

Globalization and Economic Freedom: New Evidence Using the Dreher

Indices

Christian Bjørnskov*

May 16, 2006

PRELIMINARY – DO NOT QUOTE

Abstract: This paper employs a panel data set to estimate the effect of globalization on four measures of economic freedom. Contrary to previous studies, the paper distinguishes between three separate types of globalization: economic, social and political. It also separates effects for poor and rich countries, and autocracies and democracies. The results show that economic globalization is negatively associated with government size and positively with regulatory freedom in rich countries; social globalization is positively associated with legal quality in autocracies and with the access to sound money in democracies. Political globalization is not associated with economic freedom.

JEL Codes: F15, H11, K42, P16

Keywords: Globalization, Institutions, Political Economy

* Department of Economics, Aarhus School of Business, Prismet, Silkeborgvej 2, DK-8000 Aarhus C, Denmark; E-mail: ChBj@asb.dk. I am grateful for comments from Jess Aunsbjerg, Douglas Nelson, Aleksander Rutkowski and participants of a seminar at Aarhus School of Business and the 2nd Danish International Economics Workshop.

1. Introduction

Globalization has for some time been a hotly debated topic. For many years, a debate in growth theory raged between those favouring liberalist open economies and those more in favour of interventionist import substitution strategies. That debate was won by the former as the empirical evidence strongly favours a positive role of openness to trade on the economic growth rate whatever the transmission mechanisms may be (e.g. Frankel and Romer, 1999; Dollar and Kraay, 2003; Rodrik et al., 2004). Yet, on a more general level the debate of globalization remains unresolved, even within the social sciences, as other effects of globalization remain undetermined. While its opponents accuse the increasing globalization of recent decades of limiting governments' policy options, which they believe hinders human development and democratic autonomy, its proponents sometimes use the same arguments in defence of globalization, as it arguably limits the scope of government failures and control over individual freedom.

However, it is often forgotten that globalization is arguably a multifaceted concept. Yet, social scientists seem to divide themselves into two distinct branches: 1) economists worldwide have by and large tended to focus on the movement of goods and investments or specific policies directed against such movements, giving rise to a rich and predominantly pro-globalization empirical literature (see e.g. Wacziarg, 2001; Dollar and Kraay, 2003; Wacziarg and Welch, 2003); and 2) another branch consisting of, for example, many Continental European sociologists relying on single-case studies and normative arguments – both economic and non-economic - supporting an anti-globalization view or the view that it should be subject to democratic political control (e.g. Bauman, 1998; Griffin, 2003). Starting from the premise that such matters should be settled empirically, Dreher (in press) therefore develops a set of globalization indices

covering three distinct areas - economic, social and political globalization – which makes it possible to split some of the different effects in the literatures on globalization.

Dreher, a political economist, uses the three globalization indices to explore its influence on economic growth, finding that while the effects of economic globalization are strong and quite robust, the effects of social globalization are less robust and those of political globalization are simply non-existent. Tsai (2005), a quantitative sociologist, instead explores the effects of globalization on various indicators of human development. In particular, he finds a strong positive effect of economic globalization on life expectancy and infant mortality and a slightly weaker effect of social globalization on the latter indicator while finding none of the adverse effects argued for by the opponents of globalization. Similar indices are used in other studies to capture the overall beneficial effects of globalization on national corruption and respect for human rights (Sandholtz and Gray, 2003; Richards, Gelleny and Sacko, 2001).

To supplement these studies, this paper deals with the relation between globalization and institutional performance, proxied by a set of well-tested indicators of economic freedom. The feature of this paper that differs from existing studies is the use Dreher's indices instead of the simple openness measures usually employed in the literature. In particular, I use indices on government size, legal quality, the access to sound money and regulatory freedom to replicate or reject previous findings and suggestions in the globalization literature. The paper is structured as follows. Section 2 briefly outlines potential mechanisms connecting globalization and the three institutional areas. Section 3 describes the data used in section 4 to estimate the effects. Section 5 discusses the findings and draws some tentative policy implications.

2. Connecting globalization and institutions

In both the literature and contemporary political discussion, there are several possible suggested ways that globalization could affect institutions such as governments' involvement in the economy, its extent of regulations and the quality of legal systems. These mechanisms cover more than one aspect of globalization; hence the following walk-through of the potential mechanisms splits globalization into the three aspects covered by the Dreher dataset used in the empirical section of the paper.

2.1 Economic globalization and institutions

Most of the empirical literature revolves around economic globalization, measured by either openness to trade or inflows of foreign direct investments. A seminal paper on the effects of economic integration on institutional performance is Rodrik et al. (2004), which circulated for a few years in various working paper versions, during which it received substantial attention. Rodrik et al. (2004) argue that the effects of openness on economic performance come about only through its positive influence on the quality of institutions, e.g., the rule of law. Among the critiques, Dollar and Kraay (2003) find that in the very long run, the effects of institutions and economic integration can probably not be separated while in the shorter run the effects of the latter dominate. The theoretical arguments connecting economic globalization to institutions can be split into four main channels.

- Economic integration causes growth, thereby creating wealth. As most institutions such as the legal system are expensive, globalization thus leads to more opportunities and increased ability for maintaining institutional quality

- Foreign firms are often thought to apply pressure on developing country governments for better governance, which usually means less intervention and liberalizing reforms. However, critics also mention examples of firms lobbying for less respect for, e.g., workers' rights, and multinational firms bringing corruption and increased international tax competition (Cingranelli and Richards, 1999; Hines, 1999; Sandholtz and Gray, 2004; Dreher, 2006).
- Increased exposure to international economic developments may tend to lead to increased vulnerability to failed government policies, since the costs of such policies are felt more rapidly (Wazciarg, 2001).
- It can, on the other hand, therefore also be argued that more open countries tend to have larger governments, because government provides compensation for and insurance against such shocks (e.g. Rodrik, 1998; Almeida and Ferreira, 2002).

