Financial Development, Economic Institutions and Policy – Panel Data Evidence

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Abstract
In recent years significant researches have been done to identify what are the determinants of financial development. This paper tries to explore the complex role of institutional quality, financial liberalization, trade openness and economic policy in banking sector and stock market development, using data from 44 countries during 1988-2007. In order to investigate the effect of institutions on bank-based and equity-based financial development, we employ dynamic panel techniques and more specifically, we employ the 'system GMM' estimator developed by Arellano and Bover (1995), and Blundell and Bond (1998), controlling for endogeneity among variables. In order to quantify the effect of institutions on financial development, we decompose institutions into economic, political and social institutions and especially for the economic dimension, we decompose into legal structure and government quality. The results demonstrate that: i) institutional quality can explain international differences in the level of banking sector and stock market development; ii) economic institutions and trade openness have a much stronger association with the banking sector development, while political institutions and financial openness have a closer link with stock market development; and iii) political choices - the degree of government intervention to the economy - deeply affect the development and operations of the financial system.

Keywords: Financial development, institutions, trade openness, financial liberalization, panel data analysis

JEL Classification: G29, F19, K49

Introduction

There is a vast literature, dating back from Schumpeter (1911), indicating that the development of a financial sector facilitates economic growth[1]. The inherent functions of financial systems, including mobilizing savings to their highest valued use, acquiring information, evaluating and monitoring investment projects, and enabling individuals to diversify away idiosyncratic risk, have been widely believed to encourage productive investment and therefore total factor productivity and economic growth (Huang, 2005).

Consequently, a better understanding of the sources of financial development is needed in order to design effective policies that encourage financial development. In recent years significant researches have been done to identify the question: what are the determinants of financial development? The main findings from this literature can be summarized as follows. First, the degree of a country's openness, such as capital account openness[2] and trade openness[3], helps the development of the financial sector. Second, a country's economic and political institutions, formed by a country's

1 See Levine (2005) for an overview of the literature.
2 Chinn and Ito, 2002; Demirguc-Kunt and Detragiache, 1998
3 Rajan και Zingales, 2003; Beck et. al., 2001, 2003

legal origin[4] or by a country's geography and initial endowment[5], affects both creditor rights and private credit, and the extent of creditor rights protection has an independent effect on financial sector development. Third, political economy factors, where the government's position as arbitrator of financial contracts, potential borrower and regulator of the financial system, impacts on the functioning of the financial market[6]. Finally, macroeconomic factors, such as the level of inflation have a significant impact on financial sector development[7].

Based on these results, policy packages have been considered to promote financial development. Financial development literature tried to investigate this outcome and provide reasons why some countries are more financially developed than others and why some countries remain financially underdeveloped. Although the results in some way could explain part of these differences, still they are not able to clarify most part of these conflicts.

With regard to this outline, the main objective is to investigate the role of institutional quality, financial liberalization and trade openness in banking sector and stock market development as well as the effect of political and macroeconomic factors. More specifically: i) we decompose institutions into economic, political and social institutional quality in order to quantify the effect of institutions on financial development; ii) moreover, for the economic institutional quality, we decompose into legal structure and government quality; iii) in the same logic, we decompose our measure of financial openness into equity- and loan-related foreign assets and liabilities in order to assess whether the hoarding of risky vs. riskless assets or the accumulation of equity vs. debt liabilities affect the development of domestic financial institutions; and iv) to control for a potential bias among variables, we include a large set of information, which covers all the spectrum of possible effects on finance, giving emphasis on political factors and government policies.

Variables and Methodology

Variables

The objective of this study is to examine a group variables that may affect the financial development. In order to reach the full effect of the political and institutional change in the financial development, the model is estimated for the period 1988 - 2007 for 44 countries. The diversification of work is that it seeks to address the three dimensions of the institutions (political, economic and social), looking at the same time, the impact of political and macroeconomic factors.

