Development Centre Seminars

Foreign Direct Investment Versus Other Flows to Latin America

FINANCE AND INVESTMENT



OECD

Preface by
Jorge Braga de Macedo
and Enrique V. Iglesias

INTER-AMERICAN
DEVELOPMENT BANK

© OECD, 2001.

© Software: 1987-1996, Acrobat is a trademark of ADOBE.

All rights reserved. OECD grants you the right to use one copy of this Program for your personal use only. Unauthorised reproduction, lending, hiring, transmission or distribution of any data or software is prohibited. You must treat the Program and associated materials and any elements thereof like any other copyrighted material.

All requests should be made to:

Head of Publications Service,
OECD Publications Service,
2, rue André-Pascal,
75775 Paris Cedex 16, France.

Development Centre Seminars

Foreign Direct Investment Versus Other Flows to Latin America

Preface by
Jorge Braga de Macedo and Enrique V. Iglesias

OECD

INTER-AMERICAN DEVELOPMENT BANK
DEVELOPMENT CENTRE OF THE ORGANISATION
FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

Pursuant to Article 1 of the Convention signed in Paris on 14th December 1960, and which came into force on 30th September 1961, the Organisation for Economic Co-operation and Development (OECD) shall promote policies designed:

- to achieve the highest sustainable economic growth and employment and a rising standard of living in Member countries, while maintaining financial stability, and thus to contribute to the development of the world economy;
- to contribute to sound economic expansion in Member as well as non-member countries in the process of economic development; and
- to contribute to the expansion of world trade on a multilateral, non-discriminatory basis in accordance with international obligations.

The original Member countries of the OECD are Austria, Belgium, Canada, Denmark, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. The following countries became Members subsequently through accession at the dates indicated hereafter: Japan (28th April 1964), Finland (28th January 1969), Australia (7th June 1971), New Zealand (29th May 1973), Mexico (18th May 1994), the Czech Republic (21st December 1995), Hungary (7th May 1996), Poland (22nd November 1996), Korea (12th December 1996) and the Slovak Republic (14th December 2000). The Commission of the European Communities takes part in the work of the OECD (Article 13 of the OECD Convention).

The Development Centre of the Organisation for Economic Co-operation and Development was established by decision of the OECD *Council on 23rd October 1962 and comprises twenty-three Member countries of the* OECD: *Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Korea, Luxembourg, Mexico, the Netherlands, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden and Switzerland, as well as Argentina and Brazil from March* 1994, *Chile since November* 1998, *and India since February* 2001. *The Commission of the European Communities also takes part in the Centre's Advisory Board.*

The purpose of the Centre is to bring together the knowledge and experience available in Member countries of both economic development and the formulation and execution of general economic policies; to adapt such knowledge and experience to the actual needs of countries or regions in the process of development and to put the results at the disposal of the countries by appropriate means.

The Centre has a special and autonomous position within the OECD *which enables it to enjoy scientific independence in the execution of its task. Nevertheless, the Centre can draw upon the experience and knowledge available in the* OECD *in the development field.*

THE OPINIONS EXPRESSED AND ARGUMENTS EMPLOYED IN THIS PUBLICATION ARE THE SOLE RESPONSIBILITY OF THE AUTHORS AND DO NOT NECESSARILY REFLECT THOSE OF THE OECD OR OF THE GOVERNMENTS OF ITS MEMBER COUNTRIES.

*
* *

Publié en français sous le titre :
INVESTISSEMENT DIRECT ÉTRANGER ET D'AUTRES FLUX FINANCIERS VERS L'AMÉRIQUE LATINE

© OECD 2001
Permission to reproduce a portion of this work for non-commercial purposes or classroom use should be obtained through the Centre français d'exploitation du droit de copie (CFC), 20, rue des Grands-Augustins, 75006 Paris, France, tel. (33-1) 44 07 47 70, fax (33-1) 46 34 67 19, for every country except the United States. In the United States permission should be obtained through the Copyright Clearance Center, Customer Service, (508)750-8400, 222 Rosewood Drive, Danvers, MA 01923 USA, or CCC Online: *www.copyright.com*. All other applications for permission to reproduce or translate all or part of this book should be made to OECD Publications, 2, rue André-Pascal, 75775 Paris Cedex 16, France.

Foreword

This publication was undertaken in the context of the International Forum on Latin American Perspectives, jointly organised by the Inter-American Development Bank and the OECD Development Centre. It forms part of Centre's research programme on *Governing Finance and Enterprises*, and the Centre's External Co-operation activities. The Forum held its eleventh meeting in Paris in November 2000. Contributions to that meeting are included in this volume.

Table of Contents

Preface

Jorge Braga de Macedo and Enrique V. Iglesias 7

Introduction

Eduardo Fernández-Arias, Colm Foy and Helmut Reisen 9

PART ONE

EXPERTS' SEMINAR

Foreign Direct Investment: Good Cholesterol?

Ricardo Hausmann and Eduardo Fernández-Arias 19

A Comment by Stefano Manzocchi 51

A Comment by Helmut Reisen 55

The Perils of Competition for Foreign Direct Investment

Charles P. Oman 63

A Comment by John Evans 85

A Comment by Eduardo Fernández-Arias 89

Capital Inflows and Crisis: Does the Mix Matter?

Eduardo Fernández-Arias and Ricardo Hausmann 93

A Comment by Beatrice Weder 111

A Comment by Philip Turner 113

Will the FDI Boom Bring More Growth?
Ricardo Hausmann and Patricia Cortés 117
A Comment by Daniel Cohen 141
A Comment by Peter Nunnenkamp 143

Part Two

The View from the Corporate Sector

Preliminary Remarks
Enrique V. Iglesias 149
A Summary of the Discussions
Colm Foy 151
Business Activity Is a Factor
Antonio Estrany-Gendre 153
Global Markets, Local Institutions
Frans van Loon 155
"Reform Fatigue" Must Be Overcome
Carlos Hurtado Lopez 157
The Globalisation of Business Can Be Good for Development
Douglas C. Worth 159

Conclusions to the Forum
Jorge Braga de Macedo 161

Programme 167
List of Authors and Participants 173

Preface

Developing countries and emerging economies require secure forms of financing if they are to grow and increase wealth. In Latin America, a region which has suffered in the recent past from volatility in financial flows, the search for the optimal mix of inward-bound flows is paramount. For this reason, the International Forum on Latin American Perspectives focused on the analysis of patterns of financial flows to Latin America and their consequences for development in the region.

The Forum concentrated on: *i)* the nature, determinants and growth effects of foreign direct investment (FDI) flows; and *ii)* whether the degree of vulnerability is a function of the mix of capital inflows. The Forum drew lessons from this discussion to identify policy priorities for promoting, or discouraging, specific types of capital inflows in support of institutional and financial sector reform.

Three chapters of this book challenge the view that FDI is necessarily the preferred form of capital inflow in developing countries. The authors argue that the greater stability and resilience of FDI spring from defective debt markets and not from the permanence of fixed investment. This line of argument challenges the widely held view that FDI benefits economic development through embodied technology, managerial skills, and easier access to world markets. Further, it posits that the rising share of FDI in the capital accounts of Latin American countries that has been observed in recent years may reflect a deteriorating external financial environment in the context of a weak domestic institutional framework to support investment, finance and risk taking. FDI is not a substitute for reform, it may rather be an indication of the need for better governance.

Most of the corporate-sector representatives, policy makers and economists who participated in the Forum agreed that incentives and subsidies are unwarranted for attracting FDI. Rather, they concluded that countries should improve the environment for private investment generally and strengthen local and regional financial markets.

We hope that these findings of the International Forum on Latin American Perspectives will contribute to the search for solutions to the essential economic issues facing the region.

Jorge Braga de Macedo
President
OECD Development Centre
Paris

Enrique V. Iglesias
President
Inter-American Development Bank
Washington, D.C.

January 2001

Introduction

Eduardo Fernández-Arias, Colm Foy and Helmut Reisen

The rising share of foreign direct investment in private capital flows to Latin America observed during the late 1990s has given rise to discussion of the role of FDI in financing development. The eleventh International Forum on Latin American Perspectives focused on corporate perspectives on private capital flows to Latin America and on how to interpret this growing share of foreign direct investment flows to the region.

Does FDI Indicate Weakness?

FDI is usually seen as a reliable ally in times of difficulty and a good friend in times of prosperity. This favourable view can, however, be challenged. Hausmann and Fernández-Arias demonstrated to the Forum in their paper reproduced in this volume, that FDI could be seen in a different light. Instead of being a sign of stability and, therefore, cause for optimism, foreign direct investment could be interpreted as a sign of weakness and bad health. The high proportion of FDI in the external finance mix of Latin America, relative to more developed regions, and its dramatic increase in recent years, they say, "… is an indication that markets are working poorly, that institutions are inadequate, and that risks are high". What has been demonstrated in Latin America, they claim, is that economies are weak; so weak, in fact, that their financial systems are unable to provide the facilities and confidence for local firms to borrow abroad, leaving FDI as the best-suited, or only available, form of foreign capital inflow.

The picture painted by Fernández-Arias and Hausmann is a cautionary one. In their view of a failure in the local financial system, especially in the presence of the global decline of capital flows to developing countries, all other flows apart from FDI are discouraged. The decline of debt inflows to virtually nil is responsible for the preponderance of FDI as a proportion of financial flows in Latin America in recent years. A capital inflows mix heavy on FDI, they therefore conclude, is an indicator of the weakness of economies, rather than a sign of their health and growth potential.

FDI is an inferior item in the financing menu, whose choice signals necessity more than virtue. This conclusion is apparently at odds with economists' general approval of FDI as "safe" flows founding the basis for a healthy economy, but it is not so in a second-best sense. As the authors put it, "…[it] is a good market response to a bad situation".

There are additional factors in the FDI story which have not been considered here but may be important. For example, in work for the Development Centre, Wei (2000) shows that corruption tends to be correlated with relatively light flows of FDI. Put the other way round, this would indicate that strong FDI flows are an indication of low corruption and, therefore, of health. Furthermore, the question of the desirability of FDI over other flows is more complex. A number of commentators, including Nunnenkamp and Turner, both in this volume, stress the importance of the makeup of FDI. Indeed, FDI can have different characteristics and therefore different effects on the economy. Greenfield investment represents a net increase in fixed capital, whereas the acquisition of shares in a privatised company may not. Though FDI may not necessarily raise the investment/GDP ratio, it might still increase the productivity of investment.

Supply explanations for the increase in FDI flows to Latin America in the 1990s can also be advanced. Manzocchi and Reisen point out that the 1990s were a period of consolidation and concentration, leading to mergers and acquisitions on a large scale and a consequent increase in FDI flows, somewhat irrespective of other factors. This phenomenon is not by any means limited to emerging markets and developing countries; indeed, the poorer countries were under-represented in FDI flows during the period. In quantitative terms, therefore, more FDI went to the industrialised countries, which were not in crisis, than to the developing ones, some of which were. Nonetheless, since emerging markets became less expensive targets for mergers and takeovers, such operations have hollowed out the stock markets, reducing liquidity and raising the cost of further investment. It is difficult to disentangle a temporary phenomenon, possibly explained by the wedge in capital costs between industrialised and developing countries, from a more permanent feature of ill-functioning financial markets.

FDI and Resistance to Crisis

Turning to the relationship between crisis and foreign direct investment compared to other inward flows, we appear to have ample evidence, again cited by Turner in this volume, that FDI stays in crisis countries and that flows of FDI continue, indeed, may even increase in the immediate post-crisis period.

Crisis typically has a negative effect on the exchange rate, reducing the price of non-tradables and raising the proportion of tradables in a local subsidiary's output. Production therefore rises, and capital flows into the economy. At the same time, the price of local fixed assets falls relative to its pre-crisis level, thus increasing the

attractiveness of domestic firms to overseas investors. This is the converse argument to that discussed above, but the result is the same: FDI continues to flow into crisis and post-crisis countries.

Fernández-Arias and Hausmann examine the effect of the mix of capital inflows on the vulnerability of economies to crisis in a second paper in this volume. The authors are sceptical about the traditional assumption that FDI could not "fly away" from recipient countries because it is tied to physical investment, noting that in some crisis-ridden developing countries it has been shown to demonstrate mobility usually associated with debt by round-tripping and hedging. Nevertheless, they do find that FDI liabilities are, indeed, less crisis-prone than debt or other non-FDI obligations, irrespective of other commonly measured factors such as openness or income level. However, this appears to be true for developing countries and does not apply in the industrialised economies, where non-FDI liabilities display similar stabilising influences.

They conclude that the difference is caused by excessive debt mismatch resulting from currency or maturity mismatches associated with debt in developing countries. This, in turn, is the crux of the "original sin" suffered by developing economies — the inability of firms to borrow long-term in their own currencies so that long-term borrowing has to be taken out in international currencies, notably the US dollar, or else short term. Hence, the challenge is to obtain redemption from original sin. If this proves impossible, then emerging markets and developing countries are "condemned" to seeking to maximise the proportion of FDI in their liabilities as a hedge against crisis, thereby distancing themselves from the pattern of finance employed in the developed, industrial countries.

Redemption from original sin can only be attempted in one of two ways: either a country can gain credibility for its own currency through long-term, confidence-building measures such as maintaining stable exchange rates and fiscal prudence; or it can adopt a currency which has already attained credibility. Neither choice is an easy one.

Confidence building is, by definition, a lengthy process, comments Beatrice Weder in response to Fernández-Arias and Hausmann, and there is by no means a guarantee of success. It involves demonstrating to the domestic and the international markets, including international institutions, that the currency is safe for a significant period, both in the past and in the future. In itself, the process requires sustained growth in order to enable policy stability and, therefore, predictability. Policies to support the currency in difficult times and to prevent it from appreciating in good times are not necessarily the same, and even in mature industrialised economies have not been easy to find.

The alternative is, for Latin America, dollarisation, though it could be "euroisation" elsewhere. The costs, here, are of a different nature but none the less real. Adopting someone else's currency implies surrendering at least a part of national sovereignty to a foreign government. Apart from the political factors which might

counter such a move on nationalist grounds, a country choosing this route acknowledges that henceforth monetary policy will no longer be a domestic regulatory tool. In both cases, developing countries may be subject to more radical consequences than, for example, the European countries were when adopting the Euro.