As such, there are a number of channels through which economic integration can affect institutional performance, although the sign of the overall effect is unclear and likely to depend on which area one focuses upon.

2.2 Social globalization and institutions

While there are good reasons to suspect that economic globalization affects institutions, the same might be said for social globalization. This type, which Dreher (in press) defines as “the spread of ideas, information, images and people”, might conceivably affect institutional performance positively through two related channels:

- Social globalization can provide voters with information on the situation in other countries. This would arguably affect their voting behaviour, which in

sufficiently democratic countries could push politicians to invest in institutional quality.

- By providing information on alternative policies and institutional set-ups to politicians, social globalization could likewise entail demonstration effects, which would allow for political learning and thus effects that need not depend on the democratic process.

2.3 Political globalization and institutions

Finally, political globalization understood as countries' participation in international organizations and actions might also have some effects on institutional performance. A number of different possibilities exist (cf. Griffin, 2003), of which three overall types need mention:

- While all countries can become members of the United Nations, membership in organizations such as the World Trade Organizations in principle entails a set of requirements that in the long run could affect institutions.
- International integration might facilitate elite learning, which could affect both domestic policies and institutional outcomes (cf. Morrissey, REF).
- In a more indirect way, countries choosing to enter international organizations or participate in international undertakings such as peace keeping missions may be more concerned about their international reputation, which would also include e.g. a minimum level of legal protection of its citizens (Sandholtz and Gray, 2003).
- The latter mechanism, it should be stressed, may also entail the opposite relation since countries, on the other hand, could choose to take part in such actions to

derail attention from domestic institutional shortcomings, i.e. what might show up in the data as political globalization could in some cases be attempts to protect an otherwise tarnished reputation (e.g. Loconte, 2006).

2.4. Reverse mechanisms

As such, there are a number of different mechanisms through which globalization could influence institutional performance and economic freedom. However, institutions and economic policy may also support globalization. The main focus in the fairly limited literature on this topic is on the connection between trade or foreign direct investments and the protection of property rights. Using a gravity model to estimate the determinants of trade flows, Andersson and Marcouiller (2002) for example find that both the protection of property rights and transparency of rules and the absence of corruption clearly increase the likelihood of two countries trading with each other. While supporting these conclusions, De Groot et al. (2004) find that informal institutions are relatively more important than the formal institutions outlined in Andersson and Marcouiller (2002). Both papers thus stress that the degree to which the risk of not receiving due payment is not covered by formal and informal institutions has the same effect as a tariff or other trade barriers. The point of these papers is therefore to show that as institutions improve, such institutional barriers to trade are lowered, making countries participate more on globalization processes.

3. Data

The data to estimate the influence of globalization derive from a number of sources. First of all, institutions are captured by four indices of economic freedom from the

Fraser Institute (Gwartney and Lawson, 2004). The fifth of the indices published by the Fraser Institute – freedom to trade internationally – is meant to capture aspects of economic integration and is therefore excluded as it measures similar aspects of globalization as the indices used for this purpose. As the rest of the data in this paper they are split into five-year periods between 1975 and 2000; as they enter as dependent variables, these institutional indicators are measured at the end of each period.

- The ‘Government Size’ index is formed by combining data on government consumption as a share of total consumption, transfers and subsidies as share of GDP, government enterprises and investment as a share of total investment, and the top marginal tax rate. It is intended to capture the overall extent of government involvement in the economy instead of reliance on market forces.
- The ‘Legal quality’ index includes measures of judicial independence, impartiality of the courts, protection of intellectual property rights, military interference in law and politics, and integrity of the legal system.
- The ‘Sound money’ index consists of indicators to capture the level and volatility of inflation, the excess money supply (relative to GDP growth) as well as the ease with which foreign currencies can be used domestically. Hence, this indicator is intended to measure the long-run consistency of monetary policy and the extent to which governments rely on seignorage to finance expenditures.
- The final institutional measure to be employed in the following is supposed to measure ‘Regulatory freedom’. The data going into this measure are divided into three groups: 1) credit market regulations including the percentage of deposits held in privately owned banks, bank competition, percentage of credit extended to the private sector, and the extent of interest rate controls; 2) labour market

regulations including the impact of minimum wages, hiring and firing practices, the share of the labour force with wages set in centralized bargaining, the generosity of unemployment benefits, and the use of conscript military personnel; and 3) business regulations, including price controls, administrative procedures that are obstacles to business, time spent with the bureaucracy, the ease of starting new businesses, and the necessity of irregular payments.

These four indices thus capture central aspects of the institutional framework of a country that could potentially be affected by globalization. They are regressed on a set of control variables of which the globalization indices are of main interest in this paper. All regressions in the following include the relevant measure lagged one period to account for the almost unavoidable institutional inertia characterizing most countries.

As mentioned in the introduction, the globalization data derive from the data set developed by Axel Dreher; Dreher (in press) contains a full description. He characterizes economic globalization as “long distance flows of goods, capital and services as well as information and perceptions that accompany market exchanges”; social globalization is characterized as “the spread of ideas, information, images and people”; while political globalization is simply “a diffusion of government policies”. To measure these three dimensions of globalization, Dreher (in press) draws data from a variety of sources.

- Economic globalization includes flows of trade, foreign direct investments, portfolio investments, income payments to foreign nationals and capital employed (all % of GDP) as well as a set of restrictions on trade and capital flows.

- The data measuring social globalization include, for example, the extent of international tourism, internet users, number of radios and number of MacDonald's restaurants in a given country.
- Finally, Dreher captures political globalization with data on the number of embassies in a country, its memberships in international organizations and the number of UN peace missions that the country has participated in.

