INTERACTIONS BETWEEN CAPITAL INFLOWS AND DOMESTIC INVESTMENT: ISRAEL AND DEVELOPING ECONOMIES

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The purpose of this paper is to explore econometrically the interactions between domestic investment and various types of capital inflows. We estimate these interactions using an international panel data set of sixty-four countries for the period 1976-1997. Interaction exists, especially in the FDI (foreign direct investment) and loans inflows. A noteworthy finding is the significant impact of the domestic investment on FDI inflows (0.14), after controlling for other factors of these inflows. We also find that the impact of FDI inflows on domestic investment (0.68), plagued by the endogeneity and non-stationarity problems, is a bit weaker than previously suggested in the literature,. Nevertheless, in terms of impact on domestic investment, FDI inflows are ranked highest, above the other types of capital inflow. Regarding the ranking of Israel in the sample, we find that it has an above average domestic-investment country-specific dummy and a portfolio-inflow country-specific dummy, but a below average FDI country-specific dummy. We interpret this finding as an indication of the high level of development of financial institutions in Israel.

I. INTRODUCTION

Effects of capital inflows, and particularly foreign direct investment (FDI), on domestic investment have been the subject of recent literature, both theoretical (e.g., Loungani and Razin, 2001, and Razin and Sadka, 2001) and empirical (e.g., Borenzstein, de Gregorio, and Lee, 1998, and Bosworth and Collins, 1999). This paper provides new evidence from international panel data on this issue, as well as on the related issue of the effect of domestic investment and growth on FDI, portfolio and debt flows.

Capital flows, and FDI in particular, can be beneficial both to the investors and to the host country. Economists tend to favor the free flow of capital across nations because it allows capital to seek out the highest rate of return. Unrestricted capital flows may also offer several other advantages, as noted by Feldstein (2000). First, international flows of capital reduce the risk faced by owners of capital, by allowing them to diversify their lending and investment. Second, the global integration of capital markets can contribute to the spread of best practices of corporate governance, accounting rules, and legal traditions. Third, the global mobility of capital may limit the ability of governments to pursue bad policies.

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   The paper is organized as follows. Section 2 summarizes current literature findings on the effects of capital inflows on domestic investment. Section 3 describes the econometric framework of this paper. Section 4 describes the empirical findings. Section 5 analyzes Israel's country specific effects. Section 6 concludes. Appendix 1 provides a comparison between our empirical approach and previous empirical studies.

2. THE BACKGROUND

A comprehensive study by Bosworth and Collins (1999) provides evidence concerning the effect of capital inflows on domestic investment for fifty-eight developing countries during 1978-95. The authors distinguish among three different types of inflows: FDI, portfolio investment, and other financial flows—primarily bank loans.
   Both capital inflows and domestic investment are expressed as percentages of GDP. They find that an increase of one dollar in capital inflows is associated with an increase in domestic investment of about 50 cents. This result, however, masks significant differences among types of inflow. FDI appears to bring about a one-for-one increase in domestic investment; there is virtually no discernible relationship between portfolio inflows and investment (little or no impact); and the impact of loans falls between those of the other two. These results hold both for the sample of fifty-eight countries and for a subset of eighteen emerging markets (see Figure 1; source: Loungani and Razin, 2001).

Figure 1
Estimated Impact of Capital Flows on Domestic Investment
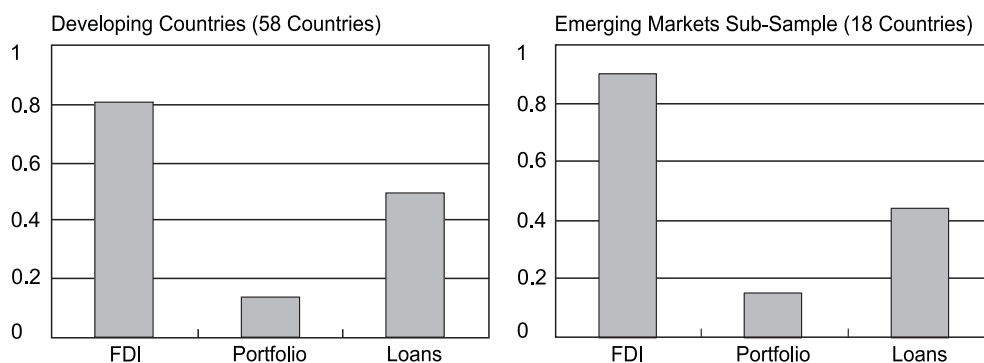
SOURCE: Based on Bosworth and Collins (1999). The height of the bar represents the estimated impact of $1 of the indicated capital flow on domestic investment.

