

## How Freedoms interact with Globalization<sup>(\*)</sup>

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### *Abstract*

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The two-way relation between democracy and globalization found by Eichengreen and Leblang (2006) is rather robust, but the dichotomous measure of democracy used may not adequately reflect political, social and economic freedoms. We introduce here measures of political, social and economic freedoms, which are *de facto* and continuous measures of democracy. We test the two-way relation between these democratic freedoms and globalization variables in the context of a pooled, fixed-effects and simultaneous system estimators. Together with Globalization and Freedoms, we also test for the interaction of distance to frontier, as a measure of different stages of development. While we confirm the Eichengreen and Leblang (2006) results to some extent, we also find that introducing different type of freedoms reveals a stronger effect of properly measured democracy on globalization than that of globalization on democracy. How freedoms interact with globalization is therefore by dominating it, given the level of income per capita. One reason for this might be that globalization's effects on freedoms are mediated by slow-moving cultural values.

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## 1. Introduction

The starting point of this paper is the two-way robust relation between democracy and globalization found by Eichengreen and Leblang (2006) (hereafter E&L). While the robustness of the relationship is confirmed in this paper, our aim is to enrich and refine the measure of democracy. Indeed, E&L used a *de jure* and dichotomous measure, which suffers from obvious limitations. We introduce here measures of political, social and economic freedoms, which are *de facto* and continuous measures of democracy. Our approach is that political rights, civil liberties and economic freedom are essential ingredients of democracy. But improving the quality of the measures of democracy reduces significantly the original time sample.

In earlier work, Macedo (2001) found that trade openness reduced perceived corruption and claimed that this was the way in which globalization improved governance, for OECD and non-OECD countries, even after correcting for the endogeneity of perceived corruption.<sup>1</sup> While historical control variables (e.g. protestant tradition, *de facto* democracy and OECD membership) were found to be highly significant, here we seek to establish *which aspects of democracy are more sensitive to the effects of globalization*.

It is a well known fact that some countries, such as China, have become increasingly globalized without having implemented democratic institutions. Using the same country as an example, it has apparently been possible to increase economic (and even financial) freedom whilst maintaining strict restrictions on all the other types of political and civil liberties.

Our main result is that introducing more comprehensive measures of freedoms tends to confirm the two-way interaction between democracy and globalization found in E&L, but the results seem to be more sensitive to regional context and stages of national economic and institutional development. The different types of Freedoms also interact differently with the Globalization variables. Overall, allowing for the quality of democracy through three alternatives channels lowers the overall effect of globalization. This suggests in turn that the reverse effect may already have been overestimated by E&L but that the shortening of the sample period exacerbated the problem.

One reason for this which we hope to pursue is the hypothesis that globalization's effects on democracy are mediated by slow-moving cultural values.<sup>2</sup> This would imply

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1 Using three averages corresponding to the periods 1984-89, 1990-94, and 1995-98 of the ICRG index of perceived corruption (available yearly for 119 countries), the most parsimonious specification reported in Macedo (2001, p. 243) includes only import openness, per capita GDP (both in logs) and an index of political rights and this explains almost 50 per cent of the variability in the corruption index. A 10% increase in imports openness results in 0.03-point change in the corruption score ( $0.34 \times 0.1$ ). This is a sizeable effect, especially when compared to the 0.09-point changes due to a 10% increase in log income per capita.

2 But the interpretation of such variables should not reflect that they are all in dummy format and thereby they are really just labels used to describe a, sometimes quite loose, common characteristic of a particular group of countries. In fact the only proper label is one not usually standing for culture, namely OECD membership. Rather than testing serious hypotheses on how, for instance, being a democracy may affect a country's corruption level, what 'cultural dummies' do is to provide an indication that our corruption theories are still incomplete. This is why the explicit label of OECD membership is preferable to such

that such variables might be accounted for by selecting groups of like-minded countries, like the OECD, for which the effect of globalization on freedoms would be stronger.

The remainder of this paper is organized as follows. As an initial caveat about measurement problems, section 2 provides an historical illustration of the significance of the regional dimension and of stages of development along the lines previously mentioned. It also suggests that the approach used in E & L obscures differences in time and space and, accordingly, makes historical interpretations more difficult. Section 3 looks at political, social and economic freedoms as measures of democracy. Section 4 provides first-stage evidence on the panel estimation issues by reporting pooled and fixed-effect estimates. Section 5 presents then system regressions of our measures of democracy on trade and financial globalization, accounting for endogeneity and distance to frontier. Section 6 concludes.

## 2. An Initial Caveat

The E&L findings support the hypothesis of a positive two-way relationship between democracy and globalization, *i.e.* the two variables positively influence one another, with reinforcement running in both directions. However, these effects are not uniform across time and space; in particular, the impact of democracy on globalization varies with resource endowments and global economic conditions.<sup>3</sup> The paper concludes that “general conclusions, not surprisingly, remain elusive. But the evidence here it is a start.” It would have been indeed surprising to see “general conclusions” emerging from this, or other similar studies. The main reason lies with the method used to analyze the nature of the phenomena under consideration. As Pereira (2006) points out, we should be aware of the limitations of the methods employed in our as these often simply seek to verify the existence of “constant event conjunctions”, which are tantamount to mechanistic explanations of the phenomena being studied. As such, they may limit our understanding of the democracy globalization relationship.

The democracy-globalization nexus is the outcome of a *positive* interaction between historical, geographical, social, cultural, institutional and economic factors. The method employed understandably focuses on the economic aspect of this relationship but, in doing so, limits one to a (partial) understanding of this interaction.

A *complementary* explanation of the democracy-globalization interaction based on the manner in which diversity, be it socio-cultural or economic, is addressed by a given society. Indeed, one of the constants of human organization is the “absolute certainty that man will never be common, he will always be different, he will always give rise to diversity. And society, by managing this diversity, will manage prosperity and the creation of wealth” (Macedo, Borges 1996, p.194). The same holds true, of course, for the case of political diversity and whether peace or conflict ensues.

To illustrate the importance of diversity and how it is managed as being a crucial determinant of the interaction between economic and political organization, Pereira

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dummies. Macedo (2001, p. 245)

<sup>3</sup> See Huang (2006) for a model suggesting a long-run relationship between economic development and political development based on the inherent technical features of different production factors.

(2006) chooses as an example drawn from Macedo, Borges (1987, p.3) the distinct processes of colonization of the Americas. In North America, the colonisers were mainly English and Dutch who settled in the region running from Rhode Island and Massachusetts to North Carolina. The interesting aspect of the colonisation process in North America is that it was not motivated by the same reasons as the Portuguese or Spanish colonization of South America, and it also took on a different form.

At the heart of North America's colonization, is the fact that the bulk of the colonizers had been either political or religious dissents in their home countries. Their foremost concerns in establishing themselves on a new continent were therefore of a political or religious nature and so economic and other aspects were not as important. As a result, the new settler societies enjoyed a high degree of political autonomy and were subject to limited interventions by central authority. For Great Britain, the fact that its North American colony had acquired political independence was not seen as an obstacle to it achieving hegemony on the world stage. The reason is that Great Britain did not place a great weight on political administration but rather on naval and economic power. Indeed, British hegemony and trade increased after the independence of the United States. In this case, the acceptance of political diversity paved the way toward economic interaction between continents.

