

Growth Effect of FSL

“Does FSL Spur Growth?” Geert Bekaert,

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Financial Sector Liberalization (FSL)

Domestic Financial Liberalization (DFL) and Capital Account Liberalization (KAL)

FSL promises:

1. Improvement in global capital allocation
2. Enhance opportunities to savers and investors that will lead to an improved macroeconomic performance
3. Create more instruments, e.g., derivatives
4. Force government to bear a “healthy discipline” for macroeconomic stability.

Domestic Financial Liberalization (DFL) and Capital Account Liberalization (KAL)

- DFL: Two important policies are: (1) lower the reserve requirement (rr); and (2) raise competition in the banking sector. The idea is, *lowering rr will increase credits, and increased competition will raise efficiency*, hence better intermediaries and better credit allocation.
- KAL: liberalizing capital account *will let capital to flow more easily to be channeled through domestic intermediaries (either banks or firms), allowing more competition*. In either case, pressures for higher efficiency in domestic banks are introduced, including greater willingness to take forex risks. KAL can also detect policy inconsistencies.

Panel A: Annual Average Real GDP Growth Rate

Years				Country				
-10	-7	-5	-3		3	5	7	10
-0.0054	-0.0104	-0.0102	0.0105	Argentina	-0.0100	0.0182	0.0143	*
-0.0042	0.0139	0.0019	-0.0216	Brazil	0.0031	0.0160	0.0160	*
0.0237	0.0507	0.0527	0.0541	Chile	0.0631	0.0663	*	*
0.0126	0.0206	0.0245	0.0179	Colombia	0.0187	0.0261	0.0204	*
0.0151	0.0082	0.0116	0.0207	Greece	0.0214	0.0157	0.0105	0.0131
0.0301	0.0315	0.0323	0.0209	India	0.0420	0.0468	*	*
-0.0185	-0.0294	0.0057	0.0498	Jordan	-0.0021	*	*	*
*	*	0.0344	0.0357	Japan	0.0211	0.0265	0.0272	0.0336
0.0783	0.0800	0.0813	0.0699	Korea	0.0535	0.0580	*	*
0.0279	0.0176	0.0097	-0.0114	Malaysia	0.0583	0.0566	0.0574	0.0575
0.0010	-0.0258	-0.0085	-0.0231	Mexico	0.0252	0.0187	0.0054	*
0.0207	0.0169	0.0182	0.0102	New Zealand	-0.0025	-0.0097	0.0012	0.0052
0.0152	0.0188	0.0051	-0.0143	Nigeria	0.0128	*	*	*
0.0343	0.0315	0.0303	0.0294	Pakistan	0.0240	0.0221	0.0149	*
-0.0092	-0.0156	0.0192	0.0249	Philippines	-0.0169	-0.0017	0.0076	*
-0.0174	-0.0161	-0.0074	-0.0177	South Africa	-0.0152	-0.0045	*	*
0.0412	0.0345	0.0352	0.0359	Thailand	0.0936	0.0869	0.0808	0.0757
-0.0284	-0.0184	-0.0111	-0.0248	Venezuela	0.0459	0.0144	0.0087	*
-0.0070	-0.0042	0.0011	-0.0186	Zimbabwe	0.0013	0.0131	*	*
0.0407	0.0341	0.0369	0.0392	Indonesia	0.0685	0.0622	0.0614	*
0.0197	0.0139	0.0039	-0.0010	Portugal	0.0597	0.0558	0.0472	0.0363
0.0174	0.0302	0.0354	0.0393	Turkey	0.0118	0.0268	0.0157	*
0.0125	0.0083	0.0051	0.0068	Spain	0.0315	0.0374	0.0346	0.0254
0.0258	0.0229	0.0203	0.0296	Sri Lanka	0.0427	0.0390	*	*
				Average	0.0271	0.0334	0.0277	0.0432
				# of increases	16 (of 24 valid)	16 (of 22)	11 (of 15)	4 (of 6)

**Panel B: Cross-Sectional Comparison
Annual Average Real GDP Growth Rate**

	k = 3	5	7	10
Full Liberalized	0.0234	0.0226	0.0213	0.0204
Never Liberalized	-0.0008	0.0014	0.0018	0.0032

The variable we explore in this table is the k-year average growth rate of real per capita gross domestic product. Official liberalization means that the equity market is liberalized. Full liberalized denotes countries that are fully liberalized throughout our sample, whereas

Table 2: Classic Growth Regression and the Impact of Liberalization

Annual Average Real GDP Growth Rate (k=5)

Panel A: Classic Growth Regression

	Sample I	II	III	IV
Constant	-0.2369	-0.2581	-0.1559	-0.3438
<i>Std. error</i>	<i>0.0181</i>	<i>0.0216</i>	<i>0.0295</i>	<i>0.0538</i>
Log(GDP)	-0.0071	-0.0069	-0.0093	-0.0156
<i>Std. error</i>	<i>0.0006</i>	<i>0.0006</i>	<i>0.0007</i>	<i>0.0011</i>
Govt/GDP	-0.0044	-0.0175	-0.0212	-0.0158
<i>Std. error</i>	<i>0.0085</i>	<i>0.0096</i>	<i>0.0105</i>	<i>0.0164</i>
Enrollment	0.0277	0.0059	0.0162	0.0624
<i>Std. error</i>	<i>0.0079</i>	<i>0.0098</i>	<i>0.0119</i>	<i>0.0174</i>
Population Growth	-0.5978	-0.6037	-0.9389	-1.2056
<i>Std. error</i>	<i>0.0577</i>	<i>0.0642</i>	<i>0.0791</i>	<i>0.1121</i>
Log(Life Expectancy)	0.0746	0.0806	0.0624	0.1182
<i>Std. error</i>	<i>0.0049</i>	<i>0.0057</i>	<i>0.0079</i>	<i>0.0140</i>

Panel B: Classic Growth Regression with Liberalization Indicator

	Sample I	II	III	IV
Constant	-0.2281	-0.2374	-0.1493	-0.2018
<i>Std. error</i>	<i>0.0179</i>	<i>0.0214</i>	<i>0.0286</i>	<i>0.0658</i>
Log(GDP)	-0.0094	-0.0088	-0.0115	-0.0158
<i>Std. error</i>	<i>0.0007</i>	<i>0.0007</i>	<i>0.0008</i>	<i>0.0011</i>
Govt/GDP	-0.0039	-0.0178	-0.0187	-0.0301
<i>Std. error</i>	<i>0.0087</i>	<i>0.0098</i>	<i>0.0105</i>	<i>0.0165</i>
Enrollment	0.0305	0.0112	0.0243	0.0566
<i>Std. error</i>	<i>0.0077</i>	<i>0.0097</i>	<i>0.0116</i>	<i>0.0171</i>
Population Growth	-0.5594	-0.5731	-0.8159	-1.1013
<i>Std. error</i>	<i>0.0621</i>	<i>0.0691</i>	<i>0.0835</i>	<i>0.1151</i>
Log(Life Expectancy)	0.0755	0.0781	0.0627	0.0838
<i>Std. error</i>	<i>0.0049</i>	<i>0.0056</i>	<i>0.0076</i>	<i>0.0167</i>
Official Liberalization Indicator	0.0095	0.0083	0.0113	0.0130
<i>Std. error</i>	<i>0.0016</i>	<i>0.0017</i>	<i>0.0020</i>	<i>0.0036</i>

I, II, III, and IV refer to samples of 95, 75, 50 and 28 countries detailed in appendix table A1. The dependent variable is the 5-year average growth rate of real per capita gross domestic product.

Log(GDP) is the log real per capita GDP level in 1980. Govt/GDP is the ratio of government consumption to GDP; Enrollment is the secondary school enrollment ratio; Population growth is the growth rate of total population; Log(Life Expectancy) is the log life expectancy of the total population; and the official liberalization variable takes a value of one when the equity market is liberalized, and zero otherwise. The weighting matrix we employ in our GMM estimation provides a correction for cross-sectional heteroskedasticity. All standard errors account for the overlapping nature of the data.