The Dreher indices are, like the institutional indices from the Fraser Institute, distributed on a scale from zero to ten. Dreher also provides an overall index of globalization, termed 'total globalization' in the following, which combines the three specific indices. However, whether this is a valid strategy is not certain since the correlations between economic, social and political globalization range between .52 (economic and social) and .23 (economic and political) in the present sample, and year-to-year changes are uncorrelated.¹ As such, although one could a priori worry about variance inflation and identification problems, there should be little difficulty in using all three indices at once. However, the four institutional variables as well as the three globalization indices have been logistically transformed to avoid problems of having variables defined within closed bounds. The data on globalization are also averaged over each five-year period while institutional performance is measured at the end of each five-year period. All data are summarized in Table 1.

Insert Table 1 about here

¹ Furthermore, even in levels the partial correlation between economic and social globalization is only .26 while political globalization is entirely uncorrelated with the other indices, once GDP per capita has been controlled for.

In order to have a parsimonious specification, the control variables are kept to a minimum. All regressions in the following include dummies for Asia, Sub-Saharan Africa, North Africa and the Middle East, Latin America and the Caribbean as well as a dummy for the postcommunist countries. In order to control for different types of societal system, I also include dummies for whether countries have common law, civil law or mixed German/Scandinavian legal systems (CIA, 2005); the baseline is therefore communist systems and those depending to a large extent on indigenous institutions. To account for economic development, and thus for the ability of governments to provide a strong institutional framework, I include the log to GDP per capita in purchasing-power adjusted US dollars, measured at the beginning of each five-year period and taken from the Penn World Tables, mark 6.1 (Heston et al., 2002). This source also provides the log to population size, which is included to account for potential economies of scale in providing institutions as well as the institutional problems that might arise from governing large countries. For all economic freedom indices, I also include the lagged value to take the unavoidable inertia in institutions and policy-making into account.

Table 2 provides an overview of the globalization data by reporting the mean score for the full sample and each subsample as well as the maximum and minimum score for each subsample. The table documents the quite substantial variation in the globalization data; note that the table only includes observations with full data.

Insert Table 2 about here

4. Estimation strategy and results

In the following, all results are obtained using a panel consisting of a maximum of 459 observations from 101 countries in four five-year periods between 1980 and 2000. The choice of estimator is generalized least squares with random effects, which a set of Hausman tests supported over the alternative fixed effects models.² The empirical approach also allows for an estimated degree of first-order autocorrelation, which is provided in the tables. This to some degree alleviates the problem of spurious correlations due to institutional and policy inertia. On the other hand, the approach does not control for reverse causality. Yet, the inclusion of lagged values of the dependent variables can be argued to take care of some of this problem, as reverse causation would likely affect these values more than the values measured at the end of the period.

To test whether the effects are similar across all countries, I apply two separation criteria to the full sample. The first is based on average income, splitting the sample with full data at the mean GDP per capita (5,200 USD per capita) while the second splits the sample at the median Gastil index (3 points), which divides observations from countries with full political rights and observations from countries with limited or no political rights. Although the correlation between democracy (the Gastil index) and GDP per capita is -.67, indicating that separation can only go so far, 64 observations from relatively poor countries nevertheless enter the democratic sample while 62 observations from rich countries enter the autocratic sample, indicating a fair number of economic and political transitions. As such, differences between results obtained using

² While Hausman tests in two instances favour the fixed effects model, the fixed effects estimates in all cases produce the same results with respect to the globalization variables. A set of alternative fixed effects estimates can be obtained from the author on the request

the two separation criteria can provide some information as to whether such differences are mainly due to income or political regime.

4.1. Government size

First, Table 3 shows the results of estimating the effects of the three aspects of globalization on the government size index; again, it should be kept in mind that higher scores imply less government intervention. As for the control variables, economic development (GDP per capita) and postcommunist countries come out as expected only in one case each. The results in column 1 show that richer countries tend to allow the government a larger role in the economy although this effect is far from robust. In column 6, the results show that the formerly communist countries as expected have substantially larger governments, but only when compared to other democracies. The dummies for different legal systems fail to be significant in any but the last column, which only includes democracies. Finally, the table shows that there is a degree of inertia in the government size index, yet this appears to be mainly due to policy inertia and possible predictability in rich and democratic societies.

Insert Table 3 about here

Turning to the globalization variables, column 1 indicates that overall globalization is strongly associated with government size. This association is further explored in the following columns, indicating that economic globalization affects the size of government in the rich half of the sample; conversely, social and political globalization are never near significance. The last two columns, separating democracies and non-

democratic countries (autocracies) shows that the effect of economic globalization overall is similar to the two groups while the separation between rich and poor countries indicate that while the point estimates are equal, the effect significant at $p < .01$ for the rich half while it is insignificant for poor countries. As such, the results suggest that the relevant separation criterion is average income instead of the political system.

4.2 Legal quality

Second, Table 4 explores the association between globalization and legal quality. Starting with the control variables, economic development is significantly associated with legal quality throughout although much more strongly in the rich half of the sample. The estimates also show the communist legacies of countries in Central and Eastern Europe has left them very far behind the legal development of the rest of the rich world. The set of dummies capturing legal systems overall indicate that a British-style common law system may outperform civil law and mixed systems and the baseline (communist legal systems) although these differences are only significant at $p < .01$ in the poor half. As such, this may more likely be an effect of the United Kingdom transplanting a superior legal system in its former colonies. Finally, the inclusion of lagged values indicates considerable inertia, which would also tend to make the potential long-term effects of countries' colonial past more likely.

