup> Hence, in a setting with increasing globalization, competing, profit-seeking firms and people set on maximizing well-being, there will be a stronger incentive to be tolerant and to try to make children tolerant.<sup>14</sup>

*Social globalization* entails personal contacts in general, information flows and cultural proximity. With more social globalization parents will absorb novel impressions, be subjected to values and access information from many new sources to a higher degree, as this type of "cultural" interaction grows stronger, both through media, the Internet, traveling, migration and the presence of foreign companies of various kinds. Meetings and experiences, not least of other forms of life, can encourage tolerance directly, if people learn to appreciate the contributions made by those who are different. Furthermore, to the extent that the ideas and influences that dominate are broadly liberal in character, as suggested by, e.g., Sklair (2001) and Rosenau (2003), a tolerant outlook plausibly becomes stronger for that reason as well.<sup>15</sup> As in the case of economic globalization, the influence could come both through internalization (for imperialistic parents) and through a realization that it is better to adapt to a situation where one can benefit from interaction with others (for both imperialistic and altruistic parents).

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<sup>12</sup> Moreover, Gehring (2013) shows that the higher the degree of tolerance, the more economic freedom stimulates subjective well-being. If people do not care about what others do, then freer exchange between people has a greater potential to generate happiness, something parents typically value highly. Thus, they can be expected to want to instill tolerant attitudes in the presence of a global market economy.

<sup>13</sup> This relates to the theory of discrimination introduced by Becker (1971), who points at a mechanism in markets for reducing the exclusion from the economy of people on other bases than low productivity. Globalization increases competitive pressures, which could discourage discrimination. Indeed, Black and Brainerd (2004) find empirical support for globalization reducing gender discrimination in manufacturing industries.

<sup>14</sup> A possible indirect effect of globalization on the willingness to teach kids tolerance is more education. With globalization labor markets become increasingly international and returns to education tend to increase, which gives incentives for human-capital accumulation. This can lead to more educated parents, who through their education have become more tolerant (through teaching and social interaction with others, possibly also with students from other backgrounds). Cf. Jaspers (2008, p. 29), Jensen and Oster (2009, p. 1060) and Congdon Fors (2014).

<sup>15</sup> For example, the power of television in affecting social norms is demonstrated by Jensen and Oster (2009) in the case of the status of women in India, by Chong and La Ferrara (2009) in the case of divorce in Brazil and by La Ferrara et al. (2012) in the case of fertility in Brazil.

*Political globalization* entails things on the national level, such as political exchange through foreign representation, membership in international organizations, participation in international missions and the adoption of international treaties. Since this type of globalization can primarily be expected to have an effect on parents who participate personally, and since such parents are few in any country, we expect the effect here on tolerance to be weaker. Still, there could perhaps also be an effect from the citizens of a country having a feeling that their country is part of an international political community. Both through internalization (as it then feels more natural to sympathize with people of different backgrounds) and through self-interest considerations (due to the many international political ties and exchanges, one and one's children might benefit from open attitudes towards others) there could be a positive effect.

To summarize our theoretical expectations, parents acting imperialistically towards their children become more tolerant through economic, social and political globalization because of an internalization effect and because of their self-interest. They will wish for their children to be more tolerant, as they want them to have the same traits and dispositions as themselves, and will therefore consider it important to teach the kids tolerance. Parents acting altruistically only care for what is in the children's best interest, and they will realize that children will be better equipped to flourish when economic, social and political globalization increases if they are tolerant and open to all kinds of people, with different nationalities, ethnicities, gender, sexual orientation, religion etc.

### *2.3. A negative effect of globalization*

Although our main hypothesis is that the relationship between globalization and willingness to teach tolerance is positive, globalization might also contain elements that reduce tolerance and a willingness to teach it to kids. Two main reasons for expecting a negative effect are cultural exclusivism and fear (and the two may very well be related in practice). By the former, we mean that people think it increasingly important to resist what they perceive to be the erosion of traditional (local or national) cultures; by the latter we mean that as globalization by definition entails economic, social and political change, this makes life less certain (Scheve and Slaughter, 2004; Mau et al., 2012), which can make people worry and resist this process. People and ideas that are different might consequently be regarded as

threats: they should not be let into “our” world.<sup>16</sup> As suggested by Arnett (2002) and Daniels and von der Ruhr (2005), people can develop oppositional identities that reinforce a “we-against-the-outsiders” kind of thinking, where the own group should be strengthened and be kept intact.<sup>17</sup> Parents affected by this outlook can become less tolerant as a result of globalization, and they can be unwilling to teach their kids tolerance towards different people and ideas and rather transmit attitudes of intolerance.

If we look at the three types of globalization separately, we expect *economic globalization* to be central if there is a negative effect, by increasing (perceived) uncertainty about such matters as unemployment and decision-making over companies, which could make parents less interested in teaching tolerance. Instead, they could increasingly start stressing the value of local production and ownership and problematize a foreign economic presence.<sup>18</sup> *Social globalization* could result in a negative reaction by those who wish to preserve cultures as they are. For example, television programs portraying female empowerment could be disliked in male-dominated cultures, and a resulting dislike of those that transmit such values could result in reduced tolerance and a reduced willingness to teach tolerance. Among the three types of globalization, *political globalization* is once again the least easy to connect to possible tolerance effects. An increase in the foreign presence and involvement of one’s own country may annoy isolationists, but most likely it will not affect the willingness to teach kids tolerance.

#### 2.4. Hypotheses to be tested

The theoretical reasoning above enables us to formulate some simple hypotheses to be tested:

H0: A willingness to teach children does not depend on globalization (in the aggregate), economic globalization, political globalization or social globalization.

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<sup>16</sup> Holton (2000) talks about “polarization” to denote how globalization may create resistance and tensions with regard to new cultural influences. This can also be related to Putnam’s (2000) notions of bridging and bonding social capital, where the former refers to bonds of connectedness that are formed across diverse social groups and where the latter refers to such bonds that only exist within homogenous groups.

<sup>17</sup> On oppositional identities, see Battu and Zenou (2010).

<sup>18</sup> However, the findings by Mau et al. (2012) do not suggest that globalization exacerbates subjective feelings of socio-economic insecurity.

H1a: A willingness to teach children depends positively on globalization (in the aggregate), economic globalization, political globalization or social globalization.

H1b: A willingness to teach children depends negatively on globalization (in the aggregate), economic globalization, political globalization or social globalization.

By recognizing that there could be positive as well as negative effects of globalization on the willingness to teach children tolerance, it becomes important to settle empirically whether positive or negative effects dominate and to see whether effects differ for different dimensions of globalization. It could, of course, also be that the null holds and that globalization, in some or all dimensions, is not related to our outcome variable.