In contrast, South America's colonization was characterised by a "dependent autonomy" in which colonizers sought to "recreate Europe" on the new continent leading to a permanent tensions in these societies. In order to deal with this tension, the political organization chosen was that of a centralized administration directly linked to that of the home countries. A great emphasis was thus placed on a centralized judicial system, a unified religious practice and well defined but limited civil liberties. The result was the development of societies with strong social and economic links to the Iberian Peninsula. In this case, economic interaction between continents was not accompanied by greater political openness.

### **3. Democracy and freedoms**

The above example serves to highlight the concern that the complex democracy-globalization interaction is best understood by having a closer look at it all of its constituent elements, possibly on a case by case basis. General conclusions are therefore likely to remain elusive. In addition, democracy is difficult to measure and to relate to individual freedoms. Accordingly, the measures of democracy commonly used in the empirical research of the democracy-globalization nexus suffer from one notable limitation, namely the rudimentary manner in which democracy is conceptualized and measured, *e.g.* a regime characterized exclusively by electoral competition and political participation (see Przeworski et al., 2000).

Garoupa and Tavares (2007) show that higher income increases the survivability of democracy and a history of democratic instability, as well as the international political context, helps predict how regime transitions impact on democracy. Nevertheless, the definition of democracy used is essentially *de jure* in nature. E & L follow this criterion and label a country as democratic if governments are designated through competitive

elections - elections in which more than one party competes and the winning party is not always the same.

The extension of the suffrage, for example, would not appear in this dichotomous variable. Yet a negative interaction between democracy and debt default has been found for the period of the classical gold standard. Specifically, Flandreau and Zimmer (2004, p. 44) find that the extension of suffrage reduces the default probability with elasticity of .5 for the whole sample and of 1.3 for capital-poor countries. They note that contemporaries saw democracy and parliaments as a source of greater stability, because they put checks and controls on the sovereign and imply a greater implied ability to tax. This contradicts the widespread view that the repression of democracy facilitated the operation of the pre-1914 international monetary system by making external adjustment easier.

Pereira (2006) describes the method used in E & L, discusses its limitations and provides a complementary explanation of the democracy-globalization interaction based on the manner in which diversity, either socio-cultural or economic, is addressed by a given society.

Some of points also apply to the related literature, attempting to find the nexus between democracy and growth.

For example, Tavares and Wacziarg (2001) define democracy in purely procedural terms.<sup>4</sup> As a result of this tendency to measure democracy in a purely political and formal manner, quantitative studies may misrepresent the effect of democracy on globalization or misinterpret the aspect of democracy responsible for that effect. The concept of democratic capital proposed by Persson and Tabellini (2006), where own history of democracy and that of democratic capital accumulation among neighbouring countries help determine the rate of economic growth is another way of introducing quality considerations and we plan to pursue these ideas in future research<sup>5</sup>.

Along these lines, our approach is that political rights, civil liberties and economic freedom are essential ingredients of democracy. To enhance the quality of the democracy measure, we therefore decompose it into those three main components.

Key elements of civil freedom include freedom of thought, religion, association, free press and respect for the rights of minorities. We derived them from Freedom House Civil Liberties (CL) index. This index is computed for almost all existing countries and “related and disputed territories” and is available for the period of 1972 to 2006.

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<sup>4</sup> Wanting to clearly distinguish democracy from other characteristics of political systems, they use the Freedom House indicator of political rights, based precisely on this procedural definition of democracy. They add that all previous studies focus on the *direct* effect of democracy on growth, conditional on other growth-determining factors and they question this procedure: “In theory, if a comprehensive institution such as democracy matters, it should matter *indirectly* through its effect on variables that in turn determine economic growth. Existing theoretical arguments point to links between democracy and a number of societal characteristics that influence growth. However, none of those arguments suggest that democracy has a direct impact on growth”.

<sup>5</sup> Persson and Tabellini (2005 and 2007).

Political freedom is associated with free and fair elections for the executive and legislative branches of power, freedom to constitute and associate to political parties, independence of the political power from, say, religion and the military, real possibilities of change of power and other characteristics of the political system alike. All of these and other features of the political freedom concept are considered into the computation of the Political Rights (PR) Index published by the Freedom House. Time availability range of this index is the same as for the Civil Liberties index.

The concept of economic freedom is more difficult to define. Does it relate only to private ownership, prices determined by market forces alone, *de jure* and *de facto* possibility of freely enter and leave markets, efficient rule of law and official economic regulation guaranteeing competition? Or should it also include the financial freedom brought about by currency convertibility, stability of money value, central bank independence and deep financial markets? Furthermore, should it include low taxes, a small share of government spending in GDP and flexible labour markets?

This difficulty arises not only from economic ideology but also from some more technical concerns, given the need to find a set of consensual economic features that one could include under the umbrella of economic and financial freedom. Be that as it may, the widely used Fraser Institute Economic Freedom of the World (EFW) index and Heritage Foundation Index of Economic Freedom both adopt a stance of extensive inclusion of economic features and both favor a strong liberal view of economic freedom. We also embrace the idea that all of the economic characteristics mentioned constitute elements of freedom and we choose the Fraser Institute's index because of its longer data availability. We note the existence of data limitations in some of the relevant indices that we are trying to overcome.<sup>6</sup>

The Civil Liberty index also encompasses some elements of economic freedom. This could generate some overlapping and collinearity between the CL and EFW indexes. In practice, specific economic freedom concerns are a rather small constituent part of the Civil Liberties index.<sup>7</sup> In consequence, the CL index cannot be used as a proxy for economic freedom; more importantly, because of the inclusion of economic concerns in that index alone, there should be no strong collinearity between the Civil Liberties variable and the one we chose for measuring economic freedom.

The adoption of a broader and more demanding definition of *de facto* democracy allows us to better understand the interaction between freedoms and globalization, as a result of clearly focusing on the economic, civil and political rights that underpin democracy itself. The questions to be addressed are: which components of democracy have an effect on globalization (trade, financial) and which are affected by globalization? With this first set of estimations, we hope to be able to answer such questions as “where

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<sup>6</sup> The EFW variable is only available for 5-year intervals for the period 1970-1999. In order not to reduce substantially the time dimension of the panel, this variable was assumed to remain constant within each 5-year intervals. The completed variable is labeled *EFWC* in the regressions displayed below.

<sup>7</sup> Cfr. [www.freedomhouse.org/printer\\_friendly.cfm?page=35&year=2006](http://www.freedomhouse.org/printer_friendly.cfm?page=35&year=2006). Economic freedoms are expressed in three questions among the six that constitute the fourth group of questions of the fourth sub-category (“Personal Autonomy and Individual Rights”) of the Civil Liberties index. Variable definitions are in Annex 1.

democracy is found to be responsible for more globalization, is it ‘democracy as a whole’ that matters or is it only one of its specific aspects, say, economic freedom that determines globalization?”; and “does globalization of trade and or finance increase ‘democracy as a whole’ or, say, only economic freedom?”<sup>8</sup>

Our main result is that introducing these different forms of democratic freedoms breaks the two way interaction between democracy and globalization found in E & L in favour of a stronger effect of properly measured democracy on globalization than of globalization on democracy. In that sense, freedoms *rule* globalization. This asymmetry would also appear using E & L variables for our sample period, which is far shorter than theirs. With observations from the 1870 on different freedoms we might observe the gradual effect of globalization on promoting democracy and therefore dampen the asymmetry found in the sample since 1970.