Insert Table 4 about here

Turning to the effects of globalization, the overall measure is strongly associated with legal quality. When splitting globalization into its three aspects, this association turns

out to be solely due to social globalization while economic globalization is positively associated in the rich sample, although the association is far from being significant and is negligible in the other subsamples. Again, the association with political globalization is far from being significant. While the size of the coefficient on social globalization is insignificant when splitting the sample along economic lines and relatively modest in the autocratic half of the observations, it is of considerable size in the subsample including only fully democratic countries. Contrary to the evidence on government size, this difference indicates that the relevant criterion of separation is the political systems instead of average income.

4.3. Sound money

Turning next to the third measure of economic freedom - the access to sound money – Table 5 first of all shows that it is only associated with income in the rich half of the sample. The legal differences also indicate that there are no differences between common, civil and mixed law countries although it should be stressed that all have substantially better scores than the baseline. On the other hand, postcommunist countries have lower scores although this difference again is only significant when compared to other democracies.

Insert Table 5 about here

As for the effects of globalization, economic globalization is only associated with sound money in the rich half, and only significant at $p < .10$ while political globalization again is insignificant throughout. However, social globalization is strongly associated with

this index and only fails being significant in the autocratic subsample. The coefficients are large, indicating a rather substantial impact of social globalization, most so in the democratic subsample. Hence, the relevant separation criterion may again be political regime.

4.4. Regulatory freedom

Finally, Table 6 explores the determinants of regulatory freedom. Starting with the control variables, economic development does not appear to be associated with regulatory freedom. On the other hand, having a communist past is strongly associated with more severe regulation in columns 1 and 2, but not significantly so when the sample is split. Legal traditions matter as common and civil law countries have more freedom than either countries with communist or countries with mixed legal systems. Yet, these differences only hold in the poor and autocratic subsamples while only common law is significant in the rich subsample on there are no differences among democracies. These differences may indicate that the effects of legal systems and other such institutions transplanted in former colonies also have effects on current regulatory policy-making. Again, this argument would also be supported by the considerable inertia apparent in the table.

Insert Table 6 about here

Turning to the association with overall globalization, it is again positive and strongly significant. However, this covers a significant effect of both economic and social globalization in the full sample but only with economic globalization for the rich,

autocratic and democratic subsamples. None of the globalization indices are associated with regulatory freedom in poor countries while social globalization is weakly significant for democracies and, as in the former cases, political globalization is entirely inconsequential. Here, the results of splitting observations average income are clear only for economic globalization while the conditions under which the significant association with social globalization arises in column 2 remains undetermined, given that the association is not entirely spurious.

4.5. Are the results robust?

The results in Tables 3-6 indicate that the types of both economic and social globalization are associated with economic freedom while political globalization appears to be inconsequential. It is nevertheless not certain whether these results are robust, or if they are driven by outlier observations. In Table 7, the analyses employing each of the four subsamples are therefore replicated without potential outlier, defined as observations with an absolute residual of more than 1.5 standard deviations.

Insert Table 7 about here

The first four columns of the upper panel in the table display the robustness of the results pertaining to the size of government, i.e. replicating the analyses in Table 3. Splitting the sample shows similar results as in Table 3 although the size of the effect in the rich half of the sample is somewhat reduced. The difference between the democratic and non-democratic countries also pertain, yet both are reduced to being significant at only $p < .10$ while social globalization becomes significant at the same level in the

democratic half. As such, the effect of economic globalization on government size in relatively rich countries must be deemed robust to outliers while other results are less robust.

In the right-hand columns in the upper panel of Table 7 are the replications of Table 4 without outliers. For poor countries, social globalization becomes significant while economic globalization becomes significant for the rich half; the latter result thus only pertains to the reduced, rich sample. When splitting the sample along political lines, the results social globalization matters to both groups while political globalization also becomes significant for the democratic countries. Again, the main findings in Table 4 survive the exclusion of potential outliers while revealing possible effects of both economic and political globalization.

Turning to the lower panel, the left-hand side shows the robustness of the findings pertaining to the access of sound money in Table 5. While replicating the rather larger, significant coefficients on social globalization, the table also shows that economic globalization is strongly associated with sound money in rich countries when removing outliers and autocracies are weakly so.

Finally, in the right-hand side of the lower panel, results pertaining to regulatory freedom are reported. The effect of economic globalization in the rich subsample survives with a coefficient virtually unchanged while the effects in the autocratic and democratic subsamples become significant at $p < .05$. As a peculiar effect that is probably spurious, it should be mentioned that political globalization also becomes negatively significant at $p < .10$ in the autocratic subsample.

To summarize, the results here show considerable potentially beneficial effects of globalization. However, these effects only appear for certain groups of countries and for

certain components of economic freedom, indicating that there may be necessary conditions for these effects to occur. The final section therefore discusses the results and draws policy implications.

5. Summary and conclusions

A number of studies have in recent years connected globalization with better governance and institutions. In particular, the influential criticism of the standard trade-growth association in Rodrik et al. (2004) generated much debate over the connection between globalization and overall development. Outside economics, different camps within sociologists and politologists alike have debated about this association. In this paper, I therefore estimate a set of determinants of four widely used indicators of economic freedom. By making a distinction between three separate types of international integration – economic, social and political globalization – the paper enables a more precise assessment of the potential benefits and pitfalls of these developments.

The results first of all mirror Dreher's (in press) finding that political globalization is inconsequential for economic growth, as it is never significantly associated with the institutional variables in this paper. The other dimensions of globalization, however, have effects on institutional performance, although in different domains and with an effect that depends on either the level of overall economic development or the nature of the political system. As a first point worth mentioning, it must therefore be emphasized that not all countries may be in a position to take advantage of globalization even if it also has to be stressed that there are no indications of any direct negative effects.