Financial Development Indicators

For measuring overall financial development, the most popular measure is the ratio of liquid liabilities to GDP (*LL*). Other standard measures are the ratio to GDP of credit issued to the private sector by banks and other financial intermediaries (*PC*) and the ratio of the commercial bank assets to the sum of commercial bank assets and central bank assets (*DBA*). Focusing on the stock market, Levine and Zervos (1998) use Stock Market Capitalization (*CAP*), measured by the value of listed companies on the stock market as share of GDP in a

4 La Porta et al, 1997, 1998; Beck et al 2000, 2003; Djankov et al 2007
5 Acemoglu, Johnson, and Robinson, 2001, 2002
6 La Porta et al, 1999, 2002; Andrianova et. al., 2008
7 Boyd, Levine, and Smith, 2001

given year, Total Value Traded (*TVT*) as an indicator of stock market activity, measured by the ratio of trades in domestic shares to GDP, and Turnover Ratio (*TOR*) as the ratio of trades in domestic shares to market capitalization. A potential drawback with these measures is that data availability is problematic for most of countries.

Basing on all above standard indicators, our first aggregate measure FD_{BANK} based on *LL*, *PC*, *DBA*, captures the extent of bank-based intermediation, while our second measure, FD_{STOCK}, captures equity market development, and is based on *TOR*.

Quality of Institutions Indicators

Economic Institutional Quality

For the quality of economic institutions we go a step further into a more specific perception of institutions, as they take shape in legislative, executive and judicial power. Specifically, we investigate disentangle economic institutions into: a) The quality of government, approached by the indicators of bureaucracy, corruption, accountability and legislative capacity of the government, taken from the International Country Risk Guide Database (ICRG); and b) The quality of the judiciary, approached by the the indicators of independence of the judiciary, the impartiality of the courts, the protection of property rights and the legal application of contracts, taken from Legal Structure and Security of Property Rights Index from the Economic Freedom of the World: 2009 Annual Report (Gwartney and Lawson, 2009). The index ranges from 0-10 where 0 corresponds to 'less economic freedom' and 10 to 'more economic freedom'.

Political Institutional Quality

Following Rajan and Zingales (2003), who argue that the degree of political and civil rights of citizens affect their access to finance, we employ a freedom index form *Freedom House*. The Freedom House democracy index is a categorical variable based on the combination of political rights and civil liberties measures. More precisely, countries whose political rights and civil liberty ratings average 1 to 2.5 are considered free, 3 to 5.5 partly free, and 5.5 to 7 not free.

Social institutional quality

Following Basu (2008), the dimension of social institutional quality is proxied by the Empowerment Rights Index from CIRI Human Rights Dataset. In our specification, we use the Workers' Rights Index, which indicates the extent to which workers internationally recognized rights at work, including a prohibition on the use of any form of forced or compulsory labor; a minimum age for the employment of children; and acceptable conditions of work with respect to minimum wages, hours of work, and occupational safety and health.

Openness of Economy

Financial openness

Financial openness is measured using the data on foreign assets and liabilities from Lane and Milesi-Ferretti (2001, 2007a) and updated (at best) until 2007 using the data from international investment positions published by central banks. To assess whether the hoarding of risky vs. riskless assets or the accumulation of equity vs. debt liabilities affect the development of domestic financial institutions, we decompose our measure of financial openness into equity- and loan-related foreign assets and liabilities. Equity-related assets and liabilities comprise information on direct investment and portfolio equity assets and liabilities, while loan-related assets and liabilities include debt and financial derivatives assets and liabilities.

Trade Openness
Measured as the real value of exports and imports as a percentage of GDP.

Macroeconomic variables
Following this literature, measures used in the current analysis include: a) inflation, aimed at capturing the consistency of monetary policy and b) gdp growth, as a standard measure of economic performance.

Political Economy variables
The public administration is the institution in which government fiscal policy is implemented and essentially reflects - directly and indirectly - the degree of socialism or liberalism of the state and the extent of privatization that take place in the economy. For this proxy we use the Size of Government: Expenditures, Taxes, and Enterprises Index from the Economic Freedom of the World 2009 Annual Report[8].

Moreover, based on the theoretical models of development, the interest rate is a basic determinant for financial development. Nevertheless, interest rate is not widely used in empirical works since it is partly a political decision, and its data availability is problematic especially for developing countries. In our analysis, we use the Interest Rate Controls index from Abiad, Detragiache and Tressel (2008), in order to overcome data issues and to capture another aspect of government (financial) policy[9].