Nevertheless, the case remains that as long as "original sin" is not redeemed, FDI may be the best bet. For example, it has been shown that short-term debt flows in the private sector were largely responsible for the international financial crises of the 1990s. These flows entered markets in Asia where the absorptive capacity of the local banking sector was inadequate, where exchange rates were initially inflexible, and where interest rates were high. All these characteristics were born of government policy or at least facilitated by it. If, instead of seeking to attract short-term and ultimately instability-inducing flows, Asian governments had concentrated more on FDI, the volatility of their own economies and the severity of the crisis could have been reduced.

FDI and Growth

One important reason for wanting to attract FDI into developing countries and emerging economies would be to stimulate and maintain growth. It has been generally accepted in the literature that FDI is good for growth because it facilitates technological transfer and encourages more efficient management techniques; the so-called "spillover" effects. In addition to this, as we have already mentioned, is the "safe" nature of foreign direct investment, making it less volatile and making it longer term. All these factors should combine to provide an environment which is propitious for growth.

In another contribution to the Forum by Hausmann, co-written by Cortés, this version of the conventional wisdom is contested. These authors find that, while it is true that FDI is synonymous with growth, it is no more so than either long- or short-term debt. Added to this rather surprising finding is another: that there is no correlation between stocks of FDI and subsequent growth. This finding is very important, for it implies that the presence of foreign firms in a country does not mean that the economy's growth prospects are enhanced, all other things being equal. Stocks of long-term debt, however, do seem to be associated with growth. Intuitively, this latter finding is not as unexpected as the former, since the accumulation of long-term debt in the first place is a function of the growth prospects of the economy.

The heterogeneity of FDI highlighted by Nunnenkamp in his comment on the Hausmann/Cortés chapter obscures interpretation of the evidence. There are different forms of FDI including greenfield investment, privatisation participation, and mergers and acquisitions; and different objectives such as resource seeking, market seeking, or efficiency seeking. The local policy environment is equally important and impacts upon the effect not only of FDI, but of all other flows and investments on growth in its own way. This heterogeneity argument is clearly one which needs to be dealt with

in a systematic and scientific way if a conclusive argument about the FDI/growth nexus is to be established. Another problem associated with assessing the impact of different financial flows on growth is accounting for apparently counter-intuitive results. In the Hausmann/Cortés hypothesis, the most serious of these is that FDI has the same or perhaps even less effect on growth than short-term debt. This finding, among other very unexpected conclusions, forms part of Cohen's critique of the paper.

All this indicates that FDI and growth is an area for further research, using more powerful instruments and longer observation periods. In fact, other authors, such as Soto (2000) in work for the Development Centre, reached results that appear to fit in more closely with conventional wisdom using a slightly different approach (panel observations). Nevertheless, the paper presented in this seminar shifts the burden of proof to those claiming the growth superiority of FDI.

The Competition for FDI

The evidence on the negative-indicator effect, the resistance effect and the growth effect of foreign direct investment can, as we have seen, be contested; what cannot be contested is that governments the world over, and particularly in developing countries, are competing for FDI. This includes countries in Latin America where, as we have also seen, FDI has come to represent more than 60 per cent of inward flows. This leads to concern that the competition for FDI may be diverting resources from other areas of economic and financial endeavour. There is a widespread fear of beggar-thy-neighbour policies and a race to the bottom as labour, environmental and other standards are lowered as incentives to foreign investment. Incentives, claims Oman, are costly and often are offered by countries that have precious little flexibility in their resources; poor countries which can little afford such expensive concessions for what might be uncertain gains. Not all the consequences, however, may necessarily be bad ones.

Depending on their size, incentives and subsidies may operate as guarantees against future expropriation by local governments, especially in regions where there is a history of such behaviour. The provision of public goods, such as infrastructure and educational facilities, in order to attract FDI represents a positive social contribution. Furthermore, banning incentives-based competition for FDI would prevent governments and regions from legitimately using resources to attract FDI into the areas with the highest social returns, thus preventing allocative efficiency.

Above the measurable cost of offering financial and fiscal incentives to foreign investors is the implicit cost of opacity in countries' dealings with potential investors. Lack of transparency leaves opportunities for corruption and rent seeking, leading to inefficiencies and militating against the development of competitive markets. A spill-over of this type of behaviour is corruption of the process of healthy government through dilution of accountability and distortion of the decision-making and policy-

making processes. Though it is difficult to quantify these costs, it would not be unreasonable to assume that they are considerable. Replacing incentives-based competition by rules-based means of attracting FDI would reduce these costs.

Part of a rules-based approach would be the creation of a reliable, equitable and predictable judicial system within the context of a transparent domestic competition policy. The benefits here do not only apply to the attraction of FDI, they also should encourage the development of an efficient domestic financial sector and stimulate the domestic economy. The problem is how to substitute regulatory reforms and confidence-boosting policies for incentives. Single countries could not be expected to "withdraw" from aggressive, incentive-based competition in favour of rules-based strategies on their own. The only course open to them, therefore, is a regional or multilateral approach to the problem. There appears to be some evidence, says Oman, that the regional groupings that are NAFTA, Mercosul or the European Union have had considerable success in attracting FDI, in part because of common standards and harmonious regulatory environments.

The core of Oman's argument is about the danger of potential damage resulting from incentives-based competition. His finding is that the reality is so far quite different and that the lowering of labour, environmental and other standards is not taking place on a large scale. Evans, in his comment on the Oman paper, contests this assertion. While acknowledging that the evidence may be slim on a macro level, he maintains that the lowering of labour standards on a micro level is an everyday occurrence. There is certainly anecdotal evidence to support this view and it would not seem unreasonable, in the context of globalisation generally, that there might be a levelling out of labour standards downwards. Whether or not this process can be ascribed to competition between developing countries and regions within countries for FDI is another question.

Whether a rules-based approach to attracting FDI is, in reality, something which governments could be expected to introduce on their own specifically for this purpose is somewhat open to doubt. The benefits of reform, points out Fernández-Arias, commenting on Oman's position, would in any case be economy-wide and should be implemented irrespective of the search for FDI. If they have not been, then there is certainly room to consider that there are other reasons preventing reform. Where such reasons exist, perhaps it would not be reasonable to imagine that incentives-based competition would have much of an effect on investors, either.

On the feasibility of introducing some kind of regional or international regulatory framework, Fernández-Arias is cautious. The problems of enforcing internationally binding agreements are well known, as are the difficulties associated with establishing common ground for their establishment. The objective of the agreement must be a matter of perceived common concern, leading to the willingness of all the parties to accept rules of independent arbitration. Compatibility of incentives is a key constraint to any agreement limiting country subsidies to FDI.

Some Conclusions

The role of FDI in developing countries and its contribution to stability and growth will remain of interest to economists, policy makers and business people for some time to come. The eleventh International Forum on Latin American Perspectives sought to use its unique format to tackle the subject of FDI from another angle and in a different context. Elsewhere in this book, the chapters by Fernández-Arias and Hausmann, and that by Hausmann and Cortés, set out to challenge the currently widespread view that FDI is a good thing, in all its manifestations, better than other forms of external finance. Oman has shown that the race for FDI may also contain fiscal costs, irrespective of future benefits. The view that emerges concerning the development value of FDI is more nuanced and complex than the traditional view. It removes the blanket presumption of FDI superiority and calls for the analysis of the circumstances that may make it advantageous in specific cases.

Bibliography

SOTO, M. (2000), *Capital Flows and Growth in Developing Countries: Recent Empirical Evidence*, OECD Development Centre Technical Paper No. 160, Paris.

WEI, S.-J. (2000), *Negative Alchemy? Corruption and Composition of Capital Flows*, OECD Development Centre Technical Paper No. 165, Paris.

Part One

Experts' Seminar

Foreign Direct Investment: Good Cholesterol?

*Ricardo Hausmann and Eduardo Fernández-Arias**

Introduction

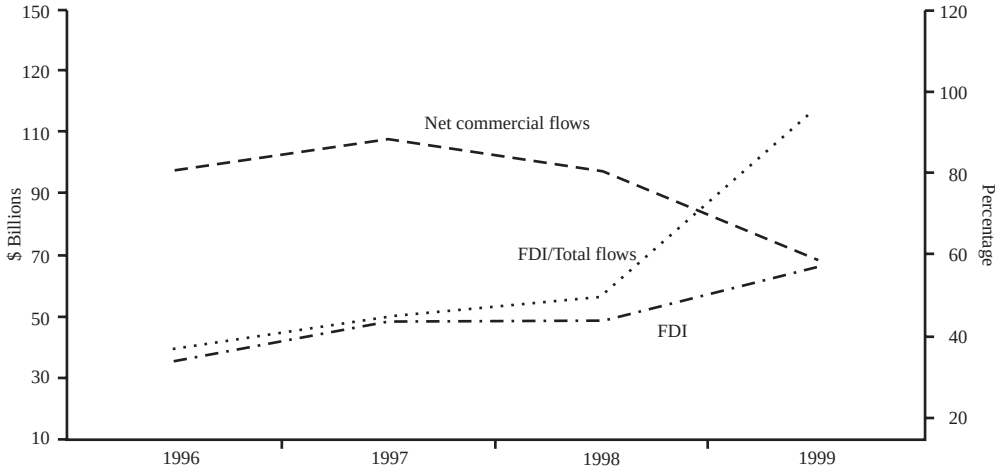
You have heard it all before. Capital flows are not all the same (Frankel and Rose, 1996; Kaminsky, Lizondo and Reinhart, 1998). Just as with cholesterol, there is the good kind and the bad kind. The good kind — foreign direct investment (FDI) — brings with it technology, managerial skills and market access and thus accelerates growth and development (Aitken, Hanson, and Harrison, 1997; Blomstrom and Kokko, 1997; Borensztein, De Gregorio, and Lee, 1998). Furthermore, it is bolted down and cannot leave so easily at the first sign of trouble. It flows in because it is attracted by the long-term prospects of a country and the confidence that its policies and institutions inspire. The bad cholesterol is represented by debt, especially of the short-term variety. It is driven by speculative considerations based on interest rate differentials and exchange rate expectations, not on long-term considerations. Its movement is often the result of moral hazard distortions such as implicit exchange rate guarantees or the willingness of governments to bail out the banking system. It is the first to run for the exits in times of trouble and is responsible for the boom-bust cycles of the 1990s (Chuhan, Perez-Quiros and Popper, 1996; Chuhan, Claessens and Mamingi, 1998; Claessens, Dooley and Warner, 1995; Sarno and Taylor, 1999).

This analysis casts current Latin American events in a very favourable light: the flow of capital to Latin America is becoming increasingly dominated by FDI. In fact, while private capital inflows (i.e. total cholesterol) declined to $68.6 billion in 1999, off 36 per cent from a peak of $107 billion in 1997 (see Figure 1), FDI — the good cholesterol — has been exploding. In fact, from less than $10 billion in the early

* The authors would like to thank Patricia Cortés, Martin Cumpa and Laura Dos Reis for their valuable research support and Rita Funaro for editing this paper.

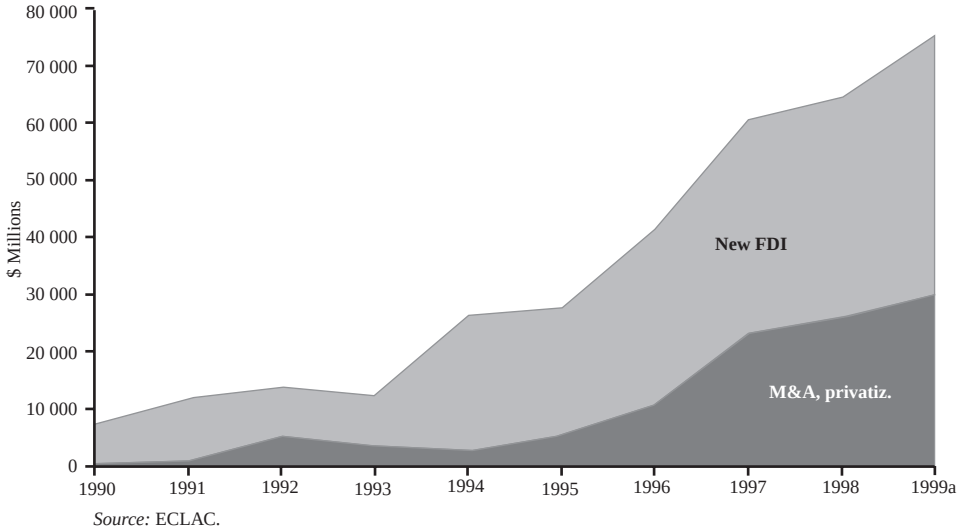
1990s (see Figure 2), and $35.8 billion (36.8 per cent of private flows) as recently as 1996, FDI reached $66.5 billion in 1999, just under 97 per cent of net private capital inflows in 1999 (see Figure 1).

Figure 1. **Recent Behaviour of Net Commercial Capital Flows and Their Composition in Latin America**



Source: The Institute of International Finance.

Figure 2. **Evolution and Composition of FDI Flows in Latin America**



Source: ECLAC.

How should we interpret the upsurge in FDI? Is it the consequence of a better policy environment? Is it a sign of confidence in the growth prospects and policies of Latin America? Should countries try to promote FDI while discouraging other types of flows?

This paper studies the proposition that capital inflows tend to take the form of FDI — i.e. the share of FDI in total liabilities tends to be higher — in countries that are safer, more promising and with better institutions and policies. It finds that this view is patently wrong since it stands the historical record on its head. It then uses alternative theories to make sense of the facts. It begins by studying the determinants of the size and composition of the flows of private capital across countries. It finds that while capital flows tend to go to countries that are safer and have better institutions and financial markets, the share of FDI in total flows is not an indication of good health. On the contrary, countries that are riskier, less financially developed and have weaker institutions tend to attract less capital but more of it in the form of FDI. Hence, interpreting the rising share of FDI as a sign of good health is unwarranted[1]. This is even more true, given that FDI's recent rise has taken place while total private capital inflows have fallen.