The findings overall do not support the popular accusations of opponents of globalization that inflows of foreign investments and trade can lead to a deterioration of basic institutions as a result of pressure from foreign firms since economic globalization does not affect legal quality. Nor do they support the allegation that economic globalization hinders poor countries governments' policies as this association only holds for the rich half of the present sample of countries. In poor countries, this type of globalization also has no connection with the access to sound money – a measure of the consistency and discretion of monetary policy – or the degree of regulatory interventions in the economy.

However, the main finding of this paper is that social globalization – defined by Dreher (in press) as “the spread of ideas, information, images and people” – also is associated with economic freedom. While there are no clear effects of economic globalization on legal quality, the social equivalent is strongly connected to legal quality, most significantly so in autocratic regimes whereas the estimate is larger but less significant in democracies. In other words, citizens' access to information about what goes on in the surrounding world and which role a well-functioning legal system can play in society evidently matters to the way politicians regulate and invest in this particular institution. As such, the logical interpretation of this result is therefore somewhat different from the much-acclaimed reading of the simpler data in Rodrik et al. (2004).

On the other hand, social globalization also is significantly and very strongly associated with citizens' access to sound money, although only so in democracies. While there is good reason to believe that this result reflects a causal influence of social globalization on policy-making, for example by introducing a degree of discipline on

politicians when voters are well-informed about the state in other parts of the world, it should also be stressed that the estimate provided in this paper probably covers a bidirectional influence. As the social globalization index includes data on access to foreign currencies and international tourism, improvements in the access to sound money may to some extent condition the degree of social integration with the rest of the world, and the true effect may thus be overestimated here.

From both a scientific and a political angle, the findings in this paper pose a challenge. The institutional economics literature has so far focused on economic integration, indicating that the effects ought to be the same for developed and developing countries alike. The findings in this paper show that this assumption is not supported by the data, as both economic development and the political system separates certain effects. Nor does economic integration tell the whole story – information flows and cross-cultural learning also appears to exert a significant influence. However, it must be stressed that these phenomena are probably interconnected, at least in the longer run. For example, institutional quality exerts strong effects on the direction of trade – and possibly also the volume – as stressed by recent findings in Andersson and Marcouille (2002) and de Groot et al. (2004). Increased social globalization could thus, through its effects on e.g. the quality of the legal system and the consistency of monetary policy (sound money), in time serve to increase economic integration across countries. As such, this study is only a first preliminary look into what may be a complex but highly beneficial relation between social and economic globalization and the quality of domestic institutions.

References

Alesina, Alberto, Arnaud Devleeschauwer, William Easterly, Sergio Kurlat and Roamin Wazciarg. 2003. Fractionalization. *Journal of Economic Growth*, vol. 8, 155-194.

Almeida, Hector and Daniel Ferreira. 2002. Democracy and the Variability of Economic Performance. *Economics and Politics*, vol. 14 (3), 225-257.

Andersson, James E. and Douglas Marcouiller. 2002. Insecurity and the Pattern of Trade: An Empirical Investigation. *Review of Economics and Statistics*, vol. 84 (2), 342-352.

Beck, Thorsten, George Clarke, Alberto Groff, Philip Keefer and Patrick Walsh. 2001. New Tools in Comparative Political Economy: The Database of Political Institutions. *World Bank Economic Review*, vol. 15 (1), 165-176.

CIA. 2005. *The CIA World Factbook 2005*. Central Intelligence Agency, Washington, DC.

Cingranelli, David L. and David L. Richards. 1999. Measuring the Level, Pattern, and Sequence of Government Respect for Physical Integrity Rights. *International Studies Quarterly*, vol. 43 (2), 407-418.

De Groot, Henri L.F, Gert-Jan Linders, Piet Rietveld and Uma Subramaniam. 2004. The Institutional Determinants of Bilateral Trade Patterns . *Kyklos*, vol. 57 (1), 103-123.

Deininger, Klaus and Lyn Squire. 1996. Measuring Inequality: A New Data-Base. *World Bank Economic Review*, vol. 10(3), 565-91.

Dollar, David and Aart Kraay. 2003. *Journal of Monetary Economics*

Dreher, Axel. 2006. The Influence of Globalization on Taxes and Social Policy – an Empirical Analysis for OECD Countries. *European Journal of Political Economy*, vol. 22, (1), 179-201.

Dreher, Axel. In press. Does Globalization Affect Growth? Evidence from a New Index of Globalization. Forthcoming in *Applied Economics*.

Freedom House. 2004. *Freedom in the World 2004. The Annual Survey of Political Rights and Civil Liberties*. Lanham, MD: Rowman and Littlefield.

Gwartney, James D. and Robert A. Lawson. 2004. *Economic Freedom of the World: 2004 Annual Report*. Vancouver, Fraser Institute.

Heston, Alan, Robert Summers and Bettina Aten. 2002. *Penn World Tables Version 6.1*. Center for International Comparisons: University of Pennsylvania.

Hines, James R. 1999. Lessons from Behavioral Responses to International Taxation. *National Tax Journal*, vol. 52, 305-22.

Loconte, Joseph. 2006. Relativism and Rights. *National Review*, February 2.

Richards, David L., Ronald Gelleny and David Sacko. 2001. Money with a Mean Streak? Foreign Economic Penetration and Government Respect for Human Rights in Developing Countries. *International Studies Quarterly*, vol.45 (2), 219-239.

Rodrik, Dani. 1998. Why Do More Open Economies Have Bigger Governments? *Journal of Political Economy*, vol. 106 (5), 997-1032.

Rodrik, Dani, Arvind Subramanian and Francesco Trebbi. 2004. Institutions Rule: The Primacy of Institutions over Geography and Integration in Economic Development. *Journal of Economic Growth*, vol. 9 (2), 131-165.

Sandholtz, Wayne and Mark M. Gray. 2003. International Integration and National Corruption. *International Organization*, vol. 57, 761-800.