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

#### *3.1. Data*

To empirically investigate if globalization makes more parents willing to instill tolerance in their children, we use as our dependent variable the share of people in different countries who answer “Tolerance” when being asked the question: “Here is a list of qualities that children can be encouraged to learn at home. Which, if any, do you consider to be especially important?”, in the World Values Survey and European Values Study.<sup>19</sup>

To measure globalization, we use the KOF Index of Globalization (Dreher, 2006). Its multidimensional character is one of the advantages with the index; another is that it covers a long time period, 1970–2012, and many countries.<sup>20</sup> Our main explanatory variables are Economic, Social and Political globalization. We also take advantage of the possibility of further decomposing our globalization measures into their sub-components – Trade flows and Trade restrictions (for Economic globalization), and Information flows, Personal contact and

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<sup>19</sup> It is common to merge data from these two surveys (see, e.g., Bjørnskov and Méon, 2013). As a crude test of whether there are systematic differences between the surveys, we have excluded the seven countries with EVS data, and we find nearly identical results after doing so. We have also inserted an EVS dummy as an alternative test, and the results are, again, unaffected. This indicates that results are not driven by survey-related differences.

<sup>20</sup> For example, while the KOF Index covers 122 countries, the Foreign Policy Index (A.T. Kearney/Foreign Policy Magazine, 2003) only covers 72 countries, while the CSGR index (Lockwood and Redoano, 2005) covers 106 countries, but only from 1982 until 2004.

Cultural proximity (for Social globalization) – to better understand what specific components that matter.<sup>21</sup> Box A1 in the Appendix describes the KOF Index of Globalization in detail.

We also make use of a number of potentially relevant control variables. We divide them into two groups: fixed variables (that we consider the most important and that we include in the baseline specifications) and switch variables (that we consider potentially relevant in addition and which we primarily use in the extreme bounds analysis). The fixed variables are: Real GDP per capita, Net income Gini and a set of geographical dummies. The switch variables are: Education, Young population share, Urban population share, Family values, Religious fractionalization, Ethnic fractionalization, Religion Catholic, Religion Muslim and Civil liberties.

The choice of control variables is based on results in previous studies examining the determinants of tolerance, as well as on theoretical considerations. As for the fixed variables, material well-being and little competition over scarce resources are likely to create more tolerance toward people different than oneself (Friedman, 2005; Andersen and Fetner, 2008; Corneo and Jeanne, 2009). Income inequality, on the other hand, can be expected to cause distance and resentment and plausibly intolerance (Andersen and Fetner, 2008). The geographical dummies serve to control for effects that may be typical of certain regions without being captured by the other control variables (Tabellini, 2010).

As for the switch variables, education can be expected to increase tolerance through teaching and social interaction with others from other backgrounds. It is also perceivable that a society with a large share of young people, who are generally more open to new experiences than older people, is more tolerant. In a similar vein, the share of people living in urban areas likely relates to tolerance in a positive manner, since diversity is generally greater in urban than in rural areas. Family value refers to the closeness of family ties (Alesina and Giuliano, 2010), and is the average of three variables: parents' duties and responsibilities, how much children should respect the elderly and how important family is in life. We expect a higher family value to correspond to a lower value for the willingness to teach kids tolerance (Ermisch and Gambetta, 2010). One reason is that children might be taught to be tolerant only towards people similar to themselves in close-knit families. To account for a potential link between heterogeneity and tolerance, we include two measures of religious and ethnic fractionalization. The predicted net effect on tolerance is unclear: while they may bring about

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<sup>21</sup> A similar decomposition for political globalization is not possible since there are no separate data for lower levels of this index.

an increase due to a greater probability of people meeting and getting to know others who are different, they may also bring about a decrease in tolerance, to the extent that differing groups tend to come into conflict with each other. The two religion variables capture shares of people who belong to a hierarchical religion, and it could be that identification with such a religion tends to decrease tolerance of those who do not follow the dictates of the prelates (Klosko, 2000; Bjørnskov, 2007). Civil rights controls for aspects of freedom. The ability to participate freely in open debates and in how one's country is governed reasonably increases tolerance, but in some cases, one could envisage a negative effect, if increased civil freedom exposes inter-group conflicts.

For the cross-country dataset we use data on the importance of teaching kids tolerance from the last non-missing value in the two latest versions of the World Values Survey and European Values Study, i.e., in 2005 or 2000. We use the latest available data in our baseline analysis since results are arguably more relevant for policy conclusions today if based on more recent data and since there are more observations available (but we use data from other years in a sensitivity test below). Globalization and control variables in baseline regressions have a ten-year lag, i.e., they stem from 1995 or 1990 (the lag length is varied in the sensitivity analysis below). The panel dataset is unbalanced with two or three observations for each country and includes values between 1980 and 2005 (with tolerance values starting in 1990). We also use these data for the first-difference analysis. For the instrumental-variable analysis we use information on globalization in neighboring countries and data on voting in the UN General Assembly in 1995. Descriptive statistics, definitions and sources of the variables are given in Table A1 in the Appendix. A list of the included countries is presented in Table A2 in the Appendix.

### *3.2. Empirical strategy*

We examine whether globalization affects the willingness to transmit tolerance to children using two main approaches. First, we carry out a cross-sectional analysis with regressions of the following form:

$$\text{Importance teaching tolerance}_i = \alpha + \beta(\text{Globalization}_{di}) + \gamma(\mathbf{X}_i) + \varepsilon_i \quad (1)$$

$\text{Globalization}_{di}$  denotes the KOF Index of Globalization of dimension  $d$  for country  $i$ , and  $\mathbf{X}_i$  is a vector of (the fixed) control variables for country  $i$ , including the regional dummies. As

described above the explanatory variables predate the dependent variable. A lagged specification is reasonable since it reduces the risk that tolerance influence globalization and since the potential globalization effect plausibly works with a delay – it is first when one can see and when one has had time to encounter the effects of globalization that one’s willingness to transmit tolerance to children can reasonably be affected.

A cross-sectional analysis is useful as it gives a first indication on the long-run “equilibrium” relationship between types of globalization and the importance of teaching kids tolerance, but several caveats apply. First, presuming reverse causality between globalization and the view on the importance of teaching kids tolerance, we test for causality using an instrumental variable approach. Second, if there are factors that are excluded from the analysis that affect the view of the importance of teaching tolerance but also globalization, the noted cross-sectional associations will capture the existence of omitted variables rather than a true globalization-effect. Our second approach is therefore to conduct panel-data and first-difference analyses. For the panel-data analysis we run regressions of the following form:

$$\text{Importance teaching tolerance}_{it} = \alpha + \beta(\text{Globalization}_{dit-1}) + \gamma(X_{it-1}) + \alpha_t + \mu_i + \varepsilon_{it} \quad (2)$$

$\text{Globalization}_{dit-1}$  and  $X_{it-1}$  are defined as for formula (1), where the added t denotes the time period and t-1 refers to a ten-year lag.  $\alpha_t$  is a period-specific effect capturing the influence of “shocks” on tolerance in multiple countries at the same time,  $\mu_i$  is a country-fixed effect capturing stable differences between countries with respect to tolerance and the willingness to teach kids these values and  $\varepsilon_{it}$  is a random error term. We estimate equation (2) using random- (RE) and fixed-effects (FE) estimators, and their difference is tested using the Hausman test. Following the line of reasoning above, the explanatory variables and the control variables always predate the measure on the importance of teaching kids tolerance also in the panel setting. The panel is unbalanced with two or three observations for each country and includes values between 1980 and 2005 (with tolerance values starting in 1990). Consequently, the panel covers a rather short time period, and cultural values and social attitudes are often quite stable in the short run. However, these estimations are still of interest since they can be interpreted as capturing transitory effects.

