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DRAFT

Abstract

This paper postulates that a country's integration into the world economy may lower citizens' political trust. I argue that economic globalization constrains government's choice set of feasible policies, impeding responsiveness to the median voter. Matching individual-level survey data from 1981 to 2007, repeated cross-sections of altogether 260'000 persons from 80 countries, with a measure of a country's degree of economic globalization for the same time period, I find that there is a trust-lowering impact of globalization; its magnitude, however, depends on whether or not the individual is informed about politics and the economy. Trust-lowering effects of globalization are larger for those who have no interest in politics, are unwilling to indicate their political leaning, or who have low educational levels. Two-stage least squares regressions and a set of country and time fixed effects support a causal interpretation. Obviously, viewing the domestic government as accountable for its policies plays a decisive role for the relation between economic globalization and political trust. Robustness against country's degree of economic development, past globalization and different time periods is tested.

Keywords: Political trust, globalization, international trade, openness, FDI, World Values Survey
JEL codes: Z18, H41, F15, D02

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1. Introduction

A new phenomenon is increasingly getting into the focus of socio-economic research: globalization. The process of an increasing integration of a country into the world markets for goods and capital as such is not new to mankind – as the history of international trade, spanning from the Roman Empire, the middle-aged Hansa trade organization, to the trans-Alpine and the Sino-European silk trade routes, suggests. However, prior to the 19th century, cross-national and cross-regional exchange had its (natural) limits: Often, trade of firm shares through financial markets was restricted to the firms in the region the market was located in, with the market's reach determined by the horse speed of messengers traveling on streets that turned into mud in autumn. Also, international trade was mostly restricted to the exchange of highly profitable luxury goods bought by the middle and upper class, e.g. gold, wine, silk, salt, spices (one may recall the wine-cloth example in the Ricardo model, where British cloth at that time was of the highest quality). In these times, labor was mostly immobile as the common man never moved farer away than to the next neighboring village or city – at least when done on a voluntary basis (which excludes dislocations through wars, persecution and slavery). However, this picture of rather marginal economic international connectedness changed with the dawn of industrialization, and its technologies for cheap mass production, its heavy investments in infrastructure, its new transport technologies, but also its improvements in contract enforceability and abolishment of bridge tolls, import and export taxes.

Even though economic exchange of luxury goods across states had already existed for centuries, with the dawn of industrialization simple, rather small-scale international trade 'turned' into what we call nowadays (economic) globalization. The new quality of the phenomenon 'globalization' is that it affects now not only an aristocratic or wealthy elite but the common man, in various dimensions: first, goods traded include now mostly normal goods (and its components) that are consumed on a daily basis, ranging from toilet paper to yoghurt, aiming at meeting a common man's demand; second, capital flows now freely across countries, seeking the most attractive investment opportunities, open to be taken up by the common man (and their portfolio managers). Economic globalization also affects the common man not only in his/her role as consumer and investor, but also as worker, as the opening-up of the domestic market to foreign imports pressures his/her employer to stay competitive – and this not only in a specific, small export sector, but in all economic sectors that are directly

or indirectly exposed to foreign supply and demand; finally, the common man in his/her role as laborer may decide herself to go migrate to the best-paid job, transgressing borders between states. Economic globalization as such is a dynamic process of integrating one country into the world economy, and once it has gained a certain momentum, it continuously accelerates and becomes unstoppable. Taken all together, economic globalization triggers an increasing dependence of the national economy and its development prospects on international trade and capital markets, and, thus, at a large scale, a growing dependence of the well-being of the common man on the international markets.

This paper poses the question whether this growing dependence of the national economy, and, thus, of a common man's well-being, on international markets has an effect on the common man's trust in the political institutions that govern his/her country. The underlying idea is that as a country globalizes, its economic development becomes more and more determined by exterior economic drivers, and lesser and lesser by internal processes; often, globalization forces the domestic economy into brutal and fast structural changes, causing much collateral economic 'damage'. In consequence, governments loose their discretionary decision-making power and influence over the domestic economy, which makes it more and more difficult for them to respond to median voter's specific preferences. The result could be that, viewed from a dynamic trust relationship that is based on (mutual) reciprocity, voters loose their trust in the political institutions which govern them.

Similarly to the recently recognized importance of social capital[2] for the functioning of the economy and quality of institutions (e.g. Knack and Keefer, 1997; Zack and Knack, 2001)[3], political trust, that is people's trust in their political institutions, facilitates the functioning of governments: political trust reduces costs of government's spending and revenue gaining activities, eases political reforms, and increases its effectiveness (Chanley, 2002; Evans, 1996; Gamson, 1968; Weatherford, 1984). Political trust also forms a fundament for social and political stability – thus, a socio-economic environment that may attract foreign investment (Aizenman and Marion, 1993; Braithwaite and Levi, 1998; Gershtenson et al., 2006; Miller, 1974a; Pharr and Putnam, 2000; Warren, 1999).[4] "Trust in political institutions

[2] See Bourdieu (1980), Coleman (1988), Fukuyama (1995), Putnam (2000), and Stolle (2000) for more general definitions of social capital.

[3] See also La Porta et al. (1999), Ostrom (2000), Uslaner (2002).

[4] Also the managerial literature recognized the importance of a trust within firm employees for sales and profits (see, e.g., Davis et al., 2000; Özyilmaz, 2010).

is the outcome of a good working relationship between the government and its citizens: People's trust in parliament and government is an expression of their expectations on the reciprocal behavior of those in politics who govern the country – with government's reciprocal behavior being a 'good' economic and social performance" (Fischer, 2011) (see also Levi and Stoker, 2000; Lipset and Schneider, 1983; Newton and Norris, 2000).[5]

This paper is probably the first to analyze the question whether and how economic globalization affects people's political trust. To address this question, I employ data from the combined European and World Values Surveys (EVS/WVS), collected between 1981 and 2007 through world-wide interviews of 360'000 individuals on their values and attitudes, including a question on trust in the national parliament.[6] These repeated cross-sections of micro-data are then matched with a measure of globalization at the country level. Controlling for national GDP levels and population sizes, inclusion of country–specific and time–specific fixed effects and taking account of heterogeneity of globalization across countries aid to identify the impact of economic globalization on political trust. Two-stage least squared (2SLS) regressions support the causal aspect of this empirical analysis.

In general, I find economic globalization to lower people's trust in their national parliaments - in a full world sample, across different time periods, for developing and developed countries likewise, but also when taking into account the effects of globalization which took place in the past. Distinguishing between those who are knowledgeable about politics and the economy and those who are not, I find that globalization lowers political trust to a larger extent among the politically uninformed and the low-educated than otherwise. These principal results remain unchanged when between high-income and low-income countries is differentiated, applying various definitions. For high-income countries, I also find that expectations and prospects may partly explain the heterogeneous results for differing educational levels. As discussed in the conclusion, this study reveals the importance of a credible and consistent communication strategy for politicians in order to maintain or build up population trust in political institutions.

[5] According to Miller (1974a) and Gershtenson et al. (2006), citizens' normative expectations also include politicians' ethical behavior and integrity – from an economic point of view, unethical behavior of bureaucrats may cause waste and inefficiencies in government activities.

[6] Bibliographic Information: WORLD VALUES SURVEY 2005, World Values Survey Association (www.worldvaluessurvey.org). Aggregate File Producer: ASEP/JDS, Madrid, and, European and World Values Surveys four-wave integrated data file, 1981-2004. Surveys designed and executed by the European Values Study Group and World Values Survey Association. File Producers: ASEP/JDS, Madrid, Spain and Tilburg University, Tilburg, the Netherlands. File Distributors: ASEP/JDS and GESIS, Cologne, Germany.

Many past studies on political trust analyze the role of the domestic economy in a time-series fashion – in most cases for the USA only (e.g. Chanley et al., 2000; Hetherington, 1998; Keele, 2007, Lipset and Schneider, 1983). Other macro-level determinants under investigation include political scandals, social tensions, social networks, perceived freedom, and government responsiveness in general (e.g., Catterberg and Moreno, 2005; Chanley et al., 2000; Keele, 2007; Mishler and Rose, 2001; Orren, 1997). Some contributions also report individual-specific determinants of political trust such as respondent's age, gender, education, and political leaning (Anderson and LoTempio, 2002; Citrin and Green, 1986; Miller, 1974a, 1974b; Gershtenson et al., 2006; Hetherington, 1998). There is however, a research void on cross-country comparisons of political trust (Fischer, 2011; Newton, 2001; Newton and Norris, 2000). So far, no study has yet analyzed the relevance of economic globalization for political trust.

Economic globalization encompasses not only the exchange of goods and services across countries, traditionally captured by an export-import-based measure of trade openness, but also the flow of capital and labor across countries. In order to reflect this multifacetedness of economic globalization, this empirical analysis uses the KOF measure of globalization that incorporates all these dimensions of classical exchange of goods and capital on both the production and consumption side, alongside with migration of workers, and an absence-of-trade-restriction component. In particular, the KOF index of globalization takes account of actual flows such as exports and imports of goods, inward and outward FDI, portfolio investments, income payments to foreign nationals - an approximation of internationalization of the domestic workforce -, but also of trade restrictions, in particular hidden import barriers, the mean tariff rate, taxes on international trade, and capital account restrictions (see Dreher, Gaston, and Martens, 2008). The KOF index of globalization is measured on a scale that ranges theoretically between 0 and 100 percentage points.

Between 1980 and 2008, around the world the degree of economic globalization varies between 6.97 and 98.69 percentage points. For the 144 countries, the between-country variation (standard deviation: 15.66) is smaller than the within-country variation (standard deviation: 26.09); this suggests that a couple of countries had a parallel development in economic globalization, but for the single country involving huge changes over time. Graph 1 displays the development of economic globalization between 1980 and 2010 for 8 exemplary

countries which represent different geographic and geopolitical regions. OECD economies (here: France, USA) were already quite open in 1980 and continued to open up, albeit at a slow growth rate – this applies also to countries on the Arabian peninsula (here: United Arab Emirates). Eastern European countries opened up fast after 1990, resulting in a catch-up effect (here exemplary: Hungary), while particularly African countries rather stagnated in their development, staying at rather low levels of globalization (here exemplary: Ethiopia). A steady and continuous rise since 1980 with the tendency to catch-up is observable for countries in South-America and South-Asia (here exemplary: China and Columbia), while India started at a lower level and gained speed only from 1990 on. In Graph 1, the within-country development is depicted as movement along the curve, and the between-country differences are reflected as distances between the lines. Both vary substantially so that an econometric exploitation in a country-panel setting appears justified.

Insert Graph 1 about here

Political trust is measured by employing a question from the EVS/WVS, 1981 to 2007, which asks "how much confidence you have in [the national parliament]: is it 'a great deal of confidence', 'quite a lot of confidence', 'not very much confidence' or 'none at all'?" where answers are recorded on a categorical point-scale ranging from (-4) (lowest) to (-1) (highest) (see also the Appendix A on data description). Population averages of confidence in national parliament for 90 countries are then calculated from 1981 to 2007. This measure of political trust shows substantial variation both between countries and across time; as expected, the between-variation is larger than the within-country variation, indicating some persistence of trust over time (0.377 versus 0.188 standard deviations), possibly caused by culture-specific and historical national characteristics such as ethnicity and religion (Alesina and La Ferrara, 2002; Becker et al., 2011; Leigh, 2006). From the 80ies on, a steady decline in small steps is observable for the OECD countries France and USA; in contrast, Hungary as representative for Eastern European countries experienced a fall in political trust prior to 1990 down to the OECD-level but remained there since then. Starting at above-OECD levels, a considerable rise in political trust is observable for India from 2000 on, as it is for China from 1990 on, with trust rising at a slower pace. Unfortunately, there is only one data point for Ethiopia (not graphed) with a level of -2.95 indicating that the Ethiopian population distrusts their political

institutions. Columbia as representative country for South America displays a low level of political trust which declines further until 1998, but then moves upwards, but still staying below OECD-levels. Data on political trust do not appear to have been collected for countries on the Arabic Peninsula. Combining graphs 1 and 2, and considering particularly the development of political trust in OECD countries, but also that in Hungary, suggests a negative correlation with economic globalization, while for India, China, but also Columbia a positive correlation is suggested.

Insert Graph 2 about here

In the next section, a definition of 'political trust' based on the investment game is derived and the effects of economic globalization on the domestic economy are illustrated, both laying the basis for discussing testable hypotheses on the impact of globalization on political trust.

2. Conceptualization and derivation of hypotheses

2.1. Definition of political trust

A first step to understanding how economic globalization may affect people's trust in political institutions is to conceptualize 'political trust'. Political trust, like any other form of trust, is relational; in such bilateral relationship trust is an expression of one party's belief in the other party's reciprocal behavior (Fischer, 2011; Levi and Stoker, 2000).

