Capital Accumulation in Less Developed Countries: Does Stock Market Matter?

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Abstract

Our panel data analysis (1988-2002) of a sample of 31 less developed countries (LDCs) shows that the stock market capitalization as a percentage of GDP- an important indicator of stock market development- has no relationship with the growth rates of gross fixed capital formation (GGKF). Our time series analysis (1976-2002) of 16 LDCs shows that in 11 cases there is no meaningful relationship between the stock market turnover ratio and the growth of capital accumulation (GGKF). For 5 LDCs (belonging to the so-called French-origin civil law category) with low shareholder protection we get a positive long-term relationship.

Key words: stock market, capital accumulation, growth, and liberalisation

JEL CODES: F3, G00, O16

I. Introduction

In the present era of financial liberalisation under the aegis of the three pillars of the Britton Woods system (IMF, World Bank and WTO) stock market development has been an important part of both internal and external financial liberalisation in the less development countries (LDCs). There is now a call for better corporate governance in order to protect the interests of the shareholders leading to stock market developments and capital accumulation. In a well-known paper La Porta *et al* (1998) – nicknamed LLSV - observed that countries with a 'common law origin' (such as UK) have a higher level of shareholder protection than countries with a civil law origin (such as France) and accordingly, the former group of countries has a lower concentration of stock ownership. In a subsequent paper (Djankov *et al* 2005), the similar line of reasoning is used to explain a positive correlation between the level of shareholder protection and stock market developments. The question is: is there any link between stock market development and economic growth through capital accumulation?

There are many studies supporting the positive link between stock market development and growth. Let us mention some of the recent studies. One important study was undertaken by Levine and Zervos (1998). Their cross-country study found that the development of banks and stock markets has a positive effect on growth. In another study Levine (2003) argued that although theory provides an ambiguous relationship between stock market liquidity and economic growth, the cross-country data for 49 countries over the period 1976-93 suggest a strong and positive relationship (see also Levine, 2001). Henry (2000) studied a sample of 11

LDCs and observed that stock market liberalisations lead to private investment boom. Recently, Bekaert et al (2005) analysed data of a large number of countries and observed that the stock market liberalisation 'leads to an approximate 1 % increase in annual real per capita GDP growth'. Arestis *et al* (2001) analysed time series data for 5 developed countries and found a favourable role of stock market along with bank in economic growth; but they observed that the favourable role of stock market is exaggerated in different cross-country studies.

There are some economists who are sceptical. Long time back Keynes (1936) compared the stock market with casino and commented: 'when the capital development of a country becomes the by-product of the activities of a casino, the job is likely to be ill-done'.

Referring to the study of World Bank (1993) Singh (1997) pointed out that stock markets have played little role in the post-war industrialisation of Japan, Korea and Taiwan. He argued that the recent move towards stock market liberalisation is 'unlikely to help in achieving quicker industrialisation and faster long-term economic growth' in most of the LDCs.

In this perspective we shall examine the relationship between stock market development and capital accumulation in the LDCs (Section II). We first undertake a panel data analysis of the experience of the LDCs. It will be followed by the time series study of individual country cases. Section III concludes.

II. Relationship between Stock Market Developments and Capital Accumulation

A. Panel Data Analysis, 1988-2002

From World Bank (World Development Indicators, various issues – hereafter called WDI) source we obtained a series on stock market capitalization of listed companies (the aggregate market value of stocks of all the companies listed in the domestic stock market) as percentage of GDP (SMC) for 31 LDCs (the full list of countries is in the Appendix) covering 1988-2002 (for some countries we get data for shorter periods). In our study these SMC data are used to indicate the development of stock market in these countries. Since the channel through which stock market development is expected to influence growth is capital accumulation, we would like to examine the relationship between the two. From the above-mentioned source we collected data for the growth of gross domestic fixed capital formation (GKFG).