After establishing the stylised facts we move on to clarify some of the misunderstandings that emerge from the mere definition of foreign direct investment. In particular, FDI is not the foreign firm itself but only one of the ways in which it finances itself. We will argue, following Coase (1937) and Williamson (1985), that firms are in themselves substitutes for the market and will tend to extend their borders wherever they encounter missing or inefficient markets. In this context, foreign companies dealing with such markets will want to have hierarchical control (i.e. establish firms) in those environments where transaction costs (i.e. the costs of relying on the market) are high. Hence, in countries with inefficient financial markets, inadequate contract enforcement and poor protection of intellectual property, foreign companies will want to operate directly instead of relying on local suppliers, franchises or other arrangements. Secondly, the choice between debt, portfolio equity and FDI will reflect those elements that the theory of corporate finance has pointed out: the higher the risk, the greater the reliance on equity; hence FDI.

We will conclude with some policy implications. The first is that the share of FDI in total capital inflows is not a measure of anything good happening in the economy. We will argue that the fact that the recent rise in the ratio of FDI to total capital inflows started after the Tequila Crisis and accelerated during the East Asian and Russian crises is no coincidence. It can be explained by the fact that lower growth prospects and higher risks lead companies to prefer more equity and less debt in the composition of their capital. Also, poorly functioning debt and equity markets can make FDI a more efficient way to access capital. In all of these cases, the fact that the share of FDI in capital inflows is rising is not bad in itself, but is instead an optimal response to a deteriorating environment. Hence, a high share of FDI in capital inflows is not a sign of good health, as evidenced by the industrial countries where it is barely

12 per cent. Consequently, policies directed at expanding that share are unwarranted. Instead, countries should concentrate on improving the environment for investment and the functioning of markets. They are likely to be rewarded with increasingly efficient overall investment as well as with more capital inflows. However, under those conditions the share of FDI in those inflows may decline; that could very well be a sign of good health!

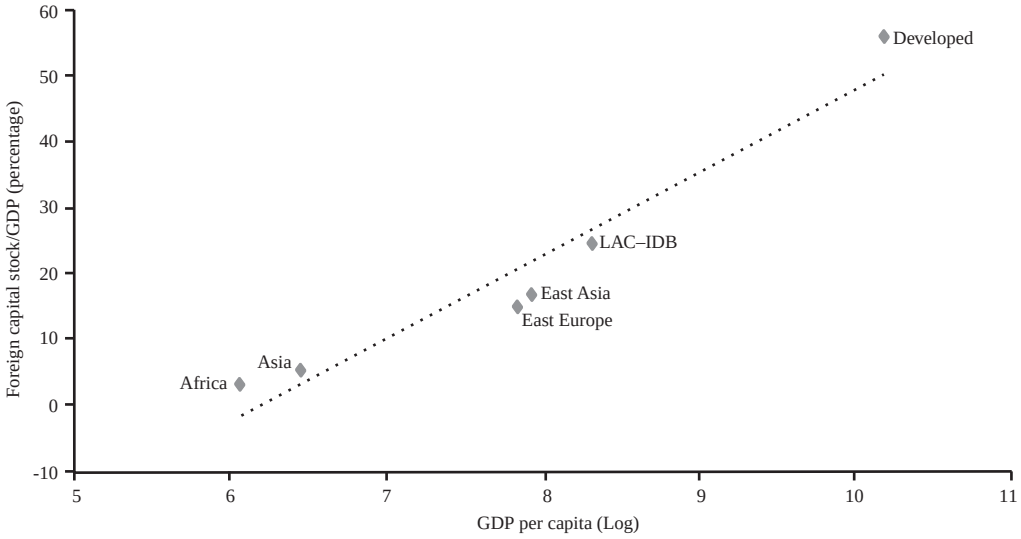
The paper starts by presenting the empirical evidence on the size and composition of capital inflows. We then run a set of regressions to see how much of the cross-country experience can be explained by variables such as the quality of institutions, the level of risk and development, among others. In subsequent sections, we review different theoretical approaches to see how they may help make sense of the empirical findings.

Size and Composition of Private Capital Flows: Some Stylised Facts

Does it not make sense to see FDI as a more serious, long-term commitment to a country that is more demanding in terms of institutions, prospects and policies? Should one not expect FDI to be a preferred type of capital? What is wrong with the good cholesterol/bad cholesterol metaphor?

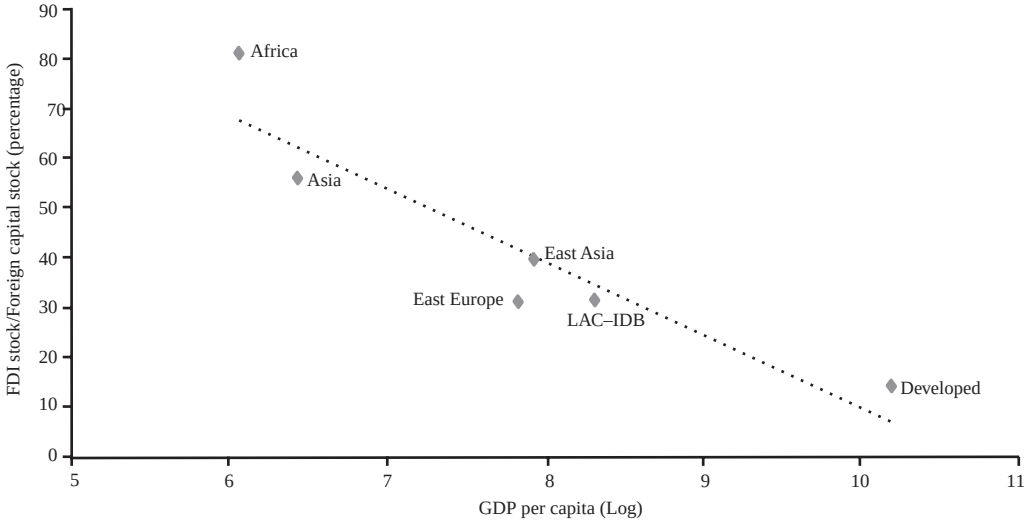
To analyse this question we looked at three concepts. First, we considered gross private capital inflows as a share of GDP, i.e. how large is the stock of liabilities to private foreign investors relative to GDP. Second, we looked at the share of FDI in those liabilities, i.e. the share of good cholesterol. Finally, we examined the ratio of FDI to GDP. Obviously, the last ratio is the product of the first two[2]. We can thus decompose the share of FDI to GDP as a consequence of a *volume* effect, reflected in the total flow of private or commercial capital, and a *composition* effect, i.e. what proportion of it is FDI or "good cholesterol". Figure 3 uses the *stocks* of liabilities for 1997, while Figure 4 uses the average *flows* of capital for the period 1996-98[3]. The two sets of graphs are quite similar, indicating that what has been true historically, as reflected in accumulated stocks, is also true for the recent past.

Figure 3a. **Foreign Capital Stock vs. Income: Regional Comparison**



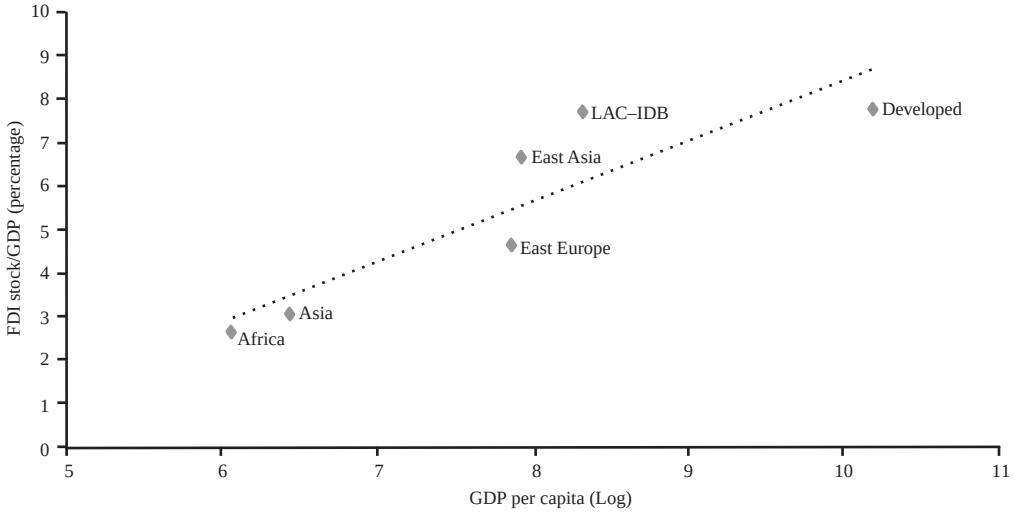
Note: Data refer to stocks of 1997 in current dollars and GDP in PPP current dollars.
The GDP per capita is a weighted average of countries for the same year.
Source: IFS, WB and RES–IDB.

Figure 3b. **Composition of Foreign Capital Stock vs. Income: Regional Comparison**



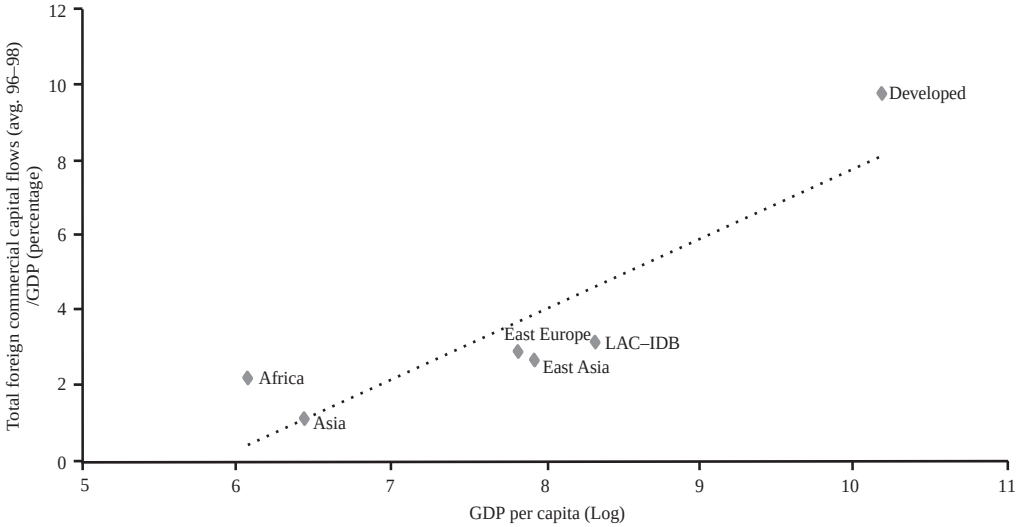
Note: Data refer to stocks of 1997 in current dollars and GDP in PPP current dollars.
The GDP per capita is a weighted average of countries for the same year.
Source: IFS, WB and RES–IDB.

Figure 3c. **FDI vs. Income: Regional Comparison**



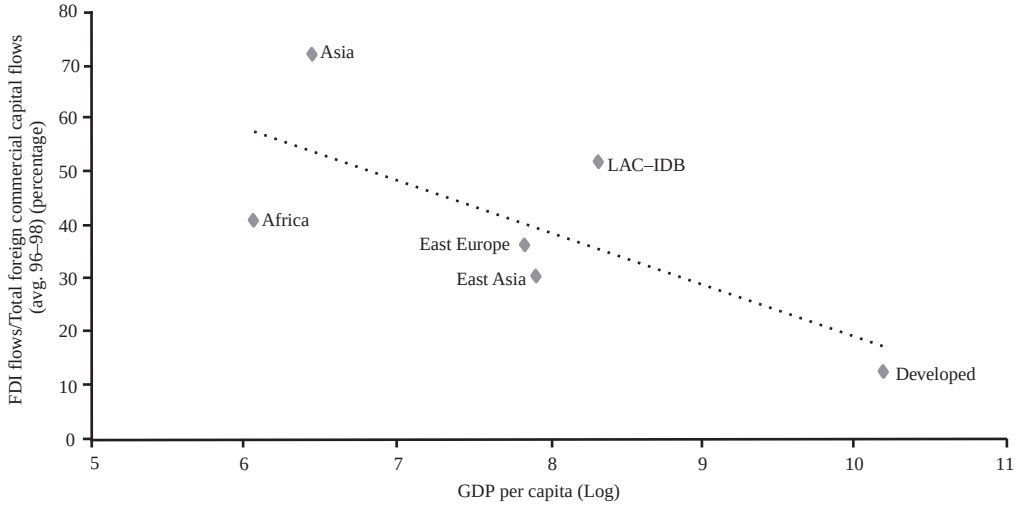
Note: Data refer to stocks of 1997 in current dollars and GDP in PPP current dollars.
The GDP per capita is a weighted average of countries for the same year.
Source: IFS, WB and RES–IDB.

Figure 4a. **Total Commercial Capital Flows vs. Income: Regional Comparison**



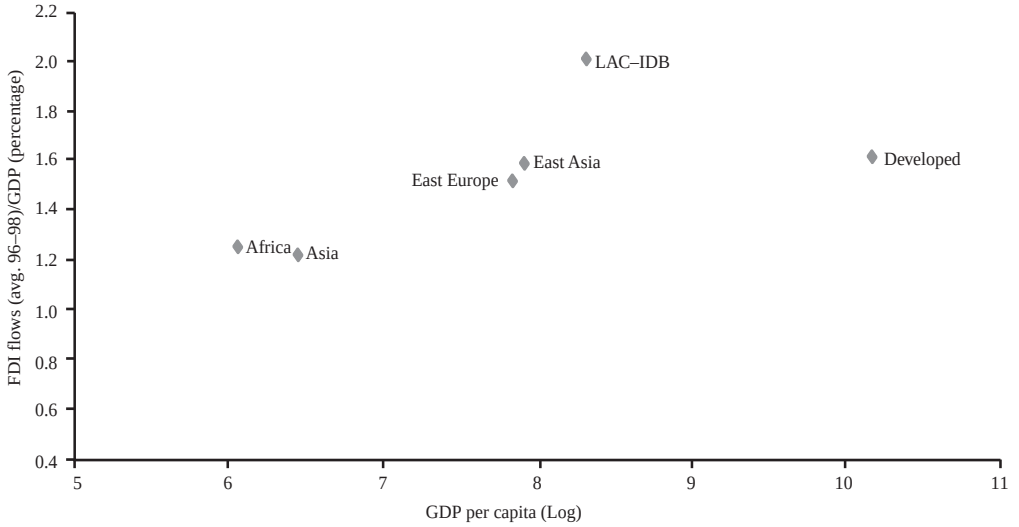
Note: Data refer to gross capital flows (only liabilities) in current dollars and GDP in PPP current dollars.
The GDP per capita is a weighted average of countries for 1997.
Source: IFS, WB and RES–IDB.

