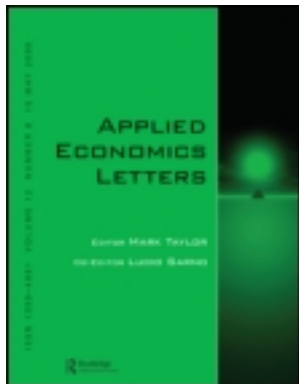


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Publisher: Routledge

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Applied Economics Letters

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/rael20>

Globalization, democratization and economic growth

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Available online: 20 Apr 2009

To cite this article: Dario Maimone Ansaldo Patti & Pietro Navarra (2009): Globalization, democratization and economic growth, Applied Economics Letters, 16:7, 731-734

To link to this article: <http://dx.doi.org/10.1080/13504850701221840>

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Globalization, democratization and economic growth

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Using a two-equations model we estimate whether and to what extent the interplay between FDI and democratization affects economic growth. Two results emerge. First, endogenous FDI impact significantly on economic growth. Second democracy is a substantive predictor of both FDI and growth.

I. Introduction

The diffusion of political democracy and the rise of economic globalization are two of the most significant characteristics of contemporary political economy. In this article we examine whether the inter-linkages between the dispersal of democratic governance and the flood of FDI produce any significant impact on the economic growth of recipient countries. The effects of FDI inflows on economic growth have been extensively analysed in the literature. However, in these studies foreign investments have been considered as an exogenous variable unaffected by the political conditions that shape public decision making. The novelty of our approach is to endogenize FDI as determined by the political institutions of the economies under investigation and to estimate whether and to what extent they affect the level of economic growth.

The article is structured as follows. In Section II we describe the data used in the empirical investigation, perform the estimation and comment on the results. In Section III we draw some concluding remarks.

II. Data, Methodology and Results

We collected economic and political information for 66 countries from 1980 to 2003. A fully description of the data is given in Table 1. In Table 2, we replicate the results of a vast body of research analysing the effect of FDI and democracy on economic growth. We estimate four specifications of the Mankiw, Romer and Weil (1992) growth equation (MRW) and note that both FDI and democratic regimes are associated with high levels of per-capita income (Przeworski and Limongi, 1993; de Mello, 1999).

However, the specifications of MRW appearing in column (c) and (d) may suffer from problems of endogeneity since FDI is also determined by the income level. If this is the case, the results may be inconsistent and the inference invalid. To overcome this problem we endogenize FDI allowing for the level of income as well as for the working of the political institutions governing the countries considered in our study. We, therefore, estimate a two-equation model as follows:

$$\text{FDI} = f(\text{Political Competition, X}) \quad (1)$$

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Table 1. Description of variables and their source

Variables	Description	Source
FDI	Gross foreign direct investments as% of GDP	UNCTAD
Growth GDP	Constant GDP per capita growth rate	World Development Indicators
Export	Export as% of GDP	World Development Indicators
Economic freedom	Economic freedom index: 1 = low freedom; 10 = high freedom	Fraser Institute
Democracy	Index of democracy: -10 = no democracy; 10 = full democracy	Marshall and Jagger (2004)
Political competition	Index of political competition: 0 = no competition; 10 = maximum competition	Marshall and Jagger (2004)
HerfGov	Herfindal index for power concentration within the government	Kiefer (2005)
Majority	Difference between the number of seats held by the political parties supporting the government and the ones held by opposition	Kiefer (2005)
Competitiveness in Gov. recruitment	Index of competition in government recruitment: 1 = no competition; 3 = full competition	Marshall and Jagger (2004)
Investments	Investments as percentage of GDP	World Development Indicators
n	Population growth rate	World Development Indicators
$(\delta + g)$	Technological growth rate	Mankew <i>et al.</i>