We thus posit democracy to be a multidimensional reality and stress the importance of its *de facto* nature. In our analysis, we study the effects of democracy on financial and trade globalization and vice-versa by taking into consideration the problem of bidirectional causality through the use of instrumental variables methods. However, we also adopt a set of measures that will allow for the measurement of *de facto* democracy as a multidimensional variable, as discussed below. We include these measures in both the regression equations that explain globalization using democracy and the ones that explain democracy using globalization.

As mentioned, we introduced de facto and continuous measures of democracy. But there is a trade-off: refining the measure of democracy reduces dramatically the sample from 1870-2000 to 1970-2000. This makes the results much more sensitive to sample bias (because the number of countries, N, is much bigger than the number of years, T). Nevertheless, the loss is not as large as might appear because of the missing values problem: the original sample of E&L covers 135 years for 202 countries (taking into account name and border changes) but no regression includes more than one third of the maximum number of observations (about 27K). In this regard, using our measures of democracy cuts the sample size by half rather than by two thirds.

#### **4. First step: Estimating the relationships individually**

Our empirical investigation of the relation between Freedoms and Globalization starts with an OLS estimation, equation by equation, without correcting for endogeneity. While we fully acknowledge the endogeneity issue raised by E&L, as we will see below, it is useful to use this benchmark in order to highlight specific panel data issues in our sample.

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<sup>8</sup> We plan a second set of equations where we include one measure of *de jure* democracy (as in E & L) and a measure of *de facto* democracy (such as an index of human rights, e.g. the Civil Liberties of Freedom House or the Index of Human Development). We then compare the effects of strictly *de jure* democracy with the ones stemming from *de facto* democracy on trade and financial globalization. We also study the reverse causality case: does globalization have an equal effect on *de jure* democracy and *de facto* democracy? With this set of equations, we focus on questions such as “does the respect for human rights favor more globalization?” and “does globalization improve human rights?”

Ideally, one would aim at introducing the three freedom variables together in the equations, but to prevent multi-collinearity problems the test is also done individually for each Freedom variable. In particular, the Political Rights (PR) and Civil Liberties (CL) are highly correlated. For this reason, we also used below an average of these two variables. Annex Tables 1 and 2 provide the basic statistics for each variable entering the regressions and the correlations among the different measures of Freedom. The measure of globalization uses both trade openness and a dichotomous measure of capital controls.

Following E&L, our approach is to estimate a linear model:

$$Y_{it} = \alpha X_{it} + \beta Z_{it} + \varepsilon_{it} \quad \text{for } i=1, \dots, N \text{ and } t=1970-2004 \quad (1)$$

Where  $Y, X$  stands for Trade openness, capital controls and the three measures of Freedom and  $Z$  a number of control variables, as defined in E&L;  $N$  stands for the total number of countries. We also introduced systematically four regional dummies (Latin America, Middle-East, Africa and Asia) to allow for some regional idiosyncrasies. It turned out that these regional dummies are generally highly significant. Tables 1-a) to 1-c) provide the estimates of a simple Pooled OLS model. Basically, the relationship between Freedoms and Globalization holds. The effect of each Freedom on Trade openness is significant and has a positive sign, as expected (Table 1-a). The impact of Freedoms on the existence or not of capital controls is broadly consistent with expectations. Except for political rights (PR), both more Civil Liberties (CL) and Economic Freedom (EFW) impact negatively the likelihood of having restrictions on capital flows.

***Insert Tables 1-a, 1-b and 1-c***

The reverse relationship works less well. Only the impacts of globalization measures on Economic Freedom (EFWC) have the expected signs. The sign of the coefficients of Trade Openness and Capital Controls on Political rights is opposite to expectations, while the relationship is not significant for Civil Liberties. A potential candidate for explanation is indeed a likely endogeneity bias. However, the empirical tests carried out with the GMM-Instrumental variable approach of E&L (available upon request) are not conclusive in this respect. Probably, this is due to weak instruments.

It is also probable that the reduced time dimension of our estimates makes the results more sensitive to individual fixed-effect compared with the estimates of E&L.<sup>9</sup> If we introduce the country fixed-effects, the relationship breaks down even further (see Tables 2-a to 2-b).<sup>10</sup>

***Insert Tables 2-a, 2-b and 2-c***

Concerning Trade openness, only the impact of Economic Freedom resists to the introduction of country fixed-effects. Both Political and Civil Rights are not significant

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<sup>9</sup> With their larger time sample, E&L tested a sensitivity test with a Panel Fixed-effects model. Apparently, their results seem robust to the introduction of Fixed-effects.

<sup>10</sup> Note that the introduction of time-invariant (fixed) effects does not allow estimating other time invariant variables, such as the regional dummies, Legal origins or Colonial Heritage.

(Table 2-a). The same applies for Capital Controls (Table 2-b). The effect of Globalization variables on Freedoms also displays a reverse significant sign. Only the effect of Capital controls on Civil Liberties and Economic Freedom appears significant and with the right sign (Table 2-c).

We draw to main conclusions from these results. First, they suggest that the cross-country effects are most influential in the limited time sample at our disposal. Second, we found certain asymmetries in two-way relationship between Freedoms and Globalization and the effects associated with different type of Freedoms. The latter result could be somewhat expected given that we are trying to replace the dichotomous measure of democracy used in E&L by a set of richer and continuous measures of Freedoms. Furthermore, all these results could be sensitive to the endogeneity problem, which is the main point referred in E&L<sup>11</sup>.

Our strategy is therefore two-fold. On the one hand, we move to estimate the two-way relation between globalization taking into account endogeneity in a more proper way. On the other hand, we tried to introduce additional variables that could capture and/or model the cross-country fixed effects. In this respect, a meaningful characterization of each country is its distance to GDP per capita frontier.

## 5. Freedoms and Globalization: a System equation approach

Rather than using instrumental variables, our approach is to estimate a system of three equations for each type of Freedom (PR, CL and EFWC), as follows:

$$\begin{cases}
 \text{(i) } Trade\_Op_{it} &= \alpha_1.Freedom_{it} + \delta_1.Gap_{it} + \eta_1.Freedom_{it}.Inc\_gap_{it} + \beta_1.Z_{1it} + \varepsilon_{1it} \\
 \text{(ii) } Capital\_cont_{it} &= \alpha_2.Freedom_{it} + \delta_2.Gap_{it} + \eta_2.Freedom_{it}.Inc\_gap_{it} + \beta_2.Z_{2it} + \varepsilon_{2it} \\
 \text{(iii) } Freedom_{it} &= \gamma_1.Trade\_Op_{it} + \gamma_2.Capital\_cont_{it} + \\
 &+ \delta_3.Gap_{it} + \mu_1.Trade\_Op_{it}.Inc\_gap_{it} + \mu_2.Capital\_cont_{it}.Inc\_gap_{it} + \beta_3.Z_{3it} + \varepsilon_{3it}
 \end{cases}$$

for  $i=1, \dots, N$  and  $t=1970-2004$

Where  $\{Z_i\}$  is a set of appropriate control variables by equation, including regional dummies. *Inc\_gap* stands for the ratio between GDP per capita in a given country to the one of the United States. The estimation is carried out by the Three-Stage least squares method (3SLS), which in our case performed relatively well.<sup>12</sup>

We start first by estimating the model without the income gap and the interaction variables (Tables 3a-3c). The results are encouraging. The estimated coefficients for all the relevant variables are significant and have the expected sign. Therefore, the system estimation confirms a two-way relationship between the three types of Freedoms, in line with E&L.