The mechanism of trust-building is best described in so-called trust or investment games between two players (Berg et al., 1995), in which the 'sender'/'investor' decides on an amount of money to be transferred out of her endowment to the 'receiver'. This amount is then multiplied by the experimenter (reflecting an investment with a positive yield), leaving the receiver with the choice of how much to send back to the sender/investor. The amount sent back minus the initial amount transferred constitutes then the profit made by the investor, while the gain of the investee (who started with a zero endowment) is the share she keeps for

herself. In repeated games (when identical senders and receivers play this game for several rounds), the amount transferred by the sender appears to increase from round to round in case the receiver leaves her with a positive return on investment; in contrast, if the receiver sends little or nothing back, the investor is observed to stop sending money, keeping the entire endowment for herself. In case of reciprocal behavior, both players are better off as compared to if the sender had kept all her endowment for herself.[7]

Based on this investment game, it is possible to describe the key terms 'reciprocity' and 'trust' and how they relate to each other. Receiver's *reciprocity* is reflected by the amount of money she sends back conditional on the amount she had originally received; in turn, sender's *trust* is reflected by the amount of money she had transferred to the receiver in the first place. Repeated forms of the trust game reveal that sender's trust in the current round depends on receiver's reciprocity in the preceding round(s), an observation that is supported by questionnaires on sender's beliefs in receiver's reciprocity (as in, e.g. Bornhorst et al., 2010).[8] Taken altogether, when played several rounds the other player's actual behavior moderates the first player's belief ('updating') and, thus, her trust; consequently, trust is built up and maintained when reciprocal behavior occurs (Hardin, 2003) (see also Graph 3). In empirical support, trade frequency is shown to increase trust among people ('horizontal trust') (Henrich et al., 2001; see also Fischer, 2008, and Labonne and Chase, 2010)[9] – in a goods exchange relation, reciprocal behavior of the seller manifests in delivering a good of the expected quality to the (paying) buyer.

Applying these insights to political trust, a political trust relation is between the citizen and her government, where the citizen shows her trust trough e.g. going to the ballots, paying her taxes, and obeying the laws ('civic duties'). In turn, she expects the government to reciprocate by what she views as 'good institutional performance' (Newton and Norris, 2000), that is by a policy response of the government that matches her political preferences (Fischer, 2011). One may speak of a 'psychological contract' between the citizen and her government with mutual expectations and obligations, having been first described by Argyris (1960) and Schein (1965) for employee-employer-relations going beyond the written work contract.

[7] It is this characteristics of mutual benefit in the cooperative equilibrium of the trust game that gave rise to the notion of 'shared interest' in a bilateral trust-relation (e.g. Butler et al., 2009; Warren, 1999).
[8] Sender's belief in receiver's reciprocity is found to increase in the (conditional) amount sent back by the receiver.
[9] Labonne and Chase (2010) provide a natural field experiment of how the provision of infrastructure facilitating 'positive' face-to-face interactions with strangers in local goods markets increases generalized trust. For the impact of a competitive environment on generalized trust, see Fischer (2008).

A 'good institutional performance' may include, for example, success in reducing unemployment and in sustaining economic growth, but, possibly, also higher investments in education and a better social safety net.[10] Chanley et al. (2000), Hetherington (1998), Keele (2007), and Lipset and Schneider (1983) are prominent examples for empirical analyses of the relevance of the state of the economy for political trust, while Catterberg and Moreno (2005), Chanley et al. (2000), Keele (2007), Mishler and Rose (2001), Pew Research Center, (1998), and Orren (1997) focus on the role of political scandals, social tensions, social capital, perceived freedom and fairness, and government responsiveness in general as components of government performance. As Graph 4 illustrates, what appears to matter to political trust is the match between what people expect the government to do (sender's belief about receiver's reciprocity) and the policies the government actually delivers (receiver's actual reciprocity) – with government's non-reciprocity lowering political trust. The 'psychological contract' literature equally predicts that failure of the one party to meet expectations of the other party results in other party's dissatisfaction and lower trust. Indeed, a loss in trust was empirically shown for employees who found their employers in violation of the 'psychological contract' (Argyris, 1960; Robinson and Rousseau, 1994; Robinson and Morrison, 1995; Rousseau, 1989). Rephrased in a political economy-wording, political trust is determined by the gap between median voter's preferences and the policies carried out by her government, and political trust increases in the narrowness of this gap.[11]

2.2. Globalization and domestic policy-making

Economic globalization, as described in the introduction, is the increasing integration of a country into the world markets for goods, capital and labor. Domestically, such increasing exposure to international markets manifests in rising volumes of exported and imported goods and services, as well as increasing outflows of domestic savings into foreign investment projects, and increasing inflows of foreign capital into domestic companies. Such economic integration into world markets is facilitated through free trade agreements and other forms of removal of barriers-to-trade and constraints-to-capital-mobility. With today's modern means

[10] It may also include non-economy-related government activities, such as the provision of freedom, the guarantee of property rights, the rule of law and bureaucratic efficiency.

[11] Similarly, Beans (2003) argues that political trust declines as people's expectations on government performance increases, causing disappointment.

of transportation and English as established 'lingua franca', economic globalization is also reflected in an increasing mobility of labor across countries, skilled and unskilled likewise.[12] Economic globalization also manifests in foreign direct investment (FDI) (such as in the re-location of entire production facilities into foreign countries, leading to mass dismissals of workers in one country and mass recruitment in the other), in joint ventures between domestic and foreign companies (inducing knowledge transfer across countries), and in services provided from 'abroad' for domestic companies and vice versa. Overall, economic globalization is a multidimensional dynamic process of integrating one country into the world economy that, once it has gained a certain momentum, continuously accelerates and becomes unstoppable (see, e.g., Proudman and Redding, 2000, for a dynamic model).

Globalization pressures domestic economy to be efficient

The process of globalization forces the domestic economy to stay competitive; this has, from government's point of view, the disadvantage of restraining her policy choice set and, thus, limiting her discretionary power over the country. For example, integration of the domestic economy into world goods and capital markets forces local producers to increase their efficiency in production and to produce at competitive costs, in order to remain attractive for (foreign) investors and (foreign) consumers (similarly, Garett 1995); consequently, as economic globalization increases, domestic firms may lobby for a deregulation of national labor markets. Domestic firms under pressure may also demand lower taxes and social security contributions, which both make the production factor labor more costly, thus lowering their international competitiveness (see similarly, Blank and Freeman, 1994). Indeed, the model by Cai and Treisman, (2005) predicts that, under capital mobility, countries with an initially rich endowment in one production factor will have, in equilibrium, generated an attractive business environment with low tax levels and less government spending. In turn, a shrinking tax base, however, exerts pressure on governments to reduce their absolute and relative spending levels (Garett and Mitchell, 2001; Hines and Summers, 2009). This welfare spending restraining effect is often referred to as the 'disciplining effect' of economic globalization (e.g. Garett, 1995). On the empirical side, Garett and Mitchell (2001) report a restraining impact of trade openness on government spending, while Plümper et al. (2005) show analogous effects exerted by the amount of low-wage imports (for budget compositional

[12] In traditional theories of trade, the production factor labor is assumed to be immobile, while capital is assumed to move easily across countries (Krugman and Obstfeld, 2011).

effects, see, e.g., Garrett, 1995).[13] In support of the labor-market related predictions, the accounts in Lindert and Williamson (2001) suggest that increasing trade openness is often accompanied by domestic market liberalization and a decreasing generosity of the welfare state. Similarly, Fischer and Somogyi (2011) and Dreher and Gaston (2007) have shown that over the last 20 years in OECD countries economic globalization has lead to a decrease in worker's employment protection and union density.[14] Taken altogether, in order to stay competitive in a globalized world, governments are under pressure to deregulate labor markets, to liberalize capital markets and, ultimately, to lower taxes and government spending. Most importantly for my argumentation, such economic pressures persist irrespective of the political ideology of the national party that is currently in power (e.g. Baldwin and Krugman, 2004; Qian and Roland, 1998).

Globalization induces structural changes across economic sectors

Another example for how the domestic politics looses discretionary power over the domestic economy are the unavoidable long-run effects of economic globalization on the relative size of the sectors in an economy, the employment prospects of low-skilled and high-skilled workers, and the consequences for income distribution. According to the standard model of trade (e.g. Krugman and Obstfeld, 2011), integration into the world economy causes a country to specialize in the economic sector the country has a comparative advantage relative to the world market (e.g. through a relative or absolute abundance of a certain production factor). In OECD countries, such specialization will be rather in the industrial than in the agricultural sector, rather in high-skilled than in low-skilled labor production, and rather in capital-intensive than in labor-intensive industries. Classical trade models which assume full employment predict then overall income inequality to increase as the immobile, sector-specific factor in the exporting sector gains from trade, while its sector-specific counterpart in the other sector loses (Ricardo-Viner model); applied to OECD countries, high-skilled labor would experience wage increases, while wage of the low-skilled would fall. This development is acerbated by productivity growth through learning-by-doing effects in the exporting sector

[13] In general, the literature has not reached consensus on how globalization affects government spending. It may well be argued, and some empirical evidence points in that direction, that governments redistribute more to certain groups or protect some groups stronger than others as its economies globalize, possibly to appease the losers from this development or simply because of their lobbying power (Bretschger and Hettich, 2002; Fischer and Somogyi, 2011; Garrett 1995, 1998; Hicks and Swank, 1992; Huber and Stephens, 1998; Rodrik, 1998). In contrast, Dreher, Sturm, and Ursprung (2008) and Dreher (2006) do not find globalization to affect government or social spending.

[14] See Schulze and Ursprung (1999) for a review of the early literature on the effect of globalization on social and welfare spending.

(Proudman and Redding, 2000).[15] In consequence, at the sectoral level, forces of globalization will attract production factors into those sectors and industries the domestic economy specializes in, while, on the other hand, setting free production factors in the economic sectors that are then destined to contract. This structural change is aggravated through international capital flows and FDI, transferring more efficient technologies from abroad into exporting local firms (Bernstein, 2000; Coe and Helpman, 1995; Mohnen, 2001; van Pottelsberghe and Lichtenberg, 2001), forcing inefficient competitors out of the domestic market (Haddad and Harrison, 1993). Also the classical Rybczynski–theorem predicts capital inflows to acerbate this development: under fixed goods prices a rise in factor endowment should increase the output overproportionally of that economic sector that uses this factor intensively – leading to (further) (relative) specialization in that sector and shrinkage of the other. Thus, for OECD countries one may expect an inflow of capital that increases the production of capital-intensive goods, ultimately contributing to further contraction of the labor-intensive production.

With labor market rigidities, dislocations caused by such structural changes may include increased job turnover and short-run structural or frictional unemployment (for a model, see, e.g., Bernard et al., 2007). Assuming a two-factor two-good Heckscher-Ohlin model with capital and labor but allowing for unemployment, Davidson et al. (1999) predict unemployment to rise in the sector that uses labor intensively but does not export – caused by the endogenous sector-specifity of labor resulting from matching and searching costs. Supporting empirical evidence for the unemployment-increasing effect of trade liberalization can be found in, e.g., Trefler (2004) for the case of the NAFTA.[16] In developed countries, specialization in the high-technology industry with high-skilled labor may then lead to mass dismissals of unskilled workers in the low-technology industry, exerting pressure on their wages. Krugman (1995) has shown that in the US with flexible labor markets wages for low-skilled workers (possibly employed in the contracting economic sector) have declined, while

[15] In principle, technological spill-overs across countries could cause a reversal of the current patterns of specialization, in case they more-than-neutralize the sector-size dependent learning effect.

[16] Felbermayer, Prat, and Schmerer (2011) show empirically that, at least in OECD countries, in the long-run increased openness reduces unemployment. This finding contradicts textbook predictions that trade openness had no long-run effect on unemployment; Krugman (1993, p.25) states: "Trade policy should be debated in terms of its impact on efficiency, not in terms of phony numbers about jobs created or lost." However, some modern trade theories predict an increase in long-run unemployment, possibly through frictional unemployment, minimum wage, or segmented labor markets (as in developing countries) (e.g. Baghwati and Srinivasan, 2002; Brecher, 1974; Davis, 1998; Egger and Kreickemeier, 2009; Helpman and Itskhoki, 2010).

in Europe instead, with more rigid labor markets, unemployment of low-skilled workers has risen.

That globalization increases income disparities between workers and capital owners is concluded by, e.g., ten Raa and Mohnen (2008) who suggest that international competition in goods markets drives down rents on labor, while (positive) rent levels on capital persist for future R&D investments. Already the classical Rybczynski–theorem predicts that in developed countries international trade leads to higher rents for capital and high-skilled labor than for other production factors.[17] Applying tax competition models to an international context, Baldwin and Krugman (2004) conclude that under strong economic globalization, in developed countries with their larger capital endowments tax levels are lowered, implying less means for redistribution and a more skewed income distribution, when compared to developing countries that are abundant in labor. In general, economists hypothesize that globalization most possibly forces governments to tax bases that are least responsive to the forces of worldwide competition – implying that those production factors are taxed higher that are relatively less mobile than the other ones, such as immobile labor in classical trade models (Garett, 1995; see Bretschger and Hettich, 2002, for empirical evidence). Indeed, taxation of labor (wages) is rather observed in populous countries, while in small countries with higher international labor mobility rather goods, services, and imports are taxed (Hines and Summers, 2009) - reducing overall fiscal progressivity. Many other modern trade theories equally predict a more skewed income distribution, e.g., Egger and Kreickmeier (2009), Feenstra and Hanson (1997), and Gaston and Nelson (2002). That economic globalization causes particularly wage disparities in OECD countries to grow has been empirically shown by Wood (1994), Burtless (1995), Dollar (2002), Dreher and Gaston (2008), while the confirmatory study by Smeeding (2002) uses a micro-level approach.[18]

Empirical evidence on sector shifts

While there is ample empirical research on the linkages between international trade and income inequality and unemployment (see above), the evidence on the impact of globalization on sector shifts in the economy merits a separate in-depth investigation. That the forces of

[17] See Burtless (1995) for an in-depth discussion of labor market models with free trade to explain increasing wage inequality.