Methodology

To assess the relationship between institutions and financial development, the following model is estimated:

$y_{it} = \alpha y_{i,t-1} + \beta x_{i,t-1} + \gamma z_{i,t-1} + \eta_i + \varphi_t + \upsilon_{it}$
where y_{it} is financial development, x_{it} is institutions, z_{it} is a vector of controlling variables including trade openness (*TO*), financial openness (*FO*), inflation (*INFL*), gdp growth (*GDP*), government size (*GOV*) and interest rate controls (*RATE*). γ is a parameter vector. η is an unobserved country-specific time-invariant effect and can be regarded as capturing the combined effect of all omitted variables. φ_t is the time effect. υ_{it} is the transitory disturbance term. The subscripts i and t represent country and time period, respectively[10].

Arellano and Bond (1991) propose the first-differenced GMM estimator for dynamic panel data models which uses all lagged values of y, x and z as instruments for $\Delta y_{i,t-1}$, $\Delta x_{i,t-1}$ and $\Delta z_{i,t-1}$ in the first-difference equation above. The first-differenced GMM estimator is consistent and asymptotically more efficient than the first-differenced 2SLS estimator. The Arellano-Bover/Blundell-Bond estimator augments Arellano-Bond by making an additional assumption, that first differences of instrument variables are uncorrelated with the fixed effects. This allows the introduction of more instruments that improve

8 Data on the number, composition, and share of output supplied by State-Operated Enterprises (SOEs) and government investment as a share of total investment were used to construct the zero-to-10 ratings. Countries with more government enterprises and government investment received lower ratings.
9 A country is given a score on a graded scale from zero to three, with zero corresponding to the highest degree of repression and three indicating full liberalization. Reversals, such as the imposition of interest rate controls, are recorded as shifts from a higher to a lower score.
10 See Bond (2002) and Arellano (2003) for details and Baltagi (2008) for a general econometric analysis of panel data.

efficiency. It builds a system of two equations - the original equation as well as the transformed one - and is known as System GMM. In other words, a 'system GMM' estimator enables the lagged first-differences of the series (y_{it}; x_{it}; z_{it}) dated t-1 to be used as instruments for the untransformed equations in levels. Based on the combination of first-difference equations with suitably lagged levels as instruments, and levels equations with suitably lagged first-differences as instruments, the system GMM estimator generally produces more efficient and precise estimates by improving precision and reducing the finite sample bias (Baltagi, 2008).

Three notes are worth mentioned about the system GMM: a) the system GMM assumes that the twice-lagged residuals are not autocorrelated; hence we need to test for autocorrelation in the error terms. The *AR(1)* and *AR(2)* procedure tests directly for, respectively, first- and second-order residual autocorrelation. According to Arrelano and Bond (1991), the GMM estimator requires that there is first-order serial correlation but that there is no second-order serial correlation in the residuals[11]; b) the system GMM can generate an enormous number of potentially 'weak' instruments that can cause biased estimates. There are no clear rules concerning how many instruments is 'too many' (Roodman, 2006; 2007), but some rules of thumb may be used. First of all, the number of instruments should not exceed the number of observations[12]. Second, the p-value of the Hansen statistic should have a higher value than the conventional 0.050 or 0.100 levels (at least 0.250 as suggested by Roodman), in order to accept the null hypothesis that the model has correct specification and valid instrumentation; and c) the estimated coefficient on the lagged dependent variable in the model should indicate convergence by having a value less than unity ('steady state' assumption), otherwise system GMM is invalid.

As we can see from the tables that follow, all rules are satisfied and the specification tests – Arellano-Bond test for autocorrelation and the Hansen test of valid overidentifying restrictions – support the validity of the model specification.

Results

The objective of this section is to identify what factors explain financial development across 44 economies for the period of 1988–2007. The novelty of our study is to explicitly introduce monetary, fiscal and financial policy as determinants of financial development. We argue that the omission of such factors may bias existing results.