Table 3: Robustness of the Liberalization Effect
Annual Average Real GDP Growth Rate (k=5)

Panel A: Sensitivity to Alternative Liberalization Dates

	Sample I	II	III	IV
Constant	-0.2240	-0.2344	-0.1373	-0.2351
<i>Std. error</i>	0.0178	0.0213	0.0290	0.0653
Log(GDP)	-0.0093	-0.0088	-0.0105	-0.0150
<i>Std. error</i>	0.0006	0.0006	0.0007	0.0012
Govt/GDP	-0.0019	-0.0158	-0.0236	-0.0229
<i>Std. error</i>	0.0088	0.0099	0.0107	0.0165
Enrollment	0.0304	0.0108	0.0224	0.0572
<i>Std. error</i>	0.0078	0.0098	0.0116	0.0173
Population Growth	-0.5531	-0.5682	-0.7913	-1.1104
<i>Std. error</i>	0.0620	0.0686	0.0838	0.1183
Log(Life Expectancy)	0.0742	0.0772	0.0582	0.0900
<i>Std. error</i>	0.0048	0.0056	0.0077	0.0170
First Sign Liberalization Indicator	0.0102	0.0091	0.0105	0.0094
<i>Std. error</i>	0.0015	0.0016	0.0018	0.0033

Panel B: Sensitivity to Regional Influences

	Sample I	II	III	IV
Constant	-0.2268	-0.2347	-0.1571	-0.2095
<i>Std. error</i>	0.0180	0.0214	0.0288	0.0645
Log(GDP)	-0.0096	-0.0090	-0.0117	-0.0158
<i>Std. error</i>	0.0007	0.0007	0.0007	0.0011
Govt/GDP	-0.0049	-0.0197	-0.0236	-0.0318
<i>Std. error</i>	0.0088	0.0099	0.0106	0.0169
Enrollment	0.0305	0.0110	0.0225	0.0553
<i>Std. error</i>	0.0078	0.0098	0.0115	0.0171
Population Growth	-0.5454	-0.5569	-0.7493	-1.0934
<i>Std. error</i>	0.0631	0.0706	0.0857	0.1158
Log(Life Expectancy)	0.0754	0.0777	0.0649	0.0854
<i>Std. error</i>	0.0049	0.0057	0.0077	0.0164
Official Liberalization Indicator (Latin)	0.0089	0.0075	0.0068	0.0138
<i>Std. error</i>	0.0034	0.0034	0.0035	0.0071
Official Liberalization Indicator (Not-Latin)	0.0108	0.0099	0.0136	0.0133
<i>Std. error</i>	0.0016	0.0017	0.0019	0.0035

Panel C: Sensitivity to Business Cycle:

Lagged World Growth and Real Interest Rates

	Sample I	II	III	IV
Constant	-0.2334	-0.2453	-0.1654	-0.2437
<i>Std. error</i>	0.0185	0.0220	0.0304	0.0678
Log(GDP)	-0.0095	-0.0089	-0.0118	-0.0162
<i>Std. error</i>	0.0007	0.0007	0.0008	0.0011
Govt/GDP	-0.0053	-0.0188	-0.0211	-0.0293
<i>Std. error</i>	0.0088	0.0099	0.0107	0.0165
Enrollment	0.0322	0.0117	0.0244	0.0559
<i>Std. error</i>	0.0077	0.0098	0.0116	0.0169
Population Growth	-0.5503	-0.5553	-0.7864	-1.0202
<i>Std. error</i>	0.0627	0.0701	0.0853	0.1195
Log(Life Expectancy)	0.0762	0.0793	0.0656	0.0924
<i>Std. error</i>	0.0049	0.0057	0.0079	0.0170
OECD GDP growth (lagged)	0.0614	0.0349	0.0444	0.0424
<i>Std. error</i>	0.0317	0.0342	0.0334	0.0413
World real interest rate (lagged)	0.0337	0.0473	0.0834	0.1069
<i>Std. error</i>	0.0325	0.0352	0.0350	0.0434
Official Liberalization Indicator	0.0101	0.0089	0.0123	0.0133
<i>Std. error</i>	0.0016	0.0017	0.0020	0.0036

Panel D: Sensitivity to Business Cycle:

Contemporaneous World Growth and Real Interest Rates

	Sample I	II	III	IV
Constant	-0.2241	-0.2371	-0.1536	-0.2240
<i>Std. error</i>	0.0185	0.0220	0.0309	0.0670
Log(GDP)	-0.0093	-0.0087	-0.0115	-0.0161
<i>Std. error</i>	0.0007	0.0007	0.0008	0.0011
Govt/GDP	-0.0084	-0.0203	-0.0233	-0.0307
<i>Std. error</i>	0.0087	0.0098	0.0107	0.0165
Enrollment	0.0367	0.0174	0.0302	0.0634
<i>Std. error</i>	0.0076	0.0098	0.0115	0.0164
Population Growth	-0.5574	-0.5619	-0.7824	-1.0136
<i>Std. error</i>	0.0623	0.0699	0.0855	0.1240
Log(Life Expectancy)	0.0744	0.0778	0.0631	0.0883
<i>Std. error</i>	0.0050	0.0057	0.0081	0.0168
OECD GDP growth (contemporaneous)	0.1469	0.1177	0.1435	0.1695
<i>Std. error</i>	0.0301	0.0328	0.0315	0.0394
World real interest rate (contemporaneous)	-0.0625	-0.0484	-0.0132	-0.0182
<i>Std. error</i>	0.0282	0.0309	0.0300	0.0372
Official Liberalization Indicator	0.0097	0.0085	0.0124	0.0141
<i>Std. error</i>	0.0016	0.0017	0.0020	0.0036

Table 5: Macroeconomic Reforms and Financial Liberalization

Annual Average Real GDP Growth Rate (k=5)

Panel A: Inflation

	Sample I	II	III	IV
Constant	-0.2447	-0.2628	-0.1494	-0.1717
<i>Std. error</i>	<i>0.0181</i>	<i>0.0216</i>	<i>0.0294</i>	<i>0.0631</i>
Log(GDP)	-0.0094	-0.0088	-0.0120	-0.0167
<i>Std. error</i>	<i>0.0007</i>	<i>0.0007</i>	<i>0.0008</i>	<i>0.0011</i>
Govt/GDP	-0.0122	-0.0263	-0.0303	-0.0344
<i>Std. error</i>	<i>0.0091</i>	<i>0.0103</i>	<i>0.0109</i>	<i>0.0134</i>
Enrollment	0.0100	-0.0167	0.0057	0.0574
<i>Std. error</i>	<i>0.0083</i>	<i>0.0103</i>	<i>0.0121</i>	<i>0.0169</i>
Population Growth	-0.4966	-0.4954	-0.8100	-1.1441
<i>Std. error</i>	<i>0.0589</i>	<i>0.0684</i>	<i>0.0842</i>	<i>0.1167</i>
Log(Life Expectancy)	0.0789	0.0840	0.0638	0.0775
<i>Std. error</i>	<i>0.0049</i>	<i>0.0057</i>	<i>0.0078</i>	<i>0.0159</i>
Trade	0.0095	0.0108	0.0090	0.0084
<i>Std. error</i>	<i>0.0011</i>	<i>0.0012</i>	<i>0.0012</i>	<i>0.0013</i>
Inflation (Latin)	0.0001	0.0001	0.0005	0.0003
<i>Std. error</i>	<i>0.0002</i>	<i>0.0002</i>	<i>0.0003</i>	<i>0.0004</i>
Inflation (Non-Latin)	0.0030	0.0021	0.0042	-0.0492
<i>Std. error</i>	<i>0.0022</i>	<i>0.0024</i>	<i>0.0039</i>	<i>0.0134</i>
Official Liberalization Indicator	0.0102	0.0084	0.0112	0.0088
<i>Std. error</i>	<i>0.0016</i>	<i>0.0017</i>	<i>0.0020</i>	<i>0.0034</i>