### *Insert Tables 3-a, 3-b and 3-c*

<sup>11</sup> Note that the endogeneity bias depends on the type of cross-relation existing among the endogenous variables. Depending on the slopes of  $y$  on  $x$  and  $x$  on  $y$  or even if there are two different functions, the endogeneity bias can be upward, downward or neutral.

<sup>12</sup> Using the reg3 command of STATA 9.2.

We also estimated a system where the Political rights (PR) and Civil Liberties (CL)'s indicators were replaced by an average of both indicators (PRCL). The results are in line with the previous ones (Table 3-d). This parsimonious specification, together with the system of Economic Freedom and Globalization is our preferred benchmark.

*Insert Table 3-d*

Then, we introduced the income gap and the corresponding interaction terms (Tables 4a-4b). These variables are lagged by one-period, in order to avoid potential endogeneity problems of income levels vis-à-vis the RHS variables. In broad terms, the introduction of these additional variables does not change the previous estimated individual effects, which is a sign of robustness. Concerning combined Political and Civil Liberties, the effect of the income gap on Trade openness is positive, while the interaction term is negative. Higher income countries tend to be more open to trade, but higher Political and Civil Liberties tend to counteract somewhat this effect.<sup>13</sup> This could be justified on the grounds that more Freedoms also open the possibility for lobbying groups for a given level of income. The negative sign of the interaction term also implies that for a given level of Freedoms, a higher level of income lowers trade openness. On capital controls, only the interaction term is significant with a negative sign, indicating that a higher level of Freedoms and/or a higher level of income reduce the likelihood of having capital controls.

*Insert Table 4-a and 4-b*

In the equation where PRCL is the dependent variable, the sign of the income gap is negative. This result is somewhat surprising and counterintuitive, though in a country with capital controls the net effect would still be positive.<sup>14</sup> The estimated interaction term of trade and income gap is positive suggesting that higher trade openness increases Political and Civil Freedoms, this effect being reinforced if the country is close to the frontier. The interaction term between the income gap and capital controls is positive. This indicates that less capital controls increase Political and Civil Freedoms, but the effect is reduced when the countries close the gap to the income frontier.<sup>15</sup>

The system estimates of Economic Freedom (EFWC) and Globalization indicators produce similar results, except that in the equation of capital controls both the coefficients EFWC and income gap are now significant and negative. Higher Economic freedom and less distance to the frontier reduce the likelihood of capital controls. These effects are moderated by the interaction term. The effect of Globalization variables on Economic Freedoms display similar effects terms to those noted for PRCL.

If these are estimates are reliable, they suggest that the two-way reinforcing relationship between Globalization and Freedoms has to be moderated by other considerations, in particular the stage of development. Moreover, the impact of Freedoms on Globalization do emerges somewhat stronger and is more clear-cut than the reverse

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<sup>13</sup> Note that the partial derivative of the log of trade openness to PRCL can be approximated by  $\alpha_1 + \eta_1 \cdot \text{gap}_i$ . For a country at the income frontier ( $\text{gap}=1$ ), the combined effect is negative ( $=0.67-0.91$ ).

<sup>14</sup> The partial derivative is  $\delta_3 + \eta_2 \cdot \text{cap\_cont}$ ; if  $\text{cap\_cont}=1$  the derivative is positive ( $= -3.7+9.0$ ).

<sup>15</sup> For a country at the income frontier the  $\text{gap}=1$ , the partial derivative of PRCL on capital controls becomes positive ( $= -8.7+9.0$ ).

relationship. Put differently, Freedoms would dominate Globalization. One reason for this which we hope to pursue is the hypothesis that globalization's effects on democracy are mediated by slow-moving cultural values.<sup>16</sup>

## 6. Conclusion

In this paper, we have considered different research avenues for the interaction between freedoms and globalization interaction. The focus on the management of diversity as a determinant of this interaction, of which an example was provided in section 2, is simply one such avenue that warrants further investigation. The Portuguese case may be helpful because the liberal revolution of the 1820s and its aftermath created the presumption that political and financial freedoms are incompatible instead of complementary. This influenced the democratic transition of Brazil and several African states and may allow us to better move from *de jure* to *de facto* democracy in these countries.<sup>17</sup>

After defining democratic freedoms in Section 3, we took as a starting point of the econometric analysis the two-way robust relation between democracy and globalization found in Eichengreen and Leblang (2006). Using more detailed indicators of democratic Freedoms, but with shorter time sample (1970-2004), we showed that this relation broadly holds for pooled regression estimates. However, controlling for the usual fixed-effects breaks down the relationship, except for the link between capital controls and Economic Freedom.

Acknowledging that the endogeneity bias could be part of the explanation for this result, we then turned to a simultaneous estimation of the interactions between Freedoms and Globalization. The summary results of this estimation are provided in Table 5.

**Table 5. Summary of results: Interactions among Political Rights & Civil Liberties, Economic Freedom, Trade Openness and Capital Controls**

<i>Impact of variable x → y</i>	<b>Trade openness</b>	<b>Capital controls</b>	<b>Political Rights &amp; Civil Liberties</b>	<b>Economic Freedom</b>
<b>Political Rights &amp; Civil Liberties</b>	0.63***	-0.07***		
<b>Economic Freedom</b>	1.02***	-0.20***		
<b>Trade openness</b>			0.05***	0.04***
<b>Capital controls</b>			-2.57***	-4.62***

Period 1970-2004, 3SLS System estimates. \*\*\* p<0.01, \* p<0.1

<sup>16</sup> But the interpretation of such variables should not reflect that they are all in dummy format and thereby they are really just labels used to describe a, sometimes quite loose, common characteristic of a particular group of countries. In fact the only proper label is one not usually standing for culture, namely OECD membership. Rather than testing serious hypotheses on how, for instance, being a democracy may affect a country's corruption level, what 'cultural dummies' do is to provide an indication that our corruption theories are still incomplete. This is why the explicit label of OECD membership is preferable to such dummies. Macedo (2001, p. 245)

<sup>17</sup> This is acknowledged by Maddison (2001, p. 71-75). On the Portuguese currency experience over the last two centuries, Macedo et al 1996. On the earlier transition to democracy, Amaral (2007). Our initial inspiration was indeed to study the diversity of Portugal's and Portuguese speaking countries' responses to globalization and we plan to pursue it.

The results confirm the findings in E&L concerning a two-way relation between democracy and globalization. However, we aimed at further testing for the relation between democracy and globalization in the context of stages of development. This is a way to capture the country-level idiosyncrasies that were revealed by the fixed-effect estimates. More precisely, we used the distance to frontier and interaction terms with our main endogenous variables.