Decomposition of financial openness

In Table 1, we present the results for the stock market and the banking sector, decomposing financial openness. Overall financial openness index (namely FO) is decomposed into equity-related (foreign direct investment and portfolio equity, namely EQUITY) and loan-related (financial derivatives and debt, namely LOAN) assets and liabilities. Models 1 to 3 report the coefficients on each component of the financial openness variables when included separately in the regressions of stock market and models 4 to 6 report the coefficients

11 Since the null hypotheses are that there is no first-order / second-order serial correlation, it means that one needs to reject the null hypothesis in the AR(1) test but not to reject it in the AR(2) test to get appropriate diagnostics.

12 Our empirical approach uses System GMM based on the xtabond2 command developed by David Roodman for use with STATA, which offers unique features including observation weights, automatic Hansen testing, and the ability to "collapse" instruments to limit instrument proliferation.

on each component of the financial openness variables when included separately in the regressions of banking sector.

As expected, financial openness is highly associated with stock market development in all specifications (models 1-3). The coefficients of FO, EQUITY and LOAN for the stock market are 0.076422, 0.2020214 and 0.1019987, respectively. It is noticeable that the impact of EQUITY is greater than of political regime, which at best reaches -0.1672581 (model 3) and of gdp growth (0.0151378, model 2). The other variables, even though they are of the correct sign at most cases, are not statistically significant. In sum, political institutions (rather than economic institutions), financial openness (particularly risky assets and liabilities) and economic performance (gdp growth) are main determinants of stock market development.

A different logic prevails in the banking sector. Economic institutions are statistically significant in all cases (models 4-6). The coefficients of 0.0588339, 0.0571176 and 0.0658521 indicate the significant role and magnitude of economic institutions in the context of the banking sector development. Even though the banking sector is affected by a wide spectrum of variables (since trade, inflation, government size and interest rate controls are statistically important), economic institutions seem to have the greater effect. In sum, the results demonstrate that the banking sector is more responsive in changes in economic institutions and trade as well as in fiscal (government size), monetary (inflation) and financial (interest rate controls) policies.

Decomposition of economic institutions

So far we find that institutional qualities have a significant impact on financial development. Namely, the political regime seems to play a key role in stock market development for all countries, while economic institutional quality is important in banking sector development. Nevertheless, it is difficult to generally establish which economic institutional attribute is more important. Tables 2 and 3 reports results to address this issue. Overall economic institutions (ECON) is decomposed into government quality (GOVQUALITY) and legal structure (LEGAL). We did the same sensitivity analysis for the three dimensions of financial openness (FO, EQUITY, LOAN) and for the two dimensions of financial development (stock market, banking sector). Again, the results remain robust.

More specifically, when legal structure is the dimension of economic institutions (Table 2), the political regime (-0,12849655)[13], financial openness (0,1303036) and gdp growth (0,0147178) are main determinants of stock market sector development. On the other hand, economic institutions (0,069732), trade (0,010286433), inflation (-0,00091605), government size (0,0013375) and interest rate controls (0,0076999), are having a statistically significant impact on banking sector development. Furthermore, when government quality is the dimension of economic institutions (Table 3), the political regime (-0,1415777), financial openness (0,123268333) and gdp growth (0,014332) are main determinants of stock market sector development, while economic institutions (0,0430088), trade (0,008279133), inflation (-0.0008357), gdp growth (0.0014409), government size (0,00122375) and interest rate controls (0,006458067), are having a statistically significant impact on banking sector development.

13 The numbers in brackets are the averages of the statistically significant coefficients: for political institutions is the average of coefficients -0,1011646 (model 1) and -0,1558285 (model 3).

A result is noticeable from the previous analysis based on Tables 2 and 3: social institutions are statistically significant in the stock market, especially in the LOAN dimension of financial openness (model 3 in all Tables). The last one in a small indicator of the way that the stock market is operating. In contrast to the banking sector development, the stock market development seems to be partly unaffected by good economic institutions and good policies due to its speculative dimension. That's why it greatly depends on the development of risky assets and liabilities (variable EQUITY), and that's why not fully protected workers' rights (a feature of less developed countries) is probably connected with more risky but more profitable speculative activity.

In sum, as it was previously presented, the political is the institutional variable that matters in the stock market and the quality of government and/or legal structure is the main statistically significant variable in the banking sector. In sum, our main finding is that good institutions and good policies play a significant role for financial development.