For the first-difference analysis we run regressions of the following form:

$$\Delta \text{Importance teaching tolerance}_{it} = \alpha + \psi(\text{Importance teaching tolerance}_{it}) + \beta(\text{Globalization}_{dit-1}) + \gamma(X_{it-1}) + \alpha_t + \mu_i + \varepsilon_{it} \quad (3)$$

The dependent variable here refers to *the change* in the share that thinks it is important to teach kids tolerance. We now include the initial value of the tolerance measure among the explanatory variables; other variables are defined as above. Note that we now include a lagged tolerance variable on the right-hand side, since social attitudes tend to change slowly, which implies that tolerance in a certain time period is most likely correlated with tolerance in a previous one.<sup>22</sup>

## 4. Results

We begin by presenting cross-sectional, panel-data and first-difference regression results. In each case we present findings from some robustness tests and an instrumental-variable analysis (in order to try to ascertain causality). Lastly, we provide an attempt to ascertain whether parents, to the extent they are willing to teach kids tolerance, are primarily motivated by altruistic or imperialistic concerns.

### 4.1. Cross-sectional results

#### 4.1.1. Baseline results

Table 1 contains the results for the aggregate globalization index and the willingness to teach children tolerance, adding one fixed variable at a time. In line with our theoretical predictions, Globalization correlates positively with the willingness to teach kids tolerance, lending support to hypothesis H1a in Section 2.4. Regarding the size of the effect, an increase in Globalization of 10 units (out of 100) – which approximately corresponds to the difference between the UK and the US – relates to an increase in the share of people who consider it important to teach kids tolerance by about 7 percentage points. We consider this a sizeable effect, given the observed variation in Globalization (see Table A1 in the Appendix). We got

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<sup>22</sup> Adding a lagged tolerance variable as explanatory variable in the RE or FE model necessarily introduces bias because this variable is correlated with the error term (see, e.g., Baltagi, 2008), which is why we refrain from doing so (while being aware that non-inclusion brings with it a slight risk for omitted-variable bias).

statistical significance for two of the control variables: Net income Gini and Sub-Saharan Africa.<sup>23</sup>

(Insert Table 1)

In order to make more precise what elements of Globalization that drive these results, we use the same model to estimate the relationship between Economic, Social and Political globalization, on the one hand, and our tolerance measure, on the other. Results in Table 2 suggest that Economic and Social, but not Political, globalization is of particular importance for transmitting this social value. Social globalization, especially, matters: it both has the largest point estimate and it retains its statistical significance in columns 10–12, when all three areas of globalization are included. In other words, hypothesis H1a applies to Economic and Social globalization and H0 to Political globalization, while hypothesis H1b, positing a negative relationship, is not supported for any of our globalization variables. As for the control variables, they generally have the expected sign, but statistical significance varies.

(Insert Table 2)

We also take advantage of the possibility to further decompose Economic and Social globalization. Table 3 presents the estimated coefficients of the five sub-components without reporting, for reasons of space, the findings for the control variables. Interestingly, all five are positive and statistically significant. On the economic side, both larger volumes of trade and fewer trade restrictions increase the willingness to teach kids tolerance. On the social side, the three factors Personal contact, Information flows and Cultural proximity all stand in a positive relation to a willingness to transmit the social value tolerance. Personal contact primarily measures telephone traffic, tourism, the share of the population that is foreign and international letters per capita; Information flows refer to the Internet and media; Cultural

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<sup>23</sup> As for why we get a positive effect for this country-group dummy, we can only speculate. Our idea is the experience of people in this region, of colonialism and social strife, is such as to generate a willingness to teach kids tolerance. Also, they have experienced a lot of in-fighting between African groups, with horrible consequences in some cases, which likewise may have disposed the adults to try to instill tolerance among the children in order to avoid similar outcomes ahead.

proximity is measured by the number of McDonald's restaurants per capita, the number of IKEA stores per capita and trade in books.<sup>24</sup>

(Insert Table 3)

#### 4.1.2. Robustness

To check the robustness of our baseline findings we perform a number of sensitivity tests.

First, we have done an EBA, using the tool developed by Young et al. (2013). We have estimated 1,024 regressions in total for each globalization measure, with each regression containing one globalization variable and the fixed variables (Real GDP per capita, Net income Gini and country-group dummies). In addition, we have then added switch variables (see Section 3.1 for a listing) in all possible combinations. The overall results are presented in Table 4.

(Insert Table 4)

The results show that when varying the model in the manner just described, Globalization, Economic Globalization and Social Globalization, as well as several of their components, actually attain statistical significance in all regressions. Furthermore, none of the variables ever changes sign. We also report the outcomes of the cumulative distribution function (CDF) test, which is based on the fraction of the cumulative distribution function lying on each side of zero.  $CDF(0)$  indicates the larger of the areas under the density function either below or above zero, which means that  $CDF(0)$  will lie between 0.5 and 1.0. Robustness is implied by a value of 0.95 or higher (Sala-i-Martin, 1997). The results reveal that all globalization variables except Political globalization lie at or above 0.95. Altogether this indicates strong robustness (Raftery, 1995). Moreover, when looking at the distributions of the point estimates over all regressions (available on request), they are all very compressed.

Second, we have used least trimmed squares to check for the influence of outliers. It turns out that our baseline results are not sensitive to such an influence.

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<sup>24</sup> We have also performed regressions with *all* control variables included (fixed and switch variables). Reassuringly, our globalization measures all remain qualitatively similar in terms of point estimates and statistical significance.

Third, we have varied the year in which the dependent variable is measured and the lag length. When measuring the dependent variable in 2000 or in 1995 rather than in 2005, and when keeping a ten-year lag, results remain virtually unchanged compared to the baseline. The only difference is that Economic globalization loses significance when the dependent variable is measured in 1995, but one should interpret this with caution since the sample is reduced considerably in that case. When varying the lag length of the control variables, from ten to fifteen and five years respectively, results do not change much either. All results are available on request.

Taken together, these findings lead us to regard our baseline results as robust.

#### *4.1.3. Instrumental-variable estimations*

The cross-sectional results seem to imply that economic and social globalization increases people's willingness to teach the next generation tolerance. However, it is not unreasonable to think that globalization is endogenous to such willingness. For example, the results might mirror reverse causality, since intolerance towards other cultures could deter foreign direct investments, trade and tourism (important indicators of globalization), in which case these types of globalization would be a result of rather than a cause of tolerance.<sup>25</sup> For this reason we use an instrumental-variable (IV) approach, where we instrument our measures of globalization, in order to see if we can find indications of a causal effect from our tolerance measure to globalization. We use two instruments: the preceding average level of globalization in neighboring countries, as measured by the aggregate KOF index, and a voting-similarity index capturing how often a country's vote in the UN General Assembly coincides with the how the United States votes.