In broad terms, the introduction of these additional variables does not change the previous estimated individual effects, which is a sign of robustness. Nonetheless, these sensitivity tests showed that the impact of Freedoms on Globalization emerges somewhat stronger and is more clear-cut than the reverse relationship. This finding seems to run against previous findings that globalization improves governance in a two-way, mutually reinforcing relationship. The reason is precisely the historical and geographical specificity of this interaction which is difficult to measure accurately over long periods and for very different economies and societies. It is no wonder then that the estimation methods employed cannot provide “general conclusions”. There seems to be scope for further investigation along these lines.

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## Annex 1: Data and Variable Definitions

The sources for the three variables of Freedoms are as follows:

**PR:** Freedom House Political Rights PR. We ranked this variable from:

- 7 = maximum political rights
- 1 = minimum political rights

**CL:** Freedom House Civil Liberties CL. We ranked this variable from:

- 7 = maximum civil liberties
- 1 = minimum civil liberties

**EFW:** Fraser Institute Ec. Freedom of the World Index EFW. We ranked this variable from:

- 10 = maximum economic liberties
- 0 = minimum economic liberties

These variables can be downloaded at the following addresses:

Freedom House:

[http://www.freedomhouse.org/printer\\_friendly.cfm?page=35&year=2006](http://www.freedomhouse.org/printer_friendly.cfm?page=35&year=2006)

Fraser Institute:

<http://www.fraserinstitute.ca/shared/readmore.asp?sNav=pb&id=852>

We refer to Eichengreen and Leblang (2006) for more detailed descriptions of these variables.

### Acronyms of the different variables used in the regressions:

COUNTRY	obs
YEAR	year
IMF CODE	ifs
POPULATION DENSITY	pop_den
% LIVING IN URBAN AREAS	urban
CONSTITUTIONAL AGE	const_age
AVERAGE DISTANCE FROM REST OF THE WORLD	distance
DICHOTOMOUS MEASURE OF DEMOCRACY	democracy
BRITISH COLONY	eng_col
FRENCH COLONY	fra_col
SPANISH COLONY	spa_col
INFLATION	inflation
BRITISH LEGAL ORIGIN	legor_uk
FRENCH LEGAL ORIGIN	legor_fr
SOCIALIST LEGAL ORIGIN	legor_so
GERMAN LEGAL ORIGIN	legor_ge
SCANDAVIAN LEGAL ORIGIN	legor_sc
EXPORTERS OF FUELS AND MINERALS	exportersoffuelsmainlyoil
LATIN AMERICAN DUMMY	laamer
MIDDLE EAST DUMMY	mideast
AFRICA DUMMY	africa

ASIA DUMMY	asia
CAPITAL CONTROLS DUMMY (1=CONTROLS)	newcapcont
WAR	war
INTERWAR PERIOD	interwar
BRETTON WOODS PERIOD	bw
POST BRETTON WOODS PERIOD	postbw
NUMBER OF PRIOR TRANSITIONS TO DICTATORSHIP	sum_prz_auto
AGE OF DEMOCRACY	age_of_demo
LOG(TRADE OPENNESS)	ltradeopen2
LOG(GDP PER CAPITAL PPP)	lgdppc_ppp2
LOG(COUNTRY SIZE)	larea
LOG(DISTANCE FROM REST OF WORLD)	ldistance
LOG(POPULATION)	lpopulation
LOG(TOTAL GDP PPP)	lecsiz2
LAGGED GROWTH	Lgrow
NUMBER OF SYSTEMATIC CURRENCY CRISES	tot_crisis
GOVERNMENT SURPLUS/DEFICIT (%GDP)	govdef
NUMBER OF OTHER DEMOCRACIES IN SYSTEM	tot_dem

**Table A1. Summary statistics of the variables used in the regressions**

<b>Variable</b>	<b>Number Obs</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min</b>	<b>Max</b>
pr	5556	4.069294	2.239259	1	7
cl	5556	4.071994	1.930811	1	7
prcl	5556	4.070644	2.044444	1	7
efwc	3449	5.612915	1.283038	1.718185	9.085423
ltradeopen2	9993	-1.040614	2.11764	-10.40436	7.774024
newcapcont	16100	.3153416	.4646662	0	1
Lag inc_gap	11668	.3082369	.3276247	.002854	3.195987
Lag lecsiz2	11568	7.824561	2.647897	1.028676	19.86288
Lag ldistance	15441	8.422972	.2384888	8.003242	9.118288
Lag larea	15742	6.108044	1.760807	3.044523	10.30226
Lag population	18888	8.155419	1.904115	1.791759	14.0691
Lag lgdppc_ppp2	11697	7.724898	1.033694	4.306714	10.66096
Lag tot_crisis	10083	5.65665	6.12167	0	22
Lag inflation	7161	40.22637	447.843	-100	23759.11
Lag govdef	6811	-3.84665	12.60066	-245.2199	225.9596
Lag sum_prz_auto	12797	.6013128	.9409702	0	5
Lag const_age	11136	22.02326	26.80845	0	194
tot_dem	13550	44.64679	30.42752	5	110
Lag lgdppc_ppp2	11697	7.724898	1.033694	4.306714	10.66096
lgrow	11370	.0158507	.0848507	-1.01451	2.889532
Lag urban	10793	.1671529	.1628589	0	.9964176
Lag pop_den	11186	49.45865	81.53487	.0064881	869.8322

**Table A2. Correlations among the different Freedom indicators**

	E&L democracy	pr	cl	prcl	efwc
E&L democracy	1.0000				
pr	0.8285	1.0000			
cl	0.7620	0.9167	1.0000		
prcl	0.8148	0.9820	0.9757	1.0000	
efwc	0.3266	0.4638	0.4976	0.4897	1.0000

NB: E&L democracy refers to the dichotomous measure of democracy used in Eichengreen and Leblang (2006).

**Table 1-a**  
**Effect of Freedoms on Trade Openness**  
**Pooled regressions 1970-2004**

	(1)	(2)	(3)
L.lecsiz2	-0.534*** (-30.4)	-0.550*** (-31.6)	-0.616*** (-28.5)
L.ldistance	0.965*** (6.26)	0.917*** (5.98)	-0.565*** (-2.95)
L.larea	-0.0884*** (-5.33)	-0.0873*** (-5.30)	-0.0901*** (-4.43)
L.lpopulation	0.197*** (8.97)	0.224*** (10.1)	0.259*** (9.29)
laamer	-1.380*** (-15.7)	-1.354*** (-15.5)	-0.695*** (-5.98)
mid-east	-0.232** (-1.99)	-0.0876 (-0.75)	-0.0821 (-0.62)
africa	-0.934*** (-10.5)	-0.834*** (-9.43)	-0.668*** (-6.23)
asia	-1.108*** (-10.7)	-0.992*** (-9.53)	-0.273** (-2.14)
<b>pr</b>	<b>0.0847***</b> <b>(5.48)</b>		
<b>cl</b>		<b>0.153***</b> <b>(8.59)</b>	
<b>efwc</b>			<b>0.368***</b> <b>(11.3)</b>
Constant	-4.817*** (-3.66)	-4.833*** (-3.70)	6.597*** (4.16)
Observations	4046	4046	2573
R-squared	0.30	0.30	0.33