Conclusions

Since the late 1980s, institutions and policies have been implemented in unparalleled scale across the developing world while financial development became one of the main components of economic growth. In this paper we go beyond the identification of the effects of an overall institutional index and try to provide a more comprehensive assessment of the financial development-institutions-policy links by asking which dimension of institutions (economic, political, social) matter vis-à-vis financial development and whether the effects of institutions and policies differ when the dependent variable differ (stock market or banking sector development).

Our main finding from the regression analysis is a robust relationship from institutions to financial development, a result consistent with most empirical studies. Also, we find a stronger effect from economic institutions to banking sector development and from political institutions to stock market development. When we use measures of economic institutions (government quality and legal structure), we find that the effect of legal structure is greater for banking sector development. Regarding the trade and finance link, we find that openness has a much stronger association with bank-based finance than with stock market development. As for financial openness, equity-related assets and liabilities have a more robust impact on stock market development. Finally, government policy in terms of less government enterprises / government investment and interest rate liberalization have a significant effect on the banking sector rather on the stock market sector.

We highlight two extensions of our study. First, it would be interesting to assess whether our findings hold as well for developed/industrialized and developing/new industrialized countries and second, it would be useful to investigate if the channels of financial development (banking sector - stock market) impact differently in different stages of economic development.

Table 1: Model Structure for Financial Openness

	Stock market		
	Model 1	**Model 2**	**Model 3**
Financial Development$_{-1}$	0.7848774*** (0.0676886)	0.7728131*** (0.0878394)	0.7637571*** (0.0667814)
Economic Institutions	0.0661346 (0.121365)	0.0658836 (0.132195)	0.0915555 (0.1212115)
Political Institutions	-0.1056864** (0.0456062)	-0.0244126 (0.0760781)	-0.1605853*** (0.0572852)
Social Institutions	-0.0388421 (0.0249517)	-0.0300839 (0.0276932)	-0.0469797* (0.0253536)
Financial Openness (FO)	0.076422*** (0.0285546)		
FO (EQUITY)		0.2020214** (0.0803056)	
FO (LOAN)			0.1019987*** (0.0364487)
Trade Openness (TO)	0.0147206 (0.0651795)	-0.0481047 (0.0790806)	0.05527 (0.0717264)
Inflation (INFL)	-0.0002929 (0.0037942)	-0.0003573 (0.0032164)	-0.0011614 (0.0053329)
Gdp growth (GDP)	0.0131543* (0.0077313)	0.0151378* (0.0080897)	0.0158297 (0.0098225)
Government size (GOV)	-0.0069147 (0.0064002)	-0.0048115 (0.0062632)	-0.0073221 (0.0067911)
Interest Rate Controls (RATE)	0.0109952 (0.0315941)	0.0188127 (0.0341517)	0.0149092 (0.0322638)
Arellano-Bond test for AR(1)	0.031	0.032	0.032
Arellano-Bond test for AR(2)	0.314	0.314	0.286
Hansen test of overid. restrictions	0.499	0.322	0.507
	Banking sector		
	Model 4	**Model 5**	**Model 6**
Financial Development$_{-1}$	0.8463392*** (0.0501344)	0.8609389*** (0.0448038)	0.830649*** (0.0607606)
Economic Institutions	0.0588339** (0.0269281)	0.0571176** (0.0249387)	0.0658521** (0.0325821)
Political Institutions	0.00123 (0.008411)	0.0009763 (0.00793)	0.0002438 (0.0104453)
Social Institutions	-0.0012531 (0.0025433)	-0.0010706 (0.0024669)	-0.0010064 (0.0025131)
Financial Openness (FO)	0.0008993 (0.0022653)		
FO (EQUITY)		0.0003838 (0.0052335)	
FO (LOAN)			0.0023012 (0.0038165)
Trade Openness (TO)	0.0085662** (0.0042615)	0.0092942* (0.0053566)	0.0099571** (0.0042427)
Inflation (INFL)	-0.000873* (0.0005182)	-0.0008541* (0.0004737)	-0.0008882 (0.0005749)
Gdp growth (GDP)	0.0010314 (0.0006654)	0.0007084 (0.0006944)	0.0010385 (0.0006666)
Government size (GOV)	0.001219* (0.0007457)	0.0010724* (0.0005873)	0.0010386 (0.0008792)
Interest Rate Controls (RATE)	0.0059099** (0.0026582)	0.0048797** (0.0022383)	0.0062893** (0.0029802)
Arellano-Bond test for AR(1)	0.001	0.001	0.003
Arellano-Bond test for AR(2)	0.251	0.235	0.251
Hansen test of overid. restrictions	0.705	0.562	0.599