Panel B: Inflation High-Low Spread

	I	II	III	IV
Constant	-0.2368	-0.2549	-0.1564	-0.3184
<i>Std. error</i>	<i>0.0183</i>	<i>0.0218</i>	<i>0.0292</i>	<i>0.0708</i>
Log(GDP)	-0.0095	-0.0089	-0.0120	-0.0170
<i>Std. error</i>	<i>0.0007</i>	<i>0.0007</i>	<i>0.0008</i>	<i>0.0011</i>
Govt/GDP	-0.0207	-0.0339	-0.0318	-0.0251
<i>Std. error</i>	<i>0.0093</i>	<i>0.0104</i>	<i>0.0107</i>	<i>0.0169</i>
Enrollment	0.0128	-0.0146	0.0066	0.0364
<i>Std. error</i>	<i>0.0083</i>	<i>0.0104</i>	<i>0.0119</i>	<i>0.0171</i>
Population Growth	-0.5210	-0.5098	-0.8138	-1.1565
<i>Std. error</i>	<i>0.0595</i>	<i>0.0686</i>	<i>0.0839</i>	<i>0.1207</i>
Log(Life Expectancy)	0.0775	0.0825	0.0656	0.1133
<i>Std. error</i>	<i>0.0050</i>	<i>0.0057</i>	<i>0.0078</i>	<i>0.0180</i>
Trade	0.0092	0.0105	0.0087	0.0089
<i>Std. error</i>	<i>0.0011</i>	<i>0.0012</i>	<i>0.0012</i>	<i>0.0013</i>
Inflation Spread (Latin)	0.0002	0.0002	0.0005	0.0006
<i>Std. error</i>	<i>0.0001</i>	<i>0.0001</i>	<i>0.0002</i>	<i>0.0003</i>
Inflation Spread (Non-Latin)	0.0050	0.0041	0.0081	0.0651
<i>Std. error</i>	<i>0.0019</i>	<i>0.0020</i>	<i>0.0030</i>	<i>0.0207</i>
Official Liberalization Indicator	0.0113	0.0094	0.0115	0.0074
<i>Std. error</i>	<i>0.0016</i>	<i>0.0017</i>	<i>0.0019</i>	<i>0.0036</i>

Table 6: Financial Development versus Financial Liberalization

Annual Average Real GDP Growth Rate (k=5)

Panel A: Banking Sector Development

	Sample I	II	III	IV
Constant	-0.2288	-0.2481	-0.1450	-0.3366
<i>Std. error</i>	0.0182	0.0216	0.0291	0.0708
Log(GDP)	-0.0104	-0.0099	-0.0133	-0.0186
<i>Std. error</i>	0.0007	0.0008	0.0008	0.0013
Govt/GDP	-0.0233	-0.0371	-0.0323	-0.0124
<i>Std. error</i>	0.0095	0.0108	0.0110	0.0188
Enrollment	0.0067	-0.0248	-0.0080	0.0226
<i>Std. error</i>	0.0086	0.0107	0.0126	0.0182
Population Growth	-0.5323	-0.5195	-0.8594	-1.2297
<i>Std. error</i>	0.0587	0.0684	0.0848	0.1290
Log(Life Expectancy)	0.0768	0.0825	0.0651	0.1203
<i>Std. error</i>	0.0050	0.0058	0.0077	0.0180
Trade	0.0092	0.0107	0.0096	0.0102
<i>Std. error</i>	0.0011	0.0011	0.0012	0.0014
Inflation Spread (Latin)	0.0002	0.0002	0.0006	0.0008
<i>Std. error</i>	0.0001	0.0001	0.0002	0.0003
Inflation Spread (Non-Latin)	0.0053	0.0042	0.0087	0.0736
<i>Std. error</i>	0.0019	0.0020	0.0031	0.0215
Private Credit	0.0086	0.0100	0.0087	0.0066
<i>Std. error</i>	0.0020	0.0021	0.0022	0.0026
Official Liberalization Indicator	0.0098	0.0076	0.0104	0.0061
<i>Std. error</i>	0.0016	0.0017	0.0019	0.0036

Panel B: Banking Sector and Equity Market Development

	Sample III	IV
Constant	-0.1373	-0.3304
<i>Std. error</i>	0.0309	0.0746
Log(GDP)	-0.0126	-0.0180
<i>Std. error</i>	0.0008	0.0013
Govt/GDP	-0.0387	-0.0127
<i>Std. error</i>	0.0109	0.0185
Enrollment	-0.0069	0.0143
<i>Std. error</i>	0.0127	0.0184
Population Growth	-0.8127	-1.3198
<i>Std. error</i>	0.0901	0.1419
Log(Life Expectancy)	0.0606	0.1155
<i>Std. error</i>	0.0083	0.0187
Trade	0.0110	0.0119
<i>Std. error</i>	0.0012	0.0015
Inflation Spread (Latin)	0.0005	0.0009
<i>Std. error</i>	0.0002	0.0003
Inflation Spread (Non-Latin)	0.0075	0.0961
<i>Std. error</i>	0.0024	0.0226
Private Credit	0.0051	0.0059
<i>Std. error</i>	0.0022	0.0026
Turnover	0.0076	0.0078
<i>Std. error</i>	0.0023	0.0023
Log(# of dom companies)	0.0010	0.0014
<i>Std. error</i>	0.0004	0.0006
Official Liberalization Indicator	0.0083	0.0036
<i>Std. error</i>	0.0019	0.0036

Panel A: Effects of Financial Liberalization on Financial Development

Sample III: 50 countries

Dependent Variable: Average Turnover	k = 1	2	3
Constant	-1.3634	-1.4573	-1.5860
<i>Std. error</i>	0.2319	0.2121	0.1982
Log(GDP)	0.0211	0.0200	0.0161
<i>Std. error</i>	0.0062	0.0058	0.0057
Govt/GDP	-0.3103	-0.3185	-0.3387
<i>Std. error</i>	0.1012	0.0909	0.0843
Enrollment	0.1094	0.1109	0.0808
<i>Std. error</i>	0.0903	0.0819	0.0805
Population Growth	0.9376	1.1719	1.3368
<i>Std. error</i>	0.7442	0.6752	0.6314
Log(Life Expectancy)	0.3183	0.3431	0.3839
<i>Std. error</i>	0.0606	0.0558	0.0530
Official Liberalization Indicator	0.1611	0.1605	0.1660
<i>Std. error</i>	0.0157	0.0147	0.0144

Sample III: 50 countries

Dependent Variable: Average Log(# of stocks)	k = 1	2	3
Constant	-1.2640	-1.1084	-0.9963
<i>Std. error</i>	1.0370	1.0100	0.9699
Log(GDP)	0.0058	0.0048	0.0017
<i>Std. error</i>	0.0261	0.0260	0.0259
Govt/GDP	-1.2926	-1.3743	-1.4821
<i>Std. error</i>	0.3406	0.3320	0.3160
Enrollment	0.1441	0.0992	-0.0221
<i>Std. error</i>	0.3707	0.3682	0.3593
Population Growth	-3.5210	-4.0686	-4.2086
<i>Std. error</i>	2.5320	2.4068	2.1532
Log(Life Expectancy)	1.5207	1.4988	1.4925
<i>Std. error</i>	0.2681	0.2609	0.2515
Official Liberalization Indicator	0.4675	0.4566	0.4681
<i>Std. error</i>	0.0585	0.0589	0.0599

Sample I: 95 countries

Dependent Variable: Average Private Credit/GDP	k = 1	2	3
Constant	-0.9338	-0.8889	-0.8891
<i>Std. error</i>	0.0699	0.0718	0.0721
Log(GDP)	0.0850	0.0878	0.0870
<i>Std. error</i>	0.0041	0.0041	0.0042
Govt/GDP	0.2554	0.2068	0.1757
<i>Std. error</i>	0.0478	0.0465	0.0454
Enrollment	0.5231	0.5822	0.5971
<i>Std. error</i>	0.0445	0.0452	0.0457
Population Growth	-0.1110	0.0049	0.0848
<i>Std. error</i>	0.1996	0.2000	0.2002
Log(Life Expectancy)	0.1196	0.1025	0.1039
<i>Std. error</i>	0.0223	0.0229	0.0231
Official Liberalization Indicator	0.2223	0.2226	0.2285
<i>Std. error</i>	0.0091	0.0093	0.0095

Sample III: 50 countries

Dependent Variable: Average Private Credit/GDP	k = 1	2	3
Constant	-0.7842	-0.7317	-0.7002
<i>Std. error</i>	0.2572	0.2517	0.2475
Log(GDP)	0.1303	0.1300	0.1291
<i>Std. error</i>	0.0066	0.0066	0.0066
Govt/GDP	0.2000	0.1869	0.1703
<i>Std. error</i>	0.1127	0.1096	0.1062
Enrollment	1.2484	1.2502	1.2397
<i>Std. error</i>	0.0916	0.0902	0.0904
Population Growth	2.4165	2.5392	2.6223
<i>Std. error</i>	0.7425	0.7276	0.7205
Log(Life Expectancy)	-0.0262	-0.0386	-0.0438
<i>Std. error</i>	0.0665	0.0651	0.0640
Official Liberalization Indicator	0.1144	0.1227	0.1290
<i>Std. error</i>	0.0139	0.0142	0.0146

Panel B: Effects of Financial Development on Probability of Financial Liberalization