Figure 4b. **Composition of Commercial Capital Flows vs. Income: Regional Comparison**



Note: Data refer to gross capital flows (only liabilities) in current dollars and GDP in PPP current dollars. The GDP per capita is a weighted average of countries for 1997.
Source: IFS, WB and RES–IDB.

Figure 4c. **FDI Flows vs. Income: Regional Comparison**



Note: Data refer to gross capital flows (only liabilities) in current dollars and GDP in PPP current dollars. The GDP per capita is a weighted average of countries for 1997.
Source: IFS, WB and RES–IDB.

Figures 3a and 4a show that gross private liabilities as a share of GDP are by far highest in industrial countries, with flows reaching almost 10 per cent of GDP. Then come in close proximity to each other three middle-income regions: Latin America, East Asia[4], and Eastern Europe, averaging around 3 per cent of GDP. The lowest levels are found in the low-income regions of Asia and Africa, with flows that are between 1 and 2 per cent of GDP.

Figures 3b and 4b show the proportion of private flows that take the form of FDI. Here the story is reversed. The industrial countries show the lowest share of good cholesterol, averaging only about 12 per cent of total liabilities. In Figure 3b we find that the stock of FDI represents around 30 per cent of the total stock of private external liabilities in the three middle-income regions of Latin America, East Asia and Eastern Europe, while the share is highest in the poor regions of Asia and Africa, where it exceeds 50 per cent. This pattern varies somewhat from recent experience, as shown in Figure 4b. There, the ratio in Asia has amply surpassed that in Africa while the ratio in Latin America has become much higher than that observed in East Asia and Eastern Europe.

Figure 3c shows the accumulated stock of FDI as a share of GDP. Latin America and the industrial countries share a similar ratio of slightly over 7 per cent of GDP, followed by East Asia with 6.3 per cent. Eastern Europe falls in a much more distant fourth place, with stocks of FDI as a share of GDP similar to those of Africa, under 4 per cent of GDP, while the lowest ratio is observed in Asia, where it is below 3 per cent of GDP. Figure 4c shows that the recent experience has been different. Latin America is the region with by far the highest ratio of FDI to GDP, reaching 1.6 per cent of GDP. The industrial countries, East Asia and Eastern Europe received a similar but much lower proportion of FDI, averaging some 1.2 per cent of GDP. Asia and Africa both received slightly less than 1 per cent of GDP in FDI flows during 1996-98.

Hence, we find that total capital flows tend to increase with the level of development. However, the share of those flows that take the form of FDI tends to decline with the level of development. Said differently, FDI seems to be an inferior good in the sense that its share tends to fall with income. Finally, the ratio of FDI to GDP is a consequence of these two previous effects. It is very high in industrial countries because it is a small share of a very large total volume of capital. It has been unusually high in Latin America recently, not because total flows have been high, but because the share of those flows that take the form of FDI has been unusually high both historically speaking and in relation to other middle-income regions such as Eastern Europe and East Asia. Finally, in Africa and Asia the ratio of FDI to GDP is low because low volumes of total capital are not compensated by very high shares of FDI in the mix.

This is a first piece of evidence that there must be something wrong with the conventional wisdom. The share of good cholesterol is not highest in the most prosperous regions, but quite the contrary. What the conventional wisdom attributes to FDI seems to be true of total capital. It is total capital that appears to go up with economic development while the share of FDI declines.

The following three sections delve into an empirical investigation of these three propositions and find them either patently wrong or at least largely unsubstantiated. We then explore theoretical approaches that can make sense of the historical experience.

What Determines the Size and Composition of Capital Flows?

What factors are associated with the size and composition of capital flows? What is the effect of the level of development, openness, stability, and financial and institutional development on the size and composition of capital inflows? What factors are associated with high proportions of good cholesterol?

To explore these questions we compiled a data set, described in the Appendix, and used it to run a set of regressions. These are presented in Tables 1 to 3, which present, respectively, equations for the total volume of capital as a share of GDP, the composition of FDI in total capital inflows and the share of FDI in GDP. The first parts of all tables show the results for the simple regression using as independent variable only the concept shown. This serves to identify the overall empirical relationship between the two variables. The second part of the tables shows the results of each explanatory variable when we control for the level of income per capita, the size of the economy (total GDP) and the level of openness (the ratio of exports to GDP). These regressions examine the effect of each variable when we keep the control variables constant. We present only the regressions for the determinants of the average flows for 1996-98. Similar results are obtained by using the data on stocks shown in Figure 3.

Table1. **Determinants of Total Commercial Capital Flows/GDP**
(Average 1996-98)

Explanatory Variables	Without Controls				With Controls			
	Coefficient	t-statistic	R-squared	N. Obs.	Coefficient	t-statistic	R-squared	N. Obs.
Controls								
Income	0.62	8.84	0.57	59	0.52	4.31	0.64	57
Size	0.15	1.82	0.05	59	-0.06	-0.82	0.64	57
Openness	0.92	6.83	0.45	57	0.38	2.29	0.64	57
Stability Indicators								
Country risk	-0.02	-5.80	0.36	59	0.00	-0.86	0.61	57
GDP volatility (past)	-3.67	-1.06	0.01	58	-1.92	-0.81	0.66	56
Natural Resources								
Subsoil resources	-0.38	-1.30	0.04	42	-0.16	-0.98	0.74	42
Distance	-0.20	-3.19	0.21	40	-0.04	-0.78	0.70	40
Financial Development								
Private credit	1.94	4.71	0.30	55	0.58	1.39	0.67	53
Quality of Institutions								
Regulatory burden	1.34	6.18	0.40	59	0.53	2.19	0.67	57
Accountability	0.81	6.43	0.42	59	0.07	0.38	0.64	57
Government effectiveness	0.87	7.33	0.48	59	0.14	0.65	0.64	57
Political instability	0.94	6.48	0.42	59	0.08	0.45	0.64	57
Graft	0.79	7.07	0.47	59	0.05	0.26	0.64	57
Rule of law	0.83	6.95	0.45	59	0.09	0.48	0.64	57
Principal component	0.39	8.02	0.53	59	0.09	0.92	0.65	57
Institutions credit	0.01	0.11	0.00	34	-0.03	-0.37	0.70	34
Institutions share	0.20	1.54	0.07	35	0.17	2.16	0.72	35
Original Sin	2.41	3.06	0.16	51	0.55	0.80	0.72	49

Note: See Appendix for an explanation of each variable and of the sample used.

Table 2. **Determinants of FDI/Total Commercial Capital Flows**
(Average 1996-98)

Explanatory Variables	Without Controls				With Controls			
	Coefficient	t-statistic	R-squared	N.Obs.	Coefficient	t-statistic	R-squared	N. Obs.
Controls								
Income	-0.083	-4.37	0.25	60	-0.068	-1.96	0.26	57
Size	-0.044	-2.88	0.13	60	-0.019	-0.93	0.26	57
Openness	-0.076	-2.13	0.08	57	0.000	0.00	0.26	57
Stability Indicators								
Country risk	0.003	3.58	0.18	59	0.000	0.20	0.28	56
GDP volatility (past)	1.126	1.66	0.04	62	0.458	0.65	0.27	56
Natural Resources								
Subsoil resources	0.180	3.78	0.26	42	0.151	3.65	0.50	42
Distance	0.030	2.22	0.11	40	0.022	1.56	0.34	40
Financial Development								
Private credit	-0.236	-2.77	0.12	56	-0.075	-0.62	0.24	53
Quality of Institutions								
Regulatory burden	-0.092	-1.70	0.05	59	0.064	0.87	0.27	57
Accountability	-0.106	-3.54	0.18	60	-0.050	-0.95	0.28	57
Government effectiveness	-0.102	-3.37	0.16	60	0.011	0.18	0.26	57
Political instability	-0.095	-2.66	0.11	60	-0.002	-0.04	0.26	57
Graft	-0.091	-3.21	0.15	59	0.015	0.26	0.26	57
Rule of law	-0.109	-3.78	0.20	60	-0.044	-0.79	0.27	57
Principal component	-0.044	-3.44	0.17	59	-0.004	-0.14	0.26	57
Institutions credit	-0.018	-0.80	0.02	34	-0.016	-0.71	0.16	34
Institutions share	-0.043	-1.59	0.07	35	-0.033	-1.20	0.19	35
Original Sin	-0.511	-2.81	0.14	51	-0.093	-0.36	0.27	49

Note: See Appendix for an explanation of each variable and of the sample used.

Table 3. **Determinants of FDI/GDP**
(Average Flows 1996-98)

Explanatory Variables	Without Controls				With Controls			
	Coefficient	t-statistic	R-squared	N.Obs.	Coefficient	t-statistic	R-squared	N.Obs.
Controls								
Income	0.006	3.63	0.18	64	0.002	1.07	0.40	61
Size	-0.001	-0.98	0.02	64	-0.001	-1.10	0.40	61
Openness	0.012	6.10	0.39	61	0.010	3.21	0.40	61
Stability Indicators								
Country risk	-0.00016	-3.01	0.11	64	0.000	-0.65	0.40	61
GDP volatility (past)	0.015	0.27	0.00	63	0.021	0.46	0.42	60
Natural Resources								
Subsoil resources	0.001	0.36	0.00	43	0.003	0.93	0.43	43
Distance	-0.00049	-0.45	0.01	42	0.002	2.07	0.58	42
Financial Development								
Private credit	0.019	2.72	0.11	60	0.008	0.97	0.43	57
Quality of Institutions								
Regulatory burden	0.017	4.34	0.23	64	0.013	3.01	0.49	61
Accountability	0.003	1.06	0.01	64	-0.004	-1.42	0.42	61
Government effectiveness	0.010	4.07	0.21	64	0.010	2.56	0.46	61
Political instability	0.009	3.15	0.14	64	0.002	0.54	0.40	61
Graft	0.008	3.55	0.17	64	0.006	1.62	0.43	61
Rule of law	0.009	3.69	0.18	64	0.004	1.01	0.41	61
Principal component	0.004	3.62	0.17	64	0.003	1.50	0.42	61
Institutions credit	0.001	0.24	0.00	37	-0.001	-0.34	0.51	37
Institutions share	0.005	2.13	0.11	38	0.004	2.62	0.59	38
Original Sin	0.007	0.46	0.00	56	0.008	0.48	0.43	53

Note: See Appendix for an explanation of each variable and of the sample used.

The Effect of the Level of Income

As suggested by Figures 3 and 4, *the total volume of capital flows is strongly and positively related to per capita income*. This relationship is quite robust and, as shown in the second part of Table 1, is still significant when we include other determinants such as the overall size and openness of the economy.

By contrast, *the share of capital inflows that takes the form of FDI is strongly and negatively related to income*, a relationship that also remains significant when other control variables are included. The share of FDI in GDP, which is the product of the previous two ratios, is positively related to income, *but the statistical significance of this relationship is not robust to the inclusion of other control variables.*

We conclude that capital flows tend to increase with the level of development but the share of FDI tends to decline. The net effect of both factors on the share of FDI in GDP is ambiguous.

Is Big Better? The Effect of Economic Size

Does capital tend to flow to larger economies? Does a bigger domestic market attract FDI? Are small countries at a disadvantage?

To explore these issues we use as a measure of size the log of GDP in dollars at current prices. We find a positive correlation between the total size of capital flows and size, but this relationship is not robust, and in fact changes sign when we include income per capita. The implication is that *for two economies with similar levels of development, the bigger economy does not receive larger flows.*

The FDI composition of the flows is negatively related to economic size and the relationship remains negative, although not statistically significant, when the other control variables are included. Hence, *there is no evidence that larger countries attract a proportionally larger share of FDI in total flows. The share of FDI in GDP — the product of the two previous ratios — is negatively and not significantly associated with size. Hence, there is no evidence that capital favours larger economies.*

The Effect of Openness

Is capital attracted to more open economies? Does FDI flow to countries that are more open? To answer these questions we studied the relationship of the share of exports in GDP to the volume and composition of capital inflows.

We find *that the total volume of capital flows is positively and strongly related to openness*. More open economies tend to attract proportionally more foreign capital. However, the same is not true for the FDI composition of capital: openness is negatively related to the share of FDI, although this relationship is not robust to the inclusion of income per capita and size. Hence, *the share of FDI in capital flows does not increase in economies that are more open*.

The ratio of FDI to GDP is positively and robustly associated with openness, but we conclude that it is *only because of the effect of openness on the total size of capital inflows* and not because it affects the share of FDI in the composition. *Openness increases all forms of cholesterol; it does not skew the composition towards FDI*[5].

Does FDI Flow to Safer, More Stable Countries?

Does an environment of economic stability attract FDI? To analyse this question we ran regressions of the size and composition of capital inflows on the volatility of GDP growth over the previous decade and on a measure of country risk. We find there is a strongly negative and statistically significant relationship between country risk and total capital flows. *Riskier countries get less capital*. The relationship remains negative but loses significance when we introduce other controls. There is also a weak negative relationship between volatility and the volume of capital flows, a relationship that is consistently negative but not statistically significant.

By contrast, *there is a positive and statistically significant relation between country risk and the share of FDI in capital inflows: riskier countries tend to get more of their flows in the form of FDI.* The link between volatility and the FDI composition of flows is also positive and both remain positive but lose their statistical significance when other controls are included.

As a consequence of these two factors, there is a positive but not statistically significant relationship between volatility and the ratio of FDI to GDP. However, *there is a negative relationship between country risk and the share of FDI in GDP.* It is significant and maintains its sign, but does not remain statistically significant when we introduce the control variables. We conclude that *it is not true that capital flows tend to take the form of FDI in more stable economies. While capital tends to shun volatile environments, its composition tends to become more FDI-intensive when volatility is greater*.

The Effect of Natural Resources

Is capital attracted by the opportunity to exploit natural resources? To study this question we looked at the relationship between our variables of size and composition of capital flows with the World Bank data on subsoil natural wealth. We find a negative and statistically not significant relationship between the total volume of capital flows and subsoil wealth. However, there is a positive, statistically significant and robust relationship between subsoil wealth and the share of FDI in capital flows. As a consequence, the share of FDI in GDP is associated with subsoil wealth in a positive but not statistically significant manner. We conclude that *natural resources are no magnet for capital, but they tend strongly to shift the composition in favour of FDI.*

Does Distance Matter?