The use of the first instrument is based on the idea of "peer effects" of opening up country borders and becoming more economically and socially integrated with the world economy. Such effects can be expected to be closely related, with some lag, to a country's own globalization level – but it is hard to see how the globalization level in a neighboring country can affect the willingness to teach children tolerance in the own country. (Are parents even knowledgeable of the globalization levels of other countries?) The idea behind this instrument has previously been applied. For example, Gassebner et al. (2011) find that

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<sup>25</sup> The risk of reverse causality is likely larger if parents are motivated by imperialism (see Section 2), since this motivation means that the parents themselves hold the values they try to instill in their children and since this is more readily related to attempts to affect policies and practices determining the scope of globalization (compared to parents being motivated on altruistic grounds).

economic reforms are affected by reforms adopted by other countries, and Eichengreen and Leblang (2008) and de Soysa and Vadlamannati (2011) both instrument variables of openness with the lagged values of openness of neighboring countries.

We define two countries as neighbors if they share a land or maritime boundary, the latter as recognized by the United Nations Convention on the Law of the Sea. For example, Latvia, Finland and Russia, but also Sweden, are defined as neighbors of Estonia. However, territories are not classified as neighboring countries.<sup>26</sup> Globalization in neighboring countries is measured in 1985, i.e., ten years before the country-specific globalization value being instrumented.

As for the justification of our second instrument, the types of globalization captured by the KOF index suggest powerful links between globalized countries and the United States through the policy and cultural paradigm it represents and stimulates around the world. For example, trade dependence on powerful states or large economies such as the United States impacts partner countries' political alignments with these states in the United Nations (Richardson and Kegley, 1980; Armstrong, 1981). Voting similarity with the United States in the United Nations could therefore be expected to correlate with measures of globalization, and consequently UN voting-similarity indices have been used as an instrument by, e.g., Dreher and Sturm (2012) and Cho (2013).<sup>27</sup> Furthermore, we are not aware of any empirical results showing a relationship between tolerance and patterns of UN voting, nor do we see any theoretical basis for expecting such a relationship to exist. The data comes from Strezhnev and Voeten (2013) and refer to voting similarity with the United States in the UN General Assembly in 1995. The index ranges between 0 and 1, where a higher value implies higher voting similarity between the countries considered.<sup>28</sup>

(Insert Table 5)

The chosen instruments should not vary systematically with the error term, i.e., not have an independent effect on the dependent variable other than through the instrumented variable corresponding to a country's own globalization. To test this assumption we first include the

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<sup>26</sup> A complete list of neighboring countries is available from the authors on request.

<sup>27</sup> See Dreher et al. (2008) on the different ways UN voting coincidence has been calculated in the literature.

<sup>28</sup> The voting-similarity index is calculated as the total number of votes where both states agree divided by the total number of joint votes and uses three category data (1 = "yes" or approval for an issue; 2 = abstain, 3 = "no" or disapproval for an issue.) Abstention is therefore counted as half-agreement with a yes or no.

two instruments in our baseline specification. As shown by the results in columns 1–4 of Table 5, our instruments fulfill an important validity requirement, since they do not significantly associate with the dependent variable when controlling for the level of globalization. Moreover, including the instruments in the baseline specification adds little explanatory value and does not change the baseline coefficients in any qualitatively relevant way.

Second, instrument relevance requires that instruments should be correlated with our measures of globalization. Columns 5–7 of Table 5 show results from the first-stage regressions estimating the relationship between, on one hand, the neighbors' average globalization and voting similarity with the United States in the United Nations, and measures of globalization, including a full set of control variables and region dummies, on the other hand. P values of first-stage F tests indicate that the instruments are jointly significant in all three specifications, suggesting they are quite powerful in predicting globalization, although the voting-similarity measure does appear weak and the F test values are quite low.

Finally, columns 8–10 of Table 5 presents the second-stage regression results, where predicted globalization levels are used to estimate the effect on the willingness to teach children tolerance.<sup>29</sup> The exogenous parts of globalization remain significantly and positively related to our dependent variable. Our baseline finding that economic and social globalization increases the transmission of social values is moreover strengthened (magnitude-wise), suggesting that our initial results, if anything, underestimate the globalization effect on tolerance.<sup>30</sup> Importantly, the Sargan test statistic also shows that the overidentifying restrictions are not rejected at conventional levels of significance. Still, we do not want to overstress these findings. The instruments, especially the voting-similarity one, are not very strong.

We have also investigated other potential instruments of globalization used in the economics literature, e.g., population growth, language variables (English as an official language, the share of the population speaking English), geographic distance to New York and years of membership in the GATT/WTO. According to first-stage regression results and

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<sup>29</sup> The sample in our 2SLS estimation is reduced by one observation (Switzerland) due to a lack of data. This country did not become a full member of the United Nations until 2002.

<sup>30</sup> We have produced but do not include IV results for Political globalization since baseline estimates for this variable are generally not statistically significant and because of limited space. As expected, the IV results (available on request) show no statistically significant relationship between Political globalization and the tolerance measure.

the results when including these variables in our baseline specification, none of these instruments are valid in our case.

#### *4.2. Panel-data and first-difference results*

##### *4.2.1. Baseline results*

We also examine what the relationship under study looks like when performing a panel-data and a first-difference analysis. A Hausman test indicates that a random-effects (RE) model is the most appropriate, and we therefore perform our continued panel-data analysis and sensitivity analysis using this model. The results are presented in columns 1–4 in Table 6.

(Insert Table 6)

Notably, the cross-sectional results are confirmed. Globalization and two of its three parts, Economic and Social globalization, are associated with our tolerance measure in a positive and statistically significant way, while Political globalization is not. Disaggregating the globalization measures further reveals that the absence of trade restrictions and all three sub-components of Social globalization are positive and significant.

Since cultural attitudes arguably are characterized by inertia, this might imply that adding an initial value of the share that considers it important to teach children tolerance could be important. To avoid correlation of such a variable with the error term, we estimate a model where the dependent variable refers to *the change* in a willingness to teach kids tolerance. The results for this first-difference model are reported in columns 5–8 of Table 6. Also here, the findings are qualitatively similar to baseline results. Globalization, and its parts Economic and Social globalization, is positively related to the dependent variable. The lagged value of Importance teaching tolerance is negative and significant, indicating that a higher level of tolerance in a country comes with a smaller change over the next period.

##### *4.2.2. Robustness and instrumental-variable estimations*

As in the case of the cross-sectional analysis, we have performed robustness checks and IV estimations for the panel-data and first-difference (DIFF) results as well. First, we have done an EBA. The fixed variables in the EBA are: lagged Real GDP per capita, lagged Net income Gini, country-group dummies, period dummies and – for the first-difference model – the lagged Importance teaching tolerance. The switch variables are (all lagged ten

years): Education, share of population urban, share of population young, family values and civil rights. The analysis (available on request) suggests that most globalization measures are robustly related to our tolerance measure. The share of the 128 regressions in which the measures are statistically significant at the 5 percent level are: Globalization 100 percent (RE, DIFF); Economic globalization 100 percent (RE) and 94 percent (DIFF); Social globalization 100 percent (RE, DIFF); and Political globalization 0 percent (RE, DIFF). For the more detailed components, the absence of trade restrictions is significant in 100 percent (RE, DIFF) of the regressions, explaining the effect of Economic globalization, while all three components of Social globalization (Personal contacts, Information flows and Cultural proximity) are significant in 100 percent of the regressions (RE, DIFF).