Dependent variable is the log of Trade openness (X+M)/GDP  
Pooled regressions estimated by standard OLS.  
t statistics in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 1-b**  
**Effect of Freedoms on Capital Controls**  
**Pooled regressions 1970-2004**

	(1)	(2)	(3)
L.lgdppc_ppp2	-0.135*** (-16.9)	-0.126*** (-15.7)	-0.0429*** (-3.70)
L.tot_crisis	0.00189* (1.68)	0.00188* (1.67)	0.000226 (0.18)
L.inflation	0.0000161 (1.56)	0.0000145 (1.41)	-0.0000182 (-1.62)
L.govdef	-0.00156*** (-3.30)	-0.00165*** (-3.51)	-0.000737 (-0.94)
laamer	-0.0837*** (-4.55)	-0.0833*** (-4.53)	-0.149*** (-7.21)
mideast	-0.270*** (-10.2)	-0.300*** (-11.2)	-0.138*** (-5.18)
africa	-0.0240 (-1.12)	-0.0400* (-1.88)	-0.0403 (-1.46)
asia	-0.124*** (-4.98)	-0.138*** (-5.52)	-0.0516* (-1.92)
<b>pr</b>	<b>-0.00234</b> <b>(-0.63)</b>		
<b>cl</b>		<b>-0.0153***</b> <b>(-3.50)</b>	
<b>efwc</b>			<b>-0.178***</b> <b>(-24.1)</b>
Constant	1.886*** (27.6)	1.875*** (27.5)	2.120*** (22.7)
Observations	3925	3925	2758
R-squared	0.19	0.19	0.34

Dependent variable is a dichotomous measure of capital controls

Pooled regressions estimated by standard OLS.

t statistics in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 1-c**  
**Effect of Globalization on Freedoms**  
**Pooled regressions 1970-2004**

Dependent variable	(1) pr	(2) cl	(3) efwc
L.sum_prz_auto	0.0695** (2.55)	0.0205 (0.89)	-0.0764*** (-4.44)
L.const_age	-0.00416*** (-3.78)	-0.00270*** (-2.90)	0.00447*** (6.13)
L.tot_dem	0.0174*** (14.3)	0.0102*** (9.81)	0.0116*** (14.8)
L.fuel_exp	-0.622*** (-6.72)	-0.678*** (-8.63)	-0.138** (-2.18)
legor_so	-2.525*** (-24.4)	-2.150*** (-24.5)	-1.359*** (-15.6)
eng_col	0.901*** (12.6)	0.848*** (14.0)	-0.143*** (-2.77)
fra_col	0.123 (1.43)	0.319*** (4.38)	0.117 (1.64)
spa_col	0.0809 (0.75)	0.0686 (0.75)	0.0997 (1.45)
L.lgdppc_ppp2	0.883*** (22.9)	0.783*** (23.9)	0.447*** (15.0)
lgrow	-0.0101 (-0.030)	0.0985 (0.34)	1.359*** (5.04)
L.urban	-1.072*** (-5.95)	-1.080*** (-7.05)	-0.00602 (-0.053)
L.pop_den	0.000966*** (3.27)	0.000887*** (3.53)	-0.000859*** (-4.96)
laamer	-0.836*** (-7.08)	-0.705*** (-7.03)	-0.789*** (-10.5)
mid-east	-3.122*** (-25.4)	-2.862*** (-27.4)	-0.686*** (-8.71)
africa	-2.199*** (-19.1)	-1.919*** (-19.6)	-0.512*** (-6.07)
asia	-1.267*** (-11.5)	-1.479*** (-15.7)	0.205*** (2.83)
<b>ltradeopen2</b>	<b>-0.0621***</b> <b>(-4.57)</b>	-0.00958 (-0.83)	<b>0.0158*</b> <b>(1.81)</b>
<b>newcapcont</b>	<b>0.218***</b> <b>(3.17)</b>	-0.0950 (-1.63)	<b>-0.779***</b> <b>(-18.3)</b>
Constant	-2.888*** (-8.07)	-1.501*** (-4.93)	1.966*** (7.12)
Observations	3197	3197	2289
R-squared	0.62	0.63	0.63

Pooled regressions estimated by standard OLS.

t statistics in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 2-a**  
**Effect of Freedoms on Trade Openness**  
**Panel Fixed-effects regressions 1970-2004**

	(1)	(2)	(3)
L.lecsize2	-0.235*** (-11.1)	-0.239*** (-11.4)	-0.183*** (-7.11)
L.ldistance	1.350** (2.23)	1.354** (2.23)	2.645*** (3.74)
L.larea	-1.198** (-2.51)	-1.161** (-2.43)	-1.342*** (-2.98)
L.lpopulation	1.364*** (17.1)	1.361*** (17.1)	1.972*** (17.8)
pr	-0.0102 (-1.05)		
cl		0.00691 (0.59)	
efwc			<b>-0.108***</b> <b>(-4.79)</b>
Constant	-14.08** (-2.50)	-14.34** (-2.55)	-30.60*** (-4.89)
Observations	4046	4046	2573
Number of countries	180	180	122
R-squared	0.08	0.08	0.14

Dependent variable is the log of Trade openness (X+M)/GDP

Panel estimates using country-fixed effects (not shown)

t statistics in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 2-b**  
**Effect of Freedoms on Capital Controls**  
**Panel Fixed-effects regressions 1970-2004**

	(1)	(2)	(3)
L.lgdppc_ppp2	-0.155*** (-9.55)	-0.153*** (-9.46)	-0.100*** (-3.64)
L.tot_crisis	0.00307*** (4.20)	0.00305*** (4.17)	0.000519 (0.55)
L.inflation	0.0000187*** (2.63)	0.0000188*** (2.65)	0.00000515 (0.61)
L.govdef	0.000163 (0.45)	0.000160 (0.44)	0.000284 (0.45)
<b>pr</b>	-0.000671 (-0.19)		
<b>cl</b>		-0.00598 (-1.33)	
<b>efwc</b>			<b>-0.142***</b> <b>(-16.4)</b>
Constant	1.971*** (15.3)	1.980*** (15.3)	2.344*** (11.1)
Observations	3925	3925	2758
Number of countries	157	157	120
R-squared	0.03	0.03	0.14

Dependent variable is a dichotomous measure of capital controls

Panel estimates using country-fixed effects (not shown)

t statistics in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 2-c**  
**Effect of Globalization on Freedoms**  
**Panel Fixed-effects regressions 1970-2004**