Is being far away a problem? To study this question we looked at the distance of a country from major world markets. We find that distance is negatively and significantly related to total capital flows, although the relationship keeps its sign but loses its statistical significance when other control variables are introduced[6]. However, the share of FDI in capital inflows is positively affected by distance in a statistically significant and relatively robust manner. As a consequence, the ratio of FDI to GDP seems to go up with distance.

We conclude that proximity may be good for total capital flows, but it does not favour good cholesterol. *The share of FDI goes up with distance*.

Does Financial Development Matter?

Greater financial development as measured by the share of private credit to GDP is positively related to capital flows but negatively related to the share of FDI in those flows. The relationship maintains its sign but is significantly weakened by the

introduction of other control variables, especially income per capita. The net effect of these two factors on the share of FDI in GDP is positive and strong, but not statistically significant when other controls are included in the regression.

We conclude that *financial development is positively associated with the volume of capital, but does not shift its composition in favour of FDI*.

Does Institutional Quality Matter?

Is FDI attracted by the quality of a country's institutions? To analyse this question we used two sets of internationally comparable indexes of institutional quality. First, we used Dani Kaufmann's six indexes of government quality (regulatory burden, accountability, government effectiveness, graft, rule of law and political instability), Kaufmann, Kraay and Zoido-Lobaton, 1999*b*. We also constructed a single overall index of government quality as the principal component of the six individual measures. Second, we used the La Porta *et al*. (1997, 1998*a*, 1998*b*) indexes of creditor rights and shareholder rights.

We find that Kaufmann's indexes of institutional quality are positively and strongly correlated with the total volume of capital flows. This relationship remains positive but not statistically significant after the inclusion of the control variables, especially income per capita. The only index that remains significant is the measure of regulatory burden. IDB (2000) finds that Kaufmann's indexes are strongly correlated with measures of the level of development such as income per capita. Hence, one interpretation of the results is that institutions matter through their effect on the level of development, but not directly. If a country at a given level of development improved its institutions it would not get much more capital. The La Porta *et al*. index of creditor rights does not show any consistent relationship with the volume of capital flows, but the index of shareholder rights does have a positive and quite robust relationship with the overall volume of capital flows.

By contrast, *the FDI share in capital flows is strongly and negatively associated with Kaufmann's measures of institutional development and with La Porta's measure of shareholders' rights*. After the inclusion of the control variables, this relationship remains negative for six of the nine indexes, but not in a statistically significant manner.

As a consequence of these two effects, the share of FDI in GDP is positively associated with institutional development, as shown by the positive and statistically significant relationship in seven out of the nine indexes used. The relation remains positive for seven of the nine indexes and statistically significant for five indexes, especially regulatory burden, government effectiveness and shareholder rights.

We conclude that *institutions positively affect the volume of capital flows but do not skew the composition in favour of FDI*. Countries with better institutions do get more FDI, but they also get more of other kinds of capital.

Some Preliminary Conclusions

Capital flows tend to go to countries that are more developed, more open, more stable, financially more advanced and with better institutions. However, these factors tend to reduce the share of FDI in capital flows. Hence, a larger share of FDI in capital flows is typical of countries that are poorer, more closed, riskier, more volatile, more distant, less financially developed, with weaker institutions and with more natural resources.

How can we account for these stylised facts? What is the logic behind these findings? The next three sections explore potential explanations.

What Is FDI? Some Accounting Gimmicks

Much of the confusion about FDI emerges from misunderstandings about what is measured as FDI. FDI is defined as the increase in the equity position of a non-resident owner who holds more than 10 per cent of the shares of the firm. It also includes the loans received by the local company from the parent foreign owner[7].

A firm is a set of assets that are "owned" (i.e. financed) by creditors and shareholders, where the former have a senior claim over the resources and revenues of the firm and the equity owners hold the residual claims and have greater influence over management. FDI is not the firm and its assets. Instead, it is just one of the sources of financing for the firm. This distinction is important because many of the benefits attributed to FDI are really generated by the firm, not by the way it finances itself. For example, if a foreign-owned company brings in new technology, a better management system or access to new export markets, it is the firm that brings it, not FDI. FDI is just one way in which such a firm finances itself. If the firm decides to finance itself mainly by borrowing domestically, all the above mentioned improvements would take place, but it would not be registered as FDI. If by borrowing domestically it generates incentives for banks to borrow internationally in order to supply the increased demand for credit, then the firm would have caused an increase in external borrowing by banks, not FDI.

If the foreign owner buys out the equity position of a domestic owner, that is considered FDI, even though there are no new machines in the country, just a change of ownership. If the old owner buys an internationally diversified portfolio with the money he received from the sale of the company then what came in as FDI leaves as other forms of capital outflow and is not available to pay for any new imports. This is one way in which FDI is not bolted down.

Also, if the foreign owner does a leveraged buyout by borrowing domestically, the loan would be registered as an outflow of capital (a loan to a foreign agent by a domestic bank), while the buyout would be registered as FDI. In this case, FDI is not financing the current account. It is just the "return" of money that only figuratively went out[8].

Consider a healthy company with good growth prospects that normally reinvests all its profits and borrows abroad to fund part of its expansion plans. Suddenly, a foreign company acquires the domestic firm, maybe because the old owner wants to retire. After the purchase, the company is run just the same, with the same reinvestment policy and the same borrowing plan. This operation will lead to a sudden jump in FDI in the year of the acquisition. After that, the current account deficit of the country will increase by an amount equivalent to the accrued profits of the firm. But since these are reinvested it would be registered as an equivalent inflow of FDI every year. Hence, there would be a long-run increase in FDI, but not an increase in the real investment of the economy, only a change in ownership.

To make sense of FDI it is important to understand that there is no agent called FDI. FDI is just an account. A firm has many accounts: it has equity, domestic and foreign assets and debts, which can also be either short or long term. It is the firm that makes decisions, not the accounts. FDI is not bolted down, machines are. If a foreigner buys a machine and gives it as a capital contribution (FDI) to a local company, the machine may be bolted down. But the company's treasurer can use the machine as collateral to get a local bank loan and take money out of the country. Hence, a firm may be doing one thing with its assets and something quite different with the way it finances them. Money may be coming in through one account and leaving through another. This means that checking whether FDI is more or less stable than other flows of capital does not help determine whether it makes the overall capital account more stable. The foreign company's treasurer may be hedging the firm's FDI exposure by borrowing domestically and taking out short-term capital.

This discussion helps explain why a significant part of FDI is documented as a loan from the parent company[9]. Part of the answer has to do with tax considerations, since interest and dividends are often not treated the same way by the tax code. But also, dividends and stock repurchases are awkward ways to hedge risks. They are typically decisions of the shareholders or at least of the executive board and require the presentation of the company's financial results, something that happens at most quarterly. Profits have to be assessed by outside auditors and they involve tax liabilities. Therefore, dividends cannot be determined overnight. By contrast, the treasurer can use his liquid assets or take a local loan and repay the parent company much more swiftly. So documenting FDI as a loan from the parent company makes it much easier to take out at short notice, in case of trouble: another way in which it is not bolted down.

Hence, we need a theory of how a firm makes its decisions in order to interpret changes in its "capital account" and in the way the balance of payments moves. To develop such a theory we will begin by extracting some implications of the new theories of the firm and then move on to issues of finance.

The Firm as a Substitute for the Market

FDI involves ownership that provides significant control over a firm. A firm is a hierarchical organisation, whose existence was pretty much disregarded by neo-classical theory. Why is production organised through firms and what determines their structure? With perfect and complete markets, there are few reasons for factors to meet in a large organisation. Workers and capital can just go every day to the market and allocate themselves. A theory of the firm would have to explain why we observe these hierarchical structures we call firms that deal with the market only at their borders: when they buy or sell, not when they produce. "Make or buy" is a question that every firm must face when deciding where to put its borders. Should an apparel company make its own cloth or buy it from another firm? Should it dye, stamp or wash it? Should it make its own yarn? Should it make its own packaging? Should it sell to wholesalers and retailers or own and operate the distribution channels it uses? Should it instead have franchises? Coase (1937) and Williamson (1985) provide an answer to this puzzle. They argue that markets are not perfect and generate transaction costs. Hierarchies are not perfect either and also generate internal transaction or organisational costs. Firms compare the transaction costs of relying on the market with the production and bureaucratic costs of doing things internally. Are suppliers reliable? Do they have monopoly power? Is the internal organisation a mess that cannot hold yet another activity? Are there any synergies of having several activities under the same roof?

So why would a foreign firm want to extend its borders internationally through FDI, instead of just relying on the market? In general, given organisational and management costs, *the more inefficient the market, the greater the incentive to extend the border of the firm*. The firm will try to internalise all the functions that are poorly carried out by the market. Hence, the firm can be thought of as a substitute for the market. We should not then be surprised to find that when the institutional environment is poor, or when certain markets are not adequately developed, foreign firms may find that in order to do business in another market they need to own and operate a firm; they cannot rely on the market.

This would explain why the total volume of capital flows is positively affected by the quality of a country's institutions and growth prospects, but the share that takes the form of FDI declines with better institutions. The intuition is that the share of FDI needs to be greater in countries with bad institutions because firms will need to substitute for missing markets.

Poor Protection of Intellectual Property

One such example is technology. Enforcing ownership of ideas is extremely difficult. If it were not, firms could simply market their know-how and not have to move into new countries or areas. In the absence of such intellectual property rights

protection (IPR), firms may be put in a situation where the only way to profit from their know-how is by expanding towards new markets and countries. In this sense, FDI may be prompted by inadequate property rights protection. You would not give a franchise if you thought that the franchisee would steal your know-how and establish himself independently. You would not even trust a local partner not to set up his own shop once he got the hang of the business.

The conclusion is that the worse the protection of property rights in general, or IPR in particular, the more likely that firms will have to own and operate their own facilities in a market in order, for example, to exploit their know-how. To do so, they would have to put in some FDI and then finance with debt the rest of their operations. Hence, while the poor quality of the institutions of capitalism may make overall investments and capital inflows smaller, it will force more flows to take the form of FDI.

Financial Markets

Finance is another tricky sector. It suffers from time inconsistency because, while a borrower may find it in his benefit to commit to repay in order to get a loan, he may have incentives to keep the money after receiving it. Not knowing what the borrower might do, the lender would be reticent to extend loans or would do so only at higher interest rates. But this could be self-defeating since a higher spread would diminish further the incentives or the ability to pay. To assure the lender of his commitment to repay, the borrower may give as collateral his ownership of some asset. If he fails to repay, the lender is contractually authorised to seize the collateral. This is just one example of how contract enforcement is critical to sustain financial markets. In its absence, a foreign firm may find it advantageous to borrow abroad and transfer the resources to its local company. Hence, FDI can be a way to substitute for missing or inefficient debt markets.

Financial markets also suffer from asymmetric information, which leads to moral hazard. Typically, the firm knows more than (both debt and equity) investors about the nature of the project it plans to embark upon. The firm could inform investors, but it has incentives to misrepresent the truth. The borrower may be truthful, but how is the lender to know? That is why we typically observe more markets for debt than for equity. To lend, you just need to believe that you can seize the collateral in case the borrower does not pay; you do not need to know much about the project itself. If, instead, you are a minority shareholder, you need to know everything about the business, and you must also monitor the manager or the board to make sure they do not pocket your money through the many channels at their disposal.

Under these conditions the question is: should you “make” your own finance or “buy” it in the market? This is the logic that leads to the conglomerate and the multi-divisional firm: given that they are under the same management structure, problems of asymmetric information can be better addressed and capital allocated internally in a more efficient manner.

Suppose there is a firm in a market where the financial system is very poor and access to international finance is limited, not because there is any problem with the company, but because the country has a low credit rating given the high stock of government debt. As they often argue, these companies see themselves as "the right firm with the wrong address". Imagine two potential owners: a local entrepreneur and a foreign company. They both value the company at what they perceive to be the net present value of the future cash flow. The local owner internalises the fact that at different moments in the future he will miss profitable opportunities because access to finance will be restricted or very expensive. These restrictions will be reflected in lower growth projections and/or a high discount rate. By contrast, if the foreign owner does not need to rely on the inefficient domestic market or on the volatile international market for emerging-country debt, he may feel that financial market conditions will not restrict the growth prospects of the firm. He will reflect this by projecting a higher growth of revenues or a lower discount rate when valuing the firm. Under these conditions, it makes sense to expect local capital-constrained owners to sell (at a price above their reservation price) to foreign companies with better access to capital (at a price below their reservation price).

Is this what is driving the new spate of mergers and acquisitions (M&A) in the region? Why were the local owners of YPF or Enersis willing to sell to Repsol or Endesa-Spain? What allowed the foreign company to offer a price above the reservation price of the local owners? Was it their superior technology or was it their less constrained financial access?

In this sense, the surge in FDI can be generated by the market's attempt to find alternatives to poor financial markets for both debt and equity. By making the finance of YPF internal to Repsol and by tapping capital from a different capital city and with a different balance sheet, the allocation of capital becomes an internal decision of the firm circumventing both the international emerging bond market and the local financial market of Argentina. Repsol-YPF is not funding itself with more equity, but its subsidiary in Argentina may look that way. By the same token, foreign investment may take an increasing role in Mexico given that local firms have not had much access to domestic bank credit. In these cases, FDI is good because it helps overcome poorly functioning financial markets but is not necessarily a sign of an improving domestic environment.

The Logic of Mergers and Acquisitions

This leads us naturally to understanding the nature of mergers and acquisitions (see Krugman, 1998). Why do mergers and acquisitions take place? Why are some current owners willing to sell to some potential new owners? The theory of asset pricing gives us some ideas. The price of a share is supposed to equal the net present value of future cash flows. If the cash flows seen by two potential owners are the same or if the rate at which they discount those flows is the same, they will value the asset at the same price and there would be little point in trading them. Hence, if we observe a consistent movement in ownership from one set of owners to another it must be

driven by some difference either in the cash flows or in the discount rate. Said differently, owners will sell if they are offered a price above the net present value of the flows they would obtain if they kept the ownership of the company. Hence, in principle, ownership changes hands when the new owners feel they can extract a larger net present value than the current owners can. What can drive this wedge between the two reservation prices?