Table 2. Economic growth equations

	(a)	(b)	(c)	(d)
Constant	-6.335 (-3.38)***	-7.111 (-3.52)***	-5.334 (-2.71)***	-6.189 (-3.08)***
Investments	3.915 (10.21)***	2.876 (10.14)***	3.589 (9.21)***	3.550 (9.14)***
$(n + \delta + g)$	-5.513 (-3.38)***	-4.468 (-2.60)***	-5.698 (-3.56)***	-4.560 (-2.69)***
FDI			0.134 (3.23)***	0.136 (3.29)***
Democracy		0.035 (1.81)*		0.035 (1.86)*
Log-likelihood	-4182.596	-4179.120	-4172.930	-4169.160
R^2	0.259	0.260	0.266	0.270
Overall significance	5.63 [0.000]	5.59 [0.000]	5.83 [0.000]	5.80 [0.000]
Group dummies	2.819 [0.000]	2.916 [0.000]	2.815 [0.000]	2.879 [0.000]
Time dummies	4.379 [0.000]	3.974 [0.000]	4.228 [0.000]	4.006 [0.000]
RE vs. FE (Hausman Test)	1.25 [0.536]	0.280 [0.963]	0.85 [0.837]	0.60 [0.963]
No. of Obs.	1535	1534	1535	1534

Notes: ***, * Significant respectively, at 1 and 10%.

Numbers within parenthesis indicate Robust SEs employed. Numbers within square brackets indicate p -value.

$$\text{Economic Growth} = f(\text{FDI}, \mathbf{K}) \quad (2)$$

where in Equation 1 FDI are affected by a set of variables defining the extent of democracy as well as by a set of control variables \mathbf{X} . In Equation 2 economic growth is affected by FDI inflows and another set of control variables \mathbf{K} . This model builds from the idea that estimating the effects of democracy and FDI on economic growth requires simultaneous equations approach in which the economic development of a given country (Equation 2) is predicted by the level of FDI which, in turn, is determined by the functioning of political institutions in place in that country (Equation 1). We implement a two-stage least square (2SLS) technique using only the pre-

determined regressors and substitute the fitted values for the endogenous variable in Equation 2.

In Table 3, we show the results of four different specifications of the first-stage regression (Equation 1) using a two-ways panel data model. More specifically, we test for the relationship between the functioning of political institutions in a given country and its willingness to attract foreign capital by multinational enterprises. Moving from column (e) to column (h) we add variables that progressively define more accurately the extent to which both citizens and elected representatives participate in the formulation of collective choices. In other words, we move from a basic to a fully specified model to assess

Table 3. First stage: the determinants of FDI

	(e)	(f)	(g)	(h)
Constant	-2.993(-5.32)***	-6.388(-2.63)***	-2.998(-3.92)***	-3.835(-3.885)***
Growth GDP	0.075 (5.39)***	0.075 (5.35)***	0.078 (5.63)***	0.083 (5.42)***
Export	0.044 (7.06)***	0.044 (6.93)***	0.042 (5.35)***	0.040 (4.81)***
Economic freedom	0.552 (6.16)***	0.559 (6.10)***	0.366 (3.11)***	0.274 (1.95)**
Democracy		0.003 (0.23)	0.145 (2.38)***	0.130 (1.69)*
Democracy/economic freedom			-1.071(-3.95)***	-1.119(-3.14)***
Political competition (Political competition) ²			0.551 (3.57)***	0.521 (3.10)***
HerfGov			-0.042(-3.11)***	-0.038(-2.59)***
Majority				0.950 (2.79)***
Competitiveness in Gov. recruitment				0.978 (1.98)**
				0.809 (2.52)***
Log-likelihood	-3193.138	-3188.843	-2904.336	-2751.247
R ²	0.418	0.420	0.455	0.462
Overall significance	11.41 [0.000]	11.37 [0.000]	12.35 [0.000]	11.51 [0.000]
Group dummies	6.899 [0.000]	6.563 [0.000]	6.828 [0.000]	6.715 [0.000]
Time dummies	4.226 [0.000]	4.381 [0.000]	4.692 [0.000]	5.001 [0.000]
RE vs. FE (Hausman Test)	0.92 [0.821]	11.36 [0.022]	17.30 [0.015]	21.54 [0.000]
No. of Obs.	1487	1486	1418	1338

Notes: ***, **, * Significant respectively, at 1, 5 and 10%.

Numbers within parenthesis indicate *t*-statistic. Robust SEs employed. Numbers within square brackets indicate *p*-value.

the impact of democratic political institutions on FDI inflows.