Tsai, Ming-Chang. 2005. Does Globalization Affect Human Well-Being? Mimeo, Department of Sociology, National Taipei University.

Wazciarg, Romain. 2001. Measuring the Dynamic Gains from Trade. *World Bank Economic Review*, vol. 15 (3), 393-429.

Wazciarg, Romain and Karebn Horn Welch. 2003. Trade Liberalization and Growth: New Evidence. NBER Working Paper 10152.

World Bank. 2004. *World Development Indicators*. Washington DC: World Bank.

Table 1. Descriptive statistics

| Variable | Mean | Standard deviation | Observations |
|-------------------------|-------|--------------------|--------------|
| Log GDP per capita | 8.505 | 1.002 | 465 |
| Postcommunist | .052 | .223 | 554 |
| Common law | .307 | .462 | 554 |
| Civil law | .583 | .494 | 554 |
| German/Scandinavian | .067 | .249 | 554 |
| Economic globalization | 0.000 | 1.147 | 532 |
| Social globalization | 0.000 | 1.139 | 508 |
| Political globalization | 0.000 | .735 | 553 |
| Total globalization | 0.000 | .693 | 554 |
| Government size | 0.000 | 1.291 | 541 |
| Legal quality | 0.000 | 1.507 | 500 |
| Regulatory quality | 0.000 | .617 | 505 |
| Democracy, average | 3.227 | 2.014 | 549 |
| Log population size | 9.139 | 1.59 | 462 |

Table 2. The Dreher globalization data

| | All countries | Poor | Rich | Autocratic | Democratic |
|-------------|--------------------------------|-------------------------------|--------------------------------|---------------------------------|--------------------------------------|
| | <i>Total globalization</i> | | | | |
| Mean | 0 | -.39 | .33 | -.33 | .27 |
| (Std. dev.) | (.63) | (.43) | (.58) | (.47) | (.62) |
| Minimum | -1.57 | -1.57 | -1.12 | -1.57 | -1.08 |
| Maximum | Zimbabwe 1975-1980 1.85 | Zimbabwe 1975-1980 .52 | Singapore 1975-1980 1.85 | Zimbabwe 1975-1980 .84 | Guinea-Bissau (1995-2000) 1.85 |
| | USA 1995-2000 | Egypt 1995-2000 | USA 1995-2000 | Singapore 1995-2000 | USA 1995-2000 |
| | <i>Economic globalization</i> | | | | |
| Mean | 0 | -.53 | .43 | -.51 | .40 |
| (Std. dev.) | (1.06) | (.97) | (.93) | (.94) | (.99) |
| Minimum | -3.82 | -3.82 | -2.96 | -3.56 | -3.82 |
| Maximum | India 1980-1985 3.75 | India 1980-1985 1.49 | Singapore 1975-1980 3.75 | Bangladesh 1980-1985 1.34 | India 1980-1985 3.75 |
| | Luxembourg 1985-1990 | Zimbabwe 1995-2000 | Luxembourg 1985-1990 | Singapore 1995-2000 | Luxembourg 1985-1990 |
| | <i>Social globalization</i> | | | | |
| Mean | 0 | -.73 | .56 | -.59 | .43 |
| (Std. dev.) | (1.09) | (.62) | (1.06) | (.72) | (1.13) |
| Minimum | -2.43 | -2.43 | -1.73 | -2.43 | -2.24 |
| Maximum | Haiti 1985-1990 3.20 | Haiti 1985-1990 1.18 | Mauritius 1990-1995 3.20 | Haiti 1985-1990 1.88 | Madagascar (1990-1995) 3.20 |
| | USA 1995-2000 | South Korea 1975-1980 | USA 1995-2000 | Singapore 1995-2000 | USA 1995-2000 |
| | <i>Political globalization</i> | | | | |
| Mean | 0 | -.30 | .24 | -.15 | .12 |
| (Std. dev.) | (.70) | (.58) | (.70) | (.56) | (.77) |
| Minimum | -2.50 | -2.50 | -2.03 | -2.50 | -2.03 |
| Maximum | Zimbabwe 1975-1980 1.84 | Zimbabwe 1975-1980 1.29 | Belize 1980-1985 1.84 | Zimbabwe 1975-1980 1.73 | Belize 1980-1985 1.84 |
| | USA 1995-2000 | Egypt 1995-2000 | USA 1995-2000 | Russia 1995-2000 | USA 1995-2000 |

Table 3. Globalization and government size

| | 1 | 2 | 3 | 4 | 5 | 6 |
|-------------------------|-------------------|-------------------|-------------------|-------------------|------------------|-------------------|
| | All | All | Poor | Rich | Autocr. | Democr. |
| Initial value | .099** (.041) | .091** (.042) | .047 (.057) | .149* (.077) | .059 (.057) | .182** (.074) |
| Log GDP per capita | -.356** (.144) | -.184 (.152) | .065 (.311) | -.203 (.249) | -.126 (.243) | -.279 (.179) |
| Postcommunist | -.623 (.488) | -.696 (.471) | -4.816 (4.035) | -.397 (.409) | .302 (3.479) | -.996** (.433) |
| Common law | .435 (.743) | .552 (.739) | .698 (1.091) | 3.453 (2.704) | .446 (1.065) | 2.643 (2.314) |
| Civil law | .875 (.738) | .896 (.732) | 1.403 (1.055) | 3.301 (2.689) | 1.028 (1.031) | 2.869 (2.344) |
| German/Scandinavian | .367 (.682) | .414 (.683) | .684 (.990) | 2.942 (2.717) | .474 (.819) | 2.465 (2.335) |
| Log population size | -.054 (.065) | .084 (.081) | .357** (.159) | -.029 (.071) | .072 (.139) | .068 (.087) |
| Total globalization | .649*** (.186) | | | | | |
| Economic globalization | | .311*** (.084) | .235 (.147) | .264*** (.087) | .300** (.150) | .231** (.101) |
| Social globalization | | -.019 (.091) | .185 (.187) | -.017 (.088) | .231 (.190) | -.074 (.110) |
| Political globalization | | -.247 (.172) | -.400 (.287) | .029 (.172) | -.346 (.296) | -.147 (.211) |
| Observations | 352 | 350 | 175 | 751 | 167 | 183 |
| Countries | 93 | 93 | 53 | 53 | 57 | 61 |
| R squared, between | .402 | .450 | .513 | .469 | .413 | .537 |
| R squared, within | .323 | .316 | .356 | .285 | .322 | .329 |
| Chi square | 153.80 | 161.48 | 313.43 | 386.10 | 236.63 | 492.66 |
| Estimated autocorr. | .270 | .274 | .265 | .306 | .302 | .330 |