   Since, typically, the domestic investment undertaken by FDI establishments relies on borrowing from the domestic credit market, the small coefficient (less than one) can be interpreted as reflecting significant domestic leverage in subsidiaries of foreign multinationals. The relatively high coefficient of FDI compared with portfolio flows or foreign loans suggests that the former flows contribute more substantially to the productivity of domestic capital than other types of capital flows (for a comparison of various estimation methods, see Appendix 1).

A distinct trait of FDI, analyzed in a model developed by Razin and Sadka (2002/1), is the capacity for actual control and hands-on management of the firm. In a large company that has many relatively small shareholders, each shareholder faces a free-rider problem. If a shareholder does something to improve the quality of investment under any particular management, then all other shareholders will enjoy the benefits. Thus, an individual shareholder will under-invest in monitoring the management actions. But if the ownership of the firm is under the control of a few experienced FDI investors, the free-rider problem is weakened, or in the limit disappears. Consequently, the quality of investment made by domestic firms under FDI control (as measured by the rate of return on capital) is improved, and the average size of investment increases. But, this element introduces an econometric problem. The prospects of an increase in future productivity growth in the domestic economy tend to strengthen the intensity of FDI inflows. At the same time the growth in productivity also provides a positive incentive for an increase in domestic investment spending. Thus, productivity growth jointly drives FDI inflows and domestic investment. In the investment regression one would thus expects that FDI itself, which appears as an explanatory variable, is influenced by innovations in the stochastic productivity process underlying the investment series, leading to a potential endogeneity problem: a source for an upward bias in the FDI coefficient in the domestic investment regression.

The endogeneity problem is addressed in this paper. Accordingly, we estimate the effect of FDI inflows, portfolio inflows and loan inflows, jointly on domestic investment, and also the reversed effect of domestic investment on these three types of inflows, using a Two-Stage Least Squares estimation technique.

3. THE EMPIRICAL FRAMEWORK

In this section we describe our econometric approach for the estimation of the interactions between domestic investment, FDI flows, international loans, and international portfolio investment (henceforth, referred to as the Hecht, Razin and Shinar (HRS) method; see also Razin, 2004). The sample consists of sixty-four developing countries, including Israel,[1] in the period 1976 to 1997 (twenty-two years in total; see Appendix 2). All the variables but the dummies are expressed as percentages of GDP. The source of data is the WDI database (see Appendix 3). The system of equations is given by:

1. $I = \beta_{i1j} + \beta_{i2}I(-1) + \beta_{i3}DY + \beta_{i4}DY(-1) + \beta_{i5}FDI + \beta_{i6}P + \beta_{i7}L + \beta_{i8}G$

2. $FDI = \beta_{f1j} + \beta_{f2}FDI(-1) + \beta_{f3}I + \beta_{f4}DY + \beta_{f5}DY(-1) + \beta_{f6}Res2$

3. $L = \beta_{l1j} + \beta_{l2}L(-1) + \beta_{l3}I + \beta_{l4}DY + \beta_{l5}DY(-1)$

4. $P = \beta_{p1j} + \beta_{p2}P(-1) + \beta_{p3}I + c_{p4}DY + \beta_{p5}DY(-1) + \beta_{p6}Res1$

[1] For the analysis of Israel's country-specific effects, see section 5.

where,
I =   gross domestic investment (percent of GDP)
FDI =   foreign direct investment (percent of GDP)
L =   bank loans (percent of GDP)
P =   portfolio investment flows (percent of GDP)
DY =   annual percentage growth rate of GDP
G =   general government consumption (percent of GDP)
Res1 =   multiple exchange rates (single exchange rate = 0, More than one =1)
Res2 =   restrictions on current account transactions (no controls =0, controls=1)
j =   country index, j = 01, 02, 03, ..., 64

    The four-equation system has four endogenous variables: I, FDI, P and L as dependent variables and observations. Every equation also includes the dependent variable with a one-period lag as an explanatory variable. The exogenous variables used for identification are government expenditure (G), a dummy variable for multiple exchange rates (Res 1), a dummy variable for restrictions on current account transactions (Res2), and lagged dependent variables.

Table 1 describes the interactions among the endogenous and the exogenous variables in the four-equation system.

Table 1
Conjectured Interactions among Endogenous and Exogenous Variables

	Endogenous Variables				Exogenous Variables							
	FDI	P	L	I	I(–1)	FDI(–1)	P(–1)	L(–1)	DY	DY(–1)	G	Res2
Res1												
I	+	+	+		+				+	+	+	
FDI				+		+			+	+		+
P				+			+		+	+			+
L				+				+	+	+		

Two versions are estimated: OLS, as a benchmark, and TSLS with a country-specific effect. To avoid non-stationarity of the residuals in the 4-equation system, we introduce lagged dependent variables on the right hand side of the equation system.

4. EMPIRICAL FINDINGS

Tables 2-5 present the estimation results,[2] and we discuss them equation by equation.