Dependent Variable: 1996 Official Liberalization Indicator

Independent Variables are average of previous 5 years

50 countries

Dependent Variable: 1996 Official Liberalization Indicator

Constant	-11.773
<i>Std. error</i>	<i>16.468</i>
Log(GDP)	0.669
<i>Std. error</i>	<i>1.484</i>
Govt/GDP	14.476
<i>Std. error</i>	<i>23.590</i>
Private Credit	-2.561
<i>Std. error</i>	<i>6.957</i>
Turnover	7.376
<i>Std. error</i>	<i>11.816</i>
Log(# of dom companies)	0.939
<i>Std. error</i>	<i>0.862</i>

Dependent Variable: 1993 Official Liberalization Indicator

Constant	-6.044
<i>Std. error</i>	<i>4.260</i>
Log(GDP)	0.720
<i>Std. error</i>	<i>0.654</i>
Govt/GDP	-11.585
<i>Std. error</i>	<i>4.929</i>
Private Credit	0.438
<i>Std. error</i>	<i>3.111</i>
Turnover	0.175
<i>Std. error</i>	<i>1.848</i>
Log(# of dom companies)	0.537
<i>Std. error</i>	<i>0.300</i>

Dependent Variable: 1990 Official Lib Indicator

Constant	-6.908
<i>Std. error</i>	<i>2.507</i>
Log(GDP)	1.370
<i>Std. error</i>	<i>0.741</i>
Govt/GDP	-14.068
<i>Std. error</i>	<i>12.733</i>
Private Credit	1.264
<i>Std. error</i>	<i>1.829</i>
Turnover	0.258
<i>Std. error</i>	<i>1.291</i>
Log(# of dom companies)	-0.360
<i>Std. error</i>	<i>0.451</i>

Dependent Variable: 1987 Official Lib Indicator

Constant	-11.137
<i>Std. error</i>	<i>3.909</i>
Log(GDP)	1.405
<i>Std. error</i>	<i>0.515</i>
Govt/GDP	-4.910
<i>Std. error</i>	<i>7.734</i>
Private Credit	1.774
<i>Std. error</i>	<i>3.091</i>
Turnover	-0.335
<i>Std. error</i>	<i>2.327</i>
Log(# of dom companies)	-0.145
<i>Std. error</i>	<i>0.429</i>

I and III refers to samples of 95 and 50 countries detailed in appendix table A1. In Panel A, the dependent variable is the 1, 2, or 3-year average of either equity markets turnover, log number of companies, or private credit to GDP ratio. The weighting matrix we employ in our GMM estimation provides a correction for cross-sectional heteroskedasticity. All standard errors are robust, accounting for the overlapping nature of the data. In Panel B, the dependent variable is the official liberalization indicator. A cross-sectional Probit model is estimated for 1987, 1990, 1993, 1996 using Oproi Maximum Likelihood Methods (BHHH algorithm), with OMLE adjusted robust standard errors. In this case, each right hand side variable is the preceding 5-year average of the

Table 8: The Sources of the Liberalization Effect**Liberalization and the Components of GDP****Panel A: Annual Average Investment/GDP Ratio (k=5)**

	Sample I	II	III	IV
Constant	-0.3370	-0.3165	-0.4205	0.1725
<i>Std. error</i>	0.0287	0.0326	0.0632	0.1188
Log(GDP)	-0.0157	-0.0130	-0.0148	-0.0109
<i>Std. error</i>	0.0011	0.0010	0.0015	0.0020
Govt/GDP	-0.0147	-0.0285	0.0023	-0.1097
<i>Std. error</i>	0.0149	0.0152	0.0207	0.0315
Enrollment	0.7288	0.6498	0.7024	0.7951
<i>Std. error</i>	0.0156	0.0187	0.0232	0.0303
Population Growth	0.2270	0.2899	0.0554	-0.8799
<i>Std. error</i>	0.0796	0.0759	0.1637	0.2153
Log(Life Expectancy)	0.1230	0.1175	0.1428	-0.0029
<i>Std. error</i>	0.0083	0.0092	0.0166	0.0302
Official Liberalization Indicator	0.0141	0.0116	0.0079	0.0127
<i>Std. error</i>	0.0025	0.0026	0.0034	0.0053

Panel B: Annual Average Consumption/GDP Ratio (k=5)

	Sample I	II	III	IV
Constant	1.7627	0.9759	0.5343	0.6856
<i>Std. error</i>	0.0429	0.0642	0.0811	0.1171
Log(GDP)	-0.0418	-0.0270	-0.0206	-0.0093
<i>Std. error</i>	0.0017	0.0020	0.0021	0.0017
Govt/GDP	-0.4817	-0.4814	-0.4089	-0.8128
<i>Std. error</i>	0.0269	0.0292	0.0259	0.0283
Enrollment	-0.2665	-0.5038	-0.4503	-0.7622
<i>Std. error</i>	0.0227	0.0266	0.0276	0.0376
Population Growth	-2.5579	-1.8045	0.4181	0.0178
<i>Std. error</i>	0.1410	0.1917	0.1986	0.2088
Log(Life Expectancy)	-0.1442	0.0247	0.1006	0.0692
<i>Std. error</i>	0.0118	0.0168	0.0208	0.0292
Official Liberalization Indicator	0.0082	-0.0246	-0.0085	0.0123
<i>Std. error</i>	0.0043	0.0046	0.0049	0.0071

Panel C: Annual Average Government/GDP Ratio (k=5)

	Sample I	II	III	IV
Constant	0.0275	0.0123	0.0911	0.2702
<i>Std. error</i>	0.0109	0.0130	0.0204	0.0292
Log(GDP)	0.0069	0.0055	0.0014	0.0040
<i>Std. error</i>	0.0006	0.0007	0.0004	0.0005
Govt/GDP	0.8426	0.8756	0.9187	0.9701
<i>Std. error</i>	0.0113	0.0111	0.0072	0.0099
Enrollment	0.0377	0.0258	0.0169	0.0330
<i>Std. error</i>	0.0046	0.0052	0.0076	0.0100
Population Growth	0.2806	0.2772	-0.0861	0.1707
<i>Std. error</i>	0.0853	0.1075	0.0309	0.0558
Log(Life Expectancy)	-0.0168	-0.0117	-0.0228	-0.0733
<i>Std. error</i>	0.0025	0.0032	0.0054	0.0074
Official Liberalization Indicator	-0.0027	0.0006	0.0053	0.0041
<i>Std. error</i>	0.0006	0.0009	0.0013	0.0019

Panel D: Annual Average (Export-Imports)/GDP Ratio (k=5)

	Sample I	II	III	IV
Constant	-0.1833	0.4063	1.0657	0.1080
<i>Std. error</i>	0.0192	0.0350	0.0652	0.0565
Log(GDP)	0.0433	0.0326	0.0354	0.0196
<i>Std. error</i>	0.0007	0.0008	0.0009	0.0008
Govt/GDP	-0.2353	-0.1624	-0.3058	-0.0580
<i>Std. error</i>	0.0074	0.0173	0.0261	0.0119
Enrollment	-0.3607	0.0080	-0.1525	-0.0222
<i>Std. error</i>	0.0102	0.0104	0.0179	0.0146
Population Growth	0.4565	-0.0973	-0.4199	0.6206
<i>Std. error</i>	0.1452	0.0991	0.1428	0.1112
Log(Life Expectancy)	-0.0179	-0.1557	-0.3016	-0.0582
<i>Std. error</i>	0.0045	0.0090	0.0157	0.0152
Official Liberalization Indicator	-0.0211	-0.0107	-0.0061	-0.0231
<i>Std. error</i>	0.0017	0.0013	0.0029	0.0024

Table 9: The Cost of Capital and the Liberalization Effect**Panel A: Growth, Liberalization and the Cost of Capital (Credit Rating)**

	Sample II	III	IV
Constant	-0.2877	-0.1304	-0.2026
<i>Std. error</i>	0.0145	0.0247	0.0671
Log(GDP)	-0.0104	-0.0121	-0.0160
<i>Std. error</i>	0.0005	0.0005	0.0011
Govt/GDP	-0.0263	-0.0271	-0.0304
<i>Std. error</i>	0.0082	0.0083	0.0120
Enrollment	-0.0306	0.0173	0.0547
<i>Std. error</i>	0.0067	0.0093	0.0163
Population Growth	-0.4485	-0.8004	-1.0901
<i>Std. error</i>	0.1027	0.1013	0.0860
Log(Life Expectancy)	0.0871	0.0551	0.0831
<i>Std. error</i>	0.0035	0.0066	0.0174
Official Liberalization Indicator	0.0010	0.0105	0.0127
<i>Std. error</i>	0.0013	0.0017	0.0047
Log(Credit Rating)	0.0102	0.0054	0.0014
<i>Std. error</i>	0.0010	0.0013	0.0032