Note: all regressions include a constant term and dummies for periods and regions. *** (**) [*] denotes significance at $p < .01$ (.05) [.10].

Table 4. Globalization and legal quality

| | 1 | 2 | 3 | 4 | 5 | 6 |
|-------------------------|---------------------|---------------------|-------------------|-------------------|------------------|--------------------|
| | All | All | Poor | Rich | Autocr. | Democr. |
| Initial value | .600*** (.095) | .579*** (.097) | .155* (.079) | .550*** (.138) | .171** (.084) | .582*** (.138) |
| Log GDP per capita | .323** (.158) | .206 (.174) | .178** (.078) | 1.063* (.618) | .235** (.100) | .286 (.356) |
| Postcommunist | -1.566*** (.548) | -1.644*** (.545) | -1.617* (.953) | -.986 (.968) | | -1.705** (.817) |
| Common law | 1.104 (.963) | .685 (.972) | .653 (.237) | -4.412 (6.769) | .742* (.412) | 3.347 (4.674) |
| Civil law | .892 (.960) | .479 (.962) | .737*** (.231) | -4.911 (6.745) | .653 (.399) | 2.981 (4.720) |
| German/Scandinavian | .935 (.969) | .595 (.972) | .321 (.248) | -4.696 (6.803) | .222 (.356) | 3.137 (4.680) |
| Log population size | .012 (.063) | -.034 (.094) | .055 (.036) | -.090 (.169) | .018 (.059) | -.111 (.179) |
| Total globalization | .748*** (.267) | | | | | |
| Economic globalization | | .037 (.122) | .032 (.043) | .212 (.236) | .060 (.074) | -.037 (.213) |
| Social globalization | | .393*** (.132) | .059 (.051) | .338 (.259) | .184** (.086) | .449* (.232) |
| Political globalization | | .299 (.231) | -.019 (.077) | .593 (.456) | -.109 (.145) | .584 (.443) |
| Observations | 294 | 292 | 139 | 153 | 129 | 163 |
| Countries | 92 | 90 | 51 | 50 | 49 | 59 |
| R squared, between | .718 | .709 | .394 | .675 | .486 | .631 |
| R squared, within | .387 | .407 | .579 | .468 | .369 | .484 |
| Chi square | 294.52 | 299.50 | 1884.02 | 430.58 | 81.22 | 448.48 |
| Estimated autocorr. | .349 | .345 | .102 | .354 | .343 | .343 |

Note: all regressions include a constant term and dummies for periods and regions. *** (**) [*] denotes significance at p<.01 (0.5) [.10].

Table 5. Globalization and sound money

| | 1 | 2 | 3 | 4 | 5 | 6 |
|-------------------------|---------------------|---------------------|------------------|--------------------|-------------------|---------------------|
| | All | All | Poor | Rich | Autocr. | Democr. |
| Initial value | .264*** (.065) | .253*** (.066) | .222** (.100) | .289*** (.090) | .851*** (.122) | .127 (.089) |
| Log GDP per capita | 1.086* (.605) | .474 (.646) | -.505 (.689) | 4.979** (2.129) | -.1603 (.566) | 1.241 (1.133) |
| Postcommunist | -4.964** (1.992) | -4.993** (1.955) | 4.553 (8.894) | -.943 (3.242) | | -5.256** (2.675) |
| Common law | 3.948 (3.465) | 2.638 (3.464) | 2.658 (2.428) | 1.369 (2.171) | 2.478 (2.562) | -5.249 (14.756) |
| Civil law | 4.471 (3.449) | 3.191 (3.434) | 3.697 (2.369) | 1.821 (2.102) | 2.643 (2.512) | -4.707 (14.923) |
| German/Scandinavian | 2.719 (3.382) | 1.831 (3.379) | 1.985 (2.569) | | 2.157 (2.709) | -6.214 (14.877) |
| Log population size | .057 (.252) | .049 (.339) | .061 (.331) | -.083 (.571) | -.489 (.304) | .527 (.544) |
| Total globalization | 3.062*** (.897) | | | | | |
| Economic globalization | | .543 (.399) | .422 (.367) | 1.468* (.763) | .598 (.433) | .630 (.663) |
| Social globalization | | 1.755*** (.442) | .937** (.462) | 1.391* (.815) | .445 (.519) | 2.482*** (.728) |
| Political globalization | | .810 (.791) | .614 (.678) | 1.103 (1.484) | .405 (.771) | .149 (1.346) |
| Observations | 351 | 349 | 174 | 175 | 166 | 183 |
| Countries | 93 | 93 | 53 | 53 | 56 | 61 |
| R squared, between | .490 | .509 | .547 | .451 | .702 | .479 |
| R squared, within | .265 | .277 | .211 | .404 | .134 | .335 |
| Chi square | 159.45 | 170.42 | 165.28 | 105.47 | 116.86 | 247.28 |
| Estimated autocorr. | .127 | .131 | .358 | .094 | .086 | .206 |

Note: all regressions include a constant term and dummies for periods and regions. *** (**) [*] denotes significance at $p < .01$ (0.5) [.10].