<i>Dependent variable</i>	(1) <i>pr</i>	(2) <i>cl</i>	(3) <i>efwc</i>
L.sum_prz_auto	1.527*** (23.1)	0.777*** (13.5)	0.0238 (0.58)
L.const_age	-0.0339*** (-16.5)	-0.0323*** (-18.0)	0.00453*** (3.33)
L.tot_dem	0.00520*** (4.79)	0.00484*** (5.12)	0.0139*** (18.9)
L.lgdppc_ppp2	0.613*** (7.65)	0.494*** (7.06)	0.471*** (6.72)
lgrow	-0.220 (-0.96)	0.0923 (0.46)	0.941*** (4.98)
L.urban	1.795*** (4.67)	0.853** (2.54)	-0.907*** (-3.34)
L.pop_den	0.000113 (0.089)	-0.00327*** (-2.95)	0.000436 (0.54)
<b>ltradeopen2</b>	<b>-0.141***</b> <b>(-5.13)</b>	<b>-0.0676***</b> <b>(-2.83)</b>	<b>-0.211***</b> <b>(-11.7)</b>
<b>newcapcont</b>	<b>-0.104</b> <b>(-1.48)</b>	<b>-0.227***</b> <b>(-3.71)</b>	<b>-0.394***</b> <b>(-9.22)</b>
Constant	-2.377*** (-3.78)	-0.155 (-0.28)	0.747 (1.37)
Observations	3197	3197	2289
Number of countries	145	145	112
R-squared	0.35	0.23	0.39

Panel estimates using country-fixed effects (not shown)  
t statistics in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 3-a**  
**Globalization and Political Rights**  
**Simultaneous system estimates 1970-2004**

<i>Endogenous variables</i>	(1)	(2)	(3)
	<i>ltradeopen2</i>	<i>newcapcont</i>	<i>pr</i>
<b>pr</b>	<b>0.597***</b> (18.7)	<b>-0.0649***</b> (-8.33)	
L.lecsiz2	-0.731*** (-32.9)		
L.ldistance	-0.890*** (-5.07)		
L.larea	-0.0833*** (-4.65)		
L.lpopulation	0.424*** (14.7)		
laamer	-0.528*** (-4.72)	-0.131*** (-6.12)	-0.686*** (-6.13)
mideast	1.411*** (8.61)	-0.384*** (-11.7)	-3.408*** (-24.0)
africa	0.142 (1.17)	-0.0895*** (-3.40)	-1.842*** (-16.3)
asia	-0.151 (-1.13)	-0.0953*** (-3.36)	-1.036*** (-8.99)
L.lgdppc_ppp2		-0.0751*** (-6.48)	0.676*** (15.1)
L.tot_crisis		0.00169 (1.45)	
L.inflation		0.0000265* (1.78)	
L.govdef		-0.00125** (-2.49)	
<b>ltradeopen2</b>			<b>0.0362*</b> (1.83)
<b>newcapcont</b>			<b>-2.077***</b> (-7.56)
L.sum_prz_auto			0.0608** (2.53)
L.const_age			-0.00237* (-1.95)
L.tot_dem			0.0160*** (13.1)
L.fuel_exp			-0.348*** (-4.17)
legor_so			-1.960*** (-17.9)
eng_col			0.793*** (11.7)
fra_col			0.0917 (1.17)
spa_col			-0.129 (-1.39)
lgrow			0.0764 (0.26)
L.urban			-0.863*** (-5.16)
L.pop_den			0.000906*** (3.48)
Constant	7.755*** (5.18)	1.718*** (20.0)	0.502 (0.87)
Observations	3024	3024	3024

System estimates using Three-stage Least squares  
t statistics in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 3-b**  
**Globalization and Civil Liberties**  
**Simultaneous system estimates 1970-2004**

<i>Endogenous variables</i>	(1)	(2)	(3)
<i>ltradeopen2</i>	<i>ltradeopen2</i>	<i>newcapcont</i>	<i>cl</i>
<b>cl</b>	<b>0.675***</b> (19.2)	<b>-0.0808***</b> (-9.09)	
L.lecsiz2	-0.713*** (-33.3)		
L.ldistance	-0.917*** (-5.33)		
L.larea	-0.0858*** (-4.95)		
L.lpopulation	0.440*** (15.4)		
laamer	-0.449*** (-4.05)	-0.136*** (-6.41)	-0.677*** (-7.07)
mid east	1.446*** (9.08)	-0.402*** (-12.3)	-3.286*** (-26.6)
africa	0.162 (1.36)	-0.0970*** (-3.78)	-1.570*** (-16.0)
asia	0.136 (1.00)	-0.137*** (-4.79)	-1.365*** (-13.3)
L.lgdppc_ppp2		-0.0727*** (-6.26)	0.469*** (12.2)
L.tot_crisis		0.000330 (0.32)	
L.inflation		0.0000119 (0.90)	
L.govdef		-0.000749* (-1.69)	
<b>ltradeopen2</b>			<b>0.0766***</b> (4.79)
<b>newcapcont</b>			<b>-3.094***</b> (-13.4)
L.sum_prz_auto			0.0284 (1.48)
L.const_age			-0.00254** (-2.56)
L.tot_dem			0.00835*** (8.40)
L.fuel_exp			-0.356*** (-5.28)
legor_so			-1.458*** (-16.0)
eng_col			0.706*** (12.6)
fra_col			0.229*** (3.63)
spa_col			-0.160** (-2.14)
lgrow			0.278 (1.16)
L.urban			-0.885*** (-6.50)
L.pop_den			0.000688*** (3.29)
Constant	7.315*** (5.02)	1.790*** (21.4)	3.416*** (6.93)
Observations	3024	3024	3024

System estimates using Three-stage Least squares  
t statistics in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 3-c**  
**Globalization and Economic Freedom**  
**Simultaneous system estimates 1970-2004**

<i>Endogenous variables</i>	(1)	(2)	(3)
<i>ltradeopen2</i>	<i>newcapcont</i>	<i>efwc</i>	
<b>efwc</b>	<b>1.017***</b> (17.7)	<b>-0.203***</b> (-18.5)	
L.lecsiz2	-0.799*** (-31.0)		
L.ldistance	-1.335*** (-6.24)		
L.larea	0.00845 (0.36)		
L.lpopulation	0.464*** (12.8)		
laamer	-0.159 (-1.18)	-0.204*** (-8.94)	-0.910*** (-9.34)
mid east	0.214 (1.35)	-0.113*** (-3.90)	-0.592*** (-5.13)
africa	-0.356*** (-2.77)	-0.0223 (-0.75)	-0.180 (-1.44)
asia	-0.527*** (-3.66)	-0.0252 (-0.83)	-0.0609 (-0.50)
L.lgdppc_ppp2		-0.0271** (-1.99)	-0.0338 (-0.60)
L.tot_crisis		-0.00103** (-2.29)	
L.inflation		-0.0000355 (-0.64)	
L.govdef		-0.0000117 (-0.046)	
<b>ltradeopen2</b>			<b>0.0404***</b> (4.52)
<b>newcapcont</b>			<b>-4.623***</b> (-20.8)
L.sum_prz_auto			0.00187 (0.18)
L.const_age			-0.000698 (-1.31)
L.tot_dem			0.000813 (0.99)
L.fuel_exp			-0.109*** (-2.98)
legor_so			-0.0904 (-1.34)
eng_col			0.0628** (2.28)
fra_col			0.158*** (3.01)
spa_col			-0.0716* (-1.94)
lgrow			0.205 (1.33)
L.urban			-0.103 (-1.63)
L.pop_den			-0.000157 (-1.36)
Constant	8.705*** (4.85)	2.155*** (21.4)	9.508*** (14.3)
Observations	2256	2256	2256