Panel C: Investment, Liberalization and the Cost of Capital (Credit Rating)

	Sample II	III	IV
Constant	-0.3678	-0.4247	0.2109
<i>Std. error</i>	0.0264	0.0571	0.1139
Log(GDP)	-0.0142	-0.0157	-0.0123
<i>Std. error</i>	0.0008	0.0011	0.0024
Govt/GDP	-0.0305	0.0035	-0.1002
<i>Std. error</i>	0.0109	0.0177	0.0316
Enrollment	0.6134	0.6876	0.8051
<i>Std. error</i>	0.0203	0.0259	0.0336
Population Growth	0.2600	0.1188	-0.8640
<i>Std. error</i>	0.0406	0.1831	0.1715
Log(Life Expectancy)	0.1342	0.1374	-0.0193
<i>Std. error</i>	0.0079	0.0154	0.0293
Official Liberalization Indicator	0.0098	0.0051	0.0132
<i>Std. error</i>	0.0020	0.0032	0.0066
Log(Credit Rating)	0.0003	0.0097	0.0095
<i>Std. error</i>	0.0014	0.0024	0.0069

Panel B: Growth, Liberalization and the Cost of Capital (Dividend Yield)

	Sample IV
Constant	-0.2025
<i>Std. error</i>	0.0671
Log(GDP)	-0.0159
<i>Std. error</i>	0.0010
Govt/GDP	-0.0355
<i>Std. error</i>	0.0122
Enrollment	0.0499
<i>Std. error</i>	0.0181
Population Growth	-1.1259
<i>Std. error</i>	0.0884
Log(Life Expectancy)	0.0842
<i>Std. error</i>	0.0175
Official Liberalization Indicator	0.0163
<i>Std. error</i>	0.0049
Dividend Yield	0.0376
<i>Std. error</i>	0.0412
Div Yield*Lib Indicator	-0.0682
<i>Std. error</i>	0.0440

Panel D: Investment, Liberalization and the Cost of Capital (Dividend Yield)

	Sample IV
Constant	0.2246
<i>Std. error</i>	0.0992
Log(GDP)	-0.0107
<i>Std. error</i>	0.0021
Govt/GDP	-0.1305
<i>Std. error</i>	0.0283
Enrollment	0.7497
<i>Std. error</i>	0.0329
Population Growth	-0.9631
<i>Std. error</i>	0.1638
Log(Life Expectancy)	-0.0112
<i>Std. error</i>	0.0262
Official Liberalization Indicator	0.0213
<i>Std. error</i>	0.0071
Dividend Yield	-0.0719
<i>Std. error</i>	0.0403
Div Yield*Lib Indicator	-0.2209
<i>Std. error</i>	0.0538

Table 10: Insider Trading and the Liberalization Effect

Annual Average Real GDP Growth Rate (k=5)

Panel A: Liberalization and Insider Trading Law

	Sample I	II	III	IV
Constant	-0.2340	-0.2465	-0.1616	-0.2138
<i>Std. error</i>	<i>0.0190</i>	<i>0.0237</i>	<i>0.0238</i>	<i>0.0689</i>
Log(GDP)	-0.0093	-0.0086	-0.0114	-0.0157
<i>Std. error</i>	<i>0.0005</i>	<i>0.0006</i>	<i>0.0006</i>	<i>0.0010</i>
Govt/GDP	-0.0009	-0.0149	-0.0191	-0.0306
<i>Std. error</i>	<i>0.0074</i>	<i>0.0095</i>	<i>0.0080</i>	<i>0.0128</i>
Enrollment	0.0301	0.0104	0.0241	0.0584
<i>Std. error</i>	<i>0.0061</i>	<i>0.0080</i>	<i>0.0102</i>	<i>0.0183</i>
Population Growth	-0.5312	-0.5340	-0.7517	-1.0438
<i>Std. error</i>	<i>0.1329</i>	<i>0.1593</i>	<i>0.1036</i>	<i>0.0949</i>
Log(Life Expectancy)	0.0765	0.0796	0.0654	0.0861
<i>Std. error</i>	<i>0.0043</i>	<i>0.0053</i>	<i>0.0061</i>	<i>0.0181</i>
Official Liberalization Indicator	0.0093	0.0079	0.0117	0.0129
<i>Std. error</i>	<i>0.0016</i>	<i>0.0019</i>	<i>0.0018</i>	<i>0.0046</i>
Insider Trading Law	0.0001	0.0004	-0.0005	-0.0004
<i>Std. error</i>	<i>0.0006</i>	<i>0.0006</i>	<i>0.0008</i>	<i>0.0009</i>

Panel B: Liberalization and Insider Trading Prosecution

	Sample I	II	III	IV
Constant	-0.2319	-0.2413	-0.1584	-0.1971
<i>Std. error</i>	<i>0.0181</i>	<i>0.0228</i>	<i>0.0226</i>	<i>0.0680</i>
Log(GDP)	-0.0096	-0.0090	-0.0119	-0.0158
<i>Std. error</i>	<i>0.0005</i>	<i>0.0006</i>	<i>0.0005</i>	<i>0.0010</i>
Govt/GDP	-0.0011	-0.0143	-0.0178	-0.0314
<i>Std. error</i>	<i>0.0075</i>	<i>0.0100</i>	<i>0.0079</i>	<i>0.0124</i>
Enrollment	0.0315	0.0135	0.0292	0.0564
<i>Std. error</i>	<i>0.0058</i>	<i>0.0077</i>	<i>0.0095</i>	<i>0.0164</i>
Population Growth	-0.5544	-0.5710	-0.8047	-1.0766
<i>Std. error</i>	<i>0.1378</i>	<i>0.1722</i>	<i>0.1011</i>	<i>0.0864</i>
Log(Life Expectancy)	0.0765	0.0791	0.0653	0.0824
<i>Std. error</i>	<i>0.0040</i>	<i>0.0049</i>	<i>0.0057</i>	<i>0.0179</i>
Official Liberalization Indicator	0.0092	0.0080	0.0116	0.0138
<i>Std. error</i>	<i>0.0016</i>	<i>0.0019</i>	<i>0.0017</i>	<i>0.0044</i>
Insider Trading Prosecution	0.0036	0.0031	0.0037	0.0015
<i>Std. error</i>	<i>0.0008</i>	<i>0.0009</i>	<i>0.0010</i>	<i>0.0012</i>

I, II, III, and IV refer to samples of 95, 75, 50 and 28 countries detailed in appendix table A1. The dependent variable is the 5-year average growth rate of real per capita gross domestic product.

Log(GDP) is the log real per capita GDP level in 1980. Govt/GDP is the ratio of government consumption to GDP; Enrollment is the secondary school enrollment ratio; Population growth is the growth rate of total population; Log(Life Expectancy) is the log life expectancy of the total population; Insider Trading Law and Insider Trading Prosecution are indicators representing either the introduction of laws prohibiting insider trading or actual prosecutions, respectively; and the official liberalization variable takes a value of one when the equity market is liberalized, and zero otherwise. The weighting matrix we employ in our GMM estimation provides a correction for cross-sectional heteroskedasticity. All standard errors account for the overlapping nature of the data.