We have considered three alternative models between the growth of gross domestic fixed capital formation (GKFG) and stock market capitalization of listed companies as percentage of GDP (SMC): between-effects model (BE), the country-fixed effect model (FE) and the random-effect model (RE). The BE model is equivalent to taking the average (mean) of each variable for each case across time and running a regression on the data set of averages. As this averaging procedure results in loss of information, it is not used much in the current literature. Nevertheless we have estimated this BE model and did not observe any significant relationship between the two (details are skipped).

The FE is designed to control for omitted variables that differ across countries but are constant over time. This is equivalent to generating dummy variables for each country-cases and including them in a standard linear regression to control for these fixed country-effects. The RE is used if there is a reason to believe that some omitted variables may be constant over time but vary between cases, and others may be fixed between cases but vary over time. The Breusch-Pagan Lagrange multiplier test has been conducted to choose the appropriate model. It strongly supports the RE model in the most cases (Table 1).

Our estimates show that the growth of capital accumulation has no significant (positive or negative) relationship with stock market capitalisation. The result does not change if we include the log values of 1991 GDP per capita (purchasing power parity constant 2000 international $), LPCY91 (obtained from the WDI source) in the regression to control for the influence of initial condition in the tradition of 'Barro regression' of convergence/catching up debate literature.

We have also considered other factors such as openness index (share of trade – export plus imports – in GDP, TRDGDP), the importance of foreign direct investment in GDP (FDIGDP) and the indicator of banking sector development as measured by the ratio of domestic credit provided to the private sector to GDP (DCPGDP), which may be expected to influence growth and capital formation (1992-99 averages of all these data are presented in the Appendix). Furthermore to accommodate the state of human capital development we have included educational factor – secondary school enrolment ratio (SE) in 2000 or 2001 (available from the

same WDI source for 27 countries of our sample). Only this factor has been found to have a positive relationship with the growth of capital accumulation in many alternative models (fitted by changing the set of independent variables considered here). Surprisingly we got significant negative relationship between domestic credit (DCBGDP) and the growth of capital accumulation. But the basic conclusion of no relationship between stock market developments and capital accumulation remains.

This finding is important in view of the fact that the independent variables (expected to have positive relationships with capital accumulation) considered here have high positive correlations among themselves favouring the case for a positive relationship between GGKF and SMC. As we observed a negative relationship between DCBGDP and GGKF, we have dropped it from the set of independent variables and re-estimated the regression. Similarly many other alternative regressions are fitted (including or excluding a number of independent variables). Our basic conclusion remains (details are skipped).

In the next stage we have divided the sample into two groups – 'developed' and 'less developed' stock market - on the basis of the 1992-99 average values of SMC - 16 'HI-SMC' (SMC > 25 per cent) countries and 15 'LO-SMC' (others) countries. Within the HI-SMC group, we have made a further division – seven countries (Chile, Hong Kong, Jordan, Malaysia, Singapore, Philippines and Thailand) belong to the category of 'very highly developed stock market' ('VHI-SMC') with 1992-99 average SMC greater than 50 per cent. Remaining nine countries belong to the HI-SMC category (with SMC greater than 25 per cent

and less than or equal to 50 per cent): Brazil, India, Indonesia, Jamaica, Korea, Mexico, Mauritius, Trinidad & Tobago and Zimbabwe.

We have used a binary variable intercept dummy (for example, intercept dummy = 1 for 'HI-SMC' and = 0 for 'LO-SMC') and/or slope dummy (intercept dummy multiplied by SMC) and observed that none of the dummies are significant. Similar is the outcome if we use dummies for the VHI-SMC group.

Furthermore our conclusion does not change if we use dummies for 13 rich countries (as indicated by higher than $5000 per capita GDP in 1991 – the countries belonging to this category are underlined in the Appendix). We have considered all the dummies or a sub-set of dummies with or without other independent variables (such as DCBGDP and/or FDIGDP etc). In no case do we find a significant relationship between GGKF and SMC.