Regressions use 'System GMM' based on the xtabond2 command developed by Roodman (2006) for use with STATA. Robust standard errors are reported in brackets. *** , **, and * denote significance at the 1%, 5%, and 10% level, respectively. Arellano-Bond test for serial correlation and Hansen test for over-identifying restrictions report p-value.

Table 2: Model Structure for Legal Structure

	Stock market		
	Model 1	**Model 2**	**Model 3**
Financial Development$_{-1}$	0.7878834*** (0.0696105)	0.7729704*** (0.0882394)	0.7683721*** (0.0679505)
Economic Institutions	0.0055 (0.0107328)	-0.003217 (0.0116251)	0.052136 (0.0098129)
Political Institutions	-0.1011646** (0.0475521)	-0.0145504 (0.0737626)	-0.1558285*** (0.0597364)
Social Institutions	-0.0344425 (0.0252749)	-0.0250371 (0.0267042)	-0.0439582* (0.0251918)
Financial Openness (FO)	0.0789849*** (0.0292567)		
FO (EQUITY)		0.209834*** (0.0818276)	
FO (LOAN)			0.102092*** (0.0366665)
Trade Openness (TO)	0.0112557 (0.0650335)	-0.0544845 (0.0781511)	0.0518222 (0.0715374)
Inflation (INFL)	-0.000488 (0.0039594)	-0.0004859 (0.0033605)	-0.0012631 (0.0053125)
Gdp growth (GDP)	0.0138031* (0.0083653)	0.0156325* (0.008499)	0.0162444 (0.0106369)
Government size (GOV)	-0.0061795 (0.0064911)	-0.0037896 (0.0063339)	-0.0066283 (0.0068627)
Interest Rate Controls (RATE)	0.0196357 (0.0321663)	0.0291567 (0.0351941)	0.0212986 (0.0301429)
Arellano-Bond test for AR(1)	0.031	0.032	0.032
Arellano-Bond test for AR(2)	0.312	0.313	0.284
Hansen test of overid. restrictions	0.486	0.320	0.508
	Banking sector		
	Model 4	**Model 5**	**Model 6**
Financial Development$_{-1}$	0.8096985*** (0.0641474)	0.8302933*** (0.0630943)	0.7995258*** (0.0731821)
Economic Institutions	0.06967** (0.0029904)	0.065937** (0.0031914)	0.073589** (0.0034051)
Political Institutions	0.0093101 (0.010563)	0.0068157 (0.01029)	0.0068971 (0.0124879)
Social Institutions	-0.0000849 (0.0022492)	-0.0001505 (0.0023175)	-0.0002234 (0.0024209)
Financial Openness (FO)	0.0003248 (0.0031158)		
FO (EQUITY)		-0.0015717 (0.006193)	
FO (LOAN)			0.0023455 (0.0052107)
Trade Openness (TO)	0.0094025* (0.0048823)	0.0107291* (0.0060528)	0.0107277** (0.0048932)
Inflation (INFL)	-0.0009376* (0.0005335)	-0.0008945* (0.0004758)	-0.0009321 (0.0005781)
Gdp growth (GDP)	0.0008791 (0.0007029)	0.0004627 (0.0005485)	0.0010013 (0.0007628)
Government size (GOV)	0.001451* (0.0008536)	0.001224** (0.000615)	0.0011713 (0.0009914)
Interest Rate Controls (RATE)	0.007894** (0.0030932)	0.0069587*** (0.0025677)	0.008247** (0.0034444)
Arellano-Bond test for AR(1)	0.003	0.002	0.005
Arellano-Bond test for AR(2)	0.245	0.229	0.246
Hansen test of overid. restrictions	0.716	0.615	0.658

Regressions use 'System GMM' based on the xtabond2 command developed by Roodman (2006) for use with STATA. Robust standard errors are reported in brackets. *** , **, and * denote significance at the 1%, 5%, and 10% level, respectively. Arellano-Bond test for serial correlation and Hansen test for over-identifying restrictions report p-value.