Table 11: Financial Liberalization and Preconditions

Annual Average Real GDP Growth Rate (k-5)

Panel A: Financial Liberalization and Education

	Sample I	II	III	IV
Constant	-0.2453	-0.2619	-0.1624	-0.3074
<i>Std. error</i>	0.0181	0.0216	0.0296	0.0617
Log(GDP)	-0.0094	-0.0087	-0.0111	-0.0161
<i>Std. error</i>	0.0007	0.0007	0.0008	0.0012
Govt/GDP	0.0051	-0.0064	-0.0170	-0.0214
<i>Std. error</i>	0.0088	0.0098	0.0106	0.0179
Enrollment	0.0216	-0.0029	-0.0029	0.0410
<i>Std. error</i>	0.0081	0.0102	0.0121	0.0181
Population Growth	-0.5288	-0.5281	-0.8576	-1.1904
<i>Std. error</i>	0.0607	0.0673	0.0792	0.1129
Log(Life Expectancy)	0.0798	0.0840	0.0672	0.1115
<i>Std. error</i>	0.0050	0.0057	0.0080	0.0157
Official Liberalization Indicator*Fully Liberalized	0.0085	0.0066	0.0081	0.0037
<i>Std. error</i>	0.0017	0.0018	0.0017	0.0022
Official Liberalization Indicator*High Enrollment	0.0165	0.0157	0.0150	0.0103
<i>Std. error</i>	0.0029	0.0030	0.0028	0.0043
Official Liberalization Indicator*Low Enrollment	-0.0019	-0.0030	-0.0034	-0.0061
<i>Std. error</i>	0.0021	0.0022	0.0024	0.0036
Wald Test: High Enrollment = Low Enrollment	97.475	93.284	66.317	14.643
p-value	0.000	0.000	0.000	0.000

Panel C: Financial Liberalization and Democracy

	Sample I	II	III	IV
Constant	-0.2327	-0.2445	-0.1625	-0.2639
<i>Std. error</i>	0.0179	0.0214	0.0283	0.0606
Log(GDP)	-0.0091	-0.0084	-0.0116	-0.0162
<i>Std. error</i>	0.0007	0.0007	0.0008	0.0012
Govt/GDP	-0.0058	-0.0193	-0.0191	-0.0267
<i>Std. error</i>	0.0087	0.0097	0.0105	0.0165
Enrollment	0.0305	0.0108	0.0250	0.0621
<i>Std. error</i>	0.0078	0.0098	0.0118	0.0173
Population Growth	-0.5818	-0.5941	-0.8692	-1.1447
<i>Std. error</i>	0.0614	0.0681	0.0825	0.1146
Log(Life Expectancy)	0.0765	0.0795	0.0666	0.0996
<i>Std. error</i>	0.0049	0.0057	0.0076	0.0154
Official Liberalization Indicator*Democracy	0.0079	0.0063	0.0099	0.0087
<i>Std. error</i>	0.0017	0.0018	0.0020	0.0033

Panel B: Financial Liberalization and Government Size

	Sample I	II	III	IV
Constant	-0.2312	-0.2454	-0.1505	-0.3059
<i>Std. error</i>	0.0180	0.0215	0.0295	0.0618
Log(GDP)	-0.0089	-0.0081	-0.0108	-0.0163
<i>Std. error</i>	0.0007	0.0007	0.0008	0.0012
Govt/GDP	-0.0012	-0.0134	-0.0202	-0.0261
<i>Std. error</i>	0.0088	0.0100	0.0109	0.0182
Enrollment	0.0294	0.0087	0.0173	0.0584
<i>Std. error</i>	0.0078	0.0099	0.0118	0.0178
Population Growth	-0.5696	-0.5821	-0.9180	-1.2250
<i>Std. error</i>	0.0624	0.0697	0.0819	0.1141
Log(Life Expectancy)	0.0755	0.0790	0.0631	0.1111
<i>Std. error</i>	0.0049	0.0057	0.0079	0.0158
Official Liberalization Indicator*Fully Liberalized	0.0072	0.0053	0.0072	0.0038
<i>Std. error</i>	0.0017	0.0019	0.0018	0.0023
Official Liberalization Indicator*Big Government	0.0039	0.0028	0.0017	-0.0027
<i>Std. error</i>	0.0024	0.0026	0.0024	0.0036
Official Liberalization Indicator*Small Government	0.0103	0.0090	0.0086	0.0049
<i>Std. error</i>	0.0026	0.0026	0.0027	0.0045
Wald Test: Big Government = Small Government	5.397	3.892	4.308	4.796
p-value	0.020	0.049	0.038	0.029

Panel D: Financial Liberalization and Legal Origin

	Sample I	II	III	IV
Constant	-0.2320	-0.2475	-0.1638	-0.2960
<i>Std. error</i>	0.0206	0.0261	0.0249	0.0696
Log(GDP)	-0.0089	-0.0081	-0.0107	-0.0148
<i>Std. error</i>	0.0005	0.0006	0.0006	0.0009
Govt/GDP	-0.0095	-0.0269	-0.0296	-0.0525
<i>Std. error</i>	0.0080	0.0109	0.0080	0.0152
Enrollment	0.0280	0.0037	0.0131	0.0342
<i>Std. error</i>	0.0063	0.0087	0.0105	0.0223
Population Growth	-0.5742	-0.5793	-0.8941	-1.3499
<i>Std. error</i>	0.1528	0.1897	0.1183	0.1016
Log(Life Expectancy)	0.0761	0.0803	0.0666	0.1087
<i>Std. error</i>	0.0045	0.0057	0.0062	0.0180
Official Liberalization Indicator*French Law	0.0050	0.0031	0.0029	-0.0057
<i>Std. error</i>	0.0018	0.0021	0.0020	0.0052
Official Liberalization Indicator*English Law	0.0091	0.0077	0.0098	0.0046
<i>Std. error</i>	0.0015	0.0018	0.0018	0.0048
Official Liberalization Indicator*Law (Other)	0.0081	0.0072	0.0079	0.0000
<i>Std. error</i>	0.0022	0.0028	0.0022	0.0052
Wald Test: French Law = English Law = Law (Other)	28.356	37.564	36.985	29.073
p-value	0.000	0.000	0.000	0.000

Annual Average Real GDP Growth Rate (k-5)

Panel E: Financial Liberalization and U.S. Holdings/GDP

	Sample I	II	III	IV
Constant	-0.2333	-0.2543	-0.1583	-0.3505
<i>Std. error</i>	0.0181	0.0218	0.0298	0.0582
Log(GDP)	-0.0075	-0.0071	-0.0097	-0.0157
<i>Std. error</i>	0.0006	0.0006	0.0008	0.0012
Govt/GDP	-0.0047	-0.0182	-0.0196	-0.0142
<i>Std. error</i>	0.0088	0.0099	0.0110	0.0177
Enrollment	0.0297	0.0077	0.0215	0.0663
<i>Std. error</i>	0.0079	0.0099	0.0121	0.0187
Population Growth	-0.6007	-0.6061	-0.9259	-1.1828
<i>Std. error</i>	0.0587	0.0650	0.0813	0.1196
Log(Life Expectancy)	0.0742	0.0799	0.0633	0.1197
<i>Std. error</i>	0.0049	0.0057	0.0080	0.0151
Official Liberalization Indicator*(U.S. Holdings/GDP)	0.0118	0.0051	0.0103	0.0021
<i>Std. error</i>	0.0075	0.0074	0.0073	0.0065

Panel F: Financial Liberalization and U.S. Holdings/MCAP

	Sample I	II	III	IV
Constant	-0.2320	-0.2487	-0.1487	-0.3031
<i>Std. error</i>	0.0180	0.0216	0.0295	0.0578
Log(GDP)	-0.0082	-0.0077	-0.0099	-0.0152
<i>Std. error</i>	0.0006	0.0006	0.0007	0.0011
Govt/GDP	-0.0037	-0.0184	-0.0192	-0.0140
<i>Std. error</i>	0.0088	0.0099	0.0108	0.0166
Enrollment	0.0283	0.0064	0.0195	0.0667
<i>Std. error</i>	0.0078	0.0098	0.0119	0.0180
Population Growth	-0.5741	-0.5780	-0.8795	-1.1750
<i>Std. error</i>	0.0600	0.0664	0.0825	0.1148
Log(Life Expectancy)	0.0747	0.0795	0.0609	0.1071
<i>Std. error</i>	0.0049	0.0057	0.0079	0.0151
Official Liberalization Indicator*(U.S. Holdings/MCAP)	0.0352	0.0325	0.0291	0.0173
<i>Std. error</i>	0.0067	0.0067	0.0067	0.0073

Panel G: Financial Liberalization and Equity Market Correlation

	Sample IV
Constant	-0.3418
<i>Std. error</i>	0.0549
Log(GDP)	-0.0155
<i>Std. error</i>	0.0011
Govt/GDP	-0.0168
<i>Std. error</i>	0.0174
Enrollment	0.0612
<i>Std. error</i>	0.0185
Population Growth	-1.1952
<i>Std. error</i>	0.1241
Log(Life Expectancy)	0.1177
<i>Std. error</i>	0.0142
Official Liberalization Indicator*(market correlation with world)	0.0010
<i>Std. error</i>	0.0051

I, II, III, and IV refer to samples of 95, 75, 50 and 28 countries detailed in appendix table A1. The dependent variable is the 5-year average growth rate of real per capita gross domestic product. Log(GDP) is the

Findings

- 70% of FSL effect on growth takes place in the 5 years following FSL, and the effect is not permanent
- FSL is associated with 0.83% to 1.13% of real per-capita GDP growth, although FSL also tends to lead to a widening current account deficit
- When using insider-trading prosecution (enforcement), the results are significant and positive, and the FSL coefficient survives.
- Foreign ownership is important to raise FSL benefit
- FSL is not spuriously accounted for by macroeconomic reforms and does not reflect a business cycle effect.
- Although FSL further fin development, measures of fin development fail to fully drive out the FSL effect
- A large secondary SER, a small government sector, and Anglo saxon legal system enhance FSL effect

In Short.....