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[2] Estimated using Eviews software.

4.1. Domestic Investment

Table 2 describes the effects of capital inflows on domestic investment.

The coefficient of FDI is significant in the OLS and TSLS regressions. The long-run effect of FDI on domestic investment is 0.94 in the OLS regression and 0.68 in the TSLS regression. Thus, potential for an upward bias in the OLS estimation procedure appears to be validated. Indeed the effect of FDI on domestic investment is smaller in TSLS regressions.

The loan coefficient is significant and positive both in the OLS and the TSLS regressions, at a similar magnitude. However, the long-run coefficient (adjusted for the lag structure of the regression) moves up from -0.35 in the OLS regression, to 0.35 in the TSLS regression. The coefficient of the portfolio-investment variable is not significant in the OLS regression and becomes significant in the TSLS regression.

Interestingly, the long-run effect FDI on domestic investment, 0.68, exceeds the corresponding effect of portfolio investment, 0.53, which in turn exceeds the effect of loans, 0.35.

Table 2
Determinants of Domestic Investment[a]

	OLS	TSLS
Foreign direct investment, FDI	0.16	0.23
	(5.2)	(6.8)
Loan inflows, L	−0.06	0.12
	(−2.2)	(3.0)
Portfolio inflows, P	0.03	0.18
	(0.3)	(2.0)
Lagged domestic investment, I(−1)	0.87	0.66
	(96.1)	(51.2)
Output growth, DY	0.15	0.15
	(10.4)	(10.9)
Lagged output growth, DY(−1)	0.06	0.06
	(3.8)	(4.4)
Government expenditure, G	0.03	0.01
	(2.3)	(0.5)
Long-run effect[b] of FDI on I	0.94	0.68
Long-run effect of L on I	−0.35	0.35
Long-run effect of P on I	0.18	0.53
R^2_{adj}	0.40	0.53

[a] I(−1), FDI, P, L and G are in terms of ratio to GDP; t values appear in parentheses.
[b] The long-run effect expresses the lagged timed structure of the 2SLS estimation. It is calculated as the sum of a converging geometric series $\beta_{xi} / (1 - \beta_{x(-1)I})$.

4.2. FDI inflows

Table 3 describes the effect of domestic investment on FDI inflows, allowing for the effects of a group of other traditional variables, such as growth and capital controls.

The coefficient of domestic investment is positive and significant in both the OLS and the TSLS regression. The long-run effect in the OLS (0.08) is smaller than in the TSLS (0.14).

4.3. Loan inflows

Table 4 describes the effect of domestic investment on loans inflows, allowing for the effect of growth. The coefficient of domestic investment is negative and non-significant in the OLS but positive and significant in the TSLS regression. The long-run effect moves up from -0.03 in the OLS regression to 0.08 in the TSLS regression.

4. 4. Portfolio Inflows

Table 5 describes the effect of domestic investment on portfolio investment inflows. The explanatory power of the regression is poor, however, and most of the right-hand side variables have non-significant coefficients. The regression analysis, effectively, flashes out an autocorrelation process of the portfolio investment flows.

5. ISRAEL'S COUNTRY-SPECIFIC EFFECT

Naturally we have a special interest in Israel, a small open economy, with characteristics

Table 3
Determinants of FDI Inflows[a]

	OLS	TSLS
Domestic investment, I	0.03	0.07
	(3.0)	(5.0)
Lagged foreign direct investment, FDI(−1)	0.60	0.50
	(19.6)	(16.0)
Output growth, DY	0.01	0.02
	(0.10)	(1.6)
Lagged output growth, DY(−1)	−0.01	0.02
	(−0.1)	(1.3)
Dummy for capital controls, Res2 (no controls =0, controls=1)	−0.003	−0.002
	(−2.1)	(−1.2)
Long-run effect of I on FDI	0.08	0.14
R^2_{adj}	0.13	0.29

[a] FDI and I are in terms of ratio to GDP; t values appear in parentheses.

Table 4
Determinants of Loans Inflows[a]

	OLS	TSLS
Domestic investment, I	−0.01	0.04
	(1.4)	(3.0)
Lagged L, L(−1)	0.66	0.50
	(22.9)	(16.7)
Output growth, DY	0.01	−0.001
	(0.8)	(−0.05)
Lagged output growth, DY(−1)	0.02	−0.0002
	(1.2)	(−0.02)
Long-run effect of I on L	−0.03	0.08
R^2_{adj}	0.24	0.25

[a] L(−1) and I are in terms of ratio to GDP; t values appear in parentheses.

of both an emerging economy and of an industrialized economy. Capital inflows have played a major role in the growth of Israel's economy for decades. The composition of these inflows changed significantly over the years, as is shown in Figure 2: loan inflows declined relative to FDI flows and later relative also to portfolio inflows.