B. Time Series Analysis

With this over-all picture of panel data analysis we set ourselves to examine individual country experiences. It is, however, very difficult to get a long time series data for different indicators of stock market development. From the Financial Structure Dataset of World Bank (available on-line) we have been able to collect annual data on the most important indicator of stock market development for 16 countries (out of 31 countries covered in our panel data study) since the mid-1970s (for some countries since the early 1980s). It is the turnover ratio (TURN) defined as the ratio of the value of total shares traded in a country's stock market to average

real market capitalization.[1] We have WDI data for the growth of gross capital formation

(GKFG) for all these countries up to 2002.[2] We would like to examine whether there is any

meaningful relationship between this indicator of stock market development (TURN) and the

growth of capital accumulation (GGKF) for all these 16 LDCs over the period since the mid-

1970s or early 1980s till 2001/2 for which we have the relevant data.

We shall use Autoregressive Distributive Lag (ARDL) approach to cointegration developed by

Pesaran and Shin (1999) to test for the existence of a long run relationship between two

variables irrespective of whether they are stationary or stochastic. This approach does not

require any pre-testing of the variables to determine the order of their integration (how many

times the data are to be differenced to achieve the stationary property of the data). This

approach is especially useful here as the standard tests of stationarity have very low power for

a small sample.

First, we shall include no other variables that are expected to influence capital accumulation.

The following ARDL (p, q) model is fitted:

$$(1) \qquad G_t = a + b.t + \sum_{i=1}^{p} b_i\, G_{t-i} + \sum_{j=0}^{q} c_j\, S_{t-j}$$

where G is the growth rate of gross capital formation (GKFG), S is the stock market turnover

ratio (TURN), t is the time trend which captures the effect of other explanatory variables (it is

omitted from the ARDL equation when its coefficient is found to be insignificant), the

subscripts t, t-i, t-j, indicate different time periods and p and q are unknown lags to be determined by Schwarz Bayesian criterion (SBC) as suggested by Pesaran and Shin (1999).

The estimates of the long-term coefficients are reported in Table 2. Estimates show that for 5 countries (3 from HI-SMC group: Chile, Jordon and Philippines and 2 from LO-SMC group: Argentina and Venezuela) a positive long-run relationship exists between stock market development (indicated by turnover ratio, TURN) and capital accumulation (GGKF).

For Korea we got a negative relationship. It could be due to the fact that the period of our study includes the years of the 1997-crisis and the subsequent recovery. So we have added an intercept dummy for 1997-02 to the equation (1) and found no significant relationship between TURN and GGKF.

Next we have extended the ARDL analysis to accommodate other factors that are often expected to influence the growth of capital accumulation such as domestic private credit (DCPGDP) [3] and foreign direct investment (importance of FDI to gross capital formation, FDIGKF). We have not considered trade openness (TRDGDP) as we find very strong positive relationship between FDIGKF and TRDGDP in most of the cases: a higher openness attracts more FDI and vice versa.

The following ARDL (p, q, r, s) model has been fitted:

$$(2) \qquad G_t = a + b.t + \sum_{i=1}^{p} b_i\, G_{t-i} + \sum_{j=0}^{q} c_j\, S_{t-j} + \sum_{k=0}^{r} d_k\, F_{t-k} + \sum_{l=0}^{s} e_l.B_{t-l}$$

where G = GKFG, S = TURN, F = FDIGKF and B = DCPGDP; the subscripts t, t-i, t-j, t-k, t-l, indicate different time periods and p, q, r and t are unknown lags to be determined by the SBC.