- On average, FSL led to a **1%** increase in annual GDP growth rate
- FSL **raises I/Y** through **foreign capital** inflows, and hence **widens DCA**
- FSL does not reflect a business cycle effect
- Effects of FSL are intensified after controlling for SER, size of government, and legal system

Determinants of Capital Flows

Table 1. Definition of Variables

	Definition	Expected Sign
<i>External Variables</i>		
<i>REXT</i>	Real ex-post international interest rate: US dollar 3-months Libor minus the US-CPI 3-months inflation	-
<i>NPKF</i>	Net private capital flows available to all developing countries, minus the flows received by country j, as a share of GDP of the major industrial countries	+
<i>PIB_IND</i>	Economic activity (GDP) in industrial countries	-
<i>Domestic Variables</i>		
<i>GPIB</i>	Real GDP growth	+
<i>PSB</i>	Public sector (central government) balance as a share of GDP	+
<i>INV</i>	Gross domestic investment as a share of GDP	+
<i>TRADE</i>	Total exports as a share of GDP	+
<i>DEBTSS</i>	Foreign debt service as a share of GDP	-
<i>CRPR</i>	Growth in banking sector nominal credit to the private sector	-
<i>APPR</i>	Real exchange rate appreciation (in percent) during the past year: $[\text{RER}_t - \text{RER}_{t-1}] / \text{RER}_{t-1}$	-

Table 2. Determinants of Capital Inflows
 Sample 1: 1977-84

	m< debt	fdi	portfolio	tot. flows
l <p>ipib</p>	n/a	0.021		--
l <p>psb</p>	-0.139	-0.024		--
l <p>inv</p>	0.129	n/a		0.176
l <p>debtss</p>	-0.369	-0.026		-0.355
l <p>crpr</p>	--	--		n/a
l <p>appr</p>	-0.027	-0.004		-0.017
l <p>ext</p>	n/a	n/a		n/a
l <p>pkf</p>	1.336	0.644		1.234*
N	111	111		111
R-sq	0.358	0.230		0.349
F test	6.890	4.670		6.730
Prob>F	0.000	0.000		0.000

Table 4. Determinants of Capital Inflows
Sample 3: 1987–96

	m< debt	fdi	Portfolio	tot. flows
lgpib	n/a	0.039	n/a	n/a
lpsb	0.116	-0.044	n/a	n/a
linv	0.207	--	0.074	0.184
ldebtss	-0.221	n/a	--	-0.122
lcrpr	--	-0.004	-0.002	-0.004
lappr	--	--	--	--
rext	--	--	--	-0.337
npkf	2.094	1.471	1.334	--
dummy	n/a	1.286	n/a	2.983
N	236	236	236	236
R-sq	0.202	0.371	0.167	0.442
F test	6.750	13.260	6.470	20.750
Prob>F	0.000	0.000	0.000	0.000

Table 7: Composition of Capital Flows

Dependent variable: $\log(\text{Loan}) - \log(\text{FDI})$, averaged over 1994-96						
Methodology	Fixed Effects GCR/ WDR	Random Effects WDR	Fixed Effects T I	Random Effects	IV Fixed effects GCR/ WDR	
Corruption	0.662** (0.128)	0.680** (0.225)	0.707** (0.176)	0.720** (0.290)	0.296# (0.181)	0.285# (0.182)
Tax rate	0.021 (0.017)	0.021 (0.031)	0.021 (0.018)	0.020 (0.029)		
FDI incentives	0.194 (0.152)	0.244 (0.260)	-0.056 (0.160)	-0.019 (0.254)	0.111 (0.156)	0.095 (0.157)
FDI restrictions	0.440** (0.086)	0.446** (0.157)	0.458** (0.088)	0.446** (0.145)	0.336** (0.093)	0.333** (0.093)
Log (GDP)	-0.569** (0.107)	-0.651** (0.186)	-0.597** (0.110)	-0.655** (0.174)	-0.274** (0.115)	-0.254** (0.118)
Log (Per capita GDP)	0.172* (0.098)	0.205 (0.181)	0.272** (0.125)	0.302 (0.210)	0.034 (0.103)	0.033 (0.103)
Log distance	0.350** (0.094)	0.543** (0.114)	0.357** (0.096)	0.525** (0.114)	0.123 (0.132)	0.111 (0.132)
Linguistic tie	-0.699** (0.305)	-0.680** (0.287)	-0.722** (0.313)	-0.700** (0.292)	-0.753** (0.289)	-0.803** (0.296)
Exchange rate volatility	-0.661 (2.060)	-0.007 (3.505)	-1.351 (2.216)	-0.755 (3.488)		-1.793 (2.226)
Over-identifying restriction (P-value of the test)					0.43	0.40
Adjusted R ² /Over-all R ²	0.49	0.52	0.46	0.50	-	-
No. of obs.	225	225	225	225	180	180

Note: see notes to Table 5.

Figure 3: Composition of Capital Inflows and Corruption
(Partial correlation based on Table 7, Column 1)