[18] Implicit evidence for growing wage inequality can be drawn from Blanchflower et al. (1996) who show that wages grow overportionally as profitability of firms rise. The empirical evidence on income disparities in place of wage disparities is more ambiguous (e.g., Dollar, 2002; Dreher and Gaston, 2006).

economic globalization cause structural changes in the involved economies can be concluded from country-sector-specific developments of (relative) export shares and employment patterns.[19] Proudman and Redding (2000) show such industrial development patterns for the G-5 economies between 1970 and 1993: For example, export shares indicate a shrinkage and, thus, loss in comparative advantage in the motor vehicle industry in France and the USA, the computer sector in Germany, the metal production in Great Britain, and the textile industry in Japan. In contrast, specialization occurred in the communication industry in the U.K., in the paper and printing industry in the U.S., in the aerospace industry in France, and in the motor vehicle industry in Japan. In general, since the 50ies Middle and Southern Europe experienced the closing down of footwear and cloth manufactures. Since the nineties the same occurred in post-communist Eastern Europe (see ILO, 1996); for example, in Latvia between 1990 and 2008 the shoe pair production shrank from some 20 million pairs (1996: 2,2 millions) to some mere 156'000 pairs.[20] In the same geographic region, this development was paralleled by the shrinking of the agricultural sector (as % of GDP), resulting in a growing dependence on agricultural imports from mainly developing countries.[21] In consequence, unemployment in these shrinking sectors increased. For example, between 1980 and 1993 employment in the textile, clothing, and footwear industries declined by 40% in Germany, by 35% in Spain, by 51% in Poland, and by 30% in the USA (see ILO, 1996).[22] Prominent present-time examples of sectoral changes include the phasing out of subsidizing the coal and mining sectors as well as parts of the automotive sector, where the pressure to do so increased substantially through the fall of the iron curtain and the emergence of the automobile sector in the South-East Asian countries. From 1985 to 2007, employment in British mines fell from 220'000 workers to 7'000 workers (Germany: 607'000 workers in 1957, then 166'000 in 1985, and 35'000 in 2007); main coal producer is now China.[23] In the automobile sector, between 1997 and 2005 the contribution of the automotive industry to GDP has substantially fallen in France, Great Britain, Italy, and Spain (with the exception of Germany which

[19] The literature employs the revealed comparative advantage index which is based on sector-specific export shares. For a description, see Balassa (1956) and Vollrath (1991).
[20] Source: http://www.eurofound.europa.eu/eiro/2009/11/articles/lv0911029i.htm (download: 28th December 2011)
[21] This may exclude very specialized industries producing high quality products, possibly luxury goods, e.g. high quality clothing and textiles, or high quality processed farm products, such as premium olive oil (see, e.g. http://ec.europa.eu/trade/creating-opportunities/economic-sectors/industrial-goods/textiles-and-footwear/, http://ec.europa.eu/trade/creating-opportunities/economic-sectors/agriculture/, downloaded 26th December 2011).
[22] Notably, this is the view of developed Europe, Japan, and the US. ILO (1996) also states that shifting the production to developing countries created jobs in these economies. For example, during the same period, sectoral employment rose by 33% in Turkey and by 85% in China.
[23] Source: http://www.spiegel.de/international/0,1518,463172,00.html (downloaded 26th December 2011).

specialized in high-end products), while at the same time the car production has tripled in India and quadrupled in China (see Holweg et al., 2009).

Since the driving factors of these sectoral shifts are structural ones, namely the loss in comparative advantage in specific industries, subsidizing the production in such 'endangered' industries may reduce the speed of this adjustment process and appease the workers in the shrinking sectors. In the long-run, however, as globalization increases, subsidies will cause greater economic inefficiencies and welfare losses, ultimately becoming so large that budgetary and efficiency concerns will force governments to put this policy to an end. Notably, in Germany the decision in 2007 to cease subsidizing the coal mining sector was made by a left-right pro-worker coalition government – being an illustrative example that globalization leads to economic necessities that supersede political ideology.[24]

Taken altogether, globalization exerts pressures on economic sectors with a comparative disadvantage, making them contract and letting entire industries disappear; the resulting sectoral unemployment and increase in overall income inequality will occur despite national government's efforts to gain control and possibly counteract this process, and irrespective of the couleur of the political parties in power.

Globalization leads to dependence on international financial markets

Finally, economic globalization also manifests in the increasing linkages between foreign and domestic financial markets (through economic interdependencies, but also through herding contagion via the behavior of internationally acting investors, see Calvo und Reinhart, 1996; Dornbusch et al., 2000; Khan and Park, 2009). Thus, globalization is predicted to aggravate the impact of a recession or a financial market crash abroad on the domestic economy. The higher the degree of a country's economic integration is, the larger the effect of the world economy on the local economy may be; the strongerly interlinked national economies all over the world are, the more likely economic 'domino effects' are to occur (similarly, Hertz 1999).[25] Due to the speed of the cross-national transactions in milliseconds and the information transparency in financial and capital markets, as compared to goods markets, cross-country domino effects are more likely to be transmitted first through the financial

[24] In 2007, the German subsidies for mining amounted to 2.7 billion Euros. Source: see preceding footnote.

[25] "The domino pattern indicates that global crashes, which can hardly be diversified, do not occur abruptly but rather evolve out of prior local or regional crashes" (Markwat et al., 2009, p.1997).

channels before they start, with some time lag, working through the traditional international trade-in-goods-relations (Hernández and Valdés, 2001; Van Rijckeghem and Weder, 2001; Forbes, 2004).[26]

Illustrative examples for domino effects are various past- and present-time financial market crises, among others, the US stock market crash of October 1987 crisis, the Mexican crisis of 1994, the Asian crash of 1997, US-driven crisis of 2008-09, the new economy bubble-burst of 1999/2000, and the Eurozone crisis of 2011 (e.g. Kleimeier et al., 2008; Khan and Park, 2009; Markwat et al., 2009):[27] the 1997 Asian crisis, for instance, started first with a currency crisis in Thailand, then spilled over to financial markets in Asian countries of the same region – one argues through herding contagion of Western investors, others argue with inefficient financial intermediation of moral-hazard-infected 'finance companies' and market prices of capital and land –; finally, the Thailand crisis spilled-over also to developed countries such as the U.S.A and Western Europe (Ito, 2007; Krugman, 1998; Radelet and Sachs, 1998). In 2008/09, it was the break-down of the US American market for houses, followed by that for mortgages loans, then that for mortgage-backed securities, which then triggered first a local US-wide, and then finally a world-wide financial market crisis: the sudden collapse in mutual trust between then undercapitalized private and public financial intermediaries led to a liquidity crisis worldwide (on the role of trust, see also Guiso, 2010).[28] In the case of the 2010-11 crisis, the over-accumulation of debts of the Greek government of up to 150% of GDP first affected the market for government bonds in Greece only, where interest rates started to skyrocket,[29] leading to a loss in sovereignty over their national budget to the IMF and the EU (Alessi, 2011). Then, via the EURO-currency-link and 'wake-up-effects' (Forbes, 2004)[30], the entire Euro-currency area got into the focus of international investors' critical assessments, and

[26] Forbes (2004) proves the existence of the trade channel by showing that exporting firms are hit stronger by international financial crises than firms producing for the domestic market. Focusing exclusively on the occurrence of currency crises, Haile and Pozo (2008) find a dominance of international trade linkages over having common lenders.

[27] Lazear (2011) views the 2008/09 and the 2011 crises as 'popcorn effects' rather than 'domino effects'. Edison et al. (1998) present a theoretical model explaining the domino effect in the 1998 Asian financial market crisis. See Kahn and Park (2009) for more empirical literature on contagion effects between 1987 and 2009. The Mexican crisis spilled over so far that the IMF provided financial assistance also to neighboring Latin American countries (Ito, 2007).

[28] For a comprehensive summary, see e.g. http://cashmoneylife.com/economic-financial-crisis-2008-causes/ (28th December 2011). Spill-over to European banks occurred because they had bought large bulks of those mortgage backed securities, often after decennials of fighting against national bank regulation laws that restricted investment in risky (but potentially more profitable) business.

[29] The Maastricht criteria allow a maximum of 60% of GDP only.

[30] A 'wake-up-effect' lets investors check the creditworthiness of countries with characteristics similar to the country first in financial difficulties, in this case Greece (see Forbes, 2004).

interest rates for national treasure bonds, particularly strong for the PIGS-countries, increased.[31] With the remaining Euro countries partly and temporarily bailing out Greece, Portugal, and Ireland[32], the debt crisis of Greece became a collective one: first, with shrinking credibility and creditworthiness of the Greek government spilling over to other PIGS countries ('sovereign debt contagion'), and, then, to the initially unaffected non-PIGS-countries, whose growing rescue efforts let their own debt-to-GDP ratios substantially increase (see Alessi, 2011, for an analysis of the Eurozone crisis).[33]

There is empirical evidence that financial linkages via international capital markets spill over into the real economy. In particular, the financial market crises described above are shown to also impact the real economy of countries all around the world – through triggering lower growth, causing considerable inflation, in addition to higher unemployment and larger government debt (Ito, 2007; Mishkin, 1992).[34] For example, "the October 1987 crash […] reduced stock prices by over 20% in most developed markets" (Markwat, 2009, p.1996), leading to bankruptcies of banks and firms (Krugman, 1998). In 2008/2009, as a result of the US housing market crisis Irish banks collapsed, which lead to a shrinkage of GDP by 10%, and an increase in unemployment by 9 percentage points (e.g. Alessi, 2011). Similarly, the Eurozone crisis caused (exogenously imposed) budget cuts by the Greek government, letting Greek unemployment rates skyrocket from about 12% to 18% (September 2011), compared to one year ago, and the youth unemployment rate reach 46% (September 2011).[35] Similarly for the other PIGS-countries, youth unemployment in Spain rose from 42.8% to 49.3% (from 10/2010 to 10/2011), and in Portugal from 27% to 31%, but stayed at 30% in Italy. In other EU countries during the same period, youth unemployment was falling, such as in Slovenia and Finland (18% to 12%, and 19% to 16%, respectively).[36] Taken altogether, the argument in these examples is not that in PIGS-countries globalization forces domestic governments to cut debts against their will (which would have become economically necessary anyhow); rather, my argument is that globalization exogenously imposes a specific timeline on domestic

[31] The lowering of the PIGS-countries ratings of creditworthiness is a rational consequence of their governments' imprudent economic policy making, on the one hand, but also partly because of the many ‚old' government debts originating from the US mortgage market crises in 2008-09.
[32] According to Alessi (2011) Greece received a $163 billion loan in May 2011 and a second bailout package (that included a haircut) worth $178 billion.
[33] Davis and Stone (2004) provide an enumeration of banking and currency crisis episodes in developing and developed countries between the 1970ies and 2000.
[34] Higher inflation as predictor of exchange rate change particularly occurs in emerging economies (Ito, 2007).
[35] As reported by the Hellenic Statistical Authority (http://www.statistics.gr/portal/page/portal/ESYE), press release of 8th December 2011.
[36] Unemployment rates have been obtained from Eurostat (http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home) (29th December 2011).

policy-making, in particular a certain speed and roughness in making reforms that might not be in congruence with local political preferences. Overall, growing global linkages through financial markets let foreign economies and investors gain more and more impact on the local economy, taking the country out of the control of local policy-making.

Globalization restrains domestic policy choices

The discussion so far has revealed that globalization exerts strong pressures on the domestic economy to stay competitive and to reduce government spending, that it triggers fast and rough sectoral shifts, and that it creates strong international financial dependencies. As an inevitable result, these pressures of globalization restrain governments' choice set w.r.t. economic policy-making: Globalization induces structural changes that are, in the long-run, unavoidable, possibly creating mass unemployment in one economic sector, while leading to economic growth and worker shortage in another sector, increasing income inequality within the group of workers, and between workers and capital-owners. In addition, in order to stay competitive, globalization also exerts pressure to pursue policies of labor market deregulation, to shift the tax burden from capital onto less mobile labor and consumption, and to cut government and welfare spending. Finally, globalization creates vibrant trade and capital linkages across countries leading to strong cross-national economic dependencies and domino effects, with the potential to aggravate or even to cause national economic crises. Obviously, globalization makes the local economy re-structure - which may be to the benefit of some societal groups (production factors), but equally to the disadvantage of others.[37]

The argument here is not about assessing whether these economic changes are overall 'good' or 'bad'; the argument I develop here is about that these changes and most of their socio-economic consequences are not under the control of domestic politics. The idea here is that governments may be compelled to carry out policies that are entirely 'dictated' by the forces of economic globalization, that is the needs of producers and workers in the domestic

[37] Under strict model assumptions, predicted positive effects of economic globalization include higher overall welfare, optimized consumption patters, higher rents of production factors in the exporting sector (e.g. higher wages for low-skilled in developing countries), higher levels of general employment, and higher overall growth (e.g., Bhagwati and Srinivasan, 2002; Davidson et al., 1988, 1999; Egger and Kreickemeier, 2009; Felbermayer et al., 2011; Mehlum et al., 1996; Krueger, 1983; Krugman and Obstfeld, 2011; Srinivasan and Bhagwati, 2001; for supporting empirical evidence, see, e.g., Bhagwati and Srinivasan 2002; Dollar, 2001; Dollar and Kraay 2004; Felbermayer et al., 2011; Frankel and Warner, 1999; Krueger, 1983). However, many empirical studies also reveal strong distributional conflicts and biased within-sector technological progress (Deaton and Dreze, 2002; Srinivasan and Bhagwati, 2002).

exporting sectors (for example, in developed countries, the demands of high-skilled laborers) and the demands in the importing markets abroad.