The literature analysing the effect of democracy on FDI suggests conflicting answers. Olson (1993) argues that well-established democracies guarantee property rights ensuring that investments are secure for the long haul. Countries governed by such political regimes are favoured by investors since their assets are shielded from predatory banditry by dictators. On the contrary, O'Donnell (1988) points out that, due to the autocrats' interest in economic benefits of FDI, they are likely to preserve multinational enterprises from popular pressures for higher wages, stronger labour protection and less capital-friendly taxation. Our results, according to a vast body of empirical evidence, show that countries presenting higher degrees of political participation attract larger volumes of FDI (see for example Harms and Ursprung, 2002).

Our estimates across the four equations of Table 3 are good in terms of model fit as well as in terms of statistical significance of individual coefficient estimates. In column (e), we start by estimating a basic model that includes only the set of control variables. They appear all extremely significant and show the expected signs. In column (f), the impact of democracy on FDI does not seem to be significant. However, when we move to more completed specifications of the effects of political institutions on FDI – see columns (g), and (h) – we observe that the functioning of the political system plays a statistically relevant role in determining FDI inflows. In column

(g), we note that not only democracy is positively related with incoming FDI, but also that the degree of political competition directly influences the location decisions of multinationals. It is important to underline that the relationship between political competition and FDI is nonlinear as shown by the negative sign of the square value of political competition. This result is in line with Acemoglu and Robinson's (2006) theory on the nonmonotonic relationship between technological change and political competition. In the same fashion, we interpret the negative effect of democracy normalized by the level of economic freedom: given a level of economic freedom, the greater the extent of democracy, the less the inflow of FDI. Finally, in column (h) we estimate the fully specified model taking into account also various indicators that measure the degree of political competition within the government. All the three indicators appear to be statistically significant and with the expected signs. This result implies that the greater the competition in the government, the higher the inflow of FDI.

The model specifications that are shown in the last two columns of Table 3 are used to estimate the second equation of our 2SLS model. Here, we test whether the level of economic growth of a given country is affected by the FDI inflows as determined by that country's political institutions. The results of the second stage estimation, where FDI appears as an endogenous explanatory variable, are displayed in Table 4. Four broad results emerge. First, we note that, compared with that of the panel data model in

Table 4. Second stage: the determinants of economic growth

	(g1)		(h1)	
Constant	-6.664	(-3.27)***	-5.454	(-2.76)***
Investments	2.687	(6.04)***	2.401	(5.54)***
($n + \delta + g$)	-3.835	(-2.44)***	-3.471	(-2.31)***
Democracy	0.058	(3.20)	0.060	(3.32)***
FDI (fitted values)	2.224	(18.22)***	2.078	(17.67)***
Log-likelihood	-3465.727		-3213.641	
R^2	0.470		0.472	
Overall significance	13.40	[0.000]	12.76	[0.000]
Group dummies	5.26	[0.000]	5.02	[0.000]
Time dummies	10.90	[0.000]	6.58	[0.000]
RE vs. FE (Hausman Test)	68.89	[0.000]	64.76	[0.000]
IV Specification (Hausman Test) ^a	63.63	[0.000]	71.04	[0.000]
No. of Obs.	1382		1318	

Notes: ***Significant respectively, at 1%.

Numbers within parenthesis indicate Robust SEs Employed. Numbers within square brackets indicate p -value.

^aH0: Rejection of IV specification.

column (d) of Table 2, the explanatory power of both regressions in Table 4 is significantly greater. Second, the standard factors that in MRW model determine growth (investment and technological progress) appear to play a minor role when we move from the panel estimation to the second stage of 2SLS model. Third, FDI inflows, as determined by the political institutions in place in a given country are a more important determinant of economic growth than exogenous FDI (Table 2). Therefore, we can conclude that the functioning of political institutions is an important predictor of economic growth via its impact on location decisions of multinational firms.

Conclusions

Using a simultaneous equations approach, we empirically examined the interplay between FDI inflows in a given country and the political institutions that govern its collective decision making as determinants of that country's level of economic growth. The empirical analysis that we implemented covered 66 developed and developing countries over about the last 25 years. Our results underline the crucial role of political institutions in determining

economic development through their willingness to attract FDI.

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