Figures 3, 4, 5, and 6 plot the country-specific coefficients of the domestic investment and capital inflows regressions. Israel appears to have above average country-specific dummy coefficients in the domestic investment regression and the portfolio inflow regression, and below average country-specific dummy coefficients in the FDI inflow and loan regressions.

We find relatively high portfolio inflows but small FDI and loan inflows. This composition of financial inflows may be predicated on the highly developed financial institutions in Israel. It is consistent with the theory that the share of portfolio inflows in total capital inflows is positively correlated with the degree of development in the domestic capital market. In contrast, the share of FDI inflows rises in a risky financial environment (see Albuquerque, 2000).

Table 5
Determinants of Portfolio Investment Inflows[a]

	OLS	TSLS
Domestic investment, I	0.004	0.01
	(0.5)	(0.7)
Lagged portfolio investment, P(−1)	0.46	0.40
	(4.8)	(4.8)
Output growth, DY	0.001	−0.001
	(0.2)	(−0.1)
Lagged output growth, DY(−1)	0.007	0.004
	(0.5)	(0.3)
Dummy for multiple exchange rates, Res1 (one exchange rate = 0, more than one =1)	−0.001	−0.002
	(−0.6)	(−0.9)
Long-run effect of I on Port	0.007	0.017
R^2_{adj}	0.03	0.13

[a] P(-1) and I are in terms of ratio to GDP; *t* values appear in parentheses.

Figure 2
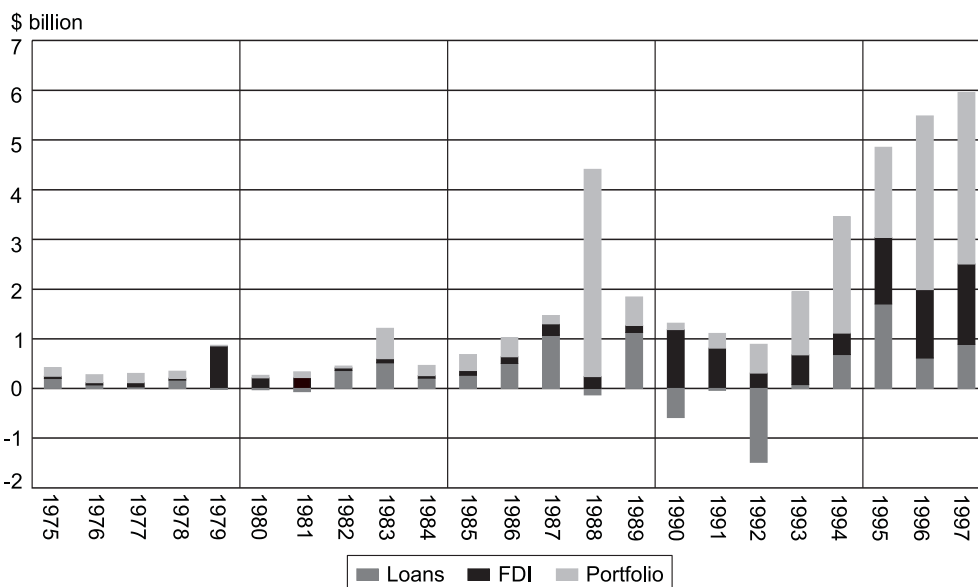**The Composition of the Inflows to Israel, 1975–1997**

Figure 3
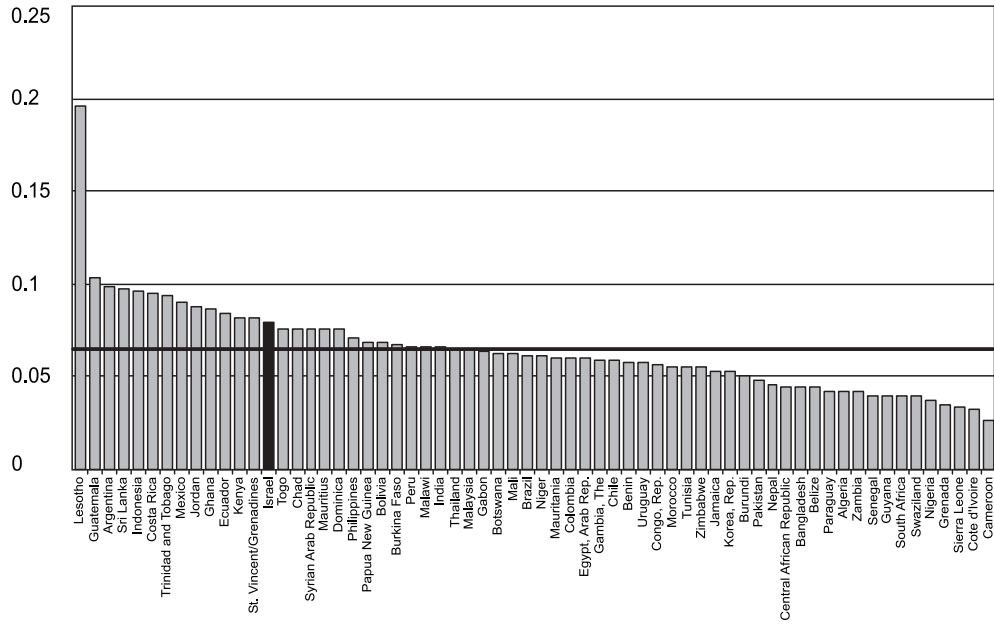**Country-Specific Effect of Domestic Investment–The Case of Israel**