For example, under the pressures of globalization both left-wing and right-wing governments likewise may equally be forced to deregulate labor markets, to cut taxes and welfare spending, and to let domestic capital flow freely into more lucrative investment projects abroad. Expressed with the words of Garrett (1995, p.670): "From a neoclassical perspective, the ability of the left and organized labor to [pursue leftist policies such as to] increase government spending, tax capital heavily, and pursue expansionary fiscal and monetary policies would decrease with exposure to trade and capital mobility". Nevertheless, I also argue that this statement is equally true for certain policies preferred by more conservative-minded voters: for example, opening up domestic markets forces domestic industries to pay competitive wages, reducing the premium on male labor ('positive discrimination'), and to employ only the most productive workers, causing a higher female labor force participation (e.g. Becker, 1957/1971); both changes result then in the destruction of the traditional role model in society. In addition, already the decision to pursue a policy of trade openness constrains domestic governments, as such policy requires macroeconomic stability, in particular a low level of inflation - with all its labor-market, dept-related and distributional consequences (Bhagwati and Srinivasan, 2002).

Taken altogether, economic globalization imposes a constraint on national government's discretionary power over domestic politics, forcing her to accept exogenously imposed economic adjustment processes and to pursue policies that may not be consistent with her political ideologies; both let her seemingly lose steering power over the domestic economy. In the next section I will show that it is this loss in discretionary power that makes it difficult for the government to behave reciprocally, that is to fulfill her obligations in the 'psychological contract' with the citizen.

2.3. Globalization and political trust

The impact of globalization on political trust can be understood best by focusing on the role of government responsiveness for the evolvement of political trust - that is on the role of government's reciprocity in the psychological contract between the government and its

citizens. As illustrated in section 2.1. in analogy to the trust game, where sender's trust evolves in response to receiver's reciprocity, people's trust in political institutions evolves from, and is determined by, the reciprocity of their government; citizens may regard reciprocity as given when government's policies are in congruence with their political preferences.

As argued and illustrated in section 2.2., economic globalization may restrain government's choice set of feasible policies, possibly to an extent that government is forced to pursue policies dictated by needs of globalized markets only and may loose its discretionary power over certain socio-economic domains. In consequence, economic globalization may, in the very extreme, lead to such limitation of economically feasible policy choices that governments lack the possibility to respond to median voter's political preferences, particularly when the latter is in opposition to competitiveness-enhancing policies of deregulation or prefers protecting and subsidizing certain economic sectors.

In its final consequence, constraining the policy choice set through economic globalization may lead citizens to perceive their government as non-responsive to their wishes and expectations: as illustrated in section 2.1., in an investment game, non-responsiveness of the receiver signals non-reciprocity, resulting then in the following round in a lower amount entrusted by the sender, or, respectively, in her lower trust. The same is predicted by the 'psychological contract' research: failure of the employer to meet employees' expectations results in worker dissatisfaction and lower trust – a loss in trust was empirically shown for employees who found their employers in violation of the 'psychological contract' (Argyris, 1960; Robinson and Rousseau, 1994; Robinson and Morrison, 1995; Rousseau, 1989). Based on the trust game and psychological contract research, I expect the non-responsiveness of governments to citizens' preferences (triggered by the forces of economic globalization) to lower citizens' political trust.[38]

Taken altogether, economic globalization is predicted to constrain government's set of economically feasible policies so that it becomes very difficult to sufficiently respond to median voter's preferences. This implies that governing institutions face obstacles in acting

[38] It is for this reason that the emergence of right-wing and left-wing extreme parties is correlated with increasing economic openness. Examples include the Swiss right-wing SVP which started to become a major player about the time the possible accession of Switzerland to the European Economic Area was debated in public. Similarly, in Germany the left-wing extreme party 'die Linke' came into existence in response to cuts in the welfare system that were politically justified with the need to increase international competitiveness.

reciprocally, viewed from a citizens' perspective. Consequently, as globalization rises, citizens develop mistrust in their governments and parliaments. These considerations are summarized in *Hypothesis 1*:

Hypothesis 1: The more a country is exposed to economic globalization, the lower is people's trust in political institutions.

2.4. The Role of government accountability

The impact of globalization on political trust may well depend on to what extent people perceive their government as accountable for its policies and for the state of the economy: One may argue that these should matter to citizens' political trust only if they have reasons to hold their government responsible - that is, when they believe political institutions to have sufficient discretionary power over the policy space. Accountability in a trust relation was first mentioned by Levi and Stoker (2000), who postulated that any trustee earns her trustworthiness not only through "the commitment to act in the interest of the truster", but also through her visible "competence in the domain over which trust is being given" (p.476). In consequence, government accountability may matter for the importance of government performance for citizens' political trust. Notably, in the trust game discussed above (section 2.1.), the possibility of missing accountability is ruled out by design of the laboratory experiment. As economic globalization restrains government's choice set of feasible policies through triggering uncontrollable and inevitable structural changes in the economy, in its final consequence, it may reduce the accountability of national governments for their policy-making and the resulting policy outcomes. Consequently, if people understand that there is a loss in government accountability caused by economic globalization, there should be no trust-lowering impact of economic globalization on political trust (as postulated in *Hypothesis 1*).

Possibly, whether or not an individual realizes that the forces of globalization reduce the accountability of the domestic government for its policies and policy outcomes may well depend on her knowledge and competence in politics and the economy. In this line, the 'psychological contract' literature argues that those persons, who are able to process new, possibly discrepant information and who are also motivated to undertake a cognitive effort for revision, are also those who may adjust their psychological contracts to this new situation

(Rumelhart and Norman, 1978; Rousseau, 2001). Rousseau (2001) lists "information, gathering, discussion, and sense-making" among the behaviors that facilitate processing of new information and revision of psychological contracts – possibly reflected by high educational levels and a general interest in the topic of the contract. Similarly, I postulate in this paper that the more an individual has gained an understanding of how the economy or politics function, the better she may understand how the internationalization of the domestic economy affects the constraints under which domestic governments are acting, and the less likely she will hold her domestic government (solely) accountable for her country's economic development.

In the empirical analysis, such competence in politics and the economy is approximated by individual's education and interest in politics. Indeed, Lipset and Schneider (1983) report a strong positive correlation between individual's educational level and her belief of having competence in politics.[39] Consequently, the political trust-lowering influence of economic globalization should be smaller for persons (a) who are well informed about politics or (b) have knowledge about the economy through education, as compared to persons who are (a) not interested in politics, or (b) who have little knowledge about how the economy functions. *Hypothesis 2* summarizes these thoughts:[40]

Hypothesis 2: The trust-lowering effect of economic globalization (*Hypothesis 1*) is more pronounced for persons who are not well informed about politics or who have little knowledge about economy than otherwise.

3. 1. Empirical Analysis: Does globalization affect political trust ?

First step is to analyze the impact of economic globalization on political trust, measured by the KOF index of a country *s*' degree of economic globalization ($globalization_{st}$) at time *t* and self-report individual *i*'s confidence in her national parliament ($conf_{ist}$) in country *s* at time *t*. The confidence measure is obtained from the European and World Values Surveys, a collection of repeated cross-sections of micro data between 1981 and 2007 (see Appendix A).

[39] Lower-educated persons are more likely to agree to the statement "*"Sometimes politics and government seem so complicated that a person like me can't really understand what's going on"*" (p.384)
[40] Converse (1972) reveals also that higher-educated persons believe more that politicians follow their preferences.

$$conf_{ist} = \beta' globalization_{st} + \gamma' X_{ist} + \delta' K_{st} + FE_s + TE_t + \varepsilon_{ist} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Employing a synthetic panel of matched micro-macro data, OLS estimations are run on a model that includes - besides vectors of individual-level and country-level control variables (X_{ist} , K_{st}) - also country-specific and time-specific fixed effects (FE_s , TE_t). The vector of micro-level control variables (X_{ist}) includes gender, age, marital status, education, occupational status, income and political leaning, while the vector of country-level controls is composed of national income and population size – the latter may capture effects of population heterogeneity for trust (Alesina and LaFerrara, 2002), but also, alongside with national income, the size of the domestic market and the resulting pressure to internationally integrate (Fischer and Somogyi, 2011).[41] Country-specific fixed effects may approximate time-invariant culture and governance structure, and jointly with the country-level controls, mitigate a potential endogeneity bias with respect to the variable of interest, $globalization_{st}$. To better establish causality, instrumental variable approaches and country-specific time trends are tested. The most convincing results are obtained when the model accounts for heterogeneity of globalization effects across countries, that is by adding interaction terms between the globalization measure and the country fixed effects ($globalization_{st}$ x FE_s). In all models, clustering at the country-level corrects standard errors for within-country correlation and serial autocorrelation across waves; hence, statistical significance of the globalization coefficient is calculated based on the number of countries in the sample, not the number of individual observations. Appendix A provides a description of the data used in this study.

Table 1 reports the empirical results for the impact of economic globalization on political trust in a world sample of 260'000 individuals living in 80 countries, employing various model specifications. Overall, there is convincing evidence that economic globalization reduces people's trust in their national parliament. This becomes most evident when globalization is not only assumed to be a phenomenon common to all countries likewise (columns 1 to 3), but also when the model takes into account that its impact may differ from country to country, adding to the shared effect (columns 4 and 5).

More specifically, the first model includes only time-specific and country-specific fixed effects, while the second adds country-specific time trends (columns 1 and 2). While the

[41] It also captures institutional quality, direct measures of which cover less countries and time points than used in this analysis.

coefficient on globalization is not significant, column 2 reveals that country-specific time trends are orthogonal to globalization. Column 3 uses a set of valid instruments (see Appendix C for discussion) to carry out a 2SLS estimation – possibly, governments might respond to lower political trust in the population by altering their countries' exposure to international competition through imposing tariffs and quotas. This model suggests that the insignificance of globalization in column 1 is not driven by an endogeneity bias (albeit the change in sign is noteworthy, particularly in light of the regressions that follow). Finally, columns 4 and 5 add to the model country-specific globalization effects that take account of the heterogeneity of its impact across countries. While column 4 employs a linear version of globalization, column 5 tests its logarithmized form. The adjusted R2 suggests that the model fit substantially improves when heterogeneity of globalization is also taken into account (from about 0.1672 to 0.1815).

Insert Table 1 about here

Estimation results on the control variables of the OLS models (columns 1, 4, and 5) are presented in Table B1 of Appendix B; in general, individual-level determinants of political trust are rather insensitive to changes in model specification at the country-level.[42] Political trust appears significantly related to certain socio-demographic characteristics, in particular age, elementary education, marital status, occupational status, and political leaning, but only little to income; the time fixed effects estimates suggest a continuing decline of political trust since 1981 (not reported). The presence of a time-invariant component of political trust is indicated by the (jointly significant) country-specific fixed effects (not reported), while, not unexpectedly, population size and GDP per capita matter only little to trust in political institutions.

Taken altogether, testing *Hypothesis 1* against a world sample of 260'000 individuals living in 80 countries, there is convincing evidence that economic globalization as such lowers individual's trust in her national parliament. As next step, by looking at heterogeneous effects by individuals' degree of interest in politics and levels of education, I plan to investigate to

[42] This was already observed in Fischer (2011).

what extend the magnitude of the impact of globalization in Table 1 depends on individuals' competence in the economy and politics.

3.2. How does knowledge about the economy and politics affect this relation ?

Hypothesis 2 is based on the idea that having acquired an understanding of the functioning the world economy and how it constrains domestic government's choice set may have an influence on whether or not someone holds her government accountable for certain domestic policy outcomes and economic developments. The EVS/WVS 1981-2007 contains a question on educational attainment, which is available for most of the interviewees; persons who have obtained a tertiary education should have gained certain knowledge about the functioning of politics and the economy – we expect the opposite for persons with a primary education. In addition, two dichotomous measures of having little knowledge about politics are constructed: the first uses a question on respondent's self-report interest in politics ('self-report disinterest in politics'). The second measure is based on the question about individual's political self-positioning, indicating those who refuted to answer - which can equally be interpreted as having no interest in politics ('disinterest in politics') (Fischer, 2011) (for further description, see Appendix A). Depending on the measure of political disinterest, the share of persons with little knowledge about politics and the economy varies between 24% (no political leaning), over 42% (only primary education), up to 53% (measure of self-report disinterest in politics).

Hypothesis 2 is tested by interacting the indicator of individual's competence in politics and/or the economy ($competence_{ist}$) with the measure of economic globalization ($globalization_{st}$) in the baseline model (based on equation (1) and column 4 of Table 1). The estimated relationship between political trust and globalization then becomes:

$$Conf_{ist} = \beta' globalization_{st} \# competence_{ist} + \gamma' X_{ist} + \delta' K_{st} + \zeta' globalization_{st} \# FE_s + TE_t + \varepsilon_{ist} \quad \ldots\ldots\ldots\ldots (2)$$

where '#' denotes 'interacted with', so that not only the coefficients on the interacted variables, but equally the coefficients on the non-interacted variables $competence_{ist}$, $globalization_{st}$, and FE_s are estimated. Table 2 presents the results.