Table 6. Globalization and regulatory freedom

| | 1 | 2 | 3 | 4 | 5 | 6 |
|-------------------------|--------------------|-------------------|------------------|-------------------|-------------------|-------------------|
| | All | All | Poor | Rich | Autocr. | Democr. |
| Initial value | .296*** (.076) | .340*** (.066) | .157** (.069) | .436*** (.099) | .232*** (.081) | .408*** (.098) |
| Log GDP per capita | .047 (.057) | .047 (.071) | .089 (.085) | -.095 (.209) | .079 (.074) | .018 (.126) |
| Postcommunist | -.556*** (.153) | -.407** (.207) | -.187 (1.088) | -.337 (.307) | | -.283 (.276) |
| Common law | .656** (.295) | .722 (.502) | .724** (.302) | .551*** (.194) | .811** (.366) | 1.622 (1.613) |
| Civil law | .557* (.291) | .571 (.497) | .764** (.294) | .153 (.187) | .776** (.357) | 1.282 (1.624) |
| German/Scandinavian | .229 (.295) | .275 (.514) | .369 (.349) | | .358 (.428) | 1.096 (1.621) |
| Log population size | -.048* (.026) | -.017 (.038) | -.023 (.043) | -.007 (.054) | -.030 (.045) | .013 (.058) |
| Total globalization | .296*** (.076) | | | | | |
| Economic globalization | | .093** (.047) | .066 (.041) | .184** (.079) | .093* (.049) | .139* (.076) |
| Social globalization | | .116** (.050) | .044 (.052) | .147 (.090) | .085 (.062) | .152* (.082) |
| Political globalization | | -.034 (.089) | -.012 (.079) | -.016 (.148) | -.101 (.096) | -.057 (.145) |
| Observations | 442 | 304 | 135 | 169 | 135 | 169 |
| Countries | 101 | 92 | 51 | 52 | 53 | 59 |
| R squared, between | .462 | .581 | .788 | .589 | .673 | .542 |
| R squared, within | .321 | .331 | .430 | .329 | .429 | .274 |
| Chi square | 206.42 | 206.66 | 2085.07 | 123.38 | 154.60 | 1156.41 |
| Estimated autocorr. | .357 | .070 | .068 | .057 | .012 | .102 |

Note: all regressions include a constant term and dummies for periods and regions. *** (**) [*] denotes significance at p<.01 (0.5) [.10].

Table 6. Globalization and economic freedom - robustness

| | Government size | | | | Legal quality | | | |
|-------------------------|--------------------------|--------------------|------------------|--------------------|--------------------------|-------------------|-------------------|------------------|
| | Poor | Rich | Autocr. | Democr. | Poor | Rich | Autocr. | Democr. |
| | <i>Baseline included</i> | | | | <i>Baseline included</i> | | | |
| Economic globalization | .066 (.041) | .184** (.079) | .093* (.049) | .139* (.076) | .035 (.035) | .333** (.141) | .018 (.047) | -.051 (.147) |
| Social globalization | .044 (.052) | .147 (.090) | .085 (.062) | .152* (.082) | .094** (.039) | .201 (.161) | .145*** (.056) | .389** (.156) |
| Political globalization | -.012 (.079) | -.016 (.148) | -.101 (.096) | -.057 (.145) | -.055 (.061) | .472 (.293) | -.056 (.088) | .656** (.309) |
| Observations | 135 | 169 | 135 | 169 | 121 | 168 | 120 | 151 |
| Countries | 51 | 52 | 53 | 59 | 49 | 50 | 48 | 59 |
| R squared, between | .788 | .589 | .673 | .542 | .562 | .499 | .420 | .539 |
| R squared, within | .430 | .329 | .429 | .274 | .710 | .723 | .592 | .682 |
| Chi square | 2085.07 | 123.38 | 154.60 | 1156.41 | 176.18 | 178.79 | 104.78 | 188.24 |
| | Sound money | | | | Regulatory freedom | | | |
| | Poor | Rich | Autocr. | Democr. | Poor | Rich | Autocr. | Democr. |
| | <i>Baseline included</i> | | | | <i>Baseline included</i> | | | |
| Economic globalization | .399** (.157) | 1.151*** (.423) | .411* (.217) | .511 (.389) | .050 (.033) | .155*** (.054) | .083** (.037) | .109** (.047) |
| Social globalization | .550*** (.200) | 1.356*** (.507) | .677** (.270) | 1.943*** (.438) | .049 (.041) | .021 (.058) | .071 (.048) | .047 (.051) |
| Political globalization | -.017 (.299) | -.268 (.831) | -.231 (.414) | -.503 (.782) | -.039 (.062) | .135 (.104) | -.132* (.073) | .087 (.097) |
| Observations | 162 | 160 | 156 | 165 | 120 | 160 | 119 | 158 |
| Countries | 52 | 52 | 56 | 50 | 50 | 52 | 50 | 58 |
| R squared, between | .401 | .519 | .221 | .491 | .555 | .583 | .610 | .539 |
| R squared, within | .515 | .692 | .757 | .693 | .868 | .574 | .817 | .648 |
| Chi square | 105.67 | 233.14 | 123.88 | 235.51 | 345.62 | 171.90 | 271.18 | 179.85 |

Note: all regressions include a constant term and dummies for periods and regions. *** (**) [*] denotes significance at p<.01 (0.5) [.10]. Outliers are defined as observations with an absolute residual larger than 1.5 standard deviations.