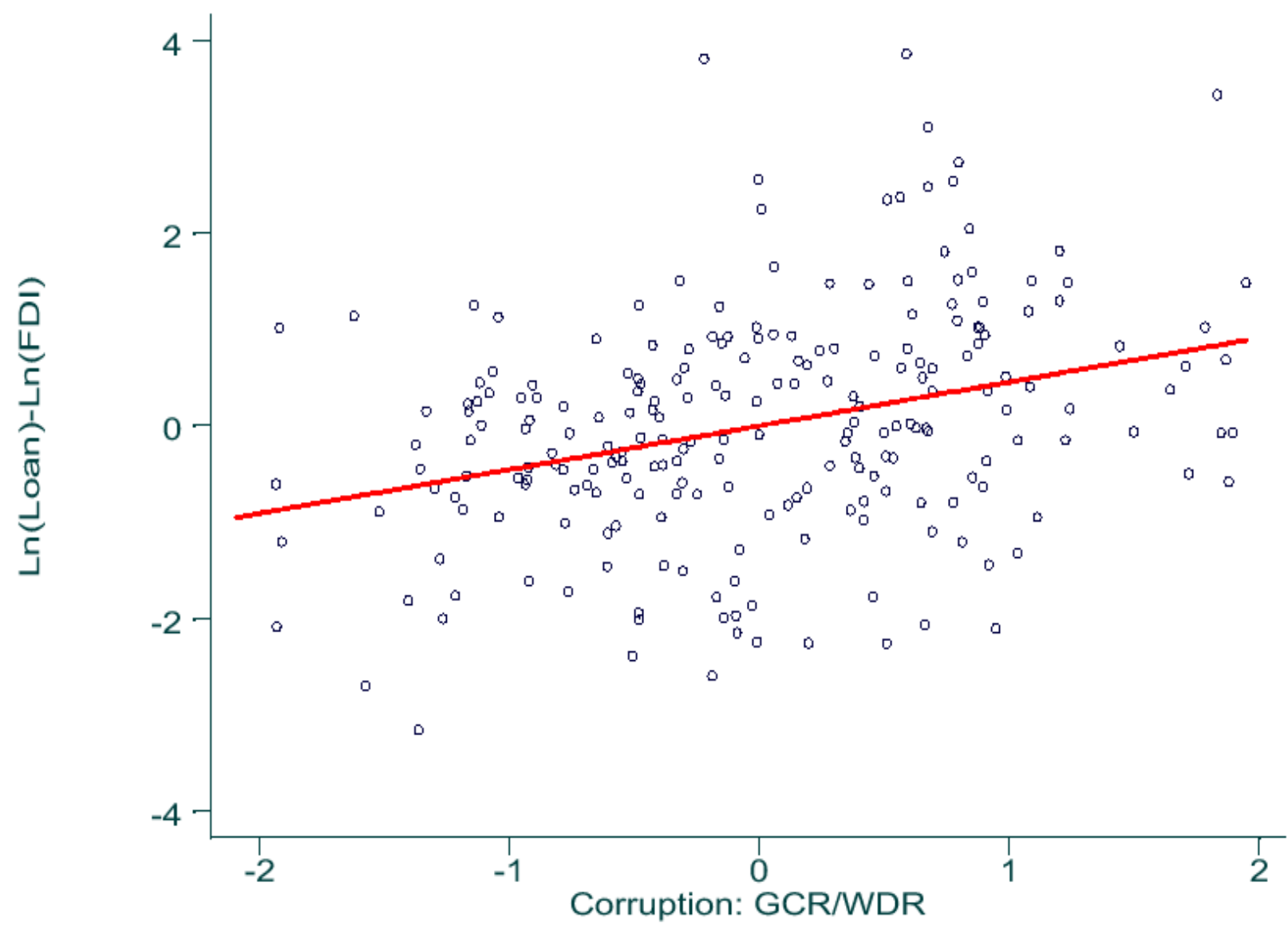
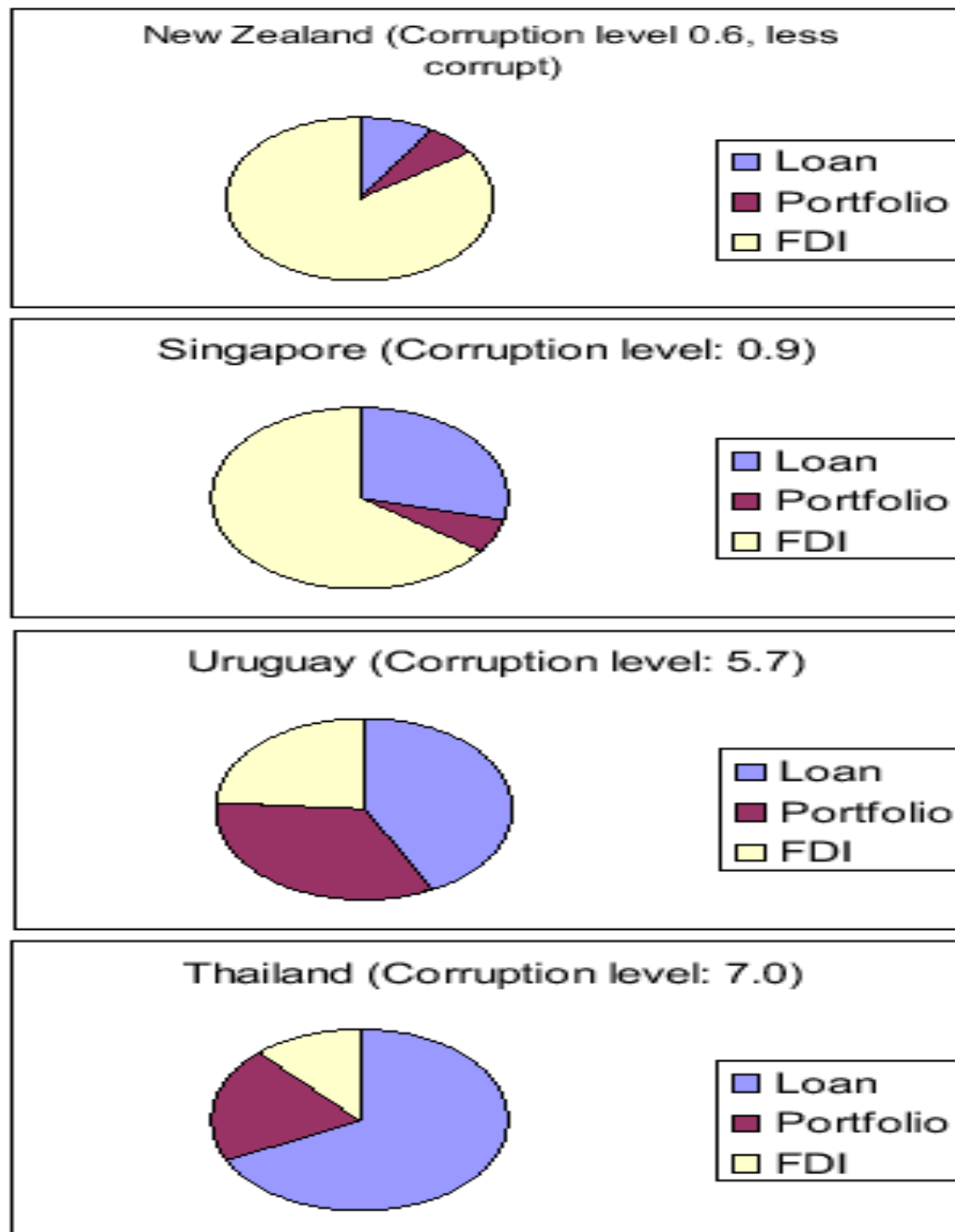


Figure 2: Quality of Public Governance and the Composition of Capital Inflows



**Table 1a: Volatility of FDI/GDP, Bank Loan/GDP, and Portfolio Flow/GDP
as Measured by Standard Deviation:1980-1996**

	FDI/GDP	Loan/GDP	Portfolio/GDP
Whole sample: 103 countries			
Mean	0.012	0.041	0.014
Median	0.008	0.033	0.009
Emerging markets: 85 countries			
Mean	0.012	0.046	0.012
Median	0.008	0.035	0.004
OECD: 18 countries			
Mean	0.008	0.020	0.021
Median	0.007	0.014	0.020
Selected countries			
Indonesia	0.007	0.017	0.009
Korea	0.002	0.037	0.014
Malaysia	0.023	0.034	0.023
Mexico	0.007	0.033	0.026
Philippines	0.009	0.026	0.017
Thailand	0.007	0.028	0.012

Notes:

1. Sources: Total inward FDI flows, total bank loans, and total inward portfolio investment from the IMF's Balance of Payment Statistics, various issues, GDP data are from the World Bank's GDP & WDI Central Databases.

2. Only countries that have at least eight non-missing observations during 1980-1996 for all variables and whose populations are greater than or equal to one million in 1995 are kept in the sample.

3. OECD countries (with membership up to 1980) include: Australia, Austria, Canada, Denmark, Finland, France, Ireland, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, United States. Emerging Markets refer to all countries not on the above list and with a GDP per capita in 1995 less than or equal to US\$15,000 (in U.S. \$).

Table 8: Transformed Ratio of Loans to FDI

Dependent variable: $\log(\text{Loan}+0.1) - \log(\text{FDI}+0.1)$, averaged over 1994-96						
Methodology	Fixed Effects GCR/ WDR	Random Effects WDR	Fixed Effects T I	Random Effects	IV Fixed effects GCR/ WDR	
Corruption	0.675** (0.151)	0.674** (0.226)	0.701** (0.210)	0.681** (0.320)	0.382* (0.199)	0.374* (0.196)
Tax rate	0.011 (0.020)	0.013 (0.031)	0.012 (0.021)	0.012 (0.032)		
FDI incentives	0.040 (0.178)	0.072 (0.262)	-0.196 (0.187)	-0.166 (0.280)	-0.014 (0.171)	-0.023 (0.169)
FDI restrictions	0.546** (0.101)	0.550** (0.156)	0.558** (0.103)	0.547** (0.159)	0.427** (0.103)	0.425** (0.102)
Log (GDP)	-0.591** (0.128)	-0.645** (0.189)	-0.615** (0.131)	-0.657** (0.194)	-0.323** (0.128)	-0.309** (0.129)
Log (Per capita GDP)	0.227* (0.117)	0.239 (0.182)	0.314** (0.149)	0.318 (0.232)	0.114 (0.114)	0.113 (0.112)
Log distance	0.391** (0.112)	0.477** (0.133)	0.396** (0.115)	0.479** (0.135)	0.159 (0.147)	0.151 (0.146)
Linguistic tie	-0.490 (0.365)	-0.504 (0.356)	-0.513 (0.373)	-0.522# (0.360)	-0.752** (0.325)	-0.787** (0.326)
Exchange rate volatility	0.563 (2.368)	1.091 (3.490)	-0.279 (2.553)	0.442 (3.798)		-1.257 (2.451)
Over-identifying restriction (P-value of the test)					0.28	0.28
Adjusted R ² /Over-all R ²	0.48	0.51	0.45	0.50	-	-
No. of obs.	231	231	231	231	183	183

Note: see notes to Table 5.

Figure 1: Relative Volatility of Different Capital Flows