Figure 4
Country-Specific Effect of FDI–The Case of Israel
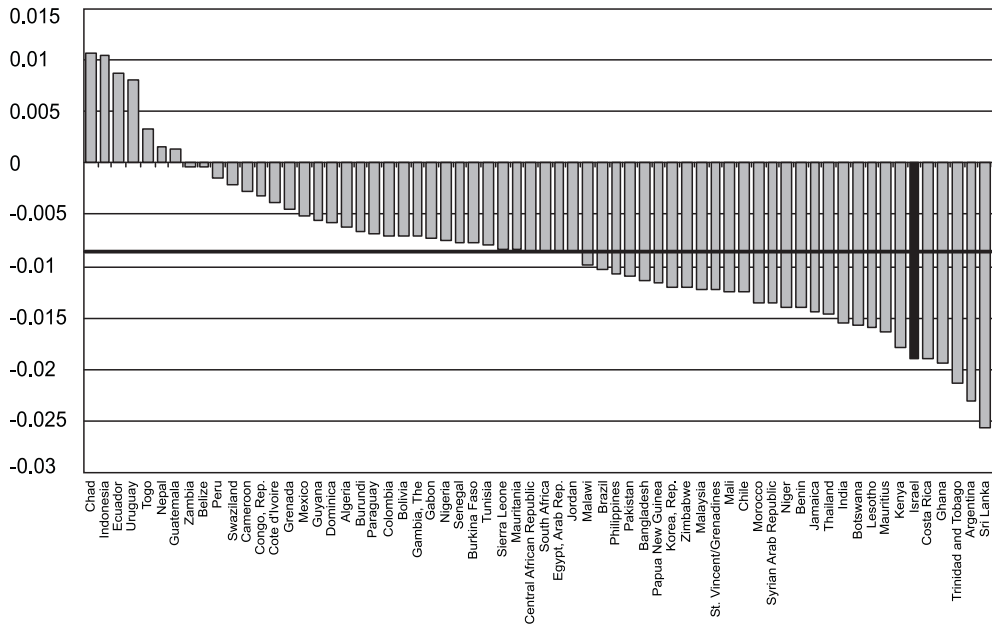
Figure 5
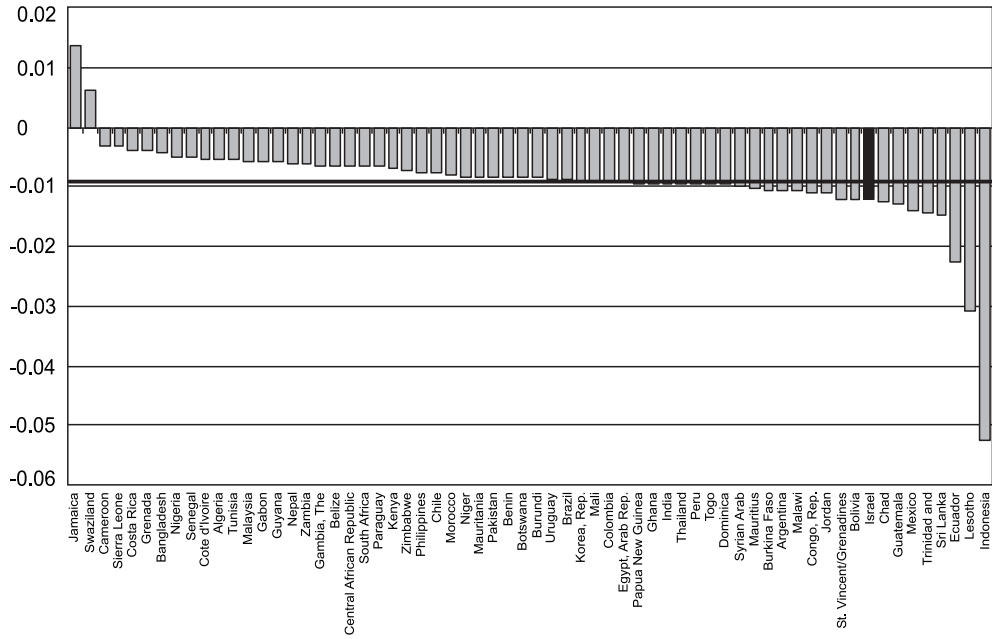**Country-Specific Effect of Loans–The Case of Israel**