Second, we perform an outlier analysis by means of LTS. When the identified outliers (four outliers in the RE analysis and five in the DIFF analysis) are removed, point estimates for the globalization measures do not change much, which we consider reassuring.

Finally, we undertake an IV analysis for the RE and the first-difference model. We make use of the same instruments as in the cross-section analysis and lag them 10 years. Tests from the first stage regression results indicate that the instruments are jointly significant, and the Sargan test statistics also suggest that the overidentifying restrictions are not rejected. The 2SLS results indicate that the baseline findings can be seen as causal.

In all, the results seem robust throughout these various exercises.

#### *4.3. The motivation for a willingness to teach children tolerance*

Theoretically, we posit that parents in general are both imperialistic and altruistic to varying degrees. Yet it is possible to gain partial knowledge whether one of the two suggested theoretical bases is predominant. As discussed in Section 2, in *the imperialistic case*, parents have certain preferences for tolerance and try to transmit these social attitudes, as they want the children to adopt the very same values. Therefore, if globalization affects parents' willingness to teach kids tolerance, it is through affecting the values of the parents. In the *altruistic case*, parents may very well value tolerance and globalization can also affect their level of tolerance, but this is not a necessary condition for them to think it important to teach their offspring to be tolerant: all that is required is the conviction that tolerance will be a good social attitude for the children to hold in the future. Keeping in mind that aggregate comparisons should be interpreted with caution, we try, in two ways, to ascertain which of these motivations that dominates.

First, we look at whether the effect of globalization to increase the willingness to teach children tolerance stems from globalization bringing about higher tolerance among adults. If it does not, this can be seen as ruling out the imperialistic motive. To study this in a very simple way, we regress the same set of explanatory variables as in Table 1 (for the cross-section case) and Table 6 (for the panel case) on two alternative dependent variables: tolerance among adults towards homosexuals and towards people of different race, collected from the World Values Survey and European Values Study.<sup>31</sup> Both cross-sectional and panel results (available on request) suggest that globalization does not generally affect these tolerance measures.<sup>32</sup> In other words, increasing economic, social and political integration does not seem to influence the contemporary level of tolerance in the adult population, lending some support for an altruistic basis for the increase in parents' willingness to teach kids to be more tolerant that more globalization brings about.

At first glance, our results here may seem to imply that a willingness to teach kids tolerance does not result in actually higher tolerance (as they grow up and become adults). However, this is an incorrect conclusion. The fact that more globalization does not affect tolerance among adults does not rule out that the willingness of *their* parents (in turn likely affected by globalization) or other factors have made them tolerant – only that more current globalization does not increase their tolerance. This would not be surprising, since more tolerance from childhood could very well make adults less susceptible to the influence of more globalization on their tolerance levels. They would then already be quite tolerant.

Second, the former exercise looked at the role of altruism vs. imperialism in the marginal case, when globalization increases. It may still be, however, that the average level of tolerance among adults is high, which would suggest a role for imperialism in their overall attitudes and willingness to teach kids tolerance. To test this, we run regressions using the same specifications as in in Table 1 but also add the two new tolerance measures as explanatory variables. The idea is that imperialism can be rejected as an overall motivation,

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<sup>31</sup> Tolerance towards homosexuals refers to the share of the population in each country that does *not* pick “homosexuals” in answer to the question “On this list of various groups of people. Could you please mention any that you would not like to have as neighbors?”. Tolerance towards people of a different race refers to the share of the population that does *not* pick “people of a different race” in answer to the very same question.

<sup>32</sup> The only exception is the panel-data analysis on the relationship between economic globalization and tolerance towards people of different race. In line with our theoretical line of reasoning where economic globalization primarily is assumed to work through the imperialistic basis, this type of globalization is significantly and positively related to tolerance towards people of a different race.

on average, if we do not get a positive and statistically significant estimate of the new tolerance variables. Table 7 presents the point estimates for the two tolerance measures across specifications.

(Insert Table 7)

As can be seen, the new tolerance measures never attain statistical significance. This suggests that the willingness to teach kids tolerance (our dependent variable) is not directly affected by the other two tolerance measures, which it would be had imperialism been the dominant motive.<sup>33</sup> Again, this points at altruism as the primary explanation of the willingness to teach kids tolerance: Parents then care about their children and think they benefit from respecting and accepting others that are different in a globalizing world. It is not necessary, for them to have this willingness, that they themselves are tolerant.

## 5. Concluding remarks

Globalization is a multifaceted phenomenon that has been welcomed or decried on the basis of its perceived consequences. An increasing amount of studies make use of the relatively new KOF measure of globalization to produce more precise knowledge of the actual consequences. We add to this literature by studying whether economic, social and political globalization impacts the willingness of parents to teach tolerance to their children. This outcome variable is important since tolerance can be regarded as a valuable asset in any community, both because it creates an open and humane society in which people who are different are able to join in (which may be regarded as important in itself) and because it seems to make the economy function better by enabling a fuller use of human talent.

We primarily expect the effect of the three types of globalization to be positive. Economic globalization has the potential to make parents more tolerant, either through internalization following numerous interactions perceived to be beneficial with people who are different or through the realization that openness to such interactions are in their self-interest. Tolerant parents are then likely to be willing to transmit tolerance to their children. The same goes for altruistic parents, even if they are not tolerant, when they consider it to be

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<sup>33</sup> Interestingly, as noted above, this result also reduces the potential problem of reverse causality.

in the interest of the children to be open to people who are different. Social globalization means that values and ideas are transmitted more easily, through media, the Internet, travel, migration and other personal contacts, and to the extent that these are broadly liberal in character (e.g., through a Western cultural dominance), this can affect parents' tolerance and willingness to teach tolerance. They could also realize that it is in the best interest of their offspring to be able to be integrated with others who are different. Political globalization, lastly, concerns how nations interact with other nations and is probably not as influential on individual attitudes, but to the extent that parents notice how political ties and exchanges across borders are becoming more common and stronger, they could see this as a reason to instill tolerance in their offspring, to equip them better for an integrated world. Thus, our expectation is for positive effects of globalization. This is not to say that there cannot be negative effects as well, stemming from concerns about keeping culture unchanged and from fear of change. Ultimately, it is an empirical issue what the exact relationships look like.