The estimates of the long-term coefficients show that our observation of positive relationship based on ARDL (p, q) equation can be maintained for four countries (Argentina is the exception). For India we get the surprising result – a negative relationship between turnover ratio and GGKF while taking into account the impact of private credit (DCPGDP) and FDI (FDIGKF). To resolve the mystery we have looked into the Indian data on the growth of private fixed capital formation (calculated from the relevant data available from Government of India, Economic Survey). The GGKF data covers both private and public capital formation and during our period of analysis (since the mid-1980s) the importance of public capital formation started declining. Fitting both ARDL equations to these data we observed that only private credit (DCPGDP) and private capital accumulation have a positive long-term relationship. In our earlier study on Indian experience (Sarkar, 2007) we have used many other indicators of stock market development and found no relationship between stock market behaviour and private capital accumulation.

For Korea, Thailand and Malaysia we used intercept and/or slope dummies for the period of financial crisis 1997-2002 and it did not alter our finding of no relationship (details are skipped).

To sum up our time series analysis, only for four (or five including Argentina) out of 16 countries we have observed a positive link between growth of capital accumulation and stock

market developments (as indicated by the turnover ratio). All these are so-called 'French-origin civil-law' countries with relatively 'poor' protection of shareholders compared to 'English-origin common law' countries *a la* the controversial theory of LLSV (La Porta *et al*, 1998). There are some leximetric studies which question this LLSV proposition (see Lele and Siems, 2007, Fagernas-Sarkar-Singh, 2007, Sarkar, 2007a). It is beyond the scope of the present paper to go into the details. But we have done some casual empiricism on the basis of some available leximetric data on shareholder protection for seven countries out of these 16 countries.

Available data (presented in Table 3) show that India and Malaysia belonging to 'English' heritage had high levels of shareholder protection while Pakistan with the same heritage had a very low level of shareholder protection. None of them experienced a positive link between stock market development and capital formation. Chile, Mexico, Brazil and Argentina had the other heritage and had a much lower level of shareholder protection. For Chile and (perhaps) Argentina we observed a positive long run relationship between capital formation and stock market development. But for Brazil and Mexico we get no relationship between stock market development and capital accumulation. All these provide some evidence against the LLSV-Djankov (*et al* 2005) type generalisation (see also Sarkar, 2007b).

III

Stock market has become an integral part of a mature capitalist society. It is expected to provide a market mechanism for financing a new venture, which is profitable on the basis of private cost calculations. As a part of the development strategy many less developed countries

try to promote the growth of stock market, often under the advice of the proponents of the Washington Consensus. However a lot of speculative activities and movements of speculative capital take place in the stock market particularly for stock trading. Accordingly stock prices move up and down and in many cases it has no connection with real economic activities. That's why Keynes compared this with casino and long-term investment decision taken on the basis of this gambling is harmful for the economy. Stock market boom and slump does not guide long-term investment decision. The source of long-term real growth does not lie in the activities of the stock market.

Our panel data study finds no positive link between the indicator of stock market development (SMC) and growth of fixed capital formation (GGKF) even after controlling for the level of per capita GDP, trade openness, FDI and banking sector development.

In our time series study of individual country cases of LDC group, based on the ARDL method of cointegration, we observe that in the majority of cases there is no positive relationship between the growth of capital formation and stock market turnover ratio- an important indicator of stock market development incorporating both market capitalisation and the value of stock trade. Given this lack of relationship between stock market development and capital accumulation, there is a limited usefulness of the policy of promoting stock market for achieving the developmental goals of the LDCs.

Notes:

1   Turnover Ratio (TURN) is the ratio of the value of total shares traded to average real market capitalization. It   is calculated using the following method: $T_t/P\_a_t/\{(0.5)*[Mt/P\_e_t+ M_{t-1}/P\_e_{t-1}]$ where T is total value traded, M is stock market capitalization, P_e is end-of period CPI, P_a is average annual CPI.

2   For Korea we have calculated GKFG from the data on gross capital formation available in International Financial Statistics published by IMF.

3   Due to gaps in the DCPGDP series, the ratio of domestic credit provided by the banking sector to GDP (DCBGDP) was used for two countries: Brazil and Malaysia.