Obviously, superior technology, management systems or market access will make one owner capable of extracting more value out of a firm than its current owner extracts. This is straightforward and involves the usual attributes associated with FDI. Notice, however, that many of the elements that could make FDI superior are not externalities. They can be perfectly appropriated by the firm, or partially captured by the previous owners through a sales price above their reservation price.

In more general terms, the fact that international firms have access to better foreign institutions and markets may be a source of value that can be extracted by purchasing firms in the local market and arbitraging between the markets through the firm. This would be a rationale for some of the mergers and acquisitions taking place in the region. It would also explain why the share of FDI tends to be higher in countries with weaker institutions.

Corporate Finance and the Capital Mix

In analysing the choice of capital structure, consider the following proposition. Assume a certain volume of capital inflows. Would a larger share of FDI in total flows not be safer? This is obviously the view that a bondholder or a credit rating agency would take. Thus, in its recent upgrading of Mexico's debt, Moody's used as an argument the fact that the current account was being financed mostly by FDI. Equity owners have claims on the cash flow of an entity that are junior to those of creditors. The larger the share of equity, other things being equal, the less likely it is that the bond will be defaulted on. Hence, as the share of equity increases, *other things being equal*, the less risky the bonds. Hence, it makes sense for bondholders to see as good news the increasing share of FDI in total capital flows. It means their claims are becoming relatively more senior. By the same token, seen from the point of view of the country, the larger the equity share, the greater the risk that is shared with foreign investors.

But other things are not equal and this form of partial equilibrium thinking can be misleading. As the share of equity expands, the debt becomes increasingly safer, and the company will be able to issue it at lower spreads. Modigliani and Miller (1958) showed that under relatively general conditions, the firm would be completely indifferent to its capital structure. The intuition is simple. If a firm has a certain risky stream of cash flow and it divides the rights to it in different forms (say between stocks and bonds), each piece will be priced according to its risk and return characteristics. There is no way to add value to the firm by just adjusting who gets

what under which conditions. The total value of the firm is just the net present value of its cash flow, no matter how you split it. By choosing a larger share of equity, more of the revenue and more of the risk will go to equity holders, but that does not change the overall value of the firm. This result breaks down when other considerations are introduced, such as taxes, costly bankruptcy, problems of asymmetric information and other issues, which will be addressed below.

The relevance of this to our discussion is that we can imagine a country as composed of a representative firm, and things that affect the optimal capital structure of the firm will affect the composition of its stock of debt and equity. The flows in the capital account of the balance of payments can be interpreted as being driven by two factors: first, by changes in the desired stocks of debt and equity, and second, by its distribution between residents and foreigners. Let us abstract from the second issue and concentrate on the changes to the overall demand of stocks and bonds.

The Modigliani and Miller theorem is often stated to mean that corporate finance does not matter. In our context it would imply that the *composition* of the capital account does not affect the net worth of a country: *national welfare cannot be affected by changing the composition of the different assets and liabilities of the country at market prices*. The composition of international finance does not matter.

Obviously, this is not the case in the real world but, as with many other theoretical results in economics, it raises questions about what aspects of the world might make international finance matter and what effects they might have.

What Makes Finance Relevant?

In this section we use the Modigliani and Miller theorem to consider the factors that affect the composition of the supply of stocks and bonds, abstracting from the elements that create a difference between foreign and domestic investors. We start with tax considerations and then proceed to other issues.

Tax Considerations

One thing that may affect the choice of capital structure is the nature of the tax system. Imagine that interest on bonds is not taxed while income on profits is taxed. This means that by changing the capital structure of the firm you can affect the overall tax burden and hence change the value of the firm that accrues to bond- and stockholders. In particular, having maximum debt would lower the tax burden and hence maximise the value of the firm that can be split between stockholders and bondholders. If, by contrast, dividends are not taxed while interest is, then it will be optimal to have maximum equity. Normally, it is assumed that because of double taxation of profits (as corporate profits and as personal dividend income), the tax system typically favours debt finance.

This point may be an additional element in explaining why so much of FDI is documented as a loan from the parent company: it can be a way to minimise the tax burden[10]. Since we measure FDI to include loans from the parent company and since such loans are better ways of dodging the taxman than trading stocks and bonds at market prices, this process may be happening within the flows that are normally measured as FDI.

One tax element that has implications for the balance of payments is tariffs and other trade barriers. In principle, other things being equal, they generate an incentive to locate economic activity domestically in order to avoid the tariff. Obviously, it will affect the efficiency of the rest of the economy, including the export sector, so the net effect of higher tariffs on output and investment is usually assumed to be negative. Depending on the advantages of foreign ownership in the export or the import-competing sectors it may have ambiguous effects on FDI.

We will not focus much on tax issues in the remainder of this paper. However, the intuition that emerges from this analysis is useful to the study of other considerations. For example, if there are distortions in the markets for debt or equity, these can be assimilated to a tax on those sources of finance and hence lead to a reallocation of the optimal portfolio. Thus, for example, if the debt market is characterised by periods of illiquidity and credit crunches, it is as if a stochastic tax rate had been applied to it, which would lead to a shift of the optimal portfolio away from debt finance. In this sense, if the domestic and foreign debt markets became less efficient after the East Asian and Russian crises, the implicit tax that this imperfection represents must have gone up, causing the optimal portfolio to shift away from debt.

Financial Distress and Costly Bankruptcy

The Modigliani and Miller theorem assumes that if the firm is unable to pay its bondholders it just does not and the future cash flow of the firm is otherwise unaffected. However, bankruptcies tend to be quite disruptive. They tend to paralyse the firm, cause a problem of debt overhang, generate uncertainty over property rights, curtail access to additional finance and prevent the company from operating efficiently.

Hence, one reason to choose a particular capital structure is in order to affect the contingent costs associated with financial distress. Debt can be understood as a riskless bond plus a "put" option on the cash flow of the firm: if revenues fall below some level, the firm has the option not to pay the bondholders. A bankruptcy is a situation when the put is "in the money". One way of thinking about the factors that affect the contingent cost of bankruptcy is by considering the factors that go into the value of the put.

First, obviously, is the amount of debt relative to equity, i.e. the structure of its capital. The larger the debt component, the more "in the money" is the put and hence the larger the risk of bankruptcy. Hence, the optimal structure of capital will be moving over time and across firms as they attempt to optimise the contingent cost of bankruptcy relative to other factors.

Second, higher expectations of growth in future cash flows lead to a lowering of the probability of default and hence lead to a shift in favour of *more debt.* By the same token, *a reduction in the level of risk of the cash flow also leads to more debt*.

Costly bankruptcy can explain why the share of FDI is higher in countries that are riskier, and have more volatile output. It can also account for the recent increase in the share of FDI in the composition of capital flows to Latin America. The 1998-99 decline in the total volume of capital flows and its shift towards more FDI is consistent with an increase in the perception of risk of the region. It is not a sign of health. By the same token, the radical economic reforms of the early 1990s brought with them a rapid rise in total capital flows and a fall in the share of FDI, consistent with the perception of higher growth prospects and lower risks. With the Tequila Crisis in 1995, growth prospects and the perception of risk reversed course and so did the share of FDI, a trend that accelerated with the Asian and Russian crises. Hence, without pretending to have proved anything, this theoretical framework gives a less rosy interpretation of the trend towards a rising share of FDI: a worsening balance between growth prospects and risks!

Costly bankruptcy can also explain why countries with a large stock of subsoil resources have a larger share of FDI. Mining and oil are sectors characterised by very volatile prices, high capital intensity and very specific assets (i.e. assets that cannot be sold off to another activity in case of financial distress). Therefore, those sectors tend to have a much larger equity composition in their capital mix, and hence a larger share of FDI.

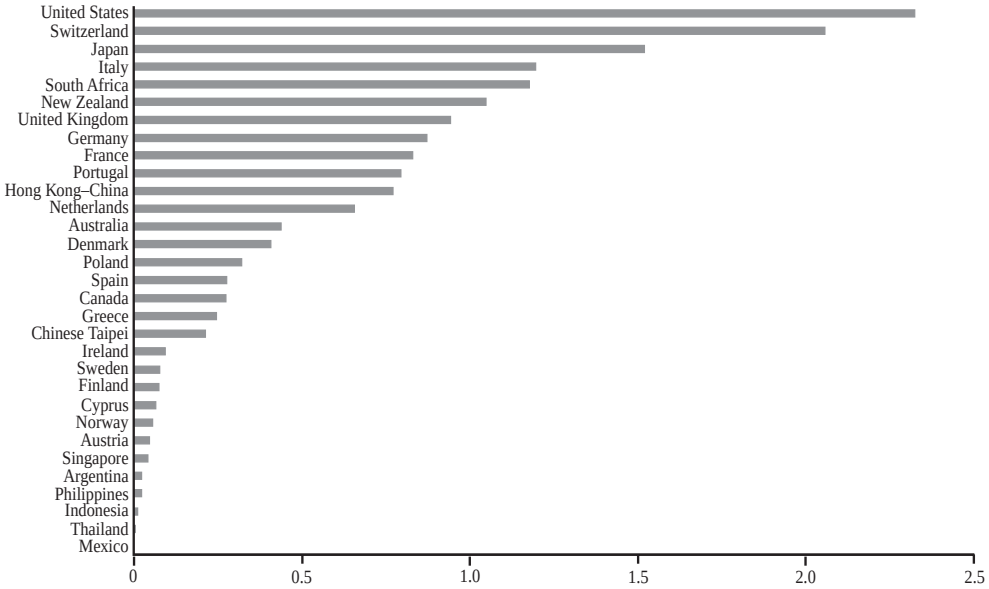
Incomplete Markets and Original Sin

Another dimension of the financial problem is the presence of incomplete markets. Ideally, a firm should be able to borrow short and long term in any currency in order to match the maturity structure of its assets and the currency denomination of its cash flow. If the firm does not find adequate financial instruments it will have a riskier balance sheet. In particular, if it does not find enough long-term financing to match its assets, it will have to borrow short term and have a maturity mismatch. If it does not find enough financing in the currency denomination of its cash flow, it will have a currency mismatch. These mismatches will make the firm riskier and hence require more equity in its optimal financial mix. From this point of view, since equity is intrinsically very long run, it does not generate maturity mismatch problems. Moreover, since it does not have a currency denomination — i.e. it is just a residual claim over a portion of the firm's cash flow, whatever currency it may be in — it does not generate currency mismatches.

The typical Latin American entity (firm or government) is unable to borrow abroad in pesos and is unable to borrow long term in pesos, even domestically. Hence it must choose between borrowing short term domestically, thus generating a maturity mismatch, or alternatively borrowing longer term in dollars but then being saddled with a currency mismatch.

This phenomenon has been termed "the devil's choice" by Pedro Pou and "the original sin" by others (see Hausmann, 1999; Eichengreen and Hausmann, 1999; Hausmann, Panizza and Stein, 2000). Figure 5 shows the proportion of international securities issued in a country's currency relative to the amount issued by that country's residents. Countries such as the United States and Switzerland appear with ratios greater than 1 because many non-residents issue in US dollars or Swiss francs. Countries that do not appear in the graph simply have no international issues in their own currencies. Essentially, all of Latin America and East Asia have either zero or insignificant issues in their own currencies.

Figure 5. **Original Sin: World Comparison**
Debt in currency x over debt in country x, 1998 (money market instruments and bonds)



Source: BIS.

Following this logic, original sin should lead to smaller overall capital flows and to a larger share of those flows taking the form of FDI. We use as a metric for original sin the variable presented in Figure 5. Hence, a larger value of the index represents a greater ability to borrow in that country's currency. We find in Tables 1, 2 and 3 that *the total volume of capital flows is larger in countries that can borrow in their own currency, while the composition of capital inflows is less intensive in FDI in those countries*. These two effects act in opposite directions and hence there is no significant relationship between this variable and the ratio of FDI to GDP.

Conclusions and Policy Implications

Capital inflows into Latin America slowed down in 1998-99 but the share of FDI increased very significantly, to the point where it now represents over 60 per cent of gross flows. Is this good? Is this an indication that things are getting better? Is this a consequence of a general improvement in the perception of growth prospects, stability and institutional development?

This paper revealed that the share of FDI in total flows tends to be larger in countries that are riskier, more distant, resource-rich, financially underdeveloped, institutionally weak and suffering from original sin. Hence, it is hard to argue that the rise in the share of FDI is an indication of good health.

This does not mean, however, that the rise in FDI is bad in itself. On the contrary, movements in the size and composition of the capital account may reflect behaviour that is optimal given the constraints faced by agents. If the risks of operating in Latin America are generating an increase in the optimal share of equity in the capital structure of firms and if M&A is the form it is taking, then it is a movement in the right direction. If the deterioration in the functioning of debt markets is answered by arbitraging between markets through foreign-owned firms, then that is an improvement over the alternatives. If in the absence of adequate institutional development and property rights protection investment takes the form of FDI, then it is better that it occur this way than not at all. If original sin discourages international lending because it cannot be denominated in local currency, then it is better that it take place as FDI than not at all.

Hence, there is no reason to say that the rise in FDI is not the best thing that could have happened, given the prevailing conditions. However, this does not mean that the rise in FDI is a sign of good health, or that we can rank the quality of a country's institutions, its risks and its prospects according to the share of good cholesterol in total cholesterol. We can argue even less that policies should be adopted to promote FDI and to discourage other types of capital flows. On the contrary, the rise of FDI is an indication that markets are working poorly, that institutions are inadequate and that risks are high. Residents are selling their companies because they do not have the markets and institutions that allow them to grow.

Latin America needs reforms in order to improve the institutional framework that supports investment, finance and risk-taking. It needs to generate a reduction in overall risk by making markets more efficient and complete. This will promote investment, productivity and growth. However, this may well shift the optimal composition towards more debt and less FDI. In that case, a declining share of FDI in the context of rising overall flows may be a sign of good health.

Appendix

The Sample

All the countries for which information is available excluding the ones with a GDP in current dollars in 1997 smaller than $5 billion, Panama and Switzerland.