System estimates using Three-stage Least squares.  
t statistics in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 3-d**  
**Globalization and Average of Political and Civil Freedoms**  
**Simultaneous system estimates 1970-2004**

<i>Endogenous variables</i>	(1)	(2)	(3)
<i>ltradeopen2</i>	<i>ltradeopen2</i>	<i>newcapcont</i>	<i>prcl</i>
<b>prcl</b>	<b>0.639***</b> (19.2)	<b>-0.0730***</b> (-8.75)	
<b>L.lecsz2</b>	<b>-0.724***</b> (-33.4)		
L.ldistance	-0.914*** (-5.27)		
L.larea	-0.0844*** (-4.80)		
L.lpopulation	0.431*** (15.1)		
laamer	-0.485*** (-4.38)	-0.134*** (-6.28)	-0.700*** (-7.07)
mid east	1.437*** (8.95)	-0.395*** (-12.1)	-3.351*** (-26.5)
africa	0.162 (1.35)	-0.0955*** (-3.68)	-1.730*** (-17.2)
asia	-0.00552 (-0.041)	-0.116*** (-4.07)	-1.218*** (-11.8)
L.lgdppc_ppp2		-0.0739*** (-6.36)	0.569*** (14.3)
L.tot_crisis		0.000912 (0.83)	
L.inflation		0.0000178 (1.27)	
L.govdef		-0.000971** (-2.05)	
<b>ltradeopen2</b>			<b>0.0525***</b> (3.09)
<b>newcapcont</b>			<b>-2.568***</b> (-10.7)
L.sum_prz_auto			0.0467** (2.26)
L.const_age			-0.00262** (-2.49)
L.tot_dem			0.0119*** (11.2)
L.fuel_exp			-0.364*** (-5.05)
legor_so			-1.730*** (-18.1)
eng_col			0.758*** (12.9)
fra_col			0.169** (2.49)
spa_col			-0.137* (-1.71)
lgrow			0.184 (0.71)
L.urban			-0.893*** (-6.17)
L.pop_den			0.000789*** (3.53)
Constant	7.622*** (5.17)	1.756*** (20.7)	2.005*** (3.93)
Observations	3024	3024	3024

System estimates using Three-stage Least squares.  
t statistics in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 4-a**  
**Globalization and Average of Political and Civil Freedoms, with Income Gap Interaction Terms**  
**Simultaneous system estimates 1970-2004**

<i>Endogenous</i>	(1) <i>ltradeopen2</i>	(2) <i>newcapcont</i>	(3) <i>prcl</i>
<b>prcl</b>	<b>0.665***</b> (11.4)	0.00912 (0.74)	
<b>L.inc_gap</b>	<b>6.150***</b> (11.7)	0.146 (1.10)	<b>-3.734***</b> (-9.40)
<b>L.int_prclgap</b>	<b>-0.909***</b> (-8.44)	<b>-0.117***</b> (-5.12)	
L.lecsiz2	-0.743*** (-33.6)		
L.ldistance	-0.226 (-1.24)		
L.larea	-0.147*** (-7.70)		
L.lpopulation	0.557*** (18.4)		
laamer	-0.772*** (-6.68)	-0.229*** (-9.64)	-1.045*** (-6.14)
mideast	0.856*** (5.76)	-0.378*** (-12.5)	-4.058*** (-21.1)
africa	0.311** (2.57)	-0.0703*** (-2.78)	-1.452*** (-8.43)
asia	-0.447*** (-3.31)	-0.168*** (-5.89)	-1.521*** (-8.46)
L.lgdppc_ppp2		-0.0319** (-2.10)	-0.229** (-2.24)
L.tot_crisis		-0.00133 (-1.28)	
L.inflation		-0.0000339 (-0.26)	
L.govdef		-0.00180*** (-3.55)	
<b>ltradeopen2</b>			-0.0741 (-1.09)
<b>newcapcont</b>			<b>-8.703***</b> (-19.8)
<b>L.int_tradegap</b>			<b>0.367***</b> (2.79)
<b>L.int_capgap</b>			<b>9.004***</b> (13.5)
L.sum_prz_auto			0.0928*** (2.64)
L.const_age			-0.00596*** (-3.68)
L.tot_dem			0.0164*** (9.96)
L.fuel_exp			-0.205* (-1.69)
legor_so			-1.026*** (-6.25)
eng_col			1.716*** (14.5)
fra_col			0.722*** (5.93)
spa_col			0.188 (1.43)
lgrow			0.193 (0.45)
L.urban			-0.994*** (-4.27)
L.pop_den			0.00291*** (7.16)
Constant	0.921 (0.59)	1.249*** (11.8)	11.91*** (12.4)
Observations	2899	2899	2899

System estimates using Three-stage Least squares.  
t statistics in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 4-b**  
**Globalization and Economic Freedom, with Income Gap Interaction Terms**  
**Simultaneous system estimates 1970-2004**

<i>Endogenous variables</i>	(1)	(2)	(3)
	<i>ltradeopen2</i>	<i>newcapcont</i>	<i>efwc</i>
<b>efwc</b>	<b>0.550***</b> (9.04)	<b>-0.331***</b> (-23.5)	
<b>L.inc_gap</b>	<b>3.838***</b> (6.81)	<b>-0.710***</b> (-4.89)	<b>-1.697***</b> (-3.40)
<b>L.int_prclgap</b>	<b>-0.308***</b> (-4.12)	<b>0.0677***</b> (4.40)	
L.lecsz2	-0.832*** (-33.5)		
L.ldistance	-0.636*** (-3.07)		
L.larea	-0.0237 (-1.02)		
L.lpopulation	0.477*** (13.9)		
laamer	-0.462*** (-3.69)	-0.236*** (-8.45)	-0.782*** (-6.74)
mideast	0.108 (0.65)	-0.167*** (-4.53)	-0.808*** (-6.16)
africa	-0.364*** (-2.80)	0.0342 (1.03)	0.0505 (0.40)
asia	-0.430*** (-2.88)	0.0751** (2.11)	0.0587 (0.47)
L.lgdppc_ppp2		0.140*** (6.12)	0.331*** (4.08)
L.tot_crisis		-0.00104 (-0.95)	
L.inflation		-0.0000286** (-2.25)	
L.govdef		0.000489 (0.79)	
<b>ltradeopen2</b>			-0.0642 (-1.62)
<b>newcapcont</b>			<b>-3.838***</b> (-9.48)
<b>L.int_tradegap</b>			<b>0.248***</b> (3.52)
<b>L.int_capgap</b>			<b>2.018***</b> (3.51)
L.sum_prz_auto			0.00945 (0.46)
L.const_age			0.00295*** (3.33)
L.tot_dem			0.00555*** (5.21)
L.fuel_exp			-0.0218 (-0.31)
legor_so			-0.177 (-1.64)
eng_col			0.283*** (3.95)
fra_col			0.232** (2.29)
spa_col			0.0599 (0.81)
lgrow			-0.0796 (-0.26)
L.urban			0.0318 (0.25)
L.pop_den			0.000733*** (2.97)
Constant	5.168*** (3.04)	1.536*** (9.15)	5.281*** (6.64)
Observations	2119	2119	2119

System estimates using Three-stage Least squares.  
t statistics in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1