Figure 6
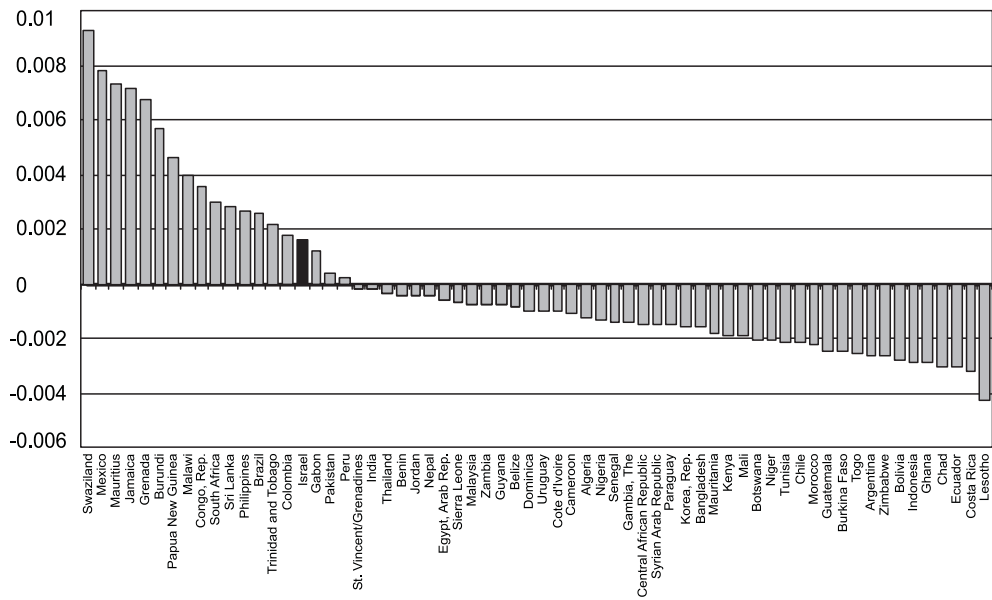**Country-Specific Effect of Portfolio Investment–The Case of Israel**

6. CONCLUSION

This paper explores econometrically the interactions between domestic investment and various types of capital inflows. We estimate these interactions using an international panel data set. Interaction exists, especially in the FDI and loan inflows. A noteworthy finding is the significant impact of domestic investment on FDI inflows (0.14), after controlling for other factors. We also find that the impact of FDI inflows on domestic investment (0.68) is a bit weaker than previously suggested in the literature, which was plagued by the endogeneity and non-stationarity problems. Still, the FDI inflows are ranked higher than the other types of capital inflow in terms of their impact on domestic investment. Regarding Israel's ranking in the sample, we find that it has an above average domestic-investment country-specific dummy and portfolio-inflow country-specific dummy, but a below average FDI country-specific dummy. We interpret this finding as an indication of the high level of development of financial institutions in Israel. To investigate this conjecture, we plan in future research to estimate the correlation between the country specific dummies and proxies of development in domestic capital markets.

APPENDIX 1

Estimation methods: comparison

Table 6 describes the effect of capital inflows on domestic investment among three different estimation methods, using our sample. The first 3 columns a, b, and c describes estimation results based on Borensztein, De Gregorio and Lee, (1998), BDGL in short. Columns d and e present the coefficients of the estimates based on Bosworth and Collins (1999), BC in short. Columns f and g presents our own estimation results, HRS in short. Loosely speaking the main differences are as follows. The BDGL and BC methods do not include lagged domestic investment, whereas HRS does include this variable. The BDGL method time average the sample into half decade and decade means, while BC and HRS use the non-aggregated original annual data. Variables such as P and L appears in the BC and HRS regression but not in the BDGL regressions, while variables such as share of education appear in the latter but not in the BC and HRS regressions. Figure 7 presents the FDI coefficient as it changes along these various estimation methods.

Figure 7
Estimated Impact of FDI on Domestic Investment[a]
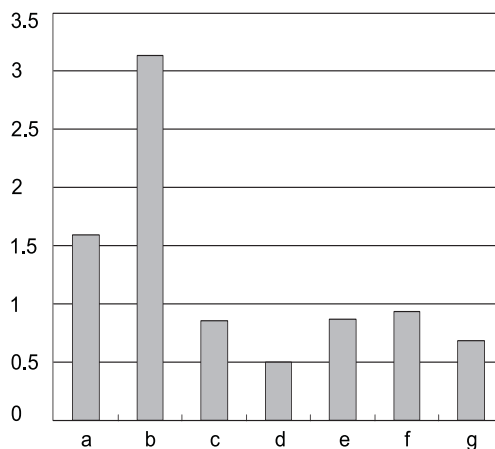
[a] See footnotes to Table 6 for legend.