The Dependent Variables

Variable	Description	Sources
Total Commercial K Flows/GDP* The transformation used is: Log (Total Commercial K Flows/GDP)	Total Commercial K flows = FDI flows liabilities + Portfolio flows liabilities + Other Investments flows liabilities (all the above in current dollars). Simple average for 1996-98. GDP in PPP current dollars. Simple average for 1996-98.	IFS and World Bank
FDI Flows/Total Commercial K Flows The transformation used is Log ((FDI Flows/Total Commercial K Flows)+1)	FDI Flows Liabilities in current dollars. Simple average for 1996-98. Total Commercial K flows = FDI flows liabilities + Portfolio flows liabilities + Other Investments flows liabilities (all the above in current dollars). Simple average for 1996-98.	IFS and World Bank
FDI Flows/GDP The transformation used is Log ((FDI Flows/GDP)+1)	FDI Flows Liabilities in current dollars. Simple average for 1996-98. GDP in PPP current dollars. Simple average for 1996-98	IFS and World Bank

* We excluded the countries for which the average of Total Commercial K flows < 0 (2 countries) and those for which FDI/Total Commercial K flows>3 (2 also).

The Explanatory Variables

Variable	Description	Sources
Income	Log(GDP per capita in current dollars)	WEO
Size	Log(GDP in current dollars)	WEO
Openness	Log(Exports/GDP)	IFS, WEO
Country Risk	The indicator ranks the countries of the world depending on the perception of risk. The higher the riskier.	Institutional Investor
GDP volatility (past)	Standard deviation of the growth rate of the GDP in constant local currency during the 1990s.	WEO
Subsoil Resources	Dollar value of the subsoil resources of the country.	
Distance	Distance to main markets.	Barro and Lee (World Bank)
Private Credit	Private Credit/GDP	IFS
Quality of Institutions indexes - Kaufmann	Aggregate indexes of different measures related to six basic governance concepts. The indexes are higher in the countries of better government performance.	Kaufmann *et al.*
- Regulatory Burden	Incidence of market-unfriendly policies and perception of the burdens imposed by excessive regulation.	Kaufmann *et al.*
- Accountability	Measures the extent to which citizens of a country are able to participate in the selection of governments.	Kaufmann *et al.*
- Government Effectiveness	Combines perceptions of the quality of public service provision, the quality of the bureaucracy and the competence of civil servants.	Kaufmann *et al.*
- Political Instability and Violence	Measures perceptions of the likelihood that the government in power will be destabilised or overthrown by possibly unconstitutional and/or violent means.	Kaufmann *et al.*
- Graft	Measures perceptions of corruption.	Kaufmann *et al.*
- Rule of Law	Measures the extent to which agents have confidence in and abide by the rules of society.	Kaufmann *et al.*
- Principal component of the last six indicators.	A measure that tries to combine all the aspects described by the six indicators.	Kaufmann *et al.*
Institutions Credit	Indicator of the legal rules covering protection of creditors.	La Porta *et al.*
Institutions Share	Indicator of the legal rules covering protection of the corporate shareholders.	La Porta *et al.*
Original Sin	Percentage of total external debt of a country that is issued in its own currency.	BIS, RES-IDB

The Models

Two specifications were used to study the determinants of the volume and composition of recent capital flows. The models were estimated using cross-section data and ordinary least squares.

In the first one, the dependent variables are regressed against each of the independent variables alone and a constant. It explores the raw relation between both variables, without distinguishing the indirect channels through which the effects can take place. It is used to verify if the data validate or not the stylised facts about the behaviour of capital flows.

In the second, three controls are always included: income, size and openness. In this way, we can isolate the direct effect of the explanatory variable and avoid the possibility that it is acting as a proxy of a more robust variable.

The econometric results are shown in Tables 1, 2 and 3.

Notes

1. A companion paper addresses the issue of the relationship between the composition of the capital account and the risk of crises. It studies among other things the proposition that FDI is better because it is "bolted down" (see Fernández-Arias and Hausmann dans cet ouvrage).

2. The relationship is straightforward:

   FDI/GDP = (Total Private Capital/GDP)(FDI/Total Private Capital)

3. Data on 1999 were not available for all regions of the world.

4. For the purpose of this paper we define East Asia as Korea, Indonesia, Thailand, Malaysia, the Philippines and Singapore.

5. Alternatively, one could interpret the relationship as indicating that countries that attract a larger share of FDI in total flows do not export more.

6. Gallup, Sachs and Mellinger (1999) and IDB (2000) find that the level of development is negatively and strongly affected by distance.

7. In fact, about 20 per cent of FDI flows take the form of loans from the parent company. The motivation for and implications of this fact will be discussed below.

8. The same would happen to the accounting of a domestic bank loan to a foreign owned firm that is incorporated abroad instead of through a local subsidiary.

9. It makes sense to treat the loan as an equity investment because it is in principle junior to all other debt obligations of the firm.

10. It may also be a way to make sure that in case of capital controls, the firm will have the right to buy foreign exchange to service its "external debt".

Bibliography

AITKEN, B., G.H. HANSON and A.E. Harrison (1997), "Spillovers, Foreign Investment and Export Behavior", *Journal of International Economics*, 43 (1-2).

BLOMSTROM, M. and A. KOKKO (1997), "How Foreign Investment Affects Host Countries", *Policy Research Working Paper* 1745, World Bank, Washington, D.C.

BORENSZTEIN, E., J. DE GREGORIO and J.-W. LEE (1998), "How Does Foreign Direct Investment Affect Economic Growth?" *Journal of International Economics*, 45 (1).

CHUHAN, P., S. CLAESSENS and N. MAMINGI (1998), "Equity and Bond Flow to Latin America and Asia: The Role of Global and Country Factors", *Journal of Development Economics*, 55 (2).

CHUHAN, P., G. PEREZ-QUIROS and H. POPPER (1996), "International Capital Flows: Do Short-term Investment and Direct Investment Differ?" *Policy Research Working Paper* 1669, World Bank, Washington, D.C.

CLAESSENS, S., M.P. DOOLEY and A. WARNER (1995), "Portfolio Capital Flows: Hot or Cool?" *World Bank Economic Review*, 9 (1).

COASE, R.H. (1937), "The Nature of the Firm", *Economica*, No. 4.

EICHENGREEN, B. and R. HAUSMANN (1999), "Exchange Rates and Financial Fragility", paper prepared for the Federal Reserve Bank of Kansas City's Conference on Issues in Monetary Policy, Jackson Hole, Wyoming.

FRANKEL, J. and A. ROSE (1996), "Currency Crashes in Emerging Markets: An Empirical Treatment", *Journal of International Economics*, 41 (3-4).

GALLUP, J., J. SACHS and A. MELLINGER (1999), "Geography and Economic Development", *International Science Review,* Vol. 22, No. 2, August.

HAUSMANN, R. (1999), "Should There Be Five Currencies or One Hundred and Five?", *Foreign Policy,* No. 116.

HAUSMANN, R., U. PANIZZA and E. STEIN (2000), "Why Do Countries Float the Way They Float?" Research Department, Inter-American Development Bank. Paper prepared for the NBER Inter-American Seminar in Economics at CEMA, Buenos Aires.

INTER-AMERICAN DEVELOPMENT BANK (2000), *Economic and Social Progress in Latin America: Development Beyond Economics,* Johns Hopkins University Press, Washington, D.C.

KAMINSKY, G., S. LIZONDO and C. REINHART (1998), "Leading Indicators of Currency Crises", IMF Staff Papers, 5 (1).

KAUFMANN, D., A. KRAAY and P. ZOIDO-LOBATON (1999*a*), "Governance Matters", manuscript, World Bank, Washington, D.C.

KAUFMANN, D., A. KRAAY and P. ZOIDO-LOBATON (1999*b*), "Aggregating Governance Indicators", manuscript, World Bank, Washington, D.C.

KRUGMAN, P.R. (1998), "Fire-Sale FDI", mimeo, MIT, Cambridge, MA.

LA PORTA, R., F. LÓPEZ DE SILANES, A. SHLEIFER *et al.* (1997), "Legal Determinants of External Finance", *Journal of Finance*, 52 (3).

LA PORTA, R., F. LÓPEZ DE SILANES, A. SHLEIFER *et al.* (1998*a*), "Law and Finance", *Journal of Political Economy*, 106 (6).

LA PORTA, R., F. LÓPEZ DE SILANES, A. SHLEIFER *et al.* (1998*b*), "Corporate Ownership Around the World", mimeo, Harvard University, Cambridge, MA.

MODIGLIANI, F. and M.H. MILLER (1958), "The Cost of Capital, Corporation Finance and the Theory of Investment", *American Economic Review,* Vol. 48, June.

SARNO, L. and M.P. TAYLOR (1999), "Hot Money, Accounting Labels and the Permanence of Capital Flows to Developing Countries", *Journal of Development Economics*, 59 (2).

WILLIAMSON, O.E. (1985), *The Economic Institutions of Capitalism*, Free Press, New York, NY.

A Comment by Stefano Manzocchi

The first comment I want to make is that I agree with most of the points made by the authors. Moreover, I think that everyone interested in international or development economics should read the paper because of two features. First, it takes a critical attitude towards a dominant viewpoint in today's thinking, namely that FDI is a symptom of economic welfare and a superior mode of capital transfer. Second, it does that in a different way from the one usually seen nowadays, namely "introduction-model-econometrics-results". Rather, it combines a set of arguments derived from different and even distant fields of economic thought, something that is ever more difficult to find.

The paper sets out plenty of reflections and interpretations, but I will only focus on just a few points for discussion. A key message is that a rising share of FDI out of capital inflows may reflect a deterioration of the economic environment in host economies (particularly, in Latin American economies in recent years) and may not be a *signal* of general improvement. FDI may still be a rational response to the deterioration of economic conditions, but this does not mean that one should be happy observing a rising share of FDI. In this sense, the metaphor of good and bad cholesterol goes perhaps a little too far, because a change in cholesterol rates does not only signal changing general conditions but *is believed to have health consequences in itself*.

But the authors go further, arguing that all of the benefits that are commonly attributed to FDI (new technology, market access, training) are generated — if they occur — by the investing firm and not by FDI itself. This could seem obvious but it is not if you check even among "informed" people. One can push the argument even further saying that the judgement on capital inflows in developing countries cannot in general be made on the basis of their *statistical definition* (debt vs. equity; private vs. public investors or recipients; greenfield FDI vs. M&A) but on the basis of other considerations as well (such as currency and maturity mismatches in the composition of assets and liabilities; complementarity or substitutability with other sources of finance). Foreign financing is basically fungible, either at the level of the individual recipient or at the macroeconomic level, hence its consequences depend on the use one makes of them. This has been clearly shown of foreign aid, but it is true of all types of capital transfer, FDI included. In this sense, it is difficult to establish a "golden rule" in the composition of capital inflows, or to say in principle whether we are in the presence of good and bad cholesterol.

This is even more true if we agree with the authors that the benefits commonly attributed to FDI are generated by the investing firm, and consider as they do that the statistical definition of FDI is, at the same time, *too much and too little* to measure the direct involvement of foreign firms in production in the host economy. It is too *much* because the acquisition of a capital share of 10 per cent or more does not necessarily imply control and direct participation of the foreign firm in the generation of value added in the host economy. It is too *little* because a foreign firm can also finance its operations in the host economy by raising debt or issuing equities in the domestic or international markets.

Is a rising share of FDI a reaction to missing or inefficient markets? Internalisation through FDI would then reflect too high transaction costs, too little protection of property rights, incomplete markets. I think this can be true to a good extent. The "original sin" (currency and/or maturity mismatch in the asset-liability position of domestic agents) can prevent Latin American economies from borrowing enough, hence FDI is a second-best solution in a case of credit constraint. What we observed in Latin America after 1997 was a rise in FDI and a decline in debt flows (although there was an initial rise in bank loans after the Tequila crisis, possibly of a "defensive" nature); in the five most seriously affected East Asian economies, FDI stayed constant while other private inflows declined after 1996. The conclusion one can draw is that financial distress and bankruptcy enhance the share of FDI in total inflows, and I subscribe to this view.

However, I am not sure one would like push this view too far. Taken to the extreme, the Modigliani-Miller perspective on the composition of capital flows would suggest that, if markets are perfect, agents are indifferent between debt or equity, hence *perfect markets* would be consistent with a 100 per cent share of debt but also with a 100 per cent share of equities or FDI. Another critical point has to do with the notion of the firm itself. In the Modigliani-Miller extreme perspective, there are no firms, only markets. In order to conceive the mere existence of firms, *we have to identify some specific asset*, which is not easily transferable on the market to other producers or whose value declines once it is sold on the market.

If a firm is defined according to this criterion, we must recognise that these assets, not easily transferable on the market to other producers or whose value declines once they are sold on the market, also exist in industrial countries, as firms are alive and well there too. An example of such assets is "technology", broadly intended as not only blueprints but a set of skills and operations that identify a firm. Another is size itself, which is a necessary asset when indivisibilities are present as in the case of resource-intensive sectors. The more relevant are these assets, the more likely we are to observe an oligopoly, either at the national or at the global level, in the industrial or in the developing world. At the same time, oligopolistic sectors where "technology" and size matter are the ones where multinationals operate and where FDI mostly occurs (see UNCTAD, 2000). The tendency towards consolidation and dimensional growth in some of these sectors is to some extent independent, I believe, from transaction costs, protection of property rights, or incomplete financial markets, and the search for dimensional growth and market control through FDI is partly independent as well.

Therefore, I would support a slightly different interpretation of recent trends in the composition of capital inflows in developing countries. The rise of FDI, both greenfield and M&A, in developing countries during the 1990s is partly autonomous, in the sense that it has been led by: *i)* consolidation and increasing concentration at the world-wide level on the investors' side; and *ii)* a benevolent political attitude towards FDI inflows on the recipients' side (see *The Economist*'s cover, 2000). Hence, both industrial and political economy trends have co-operated in this direction. This does not mean, of course, that substitution between foreign debt and FDI has not occurred to some extent; and clearly the fall of portfolio and bank lending to Latin America and East Asia in the second part of the decade is related to the inefficiencies in financial markets. But I think there is some degree of autonomy between the two phenomena.