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Table 1: Stock Market Development and Capital Accumulation in the

Less Developed Countries, 1988-2002[1,2]

Intercept	SMC	LPCY91	EDUSE	TRD-GDP	FDI-GDP	DCP-GDP	D	SD	R^2	LM Stat[3]
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)		
5.02**	0.01								0.002	3.03
-4.03	0.003		0.18*	0.06	0.47	-0.16*			0.04	1.66
2.24	0.009	0.34							0.002	3.04
-0.68	0.02		0.15*		0.58	-0.11*			0.03	3.02
15.19*	0.02			0.02	0.63	-0.3**			0.008	5.15[4]
4.64**	-0.01			-0.003	0.49				0.007	3.91
							(Dx)	(SDx)		
-2.42	-0.11		0.16*	0.05	0.53	-0.16*	1.58	0.11	0.05	0.57
							(Dy)	(SDy)		
-3.74	-0.01		0.18*	0.06	0.5	-0.16*	1.14	0.01	0.04	1.65
							(Dz)	(SDz)		
-4.53	0.02		0.22*	0.05	0.5	-0.17*	-4.02	-0.01	0.05	0.82
-0.87	-0.03		0.08	0.01	0.6				0.02	1.53

1   The following equation is fitted:

Growth of Gross Domestic Capital Formation (GGKF)

$$= a + b.\ SMC + c.\ \log(PCY91) + d.SE + e.\ TRDGDP + f.FDIGDP + g.DCPGDP + h.D + i.SD$$

where D is intercept dummy and SD is the slope dummy = D.SMC. We have used different alternative intercept dummies, Dx, Dy and Dz and SD (SDx, SDy and SDz varies accordingly: Dx = 0 for 15 LO-SMC LDCs with 1992-99 average SMC < 25 per cent and Dx = 1 for other 16 HI-SMC LDCs; Dy = 0 for 24 LDCs with SMC < 50 per cent and Dy = 1 for the seven VHI-SMC LDCs; Dz = 0 for 18 LDCs with 1991 per capita GDP < \$ 5000 and = 1 for 13 other rich LDCs.

Setting one or more parameters (b to i) equal to zero, we have fitted alternative regression equations. Details of some of the regression equations are skipped, as the basic conclusion remains unchanged.

2   Due to the non-availability of data on FDIGDP and DCBPGDP, some of the years are deleted for some of the countries.

3   The Breusch-Pagan Lagrange Multiplier (LM) test statistic is reported in this column.

4   The LM test supports FE model here; so the estimates are obtained by fitting the FE model. The estimates would not change much had we fitted an RE model.

*   Significant at 5 per cent level.

**   Significant at 1 per cent level.

Table 2: Capital Accumulation and Stock Market Development:

Estimates of Long-term Relationships through ARDL Method[1], 1976-2002

Country/Period (Model)	TURN	DCPGDP	FDIGKF	a	t
I. *HI-SMC Group*					
BRAZIL					
1977-2002 (0,0)	21.86			-9.46	
1977-2002 (0,0,0,0)	20.08	-0.02	-0.2	-5.19	
CHILE					
1978-2002 (3,1)	262.79**			36.01	-1.12**
1978-2002 (2,0,0,0)	327.72*	0.1	-0.88**	-8.02	
INDIA					
1976-2002 (2,0)	1.25			5.03**	
1976-2002 (3,2,2,3)	-6.32*	0.94*	5.85*	11.21	-0.48*
1976-2002 (2,1)[2]	-5.74			21.79**	
1976-2002 (3,4,4,4)[2]	4.11	0.84*	-2.27*	-7.63	
INDONESIA					
1977-2002 (0,0)	0.05			4.55	
1980-2002 (3,2,2,3)	-132.63	3.79	-26.06	-25.91	
JORDAN					
1977-2002 (0,0)	118.02*			-17.15**	
1977-2002 (0,0,0,0)	122.16*	-0.62	0.42	24.17	
KOREA					
1976-2002 (0,0)	-4.53*			20.36*	
1976-2002 (0,0)[3]	2.88			15.14*	
1976-2002 (0,0,0,1)[4]	-7.46	-0.21	2.19	35.48*	
MALAYSIA					
1976-2002 (0,0)[4]	16.35			2.47	
1976-2002 (0,0,0,0)[4]	27.34	-0.32*	0.28	33.45	
MEXICO					
1977-2002 (0,0)	3.41			1.03	
1977-2002 (0,0,0,2)	5.68	0.76	0.84	-18.01	
PHILIPPINES					
1976-2002 (2,3)	85.87*			-19.67*	
1977-2002 (3,3,2,1)	31.11*	-0.09	0.19	-3.11	
THAILAND					
1976-2002 (0,0)[4]	7.83			0.61	
1976-2002 (0,0,0,1)[4]	10.16	-0.08	-0.57	9.17	
ZIMBABWE					
1980-2001 (0,0)	-110.66			8.8	
1980-2001 (0,0,3,1)	90.28	-2.03*	-0.19	44.11*	
II. *LO-SMC Group*					
ARGENTINA					
1977-2002 (0,0)	37.36*			-12.26*	
1977-2002 (0,0,1,3)	18.42	-2.21*	-0.72	49.18**	
COLOMBIA					
1976-2002 (0,0)	111.57			-5.68	
1990-2002 (0,0,2,2)	90.91	-3.23*	-2.76	134.99*	
PAKISTAN					

1984-2002 (1,1)	-1.02			3.82**	
1984-2002 (2,1,2,0)	-0.2	-1.3	0.19	77.52*	
PERU[4]					
1981-2002 (0,0)	63.74			-8.75	
1981-2002 (0,0,2,0)	120.69	0.56	-0.21	-27.12	
VENEZUELA					
1977-2002 (3,1)	70.71**			-6.39*	
1977-2002 (2,2,1,0)	141.79*	1.17*	0.16	-142.24*	2.18*

1   The following ARDL (p, q, r, s) model has been fitted:

$$G_t = a + b.t + \sum_{i=1}^{p} b_i\, G_{t-i} + \sum_{j=0}^{q} c_j\, S_{t-j} + \sum_{k=0}^{r} d_k\, F_{t-k} + \sum_{l=0}^{s} e_l.B_{t-l}$$

where G = GKFG, S = TURN, F = FDIGKF and B = DCPGDP; the subscripts t, $t-i$, $t-j$, $t-k$, $t-l$, indicate different time periods and p, q, r and s are unknown lags to be determined by the SBC.

Setting the coefficients such as b, d_k and e_l (for all k, l) we have fitted alternative ARDL equations such as ARDL (p, q), ARDL (p, q, r, s) with or without time trend.

2   Instead of GGKF data we used data on growth of private fixed capital formation, GPGKF.

3   Intercept dummy, D97 is added to the ARDL equation; it is 0 for 1976-96 and =1 for 1997-02. Its estimate is -18.46 significant at 1 per cent level.

4   We have used intercept dummy (D97) and/or slope dummy (SD97=D97*t) and observed that the basic conclusion holds.

**   Significant at 1 per cent level (based on asymptotic standard errors).

*   Significant at 5 per cent level (based on asymptotic standard errors).