To that end, we conducted an empirical study encompassing up to 59 countries, and our expectation of positive relationships was confirmed: globalization seems to enhance the willingness to transmit tolerance to children in a robust manner. However, there are differences between the types of globalization. A cross-sectional analysis revealed that economic and social (but not political) globalization stand in a positive relationship to our outcome variable. A more detailed investigation showed that in terms of economic globalization, both trade flows and the absence of trade restrictions exert a positive influence, whereas cultural proximity, information flows and personal contacts all stimulate a willingness to teach tolerance from the social side. Moreover, a panel-data analysis and a first-difference analysis taking potential inertia into account largely confirmed these findings.

Despite using a panel-data and a first-difference specification, as well as lagging globalization with respect to our dependent variable throughout, it cannot be ruled out that some components of the KOF Index of Globalization could be affected by past or present levels of tolerance, generating an endogeneity problem with biased regression results. However, an instrumental-variable approach at least weakly suggests a causal relationship between globalization and the transmission of tolerance.

Our findings lend support to a view of globalization as being able to bring about widely valued social effects, through influencing ideas about how to bring up children. These ideas seem to stem from an altruistic concern in parents, that instilling tolerance will equip children better for a future in a globalized world.

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## Appendix

(Insert Box A1)

(Insert Table A1)

(Insert Table A2)

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**Table 1**

Aggregate globalization and tolerance: cross-sectional results.

	(1)	(2)	(3)	(4)
Globalization	0.524*** (0.059)	0.646*** (0.082)	0.673*** (0.144)	0.674*** (0.137)
Real GDP per capita			-0.580 (2.461)	-1.167 (2.377)
Net income Gini				-0.306* (0.153)
East Asia		-2.204 (3.071)	-1.920 (2.965)	-2.247 (2.967)
Europe		-1.810 (3.267)	-1.453 (3.534)	-3.234 (3.783)
Latin America		4.630 (3.266)	4.885 (3.314)	7.525** (3.393)
North America		-4.188 (3.515)	-3.821 (3.750)	-4.355 (3.981)
South Asia		-1.055 (2.460)	-1.188 (2.543)	-3.442 (2.681)
Sub-Saharan Africa		10.082** (4.656)	9.653** (4.579)	12.329*** (4.565)
Observations	59	59	59	59
Adjusted R <sup>2</sup>	0.578	0.633	0.626	0.639

*Notes:* Robust standard errors in parentheses. \* significant at 10%, \*\* significant at 5%, \*\*\* significant at 1%. Geographical reference for country-group dummies is the Middle East and North Africa (MENA). All regressions contain an unreported constant.

**Table 2**

Three dimensions of globalization and tolerance: cross-sectional results.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Economic globalization	0.481*** (0.085)	0.352*** (0.113)	0.359*** (0.115)							0.099 (0.098)	0.121 (0.104)	0.132 (0.105)
Social globalization				0.541*** (0.068)	0.581*** (0.120)	0.577*** (0.118)				0.446*** (0.108)	0.496*** (0.131)	0.485*** (0.133)
Political globalization							0.248*** (0.084)	0.101 (0.087)	0.100 (0.085)	0.047 (0.069)	0.057 (0.066)	0.057 (0.065)
Real GDP per capita		3.573* (1.911)	2.837 (1.915)		-1.047 (2.115)	-1.493 (2.030)		7.621*** (1.553)	7.058*** (1.632)		-1.814 (2.423)	-2.335 (2.302)
Net income Gini			-0.337** (0.167)			-0.272* (0.160)			-0.301 (0.181)			-0.287* (0.151)
East Asia	-3.611 (3.554)	-4.962 (3.687)	-5.328 (3.547)	-5.050 (3.648)	-4.742 (3.571)	-5.033 (3.490)	4.800 (5.417)	-2.952 (5.438)	-3.296 (5.402)	-4.501 (3.432)	-3.849 (3.217)	-4.157 (3.157)
Europe	0.132 (3.658)	-2.536 (4.145)	-4.498 (4.324)	-6.233 (3.801)	-5.893 (3.695)	-7.451* (3.854)	10.936** (4.594)	-0.957 (5.825)	-2.728 (5.851)	-5.354 (3.975)	-4.576 (3.901)	-6.175 (4.091)
Latin America	3.526 (3.331)	2.273 (3.808)	5.173 (3.700)	4.239 (3.466)	4.678 (3.438)	7.007** (3.481)	9.488* (5.179)	3.386 (5.530)	5.972 (5.714)	4.082 (3.450)	4.808 (3.380)	7.237** (3.421)
North America	3.218 (3.509)	-0.944 (4.481)	-1.515 (4.279)	-9.152** (4.469)	-8.816* (4.429)	-9.237* (4.712)	12.771*** (4.518)	-1.503 (6.391)	-2.031 (6.204)	-8.149* (4.447)	-7.348 (4.440)	-7.682 (4.749)
South Asia	0.096 (2.993)	0.574 (3.412)	-1.856 (3.278)	1.145 (3.090)	1.053 (3.126)	-0.973 (3.221)	-10.509** (4.045)	-3.381 (4.557)	-5.583 (4.588)	0.936 (3.210)	0.732 (3.239)	-1.365 (3.336)
Sub-Saharan Africa	6.205 (4.774)	9.850** (4.716)	12.728*** (4.492)	7.030* (3.995)	6.009 (4.357)	8.442* (4.618)	7.492 (6.370)	14.418** (6.218)	17.038** (6.371)	8.080* (4.354)	6.538 (4.691)	9.085* (4.725)
Observations	59	59	59	59	59	59	59	59	59	59	59	59
Adjusted R <sup>2</sup>	0.495	0.517	0.532	0.662	0.657	0.666	0.192	0.418	0.426	0.658	0.656	0.668

Notes: Robust standard errors in parentheses. \* significant at 10%, \*\* significant at 5%, \*\*\* significant at 1%. Geographical reference for country-group dummies is the Middle East and North Africa (MENA). All regressions contain an unreported constant.

**Table 3**

Components of economic and social globalization and tolerance: cross-sectional results.

	(1)	(2)	(3)	(4)	(5)	(6)
Trade flows	0.164** (0.075)					0.004 (0.069)
Trade restrictions		0.386*** (0.109)				0.221** (0.097)
Personal contact			0.303*** (0.091)			0.119 (0.106)
Information flows				0.363*** (0.098)		0.207** (0.087)
Cultural proximity					0.225*** (0.058)	0.160*** (0.052)
Adj. R <sup>2</sup>	0.432	0.534	0.517	0.515	0.564	0.648
Observations	57	59	59	59	59	57

*Notes:* Robust standard errors in parentheses. \* significant at 10%, \*\* significant at 5%, \*\*\* significant at 1%.

All regressions include the same control variables as column 4 of Table 1. Trade flows and Trade restrictions are components of Economics globalization, while Personal contact, Information flows and Cultural proximity are components of Social globalization.

**Table 4**

Extreme bounds analysis: cross-sectional results.

Variable	Sign	Sign stability	Significance rate	CDF(0)
Globalization	+	100%	100%	0.998
Economic globalization	+	100%	100%	0.998
Social globalization	+	100%	100%	0.999
Political globalization	+	100%	0%	0.743
Trade flows	+	100%	53%	0.954
Restrictions	+	100%	100%	0.999
Personal contact	+	100%	98%	0.985
Information flows	+	100%	100%	0.999
Cultural proximity	+	100%	100%	0.999

*Notes:* The significance rate denotes the share of 1,024 regressions in which the globalization measure in question was statistically significant at the 5% level.