Results in Table 2 are consistent with *Hypothesis 2*: Globalization appears to lower political trust of the politically and economically incompetent to a larger extent than that of the competent. Table 2 employs the two measures of disinterest in politics and the one of educational attainment described above. For either measure, columns (1) through (3) employ the linear form of globalization, while columns (4) through (6) employ the logarithmized form, with a slightly better model fit (based on columns 4 and 5 of Table 1).

Insert Table 2 about here

In line with *Hypothesis 2*, Table 2 reports significant negative interactions between globalization and being uninterested in politics and therefore, potentially, being politically and economically incompetent (columns 1, 2, 4, and 5); in tendency, the same is observable for persons with a primary education, who are to be compared to those with a secondary education, the reference group (columns 3 and 6). In columns 3 and 6, there is a positive interaction effect between 'having a tertiary education' and 'globalization', equally consistent with *Hypothesis 2*.

Given that (in)competence in politics and the economy is measured as dichotomous variable, the interaction terms are to be interpreted as an additional (negative or positive) impact of globalization on the (in)competent, a group-specific impact that is then to be added to the general effect observed in the total population. For example, measuring disinterest in politics by missing political leaning (columns 2 and 5), the political trust-lowering impact of globalization is larger on the politically uninterested than for the politically interested: being politically and economically incompetent adds to the effect of the already trust-lowering impact of globalization on the average man (e.g. in column 2: -0.036 for the politically interested versus -0.039 for the uninterested). Analogously, the politically knowledgeable, measured by their tertiary education (columns 3 and 6), experience a lower decline in political trust through globalization compared to the reference group, the secondary-educated (e.g. in column 3: -0.034 for secondary-educated vs. -0.031 for the tertiary-educated). Similarly, in columns 1 and 4, only the self-reportedly politically disinterested experience a decline in their political trust as globalization rises, while for the remaining population no trust-decreasing effect is observed.

The magnitudes of the interaction terms are substantial: In columns 1 and 2, when globalization rises by 50 points (on a 0—100-scale) political trust is lowered (further) by -0.1 to -0.15 categories, respectively. This effect is more than five times larger than the (trust-lowering) effect of being self-employed, is about double in size the effect of being unemployed or of being leftist-extreme. In the case of the interaction with primary education in column 3, the effect is more than double the impact of being self-employed, but about the same as the effect of being unemployed or of being leftist-extreme (see Table B1 of Appendix B).[43]

Overall, in a world sample of 260'000 individuals living in more than 80 countries, surveyed between 1981 and 2007, I find empirical support for *Hypothesis 2*: the trust-lowering influence of economic globalization on political trust is larger on those who lack knowledge about politics and the economy, assumedly being ignorant w.r.t. how globalization restrains government's policy choices. Measuring competence by educational levels, however, offers an alternative explanation: Possibly, well-educated people have positive expectations from globalization - which would be predicted by classical trade models for the highly skilled in developed, high-income countries.[44] The role of expectations will be discussed in the next section when the sample is split into developed and developing countries.

3.3. Rosy versus dismal expectations

The effect of economic globalization on the domestic economy may well depend on a country's stage of economic development: in developed countries, comparative advantages are rather in the production with high-skilled labor or capital, and, viewed from a sectoral point of view, rather in the industrial sector and the knowledge economy than in sectors of resource extraction or agriculture. In contrast, developing countries may have their comparative advantages rather in the production with low-skilled labor and labor-intensive production, and the agriculture and mining sectors. With respect to the impact of globalization on political trust, however, uncontrollable structural changes in the economy should constrain governments' choice set in developing and developing countries likewise – from this

[43] In the linear specification, the coefficient on the interaction term of primary education slightly misses the 10 percent level – it becomes significant in the high-income country sample in section 3.3.

[44] An alternative explanation is given by Converse (1972), who argues that highly-educated persons feel that politicians respect their preferences more compared to persons with lower educational levels.

perspective, the trust-lowering influence of economic globalization should be present in developed and developing countries likewise.

However, high-income countries may, possibly, have more financial means to accommodate those who lose through globalization, socially smoothing transitions and structural changes – welfare state instruments which developing countries may miss. In high-income countries, the majority of people may expect an overall positive benefit-cost-balance from globalizing the domestic economy, be it through wage/profit gains, higher returns on investments, or improved consumption patterns (see also section 2.2.). In addition, educational and social mobility in high-income countries may help the 'losers' of globalization develop a positive outlook, in contrast to people in low-income countries with strongly segmented and rigid labor markets. In addition, many developing countries are ruled by clans and autocratic regimes so that the gains from globalization may be concentrated in a few hands. Taken altogether, government's ability to accommodate people to necessary changes, and common man's expectations on profits and gains from globalization may be, on average, more rosy in developed countries and more dismal in developing countries, leading to an overall higher political trust in the first as compared to the latter. In that case, a trust-lowering influence of globalization as such would only be expected for developing countries.

The stage of economic development is measured by national income (per capita, exceeding 8000 US$ deflated to the year 2000); the Appendix Table D1 provides analogous findings when a threshold of 5000 US$ per capita is applied. Table 3 reports the results for the three different measures of competence in politics and the economy (interest in politics and education), with the full sample split by GDP p.c. at the time the survey was conducted (altogether 28 high-income countries and 53 low-income countries, respectively).

In tendency, for either type of country economic globalization appears to lower political trust of the common man (columns 1 through 6 of Table 3) - mirroring the findings for the full sample in Table 1 and consistent with *Hypothesis 1* (the rather small country samples often do not allow statistical significances at conventional levels).[45] We do not find support for the conjecture that gains from trade are better redistributed in developed countries than in developing countries.

[45] The problem to statistically identify globalization effects in the low-income country sample is probably caused by its strong unbalancedness. The small samples also do not allow estimating the effect of the log of globalization, possibly because of multicollinearity with the country-specific globalization effects.

For both developing and developed countries likewise do I find that the results are consistent with *Hypothesis 2*: measuring competence in politics and the economy with two indicators of interest in politics (columns 1 to 4), the trust-lowering impact of globalization is larger on those persons who are politically incompetent, in high- and low-income countries likewise.

Insert Table 3 about here

In contrast, when alternative measures of individual's knowledge based on education are employed (columns 5 and 6), the incompetence interaction effects for political trust appears to be present in high-income countries only: *Hypothesis 2* of an additional trust-lowering impact of globalization on the primary-educated holds true for developed countries only; similarly, in the developed country sample do I find that that having a tertiary education mitigates the trust-lowering impact of globalization - there are no such effects of education observable in developing countries.[46]

There are several explanations for this phenomenon: (1) first, presence of measurement errors regarding competence variables in developing countries or, (2) second, differences in people's economic aspirations between developing and developed countries. Ad (1): First, educational levels may be indicated with error in developing countries.[47] Similarly, ad (2): Regarding education, in developed countries with its high-skilled labor production, the political-trust increasing group-specific effect of globalization (the positive interaction term) observed for persons with a university degree could be the result of their positive expectations of receiving higher wages in the growing export sectors. Analogously, there are opposing effects for those with a primary education (the negative interaction term), the expected losers from globalization. Possibly, contradicting classical trade theory, in developing countries aspirations through increased globalization are equally bad for either educational level,

[46] Possibly, as in Table 3, the unbalancedness of the low-income country sample may hinder statistical identification of the interaction effect between 'political disinterest' and 'globalization'.

[47] Possibly, the insignificance of the interaction term between 'political disinterest' and 'globalization' in column 4 could equally be the results of a measurement error as interpreting not-answering the question on political leaning as interviewee's disinterest in politics (see Appendix A) requires a society with a full-functioning democracy and with a left-right-party spectrum – which is often not given in many low-income countries. This is also reflected by its low correlation with the alternative indicator of political interest, the self-report 'disinterest in politics' (rho = 0.18 in the full sample, 0.16 in non-OECD countries, 0.22 in OECD countries).

because of, e.g. rigidities in the domestic labor markets and obstacles to within-country mobility (as discussed in section 2.2.).[48]

Taken altogether, Table 3 supports, to some extent, *Hypothesis 1*, but most strongly *Hypothesis 2*, revealing that the mechanism of having (no) competence in politics and the economy w.r.t. understanding the limits of government's choice set works in both developing and developed countries likewise. However, I also find an indication that aspirations may matter, leading to differential effects of education between developing and developed countries. Analogous regression analyses using an alternative definition of economic development in Appendix D (Table D1) are equally supportive.

3.4. The time dimension of globalization

Finally, one may ask whether the effects of globalization on political trust differ across time periods. Since the 1990ies the world faces an increasingly higher frequency of economically and politically critical events (e.g. 1997/1998 in South Asia, 1998 in Russia, 1999 the burst of the new economy bubble); particularly these financial markets crises around the year 2000, aggravated by the transnational terrorist attacks on the World Trade Center in 2001, may have helped generate common man's awareness of the growing connectedness between countries through capital mobility and trade. Table 4 tests for these differences in people's awareness prior to 2000 and after 2000 by splitting the full sample accordingly. In in the world sample, there are no substantial differences across time in that globalization lowers an average person's political trust (columns 1 and 2), and in that this occurs with greater magnitude to the politically disinterested (columns 3 and 4). These results hold also when between developing and developed countries is distinguished – with the usual small sample limitations (see Table D2 of the Appendix D). Overall, across time periods, both *Hypothesis 1* and *Hypothesis 2* remain supported.[49]

Insert Table 4 about here

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[48] An alternative explanation is that educational level in developing countries is measured with error.

[49] Even though the number of countries is identical in both subsamples (about 55), there is a dominance of OECD countries in the prior-to-2000 sample caused by the unbalanced panel structure of the EVW/WVS. To some extent, statistical identification of globalization effects is hindered by the rather low number of countries.

One may also argue that the overall beneficial effects of globalization such as higher economic growth and less overall unemployment may take a couple of years to manifest – going beyond the immediate 'collateral damage' of substantial structural changes that transform the domestic economy now. In order to account for this transmission time, the globalization measure has been lagged by ten years and then added to the baseline model. In the resulting model with combined present-time and lagged globalization (column 5), I find *Hypothesis 1* still fully supported as the current degree of globalization still drives down contemporary political trust. In addition, past globalization appears now trust-enhancing, consistent with the conjecture that it may take considerable time for its beneficial effects to realize and trickle down to the common man. An illustrative example may be social welfare reforms that, first, put certain societal groups in an economic disadvantage, but then, in the long-run, through strengthening the competitiveness of the economy, mitigate the impact of macroeconomic shocks on them. However, taking into account that globalization that took place ten years ago may equally have exerted differential effects across countries (modeled in analogy to equation (2)), no significant impact of past-time globalization common to all countries remains (column 6). Overall, even in the presence of long-run consequences of globalization and differences in effects across time-periods the empirical findings remain in line with *Hypothesis 1* and *Hypothesis 2*.

4. Conclusion

Globalization in its modern, overwhelming dynamics is a recent phenomenon in human history. With its impact on domestic industrial production, sector growth and shrinkage, labor markets and capital markets, globalization has wide-ranged consequences for humans' social and economic lives, going far beyond the predictions of classical economic textbook models. Subdued to these exogenously imposed, fast, and relentless changes, national governments loose more and more their discretionary power and control over the domestic economy. In consequence, the common (wo)man may feel that her national government intentionally 'fails' to respond to her political preferences which may, ultimately, erode her trust in the political institutions which govern her country. These considerations are the main motivation for writing this paper and my theoretical prediction that economic globalization lowers political trust.

This article provides an empirical test of whether or not there is erosion of political trust caused by economic globalization. In a pseudo micro-panel consisting of 260'000 individuals living in 80 countries, interviewed between 1981 and 2007, I detect that globalization lowers political trust in the population, as predicted. Effects are more pronounced for the politically uninformed and, thus, for those who are possibly not aware of the policy constraints globalization imposes on domestic politicians, compared to someone who keeps track of new political and economic developments. This erosion of political trust through globalization is observable in both developing and developed countries likewise. In developed countries, persons with low (high) educational levels experience globalization as more (less) trust-lowering compared to the medium-educated – an alternative explanation is based on their worse (improved) wage prospects as their country becomes more integrated into the world economy.

This analysis suggests that understanding the relentlessness of the forces of globalization and how these disempower domestic governments is, in the presence of globalization, important for NOT developing trust too low in the domestic political institutions. Indeed, it is the politically ignorant who appear to particularly view government's policies (compelled by globalization) as underperformance and non-responsiveness to her wishes and preferences. Recent examples include the riots and protests on the streets in Athens against the debt-cutting policies of the Greek government (in response to the Euro crisis), or the protests in

Germany in 2008 against cutting down the initially generous welfare programs by a leftist government (as competitiveness-increasing measure). My analysis suggests that, as the forces of economic globalization get stronger, not only the average man, but even more the politically and economically uninformed tend to view the government as being in breach of its psychological contract with the citizenry.

Given that economically isolating the country to preserve its political trust is no 'splendid' solution, what are feasible policy implications of this finding? Possibly, it shows the importance of a well-working communication relationship of governments with their populations. Rousseau and Tijoriwala (1999) emphasize the importance of 'trusted change agents' for revising psychological contracts: trusted change agents deliver new and discrepant information in a credible way to their recipients, triggering the processing of this information, ultimately enabling recipients to revise their expectations. According to Jick (1993) and Poole, Gioia, and Gray (1989) giving consistent information in continuous repetition plays a crucial role in generating such a credible message.