Table 3: Model Structure for Government Quality

	Stock market		
	Model 1	**Model 2**	**Model 3**
Financial Development$_{-1}$	0.7806613*** (0.0653373)	0.769474*** (0.0870496)	0.7604467*** (0.0642246)
Economic Institutions	0.1256864 (0.1106729)	0.1360441 (0.1235881)	0.1254266 (0.1199491)
Political Institutions	-0.1158973** (0.0481128)	-0.0427589 (0.0780926)	-0.1672581*** (0.0570592)
Social Institutions	-0.042686* (0.0245123)	-0.0340261 (0.0273914)	-0.0490702* (0.0255115)
Financial Openness (FO)	0.0741457*** (0.0271649)		
FO (EQUITY)		0.1946991** (0.0766571)	
FO (LOAN)			0.1009602*** (0.0344947)
Trade Openness (TO)	0.0176248 (0.0647652)	-0.0407758 (0.0783271)	0.0571892 (0.0705573)
Inflation (INFL)	-0.0001094 (0.0037362)	-0.0003232 (0.0031949)	-0.0010267 (0.0052415)
Gdp growth (GDP)	0.0128817* (0.0073972)	0.0148679* (0.0077438)	0.0152464* (0.0089492)
Government size (GOV)	-0.0075179 (0.0063765)	-0.0057752 (0.0062765)	-0.0076135 (0.0068227)
Interest Rate Controls (RATE)	0.0016059 (0.0287152)	0.0073843 (0.0309719)	0.0087983 (0.0318161)
Arellano-Bond test for AR(1)	0.031	0.033	0.031
Arellano-Bond test for AR(2)	0.317	0.316	0.291
Hansen test of overid. restrictions	0.519	0.330	0.513
	Banking sector		
	Model 4	**Model 5**	**Model 6**
Financial Development$_{-1}$	0.8588958*** (0.0440286)	0.8715596*** (0.0357883)	0.8520422*** (0.052281)
Economic Institutions	0.0427428** (0.0211951)	0.0428871*** (0.0164403)	0.0433965* (0.0248831)
Political Institutions	-0.0025234 (0.0078156)	-0.001718 (0.0070317)	-0.0039308 (0.0095909)
Social Institutions	-0.0004623 (0.0028084)	-0.0002275 (0.0026849)	-0.0001406 (0.0029694)
Financial Openness (FO)	0.0019569 (0.0019277)		
FO (EQUITY)		0.0027422 (0.0047539)	
FO (LOAN)			0.0035017 (0.0034781)
Trade Openness (TO)	0.0079891* (0.0044046)	0.0083826* (0.0049455)	0.0084657* (0.004687)
Inflation (INFL)	-0.0008321 (0.0005448)	-0.0008357* (0.000492)	-0.0008641 (0.0006219)
Gdp growth (GDP)	0.0013006 (0.0008069)	0.0009934 (0.0008029)	0.0014409* (0.0008616)
Government size (GOV)	0.0012679* (0.0007591)	0.0011796* (0.0006348)	0.0011896 (0.0008589)
Interest Rate Controls (RATE)	0.0066518** (0.0027863)	0.0054668** (0.0025441)	0.0072556** (0.0032269)
Arellano-Bond test for AR(1)	0.001	0.000	0.001
Arellano-Bond test for AR(2)	0.289	0.272	0.297
Hansen test of overid. restrictions	0.742	0.568	0.603

Regressions use 'System GMM' based on the xtabond2 command developed by Roodman (2006) for use with STATA. Robust standard errors are reported in brackets. *** , **, and * denote significance at the 1%, 5%, and 10% level, respectively. Arellano-Bond test for serial correlation and Hansen test for over-identifying restrictions report p-value.

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