**Table 5**

Regression results using instrumental variables: cross-sectional results.

<i>Dependent variable:</i>	Importance teaching tolerance	Importance teaching tolerance	Importance teaching tolerance	Importance teaching tolerance	Glob. First stage	Econ. glob. First stage	Soc. glob. First stage	Importance teaching tolerance 2SLS	Importance teaching tolerance 2SLS	Importance teaching tolerance 2SLS
Globalization		0.606*** (0.151)						0.899*** (0.266)		
Economic globalization			0.298** (0.117)						0.577*** (0.219)	
Social globalization				0.518*** (0.131)						0.887*** (0.263)
Average globalization in neighboring countries	0.425*** (0.157)	0.154 (0.136)	0.256 (0.171)	0.179 (0.142)	0.448*** (0.138)	0.568*** (0.192)	0.475*** (0.176)			
Voting similarity	3.389 (6.091)	4.781 (5.760)	6.789 (5.689)	2.944 (5.523)	-2.297 (6.934)	-11.424 (9.628)	0.858 (8.827)			
Observations	58	58	58	58	58	58	58	58	58	58
First stage F-test	n.a	n.a	n.a	n.a	5.47	5.51	3.65	n.a	n.a	n.a
First stage F-test (p-value)	n.a	n.a	n.a	n.a	0.007	0.007	0.033	n.a	n.a	n.a
Sargan test (p-value)	n.a	n.a	n.a	n.a	n.a	n.a	n.a	0.369	0.126	0.675

*Notes:* Robust standard errors in parentheses. \* significant at 10%, \*\* significant at 5%, \*\*\* significant at 1%. Globalization, Economic globalization and Social globalization are instrumented by average level of globalization in neighboring countries in 1995, voting similarity with the United States in the UN General Assembly in 1995 and the same full set of control variables and country-group dummies as before.

**Table 6**

Globalization and tolerance: panel-data and first-difference results

	(1)	(4)	(3)	(4)	(5)	(6)	(7)	(8)
	RE	RE	RE	RE	DIFF	DIFF	DIFF	DIFF
Globalization	0.531*** (0.098)				0.451*** (0.137)			
Economic globalization		0.217*** (0.066)				0.271*** (0.098)		
Social globalization			0.444*** (0.080)				0.367*** (0.105)	
Political globalization				0.091 (0.062)				0.082 (0.070)
Real GDP per capita	-0.359 (1.605)	3.645** (1.469)	-0.466 (1.462)	5.721*** (1.443)	0.838 (1.934)	2.697** (1.161)	0.473 (1.855)	5.202*** (1.255)
Net income Gini	-0.256** (0.129)	-0.263* (0.135)	-0.232* (0.139)	-0.222* (0.128)	-0.041 (0.104)	-0.081 (0.108)	-0.042 (0.114)	0.024 (0.137)
East Asia	0.622 (2.963)	2.206 (3.469)	0.342 (2.870)	2.017 (3.541)	-0.130 (2.506)	2.214 (2.765)	-1.389 (2.782)	1.825 (2.786)
Europe	9.424*** (2.689)	10.011*** (2.963)	10.309*** (2.945)	8.407*** (3.133)	3.995 (2.920)	5.791* (3.058)	5.389* (3.119)	3.999 (4.018)
Latin America	1.322 (2.570)	3.335 (3.233)	3.897 (2.765)	1.809 (4.199)	4.204 (3.849)	7.843** (3.539)	5.471 (4.413)	7.777* (4.453)
North America	-0.187 (3.255)	4.884 (3.608)	-1.811 (3.478)	3.402 (4.030)	-2.852 (2.846)	1.953 (2.926)	-4.067 (3.258)	0.279 (3.519)
South Asia	2.818 (2.151)	5.826** (2.536)	5.744** (2.263)	1.734 (3.025)	3.887* (2.288)	7.869*** (2.367)	5.431** (2.312)	4.002 (3.749)
Sub-Saharan Africa	11.414*** (3.518)	13.705*** (4.031)	11.556*** (3.811)	14.801*** (3.908)	7.649 (4.686)	7.428** (3.264)	7.342* (4.169)	8.372* (4.755)
Importance teaching tolerance					-0.673*** (0.135)	-0.614*** (0.153)	-0.658*** (0.123)	-0.528*** (0.119)
Observations	142	142	142	142	78	78	78	78
Number of countries	62	62	62	62	39	39	39	39
Period dummies (Prob>F)	0.00	0.00	0.00	0.00	0.01	0.02	0.00	0.05
Adjusted R2					0.642	0.588	0.629	0.580
Hausman (Prob>chi2)	0.328	0.102	0.203	0.809				
Within R2	0.326	0.326	0.345	0.317				

Notes: RE = panel-data analysis, random effects with Importance teaching tolerance as the dependent variable. DIFF = first-difference regressions, with Change in importance teaching tolerance as the dependent variable. Robust standard errors in parentheses. \* significant at 10%, \*\* significant at 5%, \*\*\* significant at 1%. All regressions contain time-fixed effects and a constant (not shown).

**Table 7**

Globalization and tolerance: cross-sectional results with new tolerance measures.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Tolerance homosexuals	0.007 (0.050)	0.019 (0.057)	0.014 (0.055)	0.051 (0.076)				
Tolerance different race					0.093 (0.164)	0.104 (0.185)	-0.033 (0.157)	0.189 (0.240)
Globalization	0.734*** (0.145)				0.730*** (0.141)			
Economic globalization		0.364*** (0.131)				0.363*** (0.128)		
Social globalization			0.639*** (0.111)				0.647*** (0.105)	
Political globalization				0.091 (0.088)				0.103 (0.088)
Observations	57	57	57	57	57	57	57	57
Adjusted R <sup>2</sup>	0.644	0.519	0.688	0.424	0.647	0.522	0.688	0.429

Notes: Robust standard errors in parentheses. \* significant at 10%, \*\* significant at 5%, \*\*\* significant at 1%. All regressions contain a constant and the control variables Real GDP per capita, Net income Gini and country-group dummies.

## **Box A1**

The 2012 KOF Index of Globalization: Indices and variables weights

### **A. Economic Globalization (36%)**

#### *i) Actual Flows (50%)*

Trade (percent of GDP) (21%)

Foreign Direct Investment, stocks (percent of GDP) (28%)

Portfolio Investment (percent of GDP) (24%)

Income Payments to Foreign Nationals (percent of GDP) (27%)

#### *ii) Restrictions (50%)*

Hidden Import Barriers (24%)

Mean Tariff Rate (27%)

Taxes on International Trade (percent of current revenue) (26%)

Capital Account Restrictions (23%)

### **B. Social Globalization (37%)**

#### *i) Data on Personal Contact (34%)*

Telephone Traffic (25%)

Transfers (percent of GDP) (4%)

International Tourism (26%)

Foreign Population (percent of total population) (21%)

International letters (per capita) (25%)

#### *ii) Data on Information Flows (35%)*

Internet Users (per 1000 people) (33%)

Television (per 1000 people) (36%)

Trade in Newspapers (percent of GDP) (32%)

#### *iii) Data on Cultural Proximity (31%)*

Number of McDonald's Restaurants (per capita) (44%)

Number of Ikea (per capita) (45%)

Trade in books (percent of GDP) (11%)

### **C. Political Globalization (26%)**

Embassies in Country (25%)

Membership in International Organizations (28%)

Participation in U.N. Security Council Missions (22%)

International Treaties (25%)

Source: Dreher et al. (2008).