Table 3: Shareholder Protection index, 1995-2005: Selected Countries

Countries	Average Shareholder Protection Index[1]
I. 'Common law' origin countries	
Malaysia	6.05
India	5.35
Pakistan	2.23
II. 'Civil Law' origin countries	
Brazil	4.89
Argentina	3.91
Chile	3.25
Mexico	2.67

1   Legal scholars of Centre for Business Research (CBR), University of Cambridge have compiled a large time-series dataset on shareholder protection as a part of the project on Law, Finance and Development. For details of the construction of these leximetric data see Lele and Siems (2007). In these CBR data, originally 60 indicators of shareholder protection were considered and finally these were reduced to 10 important variables. We have added the 10 variables to get the aggregate index. Then it is averaged over the period for which the data are available. For maximum protection the index would assume the value 10 (as 1 is the maximum value for each of the 10 indicators). So the lower the value the lower is the level of protection

Appendix

**Per Capita GDP, Capital Accumulation and the Ratios of Stock
Market Capitalisation, Trade, Foreign Direct Investment and   Bank
Credit to GDP, 1992–1999: Selected Less Developed Countries**

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Country[1]\Series*	DCB-GDP	FDI-GDP	PCY-91	TRD-GDP	GGKF	SMC	SE

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I.HI-SMC Group (1992-99 SMC > 25 %)

Country[1]\Series*	DCB-GDP	FDI-GDP	PCY-91	TRD-GDP	GGKF	SMC	SE
BRAZIL	49.56	1.92	6425	18.54	2.39	26.62	69
CHILE	56.75	5.81	6167	57.86	9.14	96.79	75
HONG KONG[2]	153.7	12.12	20872	268.8	4.35	252.9	71
INDIA	24.28	0.48	1687	22.16	7.87	33.47	--
INDONESIA	48.76	1.06	2675	59.57	-1.41	26.45	54
JAMAICA[3]	26.38	3.47	3897	102.2	29	36.55	74
JORDAN	71.96	1.43	3639	121.8	5.38	72.47	81
KOREA[3]	68.69	0.69	9985	62.16	8.67	38.65	91
MALAYSIA	132.0	5.61	5937	184.4	4.34	215.5	69
MEXICO	27.14	2.48	7662	51.98	6.56	34.45	58
MAURITIUS	49.91	0.7	6759	125.9	5.04	34.95	70
PHILIPPINES	44.44	2.03	3734	87.57	4.17	65.5	52
SINGAPORE	108.8	11.46	15285	275	7.59	165.7	--
THAILAND	134.8	2.61	4791	89.55	-2.54	60.22	87
TRINIDAD & TOBAGO	44.69	9.08	7100	91.66	8.8	32.74	72
ZIMBABWE	32.22	1.77	2795	77.24	-1.88	27.6	37

II.LO-SMC Group (1992-99 SMC < 25 %)

Country[1]\Series*	DCB-GDP	FDI-GDP	PCY-91	TRD-GDP	GGKF	SMC	SE
ARGENTINA	20.64	2.91	9766	19.78	8.42	17.14	79
BANGLADESH	19.77	0.16	1190	27.17	9.51	3.51	43
BOTSWANA	12.62	0.09	5704	92.18	4.88	10.58	55
COLOMBIA	34.44	2.38	5889	35.47	3.34	15.94	56
COTE D'IVOIRE	20.19	1.61	1733	69.3	9.24	8.23	21
ECUADOR	24.62	2.88	3527	54.01	-1.64	7.7	48
EGYPT	40.62	1.27	2842	49.25	7.16	19.06	78
GHANA	7.03	2.03	1678	67.8	1.37	16.45	30
KENYA	32.84	0.22	1128	65.85	3.18	20.16	23
PAKISTAN	27.31	0.95	1630	36.2	1.66	16.53	--
PANAMA	74.78	6.05	4940	175.1	26.76	16.59	61
PERU	19.51	3.82	4026	30.52	7.61	20.04	66
SRI LANKA	22.28	1.38	2445	78.41	6.97	15.87	--
TUNISIA	66.12	2.43	4653	89.14	4.53	13.57	70
VENEZUELA	15.51	2.8	6150	49.81	4.5	10.45	58

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1   Relatively Rich (with PCY91 > $5000) countries are underlined.
2   FDIGDP data for 1998-99.
3   GGKF data are calculated from the data available in International
    Financial Statistics (IMF).

Source: Calculated from World Development Indicators (World Bank).