Applying these insights of psychological contract research to my finding that globalization lowers political trust, government officials are advised to continuously inform the population in a consistent and credible way about how globalization constrains their policy choice set - such communication policy will most likely mitigate the trust-lowering impact of globalization in general, and the more on the low-educated and politically disinterested.

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Tables

Table 1: Economic globalization and political trust

	(1) OLS	(2) OLS	(3) IV	(4) OLS	(5) OLS
Economic globalization	0.0003	0.0002	-0.005	-0.037**	
	(0.10)	(0.03)	(0.77)	(2.96)	
Log(globalization)					-1.330**
					(3.15)
Country-specific globalization	NO	NO	NO	YES	YES
Country-specific time trends	NO	YES	NO	NO	NO
Test statistics					
Shea Partial R2			0.4945		
F-test on instruments F(3,78) =			57.37		
Hansen-J statistics					
Chi2(2) =			0.079		
p-value =			0.9613		
Anderson-Rubin Wald test					
F(3, 78) =			0.21		
p-value =			0.8875		
Observations	260,700	260'700	257'061	260'700	260'700
Adjusted R2	0.1672	0.1813	.	0.1815	0.1815
Country fixed effects	YES	YES	YES	YES	YES
Year fixed effects	YES	YES	YES	YES	YES
Number of countries	80	80	79	80	80

Notes: Dependent variable is the confidence in parliament measured on a 4-point scale. All models control for gender, age, marital status, education, occupational status, income and political leaning, and, at the country level, national income per capita and population size (see also Appendix A). Country-specific fixed effects and time-specific fixed effects are included but not reported. Standard errors are adjusted to within-country and serial autocorrelation through clustering at the country level. IV regressions follow the OLS regressions, but instrument globalization with population size, national income per capita, and a measure of trade restrictions (see Appendix C). T-statistics are in brackets. '**', '*', and '+' denote statistical significance at the 1, 5 and 10 percent levels, respectively.

Table 2: The role of knowledge about politics and the economy

	(1)	(2)	(3)	(4)	(5)	(6)
	Globalization			Log(globalization)		
Economic globalization	0.003	-0.036**	-0.034**	0.061	-1.280**	-1.197**
	(0.15)	(2.97)	(2.70)	(0.09)	(3.06)	(2.91)
Elementary education	0.071**	0.060**	0.142*	0.069**	0.057*	0.262
	(3.23)	(2.76)	(2.21)	(3.06)	(2.58)	(1.19)
Tertiary education	0.001	0.017	-0.153**	0.002	0.018	-0.431*
	(0.05)	(1.42)	(2.94)	(0.13)	(1.49)	(2.23)
Disinterest in politics	-0.053**	0.091	-0.078**	-0.055**	0.448	-0.081**
	(3.35)	(1.22)	(5.01)	(3.39)	(1.55)	(5.25)
Self-report disinterest in politics	-0.031			0.246*		
	(0.79)			(2.00)		
SR disinterest x globalization	-0.002**			-0.102**		
	(3.99)			(3.40)		
Disinterest x globalization		-0.003*			-0.131+	
		(2.56)			(1.89)	
Elementary x globalization			-0.001			-0.052
			(1.47)			(0.95)
Tertiary x globalization			0.003**			0.111*
			(3.65)			(2.37)
Observations	248'826	260'700	260'700	246'193	257'061	257'061
Adjusted R2	0.1917	0.1820	0.1822	0.1927	0.1833	0.1833
Country Fixed Effects	YES	YES	YES	YES	YES	YES
Year Fixed Effects	YES	YES	YES	YES	YES	YES
Number of countries	80	80	80	79	79	79

Notes: Dependent variable is the confidence in parliament measured on a 4-point scale. 'Elementary' or 'tertiary' education are dichotomous measures based on a question on educational attainment. 'Self-report disinterest in politics' is a dichotomous measure of those who report to be "not very interested" and "not at all interested" in politics. 'Disinterest in politics' is a dichotomous measure of those who refused to answer the question on political self-positioning (see also Appendix A). All models control for gender, age, marital status, education, occupational status, income and political leaning, and, at the country level, national income per capita and population size. Country-specific fixed effects and time-specific fixed effects are included but not reported. Standard errors are adjusted to within-country and serial autocorrelation through clustering at the country level. T-statistics are in brackets. '**', '*', and '+' denote statistical significance at the 1, 5 and 10 percent levels, respectively.

Table 3: Knowledge effects in high-income and low-income countries

	(1)	(2)	(3)	(4)	(5)	(6)
Economic globalization	-0.471*	0.019	-0.389+	-0.031	-0.007	-0.031
	(2.12)	(0.51)	(2.02)	(0.97)	(0.54)	(0.90)
Elementary education	-0.003	0.095**	-0.019	0.083**	0.113	0.090
	(0.20)	(3.91)	(1.13)	(3.45)	(1.54)	(1.04)
Tertiary education	0.037*	-0.019	0.054**	-0.004	-0.351**	0.004
	(2.11)	(1.44)	(3.00)	(0.30)	(5.52)	(0.08)
Disinterest in politics	-0.099**	-0.018	0.072	0.043	-0.127**	-0.045+
	(9.92)	(0.76)	(1.34)	(0.39)	(13.17)	(1.97)
Self-report disinterest in politics	0.066	-0.048				
	(1.69)	(0.98)				
SR disinterest x globalization	-0.003**	-0.002*				
	(5.91)	(2.27)				
Disinterest x globalization			-0.003**	-0.002		
			(3.15)	(0.89)		
Elementary x globalization					-0.002+	-0.000
					(1.74)	(0.08)
Tertiary x globalization					0.006**	-0.000
					(7.07)	(0.16)
Observations	107'333	138'860	110'222	146'839	110'222	146'839
Adjusted R2	0.0997	0.2451	0.0903	0.2339	0.0914	0.2338
Country fixed effects	YES	YES	YES	YES	YES	YES
Year fixed effects	YES	YES	YES	YES	YES	YES
GDP p.c. > 8000 US$ p.a.	YES	NO	YES	NO	YES	NO
Number of countries	28	53	28	53	28	53

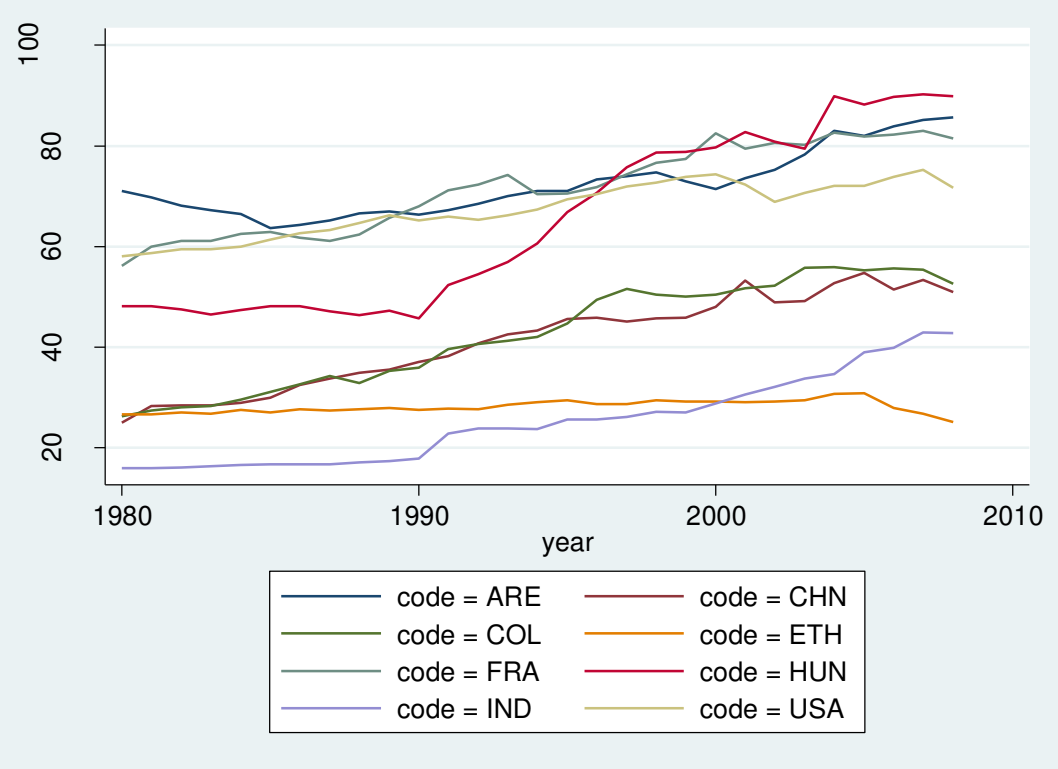
Notes: Dependent variable is the confidence in parliament measured on a 4-point scale. 'Elementary' or 'tertiary' education are dichotomous measures based on a question on educational attainment. 'Self-report disinterest in politics' is a dichotomous measure of those who report to be "not very interested" and "not at all interested" in politics. 'Disinterest in politics' is a dichotomous measure of those who refused to answer the question on political self-positioning (see also Appendix A). All models control for gender, age, marital status, education, occupational status, income and political leaning, and, at the country level, national income per capita and population size. Country-specific fixed effects and time-specific fixed effects are included but not reported. Standard errors are adjusted to within-country and serial autocorrelation through clustering at the country level. T-statistics are in brackets. '**', '*', and '+' denote statistical significance at the 1, 5 and 10 percent levels, respectively.

Table 4: The time dimension of globalization effects

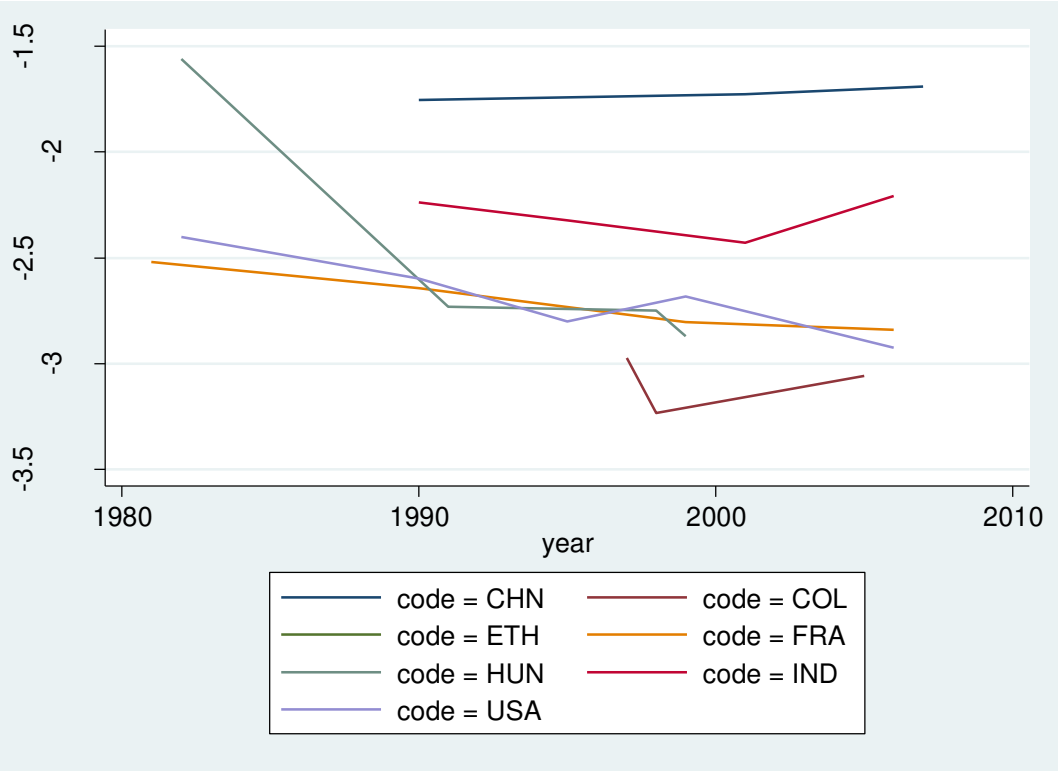
	1	2	3	4	5	6
Economic globalization	-0.706	-0.024**	-0.587	-0.018**	-0.045**	-0.214**
	(1.32)	(17.08)	(1.11)	(12.01)	(3.02)	(3.25)
Economic globalization (10-year lag)					0.013**	0.031
					(3.15)	(0.53)
Self-report disinterest in politics			-0.016	-0.074		
			(0.36)	(1.47)		
Disinterest x globalization			-0.002**	-0.002*		
			(3.43)	(2.31)		
Country-specific globalization	YES	YES	YES	YES	YES	YES
Country-specific globalization, lagged	.	.	.	.	NO	YES
Observations	156'223	100'838	147'904	98'289	235'206	235'206
Adjusted R2	0.1332	0.2507	0.1423	0.2610	0.1842	0.1866
Country fixed effects	YES	YES	YES	YES	YES	YES
Year fixed effects	YES	YES	YES	YES	YES	YES
year < 2000	YES	NO	YES	NO		
Number of countries	56	57	56	57	73	73

Notes: Dependent variable is the confidence in parliament measured on a 4-point scale. 'Self-report disinterest in politics' is a dichotomous measure of those who report to be "not very interested" and "not at all interested" in politics (see also Appendix A). All models control for gender, age, marital status, education, occupational status, income and political leaning, and, at the country level, national income per capita and population size. Country-specific fixed effects and time-specific fixed effects are included but not reported. Standard errors are adjusted to within-country and serial autocorrelation through clustering at the country level. T-statistics are in brackets. '**', '*', and '+' denote statistical significance at the 1, 5 and 10 percent levels, respectively.