**Table A1**

Descriptive statistics.

Variable	Description	Source	Mean	Std. dev.	Min.	Max.
Importance teaching tolerance	Share of the population answering “Important” to the quality “Tolerance” when being asked the question “Here is a list of qualities that children can be encouraged to learn at home. Which, if any, do you consider to be especially important?”	World Values Survey (2012) and European Value Study (2012)	71.61	11.67	50.37	93.62
Globalization	Aggregate globalization index	Dreher et al. (2008a)	59.43	17.035	21.77	87.91
Economic globalization	Economic globalization	Dreher et al. (2008a)	57.34	18.55	18.30	94.45
Social globalization	Social globalization	Dreher et al. (2008a)	51.23	22.20	12.69	87.83
Political globalization	Political globalization	Dreher et al. (2008a)	74.44	17.79	21.40	98.78
Trade flows	Actual trade flows	Dreher et al. (2008a)	54.00	20.25	9.30	99.55
Trade restrictions	Trade restrictions	Dreher et al. (2008a)	61.55	21.59	22.84	93.04
Personal contact	Personal contact	Dreher et al. (2008a)	51.50	22.30	10.90	93.52
Information flows	Information flows	Dreher et al. (2008a)	55.76	20.78	13.60	90.72
Cultural proximity	Cultural proximity	Dreher et al. (2008a)	46.04	30.64	1.12	94.33
Real GDP per capita	Log real GDP per capita, constant prices	Heston et al. (2009)	9.03	1.20	5.90	10.68
Net income Gini	Gini coefficient measuring net income inequality	SWIID 2010 (Solt, 2010)	35.17	8.94	21.31	55.08
Education	Share of population that have completed secondary education	Barro and Lee (2010)	21.31	11.35	0.71	44.90
Young population	Share of population 15 years or younger	WDI (World Bank, 2011)	45.65	21.11	21.87	97.68
Urban population	Share of population living in urban areas	WDI (World Bank, 2011)	61.85	21.63	9.6	100
Family values	Measure on the importance of family. Average of three variables measuring parents’ duties and responsibilities, how much children should respect elderly, and how important family is in life (see Alesina and Giuliano, 2009)	World Values Survey (2012) and European Value Study (2012)	82.80	9.34	58.63	96.17
Religious fractionalization	Index of religious fractionalization	Alesina et al. (2003)	0.42	0.25	0.003	0.86
Ethnic fractionalization	Index of ethnic fractionalization	Alesina et al. (2003)	0.36	0.24	0.002	0.93
Religion – Catholic	Percent Catholic	La Porta et al. (1999)	36.68	38.20	0	96.9
Religion – Muslim	Percent Muslim	La Porta et al. (1999)	12.76	28.48	0	99.4

Civil liberties	Civil liberties (measured from 1 to 7, where 7 is the lowest and 1 the highest degree)	Freedom House (2012)	2.88	1.64	1	7
Average globalization in neighbouring countries	Average globalization in neighbouring countries in 1995	Dreher et al. (2008a)	53.63	13.21	24.83	82.70
Voting similarity	Voting similarity with the US in the UN General Assembly in 1995	Strezhnev and Voeten (2013)	0.46	0.14	0.22	1
Tolerance homosexuals	Share of the population that does <i>not</i> pick homosexuals in answering to the question “On this list are various groups of people. Could you please mention any that you would not like to have as neighbours?”	World Values Survey (2012) and European Value Study (2012)	57.01	26.40	0.40	96.01
Tolerance different race	Share of the population that does <i>not</i> pick “people of different race” in answering to the question “On this list are various groups of people. Could you please mention any that you would not like to have as neighbours?”	World Values Survey (2012) and European Value Study (2012)	85.11	10.81	48.58	98.60
East Asia	Dummy for East Asian countries	WDI (World Bank, 2011)	0.19	0.39	0	1
Europe	Dummy for European countries	WDI (World Bank, 2011)	0.44	0.50	0	1
Latin America	Dummy for Latin American countries	WDI (World Bank, 2011)	0.15	0.36	0	1
Middle East	Dummy for countries in Middle East	WDI (World Bank, 2011)	0.06	0.25	0	1
North America	Dummy for North American countries	WDI (World Bank, 2011)	0.03	0.18	0	1
South Asia	Dummy for South Asian countries	WDI (World Bank, 2011)	0.02	0.13	0	1
Sub-Saharan Africa	Dummy for countries in sub-Saharan Africa	WDI (World Bank, 2011)	0.10	0.30	0	1

**Table A2**

Countries in the study.

Algeria	France <sup>D</sup>	Mexico <sup>D</sup>	Sweden <sup>D</sup>
Argentina <sup>D</sup>	Germany <sup>D</sup>	Moldova <sup>D</sup>	Switzerland <sup>D</sup>
Australia	Ghana	Morocco <sup>D</sup>	Thailand
Austria	Greece	Netherlands <sup>D</sup>	Trinidad & Tobago
Belgium	Guatemala	New Zealand	Turkey <sup>D</sup>
Brazil <sup>D</sup>	Hungary <sup>D</sup>	Norway <sup>D</sup>	Uganda
Bulgaria <sup>D</sup>	India <sup>D</sup>	Peru <sup>D</sup>	Ukraine <sup>D</sup>
Canada <sup>D</sup>	Indonesia <sup>D</sup>	Philippines <sup>D</sup>	United Kingdom <sup>D</sup>
Chile <sup>D</sup>	Ireland	Poland <sup>D</sup>	United States <sup>D</sup>
China <sup>D</sup>	Italy <sup>D</sup>	Portugal	Uruguay
Colombia*	Japan <sup>D</sup>	Romania <sup>D</sup>	Venezuela <sup>D</sup>
Denmark	Jordan <sup>D</sup>	Russia <sup>D</sup>	Vietnam <sup>D</sup>
Dominican Rep*	Korea, Rep <sup>D</sup>	Singapore	Zambia
Egypt <sup>D</sup>	Luxembourg	Slovenia <sup>D</sup>	Zimbabwe
El Salvador*	Malaysia	South Africa <sup>D</sup>	
Finland <sup>D</sup>	Mali	Spain <sup>D</sup>	

*Notes:* All countries except those marked \* are included in the cross-sectional analysis. All countries are included in the panel-data analysis. Countries marked <sup>D</sup> are included in the first-difference analysis.