Table 6
Effects of Capital Flows on Domestic Investment: Comparison of Estimation Methods

	BDGL Method			BC Method		HRS Method	
	a	b	c	d	e	f	g
Short-run effect of FDI on I	1.59	3.13	0.86	0.50	0.87	0.16	0.23
	(5.1)	(2.22)	(4.2)	(29.9)	(15.3)	(5.2)	(6.8)
Long-run impact of FDI on I	1.59	3.13	0.86	0.50	0.87	0.94	0.68
Portfolio				−0.02	0.77	0.03	0.18
				(−0.8)	(9.5)	(0.3)	(2.0)
L				0.59	0.95	−0.06	0.12
				(60.3)	(35.8)	(−2.2)	(3.0)
Growth						0.15	0.15
						(10.4)	(10.9)
Growth (−1)				0.18	0.15	0.06	0.06
				(38.3)	(21.8)	(3.8)	(4.4)
Growth (−2)				0.16	0.19		
				(34.6)	(29.6)		
(Change in the) terms of trade				0.00	0.00		
				(0.5)	(2.7)		
Government spending	0.04	0.025	−0.03			0.03	0.01
	(0.3)	(0.2)	(−0.3)			(2.3)	(0.5)
Share of education	1.28	1.51	0.96				
	(2.5)	(2.8)	(2.7)				
(log) GDP per capita	2.15	2.06	3.05				
	(2.2)	(2.07)	(3.9)				
Capital controls	−0.58	−0.93	0.95				
	(−0.3)	(−0.5)	(0.9)				
DDI*ED3		−0.28					
		(−1.1)					
Investment (−1)						0.87	0.66
						(96.1)	(51.2)
Adjusted R^2	0.29	0.29	0.19	0.69	0.69	0.40	0.53

* *t* values appear in parentheses.
1. Sample: 64 developing countries, 1976–1997.
a. Average of two periods: 76–86 & 87–97.
b. Average of two periods: 76–86 & 87–97.
c. Average of 5 periods: 76–80, 81–85, 86–90, 91–95 & 96–97.
d. OLS estimation without instruments.
e. Instrumental variable regressions using the following instruments: total inflows to 64 developing countries of foreign direct investment, portfolio investments, and loans. The one-year lagged percent change in GDP; the change in the terms of trade; and a dummy variable for whether or not a country has imposed capital controls.
f. OLS estimation.
g. 2SLS estimation with country specific effect.

APPENDIX 2

List of sixty-four countries in HRS estimation

Algeria	Costa Rica	Kenya	Philippines
Argentina	Cote d'Ivoire	Korea, Rep.	Rwanda
Bangladesh	Dominica	Lesotho	Senegal
Belize	Ecuador	Malawi	Sierra Leone
Benin	Egypt, Arab Rep.	Malaysia	South Africa
Bolivia	Gabon	Mali	Sri Lanka
Botswana	Gambia, The	Mauritania	St. Vincent and the Grenadines
Brazil	Ghana	Mauritius	Swaziland
Burkina Faso	Grenada	Mexico	Syrian Arab Republic
Burundi	Guatemala	Morocco	Thailand
Cameroon	Guyana	Nepal	Togo
Central African Republic	India	Niger	Trinidad and Tobago
Chad	Indonesia	Nigeria	Tunisia
Chile	Israel	Pakistan	Uruguay
Colombia	Jamaica	Papua New Guinea	Zambia
Congo, Rep.	Jordan	Peru	Zimbabwe

APPENDIX 3

The data

1. Sources of data
The principal source of data is the World Bank WDI 2000 CD-ROM.
Capital control data was taken from IMF publications.
A few missing data items regarding loans for Israel were taken from the bank of Israel resources.

2. Definitions of series
Terms of trade (DTT) adjustment (constant LCU) (NY.TTF.GNFS.KN) - The terms of trade effect equals capacity to import less exports of goods and services in constant prices. Data are in constant local currency. The change is calculated as the difference from one year to the other.

   Public spending on education (ED3), total (percent of GNP, UNESCO) (SE.XPD.TOTL.GN.ZS) - Public expenditure on education (total) is the percentage of GNP accounted for by public spending on public education plus subsidies to private education at the primary, secondary, and tertiary levels. For more information, see WDI Table 2.9.

   GDP per capita (CY), PPP (current international $) (NY.GDP.PCAP.PP.CD) - GDP per capita based on purchasing power parity (PPP). GDP PPP is gross domestic product converted to international dollars using purchasing power parity rates. An international dollar has the same purchasing power over GDP as the US dollar in the United States. Data are in current international dollars. For more information, see WDI Tables 1.1, 4.11, and 4.12. For the estimation we used the logarithm of CY.