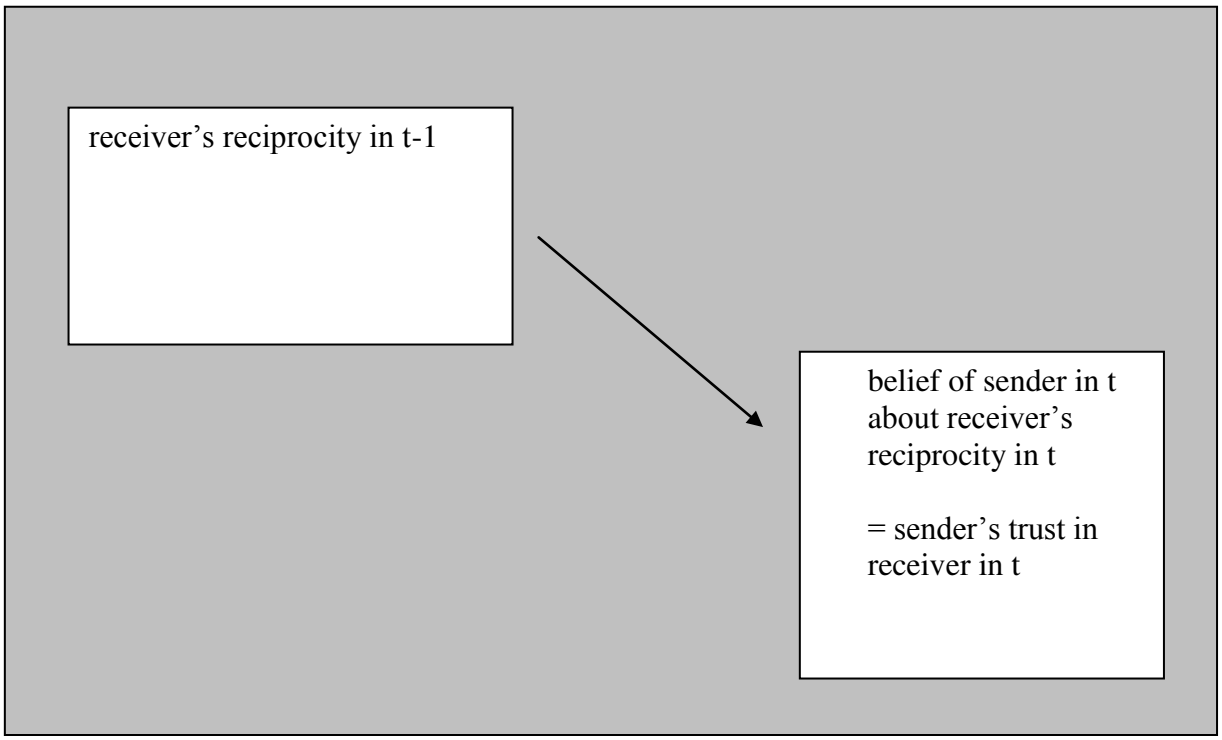
Graphs



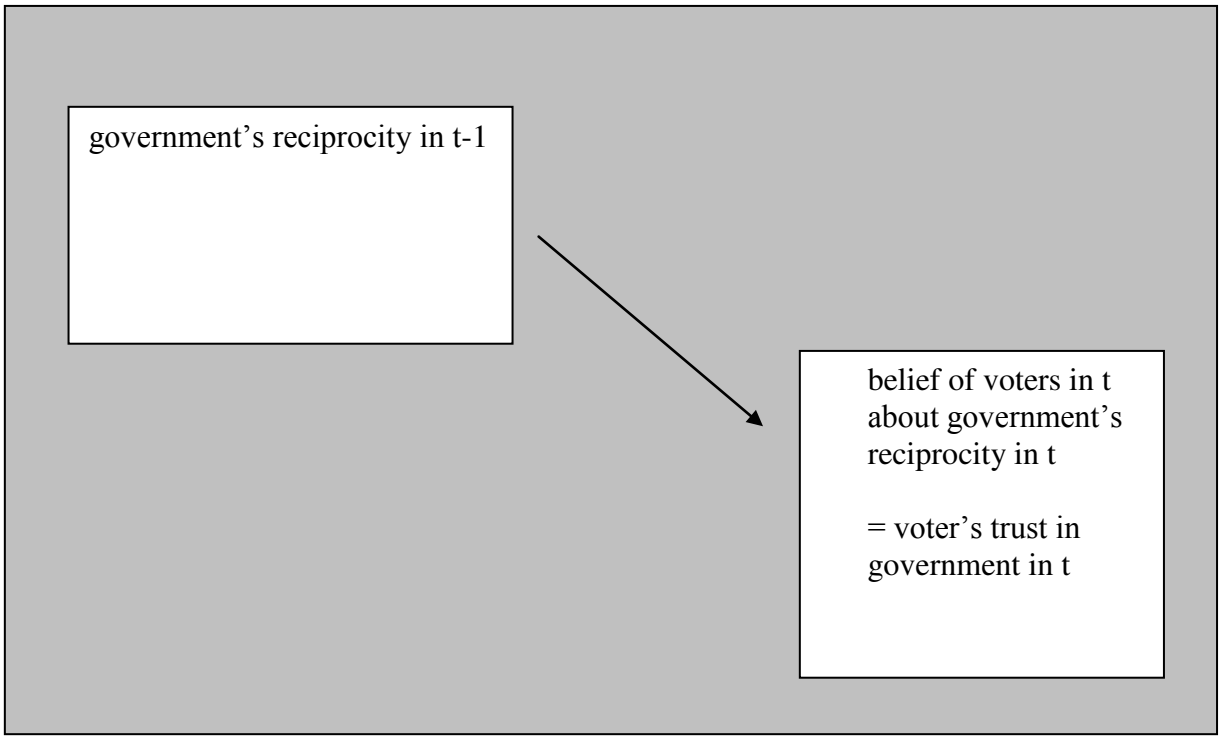
Graph 1: Economic globalization between 1980 and 2010 for selected countries



Graph 2: Confidence in parliament 1981 – 2007, European and World Values Surveys



Graph 3: The relation between reciprocity and trust in a trust game



Graph 4: The relation between government's reciprocity and political trust

Appendix A: Data description

The individual-level of measure of confidence in national parliament, the measure of political trust, is obtained from the European and World Values Surveys (EVS/WVS), 1981 - 2007, a world-wide survey on people's attitudes. The EVS/WVS has been repeated at irregular intervals for five times (roughly 1980, 1990, 1997, 2000, and 2005), with each wave including representative samples of the population in the participating countries, about 1000 to 1500 persons each. As the number of countries varies across waves, the EVS/WVS data give rise to an unbalanced micro pseudo-panel (a set of repeated cross-sections of individual-level data with a panel-structure at the country level) of about 307'000 individuals, of which about 130'000 (42%) are from OECD countries. As regards the measure of political trust, during the interview, respondents were asked to indicate her confidence in various institutions. The original wording of the question relating to any institution is "I am going to name a number of organisations. For each one, could you tell me how much confidence you have in them: is it a great deal of confidence, quite a lot of confidence, not very much confidence, or none at all?". In this empirical analysis, I use a version that relates to the national parliament, with (-1) constituting the highest category, and (-4) the lowest. With a mean of -2.68, people are rather mistrusting their national parliament than trusting it.

This dataset includes a variety of socio-demographic characteristics such as age, gender, education, income, occupational status, marital status, political self-positioning, but also a question on interest in politics.[50] The 10-category variable of self-report political leaning gives rise to the following political ideologies: conservative-extreme (9-10), conservative-moderate (7-8), center (5-6), leftist-moderate (3-4), leftist-extreme (1-2). Those having refused to answer this question on political leaning are categorized as having 'disinterest in politics' – one of the two measures of political disinterest. Using the question "How interested would you say you are in politics?" I combine the answers "not very interested" and "not at all interested" to form the group having 'self-report disinterest in politics'.[51] Overall, the absence of individual's knowledge about politics and the economy is measured by (1) the absence of self-report interest in politics, (2) not having answered the question on political

[50] Persons who did not indicate their income class where grouped into a separate category 'no income information'.
[51] This question was used from the second wave of the WVS on. In the first wave (15 country-years, 20'000 observations), the following variant of the question was used "which of these statements comes nearest to describing your interest in politics? (1) active interest, (2) interest but inactive, (3) not greater than other, (4) not at all interested. Again, categories (3) and (4) were combined to form the group of persons not interested in politics.

leaning and (3) having an education at the primary level. According to either measure, about the share of persons with little knowledge about politics and the economy varies between 24% (no political leaning/no interest) and 53% (self-report disinterest in politics). Table A1 of the Appendix provides descriptive statistics of the individual-level variables in this sample. While about 307'000 persons responded to the question on political trust, missing observations in the country-level variables lets the regression sample shrink to about 260'000 observations.

The country-level control variables include population size and GDP per capita (both in log-form), the latter measured in year-2000 US$ to ensure comparability across countries and years. Both are obtained from the World Bank database World Development Indicator (WDI, 2011). In the course of analysis the sample is split into high-income and low-income countries. This paper employs two indicators based on the per capita income measure, in order to capture different definitions of developing country: in the main part of the paper the one measure splits the sample around 8'000 US$ per capita, while in Appendix D the other does around 5'000 US$ - both measures are somewhere between the lower and the upper bound for upper middle income countries according to the World Bank definition (upper middle income, from $3'976 to $12'275 in 2010 GNI per capita).[52] For an in-depth discussion of the globalization measure the reader is referred to the main text (section 1). Table A2 of the Appendix provides descriptive statistics of the country-level variables in the regression sample.

Table A1: Descriptive statistics: individual-level variables

Variable	Obs	Mean	Std. Dev.	Minimum	Maximum
Confidence in parliament (economic)	307'269	-2.68	0.90	-4	-1
Globalization	289'206	59.51	17.11	12.87	97.33
log(globalization)	289'206	4.04	0.34	2.55	4.58
Self-report disinterest in politics	289'791	0.53	0.50	0	1
Disinterest in politics (no political leaning)	307'269	0.24	0.43	0	1
Elementary education	307'269	0.42	0.49	0	1
Secondary education	307'269	0.42	0.49	0	1
Tertiary education	307'269	0.19	0.39	0	1
Age	304'279	41.24	16.31	15	101

[52] Source: http://data.worldbank.org/about/country-classifications , retrieved 31 October 2011.

Age squared (age^2)	304'279	19.67	15.11	2.25	102.01
Age^3	304'279	10.53	11.80	0.34	103.03
Male	307'198	0.49	0.50	0	1
Married	302'472	0.59	0.49	0	1
Cohabiting	302'472	0.05	0.22	0	1
Divorced	302'472	0.04	0.19	0	1
Separated	302'472	0.02	0.13	0	1
Widowed	302'472	0.06	0.24	0	1
Single	302'472	0.24	0.43	0	1
Full-time employed	296'858	0.38	0.49	0	1
Part-time employed	296'858	0.07	0.26	0	1
Self-employed	296'858	0.10	0.30	0	1
Retired	296'858	0.14	0.34	0	1
Housewife	296'858	0.14	0.34	0	1
Student	296'858	0.07	0.26	0	1
Unemployed	296'858	0.08	0.28	0	1
Other	296'858	0.02	0.14	0	1
Income category 1	307'269	0.08	0.27	0	1
Income category 2	307'269	0.10	0.31	0	1
Income category 3	307'269	0.12	0.32	0	1
Income category 4	307'269	0.13	0.33	0	1
Income category 5	307'269	0.13	0.33	0	1
Income category 6	307'269	0.10	0.30	0	1
Income category 7	307'269	0.08	0.27	0	1
Income category 8	307'269	0.06	0.24	0	1
Income category 9	307'269	0.04	0.19	0	1
Income category 10	307'269	0.03	0.18	0	1
Income missing	307'269	0.14	0.34	0	1
Conservative, extreme	307'269	0.09	0.29	0	1
Conservative, moderate	307'269	0.14	0.35	0	1
Center	307'269	0.33	0.47	0	1
Leftist, extreme	307'269	0.07	0.25	0	1
Leftist, moderate	307'269	0.12	0.33	0	1
No political leaning (disinterest in politics)	307'269	0.24	0.43	0	1

Table A2: Descriptive statistics: country-level variables

Variable	Obs.	Mean	Std. Dev.	Minimum	Maximum
Log(population)	301'857	17.09	1.55	12.38	21.00
log (GDP per capita)	288'813	8.50	1.44	5.13	14.97
trade restrictions (IV variable)	285'494	65.42	19.79	6.16	97.05
High-income (> 8000 US$)	288'813	0.40	0.49	0	1
High-income (> 5000 US$)	288'813	0.48	0.50	0	1

Appendix B: Full sample results

Table B1: Globalization and political trust

	(1)	(2)	(3)	(4)
Globalization	0.0003		-0.037**	
	(0.10)		(2.96)	
Log(globalization)		0.033		-1.330**
		(0.19)		(3.15)
Country-specific globalization	NO	NO	YES	YES
Age	-0.009	-0.009	-0.009	-0.009
	(1.58)	(1.58)	(1.60)	(1.60)
Age^2	0.021+	0.021+	0.021+	0.021+
	(1.85)	(1.85)	(1.85)	(1.86)
Age^3	-0.011	-0.011	-0.012	-0.012
	(1.62)	(1.62)	(1.64)	(1.64)
Male	0.0001	0.0001	0.002	0.002
	(0.02)	(0.01)	(0.30)	(0.28)
Elementary education	0.070**	0.069**	0.061**	0.060**
	(3.46)	(3.39)	(2.83)	(2.75)
Secondary education	Ref.cat.			
Tertiary education	0.014	0.014	0.017	0.017
	(1.16)	(1.17)	(1.40)	(1.40)
Married	Ref.cat.			
Cohabiting	-0.034+	-0.034+	-0.033*	-0.032*
	(1.95)	(1.94)	(2.05)	(2.04)
Divorced	-0.084**	-0.084**	-0.085**	-0.085**
	(5.52)	(5.52)	(5.59)	(5.64)
Separated	-0.066**	-0.066**	-0.068**	-0.069**
	(4.44)	(4.38)	(4.60)	(4.60)
Widowed	-0.010	-0.011	-0.006	-0.006
	(0.91)	(0.93)	(0.58)	(0.57)
Single	-0.026*	-0.026*	-0.027*	-0.027*
	(2.03)	(2.04)	(2.18)	(2.19)
Full-time employed	Ref.cat.			
Part-time employed	0.012	0.011	0.015	0.015
	(1.18)	(1.18)	(1.60)	(1.59)
Self-employed	-0.019*	-0.019*	-0.016+	-0.017+
	(2.02)	(2.03)	(1.77)	(1.78)
Retired	-0.012	-0.012	-0.002	-0.003
	(1.03)	(1.03)	(0.20)	(0.23)
Housewife	0.018	0.018	0.028+	0.027+
	(1.16)	(1.17)	(1.72)	(1.70)
Student	0.048**	0.048**	0.050**	0.050**
	(2.92)	(2.86)	(2.84)	(2.87)
Unemployed	-0.041+	-0.041+	-0.029	-0.029
	(1.69)	(1.69)	(1.23)	(1.24)
Other	0.016	0.016	0.010	0.010

	(0.92)	(0.91)	(0.65)	(0.64)
Income category 1	Ref.cat.			
Income category 2	-0.004	-0.004	-0.002	-0.003
	(0.25)	(0.25)	(0.16)	(0.17)
Income category 3	-0.005	-0.005	-0.006	-0.007
	(0.25)	(0.26)	(0.29)	(0.31)
Income category 4	-0.020	-0.020	-0.014	-0.015
	(0.80)	(0.80)	(0.55)	(0.58)
Income category 5	-0.012	-0.012	-0.015	-0.016
	(0.42)	(0.42)	(0.49)	(0.51)
Income category 6	-0.018	-0.018	-0.016	-0.017
	(0.52)	(0.53)	(0.45)	(0.46)
Income category 7	-0.001	-0.001	-0.006	-0.006
	(0.03)	(0.03)	(0.15)	(0.17)
Income category 8	-0.014	-0.014	-0.016	-0.016
	(0.37)	(0.37)	(0.39)	(0.40)
Income category 9	-0.004	-0.004	-0.007	-0.007
	(0.08)	(0.09)	(0.15)	(0.16)
Income category 10	0.015	0.015	0.021	0.020
	(0.36)	(0.36)	(0.51)	(0.50)
Income missing	-0.019	-0.019	-0.028	-0.029
	(0.53)	(0.53)	(0.80)	(0.83)
Centrist	Ref.cat.			
Conservative-extreme	0.113**	0.113**	0.118**	0.118**
	(6.08)	(6.06)	(6.48)	(6.39)
Conservative-moderate	0.081**	0.081**	0.079**	0.079**
	(6.65)	(6.60)	(6.54)	(6.51)
Leftist-extreme	-0.066*	-0.066*	-0.066*	-0.066*
	(2.45)	(2.45)	(2.46)	(2.45)
Leftist-moderate	0.011	0.011	0.007	0.007
	(0.76)	(0.76)	(0.44)	(0.45)
No political leaning	-0.082**	-0.082**	-0.077**	-0.077**
(Disinterest in politics)	(4.71)	(4.65)	(4.94)	(4.93)
Log(population)	-0.023	-0.026	-1.630	-1.595
	(0.05)	(0.06)	(1.63)	(1.63)
Log (GDP p.c.)	0.007	0.009	0.260+	0.253+
	(0.03)	(0.04)	(1.96)	(1.93)
Constant	-2.496	-2.567	21.501	24.419
	(0.38)	(0.39)	(1.40)	(1.52)
Observations	260,700	260,700	260,700	260,700
Adjusted R2	0.1672	0.1672	0.1815	0.1815
Country fixed effects	YES	YES	YES	YES
Year fixed effects	YES	YES	YES	YES
Number of countries	80	80	80	80

Notes: Dependent variable is the confidence in parliament measured on a 4-point scale. All models control for gender, age, marital status, education, occupational status, income, and political leaning; at the country level, these are national income per capita and population size (see also Appendix A). Country-specific fixed effects and time-specific fixed effects are included but not reported. Standard errors are adjusted to within-country and serial autocorrelation through clustering at the country level. T-statistics are in brackets. '**', '*', and '+' denote statistical significance at the 1, 5 and 10 percent levels, respectively.

Appendix C: IV Regressions and testing

Instrumental variable regressions in Table C1 use a 2SLS approach. Expressed in words, in the first stage the effect of exogenous factors on globalization is tested, while in the second stage the impact of first-stage-predicted values of globalization on political trust is estimated. Globalization is instrumented with three variables: population size, national income (which are then both excluded from the main regression), and an index of trade restrictions, one minor component of the measure of economic globalization (which mainly incorporates actual trade and financial flows). The IV regressions are, like their corresponding OLS counterparts, carried out with cluster-robust standard errors at the country level. Table 2 displays the results of the IV regressions and some tests of instrument validity.

Regarding the exclusion restriction, Table B1 of Appendix B reports that neither national income nor population size are significant predictors in the political trust-regressions - neither is the index of trade restrictions (not reported). In IV regressions, the validity of these instruments is judged by statistical tests of overidentification: Here in Table C1 the Hansen J statistics, consistent in the presence of within-class autocorrelation and heteroscedasticity, does not reject the null hypothesis. In case of additionally weak instruments, however, the Anderson-Rubin Wald test is more reliable: the non-rejection of the null confirms that the coefficients of the instruments are jointly insignificant in the reduced-form of the regressions (Baum, Schaffer, and Stillman, 2007).

Table C1 reports the estimates and significance levels of the three instruments population size, national income, and trade restrictions in the first stage regressions. In column 3, all three instruments are statistically significant, while in column 4, where the log of globalization is employed, only the absence of trade restrictions is a strong predictor of globalization. Thus, there is a small weak instrument problem in column 4. However, the F-test on the instruments and the Shea R2 indicate an overally good joint predictive power. The first stage regressions suggest that a larger domestic demand (measured by population size and national income) implies a lesser need for opening-up the domestic economy to the world, while weaker trade restrictions trigger higher overall economic globalization. Reducing the number of instruments to population size and trade restrictions only improves the already good fit in the first stage regressions but does not change the results in the second stage regressions.

Table C1: Economic Globalization and political trust

	(1) OLS	(2) OLS	(3) IV	(4) IV
Economic globalization	0.000		-0.005	
	(0.10)		(0.77)	
Globalization squared				
Log(globalization)		0.033		-0.222
		(0.19)		(0.77)
First stage regressions			*dependent variable: globalization*	
Population size			-28.314**	-0.254
			(3.16)	(0.80)
National income			-3.514+	-0.136
			(1.81)	(1.24)
Trade restrictions (absence)			0.524***	0.012**
			(10.81)	(8.85)
Test statistics				
Shea Partial R2			0.4945	0.4194
F-test on instruments, F(3,78) =			57.37	32.88
Hansen-J statistics Chi2(2) =			0.079	0.007
p-value =			0.9613	0.9963
Anderson-Rubin Wald test F(3, 78) =			0.21	0.21
p-value =			0.8875	0.8875
Observations	260'700	260'700	257'061	257'061
Adjusted R2	0.1672	0.1672	0.0095	0.0094
Country fixed effects	YES	YES	YES	YES
Year fixed effects	YES	YES	YES	YES
Number of countries	80	80	79	79

Notes: Dependent variable is the confidence in parliament measured on a 4-point scale. All models control for gender, age, marital status, education, occupational status, income and political leaning, and, at the country level, national income per capita and population size (see also Appendix A). Country-specific fixed effects and time-specific fixed effects are included but not reported. Standard errors are adjusted to within-country and serial autocorrelation through clustering at the country level. IV regressions follow the OLS regressions with an additional small-sample adjustment, but instrument globalization with population size, national income per capita, and a measure of absent trade restrictions. In the first stage regressions dependent variable is globalization. The test statistics are explained and discussed in Appendix B. T-statistics are in brackets. '**', '*', and '+' denote statistical significance at the 1, 5 and 10 percent levels, respectively.

Appendix D: Robustness tests

Table D1: Knowledge effects in high-income and low-income countries

	(1)	(2)	(3)	(4)	(5)	(6)
Economic globalization	-0.034	-0.028**	-0.430*	-0.057**	0.009	-0.055**
	(0.66)	(6.68)	(2.54)	(10.73)	(0.80)	(7.52)
Elementary education	-0.001	0.096**	-0.018	0.086**	0.072	0.036
	(0.10)	(3.56)	(1.34)	(3.22)	(1.15)	(0.42)
Tertiary education	0.036*	-0.023	0.054**	-0.007	-0.311**	0.018
	(2.34)	(1.64)	(3.33)	(0.56)	(4.67)	(0.37)
Disinterest in politics	-0.099**	-0.006	0.024	0.032	-0.129**	-0.033
	(9.89)	(0.24)	(0.42)	(0.27)	(14.17)	(1.31)
Self-report disinterest in politics	0.006	-0.064				
	(0.11)	(1.19)				
SR disinterest x globalization	-0.003**	-0.002				
	(3.56)	(1.67)				
Disinterest x globalization			-0.002*	-0.001		
			(2.49)	(0.63)		
Elementary x globalization					-0.001	0.001
					(1.32)	(0.58)
Tertiary x globalization					0.005**	-0.000
					(6.10)	(0.52)
Observations	127,317	118,876	130,440	126,621	130,440	126,621
Adjusted R2	0.1209	0.2478	0.1113	0.2373	0.1121	0.2373
Country fixed effects	YES	YES	YES	YES	YES	YES
Year fixed effects	YES	YES	YES	YES	YES	YES
GDP p.c. > 5000 US$ p.a.	YES	NO	YES	NO	YES	NO
Number of countries	35	47	35	47	35	47

Notes: Dependent variable is the confidence in parliament measured on a 4-point scale. 'Elementary' or 'tertiary' education are dichotomous measures based on a question on educational attainment. 'Self-report disinterest in politics' is a dichotomous measure of those who report to be "not very interested" and "not at all interested" in politics. 'Disinterest in politics' is a dichotomous measure of those who refused to answer the question on political self-positioning (see also Appendix A). All models control for gender, age, marital status, education, occupational status, income and political leaning, and, at the country level, national income per capita and population size. Country-specific fixed effects and time-specific fixed effects are included but not reported. Standard errors are adjusted to within-country and serial autocorrelation through clustering at the country level. T-statistics are in brackets. '**', '*', and '+' denote statistical significance at the 1, 5 and 10 percent levels, respectively.

Table D2: Political disinterest in high-income and low-income countries

	(1)	(2)	(3)	(4)	(5)	(6)
Economic globalization	-0.008	-0.001	-0.001	-0.007	0.004	-0.004
	(1.55)	(0.18)	(0.23)	(0.71)	(0.39)	(0.25)
Self-report disinterest	-0.017	-0.094*	0.071	-0.078	0.047	-0.129+
	(0.33)	(2.06)	(1.14)	(1.50)	(0.54)	(1.94)
Disinterest x glob.	-0.002**	-0.002*	-0.003**	-0.002*	-0.004*	-0.001
	(2.72)	(2.31)	(3.12)	(2.20)	(2.38)	(0.76)
Observations	100‘034	146‘159	58‘707	48‘626	41‘327	97‘533
Adjusted R2	0.1167	0.2317	0.0693	0.1290	0.1753	0.2674
Country fixed effects	YES	YES	YES	YES	YES	YES
Year fixed effects	YES	YES	YES	YES	YES	YES
Year < 1997	YES	NO	YES	NO	YES	NO
Number of countries	43	73	22	27	22	47
GDP p.c. > 5000 US$ p.a.	.	.	YES	YES	NO	NO

Notes: Dependent variable is the confidence in parliament measured on a 4-point scale. ‘Self-report disinterest in politics’ is a dichotomous measure of those who report to be “not very interested” and “not at all interested” in politics (see also Appendix A). All models control for gender, age, marital status, education, occupational status, income and political leaning, and, at the country level, national income per capita and population size. Country-specific fixed effects and time-specific fixed effects are included but not reported. Standard errors are adjusted to within-country and serial autocorrelation through clustering at the country level. T-statistics are in brackets. ‘**’, ‘*’, and ‘+’ denote statistical significance at the 1, 5 and 10 percent levels, respectively.