Foreign direct investment (FDI), net inflows (percent of GDP) (BX.KLT.DINV.DT.GD.ZS). Foreign direct investment is net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments. For more information, see WDI Table 5.1.

General government consumption (G) (percent of GDP) (NE.CON.GOVT.ZS). General government consumption includes all current spending for purchases of goods and services (including wages and salaries). It also includes most expenditures on national defense and security, but excludes government military expenditures that are part of government capital formation. For more information, see WDI Table 4.9.

Gross domestic investment (I) (percent of GDP) (NE.GDI.TOTL.ZS). Gross domestic investment consists of outlays on additions to the fixed assets of the economy plus net changes in the level of inventories. Fixed assets include land improvement (fences, ditches, drains, and so on); plant, machinery, and equipment purchases; and the construction of roads, railways, and the like, including commercial and industrial buildings, offices, schools, hospitals, and private residential dwellings. Inventories are stocks of goods held by firms to meet temporary or unexpected fluctuations in production or sales. For more information, see WDI Tables 1.4 and 4.9.

GDP growth (DY) (annual percent) (NY.GDP.MKTP.KD.ZG). Annual percentage growth rate of GDP at market prices based on constant local currency. Aggregates are based on constant 1995 US dollars. For more information, see WDI Tables 4.1 and 4.2.

Portfolio investment (P), excluding LCFAR (BoP, current US$) (BN.KLT.PTXL.CD). Portfolio investment excluding liabilities constituting foreign authorities' reserves covers transactions in equity securities and debt securities. Data are in current US dollars. This series was divided in the matching GDP to get the portfolio investment as a share of GDP.

Bank and trade-trade lending (L) (PPG + PNG) (NFL, current US$) (DT.NFL.PCBO.CD). Bank and trade-related lending covers commercial bank lending and other private credit. Data are in current US dollars. For more information, see WDI Table 6.7. This series was divided in the matching GDP to get the loans flows as a share of GDP.

Total financial flows (TLY64F is the sum of FDI, portfolio and loans). Total portfolio flows (PLY64) and total loans (OLY64) are the sum of all relevant flows divided in the sum of relevant GDP. It includes 64 developing countries.

Capital controls Data on capital controls for all IMF member countries in the years 1966—97. The dummy takes the value 1 when a restriction is in place, and 0 otherwise.
1) Multiple exchange rates (RES1)
2) Restrictions on current account transactions (RES2)
3) Restrictions on capital account transactions (RES3)
4) Surrender of export proceeds (RES4)

REFERENCES

Albuquerque, R. (2000), "The Composition of International Capital Flows: Risk Sharing through Foreign Direct Investment," *Bradley Policy Research Center Working Paper* No. FR 00-08, Rochester, New York: University of Rochester.

Borensztein, E., De-Gregorio, J. Lee, and Jong-Wha (1998), "How Does Foreign Direct Investment Affect Economic Growth?" *Journal of International Economics*, 45(1), June, 115–35.

Bosworth, B. and S. Collins (1999), "Capital Flows to Developing Economies: Implications for Saving and Investment," *Brookings Papers on Economic Activity* 0 (1), 143-69.

Dadush, U., D. Dasgupta and D. Ratha (2000), "The Role of Short-Term Debt in Recent Crises," *Finance and Development*, Vol. 37 (December), 54-57.

Feldstein, M. (2000), "Aspects of Global Economic Integration: Outlook for the Future," *NBER Working Paper* No. 7899, Cambridge, Massachusetts: National Bureau of Economic Research.

Krugman, K. (1998), "Firesale FDI," *Working Paper, Massachusetts Institute of Technology*. This paper is also available on the web at http://web.mit.edu/krugman/www/FIRESALE.htm).

Hausmann, R. and E. Fernandez-Arias (2000), "Foreign Direct Investment: Good Cholesterol?" Inter-American *Development Bank Working Paper* No. 417 (Washington).

Lipsey, R.E. (2001), "Foreign Direct Investors in Three Financial Crises," *NBER Working Paper* No. 8084, January.

Razin, A. (2004), "The Contributions of FDI Flows to Domestic Investment in Capacity, and Vice Versa," *Growth and Productivity in East Asia, NBER-EASE* Volume 13, Takatoshi Ito and Andrew K. Rose (editors), The University of Chicago Press.

Razin A. and E. Sadka (2001), *Labor, Capital and Finance: International Flows*, New York and Cambridge, England: Cambridge University Press.

——— (2002), "Gains from FDI Inflows with Incomplete Information," *Economics Letters*, December, Vol. 78/1, 71-77/

World Bank (2001), "Coalition Building for Effective Development Finance," in *Global Development Finance*, Washington: World Bank.