Finally, a more technical point. In the regressions shown in the paper, the authors find a *positive* relation between capital inflows and per capita income that is quite disturbing from the point of view of growth economics. We should expect a negative relation starting from a neo-classical two-factor set-up (larger per capita incomes mean higher capital-labour ratio, hence lower returns on capital accumulation). I found the same positive correlation studying the distribution of capital flows across 33 developing economies over 1960-82. What is interesting is that the correlation turns negative (what we should expect if conditional convergence has to occur) if we introduce some proxies for *human* capital endowments and accumulation rates. If we assume that foreign capital inflows only finance *physical* capital accumulation (the so-called "partial mobility" hypothesis) then we should observe a *positive* partial correlation between human capital proxies and net capital inflows, but a *negative* correlation between per capita income and net inflows, which I found over 1960-82 (Manzocchi, 1999). After the debt crisis of 1982-83, unfortunately, things did not work so neatly; nonetheless I think it could be interesting to try to incorporate human capital in the authors' framework for the 1990s.

Bibliography

The Economist (2000), "The World's View of Multinationals", Vol. 354, No. 8135, 29 January.

MANZOCCHI, S. (1999), *Foreign Capital to Developing Economies. Perspectives from the Theory of Economic Growth*, Macmillan Press, Houndmills.

UNCTAD (2000), *World Investment Report*, 10th edition, New York, N.Y.

A Comment by Helmut Reisen

The Proposition

Hausmann and Fernández-Arias have, once again, staged a fertile assault on a mainstream view widely shared by economists and policy makers. They caution against interpreting the rising share that foreign direct investment (FDI) flows occupy now in Latin America's capital inflows as entirely positive or even ideal. The rise rather reflects, say the authors, the inability of the region's financial markets to deliver long-term local-currency debt instruments to local enterprises and the deterioration of the region's growth prospects and risk profile. To promote the share of FDI is thus an unwarranted policy; countries are rather advised to improve the environment for private investment generally and to strengthen domestic financial markets.

The Mix of Flows: Some Theory

Despite the remarkable rise of private cross-border capital flows over the past decade, their composition remains ill-explained. A model by Hull and Tesar (2000) predicts that firms with good credit risks will prefer to raise capital through the bond market, that medium-risk firms unable to tap the bond market will rely on bank loans and/or equity and that firms with poor credit ratings rely on equity finance. The basic assumptions that underlie these predictions are that bondholders have priority claims over shareholders, that equity finance includes a risk premium to account for "lemon" firms (which are assumed to be indistinguishable to prospective investors), and that bank finance comes with the flexibility of restructuring and the possibility of information-sharing between the firm and the bank, but entails a monitoring cost reflected by the intermediation spread. Translated for the purpose of cross-border trade, countries populated with high-growth firms and characterised by a relatively high degree of corporate transparency will show a pecking order of bonds, then bank loans and finally equity investment in their capital accounts. This pattern should hold for most OECD countries. For developing countries, however, we should observe a higher degree of FDI finance — which minimises information risks relative to other capital flows — in capital inflows, as opposed to other forms of private finance.

Razin, Sadka and Yuen (1995) use the cost of financing argument to explain different forms of capital flows, finding "greenfield" FDI to be least costly, followed by debt flows and then by portfolio equity flows. FDI is less costly as participation in management reduces the asymmetric information problem. Chen and Khan (1997) derive their results from the inefficiency of the domestic financial market in the recipient country, which is modelled as a result of asymmetric information between outside investors who rely on information in the domestic financial market and insiders of the firms. Their analysis allows predictions to be made on the mix of flows based on a host country's growth potential and financial market development. Countries where the growth potential outweighs the degree of financial market development will receive more FDI than portfolio equity flows; countries with suitable parameter values for both growth potential and financial markets will see relatively more equity inflows. The Chen-Khan model allows for sudden reversals of capital flows for economies experiencing changes in the perceived growth potential or financial market integrity, or both.

Theory and evidence presented in a recent paper by Shang-Jin Wei (2000) for the OECD Development Centre seem, however, to contradict the predictions of the information-asymmetry approach presented above, including those by Hull and Tesar, if the proposition that local information and corruption problems are correlated is accepted. Wei presents strong empirical evidence that countries with high corruption indices have a relatively low share of FDI in their capital imports while bank and portfolio flows are unaffected by corruption levels in the host country.

Table 1. **Corruption and the Mix of Capital Inflows**

Dependent variables	Log (Loan/FDI)	
Specification	Fixed Effects	Random Effects
WDR Corruption Measure	0.793**	1.228**
	(0.328)	(0.615)
Log GDP	–0.333**	–0.476**
	(0.114)	(0.212)
Linguistic Tie	–0.705**	–0.504**
	(0.335)	(0.291)
R^2	0.37	0.39
No. of observations	197	197
Breusch/Pagan test Prob>chi2		0.00
Hausman test Prob>chi2		0.95

Note: Log GDP per capita and log distance between economies were further determinants, which are not reported here as they did not enter significantly. Here the *World Development Report* 1997 corruption measure is displayed; measures from Transparency International and from the Global Competitiveness Report 1997 performed significantly as well.

Source: Wei (2000).

Table 1 is based on a generalised gravity model specification:

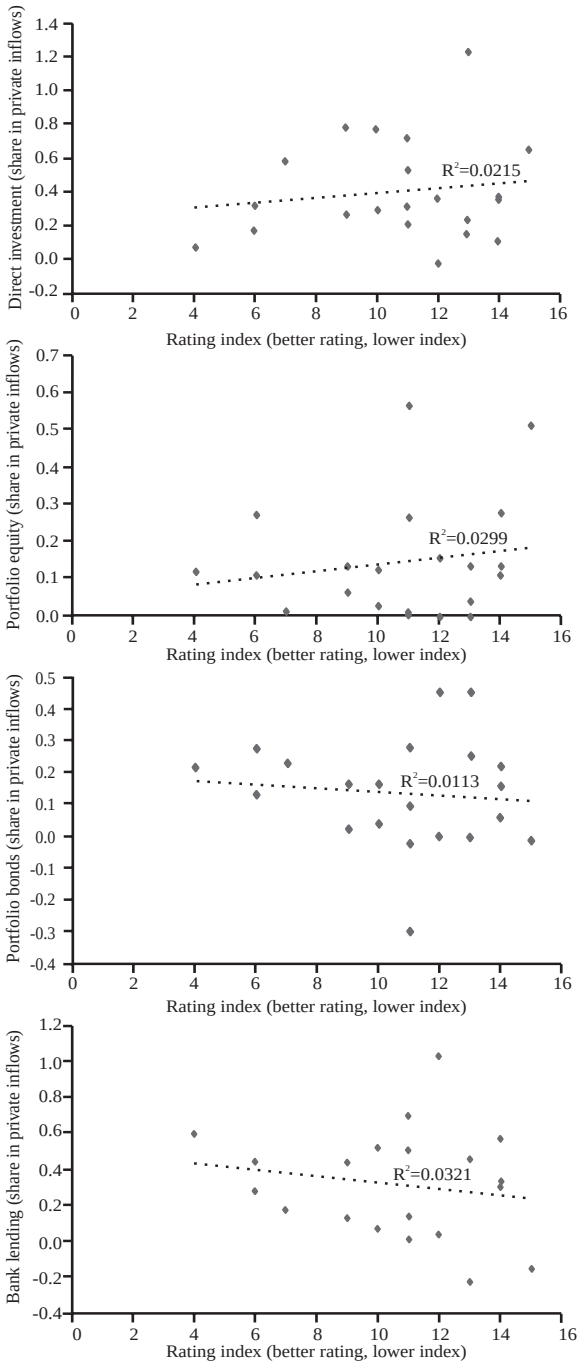
$$\log (loan_{jk}/FDI_{jk}) = \underset{\text{fixed effects}}{\text{source country}} + \beta\ \text{corruption}_{k} + x_{jk}\zeta + e_{jk},$$

where β and ζ are scalar and vector parameters, respectively, and x_{jk} is a vector of determinants of bilateral FDI other than host country corruption. Wei also finds for US data that host country corruption measures affect the ratio of portfolio flows to FDI positively as well.

These findings seem important, as they may indicate that the effects of information asymmetries between investors and recipients have often not been appropriately specified. First, how do international direct investors obtain the presumed informational advantage over bank lenders and portfolio investors? Largely, by greater direct exposure to the host country, including by sending managers from headquarters to the country. International direct investors are thus more likely to have repeated interactions with local officials (for permits, taxes, health inspection and so forth) than foreign banks or portfolio investors, raising the need to pay bribes and to deal with extortion by local bureaucrats. Second, direct investment involves greater sunk cost than bank loans or portfolio investment. This puts direct investors in a weaker bargaining position than investors in more liquid assets. This *ex post* disadvantage of FDI would make international direct investors more cautious than international portfolio investors *ex ante* in raising their claims on a corrupt host country.

Figure 1 contains good and bad news on the empirical content of the Hausmann-Fernández proposition. It provides a snapshot for 1996, a non-crisis year for which the number of observations on sovereign country ratings are maximised, to show the correlations between ratings and the share of different types of flows in total capital inflows for 21 developing countries. The good news is that the share of both foreign direct investment and portfolio equity flows moves higher when ratings, a proxy for default risk, deteriorate. By contrast, portfolio bond flows and bank lending show more prominence in the recipient countries' capital accounts when ratings are better. The bad news, however, is the low explanatory power of ratings for the mix of inflows as the R^2 does not go beyond 0.03 in the four panels displayed in Figure 1. Hence we seem to have a problem of missing variables.

Figure 1. **The Mix of Capital Inflows and Country Ratings**
21 observations for 1996

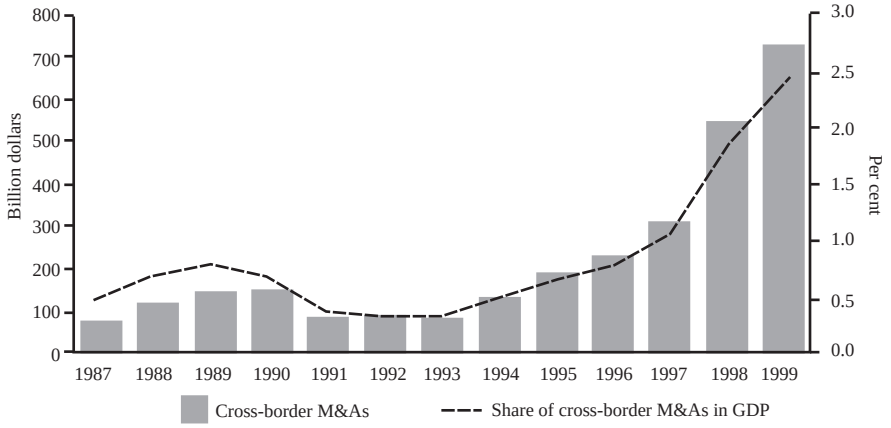


Sources: Bank for International Settlements, Standard & Poor's and World Bank.

Weak Econometric Evidence

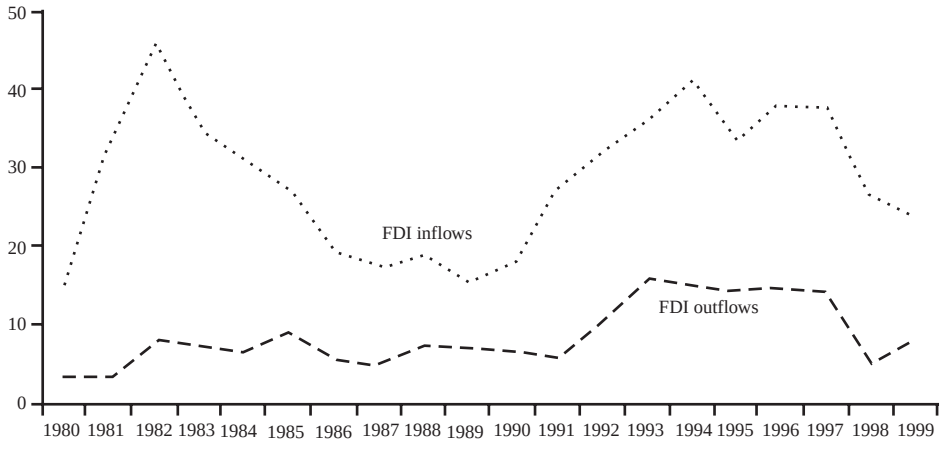
The econometric evidence presented in the paper seems flawed in several respects. The authors focus on policy variables in host countries in order to determine the share of FDI in Latin America's capital account. They do not explore whether that mix could be supply-driven. Figures 2 and 3 show that it clearly is: the world has witnessed a tremendous rise in global mergers and acquisitions during the late 1990s (UNCTAD, 2000), the authors' observation period. Interestingly, and in contrast to the hypotheses advanced by Hausmann and Fernández-Arias, the developing world has benefited from the wave only under-proportionately.

Figure 2. **The Global Wave of Mergers and Acquisitions**



Source: UNCTAD, *World Investment Report*, Geneva, 2000.

Figure 3. **The Share of Developing Countries in Global Foreign Direct Investment Flows**



Source: UNCTAD, *World Investment Report*, Geneva, 2000.

The lack of supply determinants in the regressions suggests omitted-variable bias in the results obtained by Hausmann and Fernández-Arias. Moreover, the model estimated is incomplete as the most important FDI determinants identified in the literature are notoriously absent: GDP growth (for domestic market oriented FDI), relative labour cost (for export oriented FDI), human capital and capital controls.

There are further problems with the regression results. The authors estimate a structural model, with variables jointly determined — including private credit. However, they do not control for simultaneity. A simultaneity problem is also introduced by the fact that the dependent variables are expressed as a ratio to GDP, while one of the explanatory variables is GDP (proxy for size). This may introduce negative signs for estimated coefficients and contaminate other variables. Furthermore, there is the risk of sample-selection bias in the results as the observation period is confined to 1996-98, just when FDI flows and their share in Latin American capital accounts were continuously rising. A panel data study for the entire 1990s would have strongly raised the number of observations and hence confidence in the results. There may also be an element of data mining as countries for which FDI flows were three times bigger than total flows were dropped from the regressions.

FDI Flows and Relative Capital Cost

Changes in relative capital cost for companies based in industrial versus developing countries may go a long way in explaining the rise in global mergers and acquisitions and the resulting rise of FDI to Latin America. Corporate capital costs are the sum of equity cost and debt cost weighted by the relative share of equity and debt in total capital invested in the company. Equity costs are the sum of real risk-free interest rates, expected inflation (or devaluation if expressed in dollars) and the equity-risk premium that investors require to buy and hold a stock; the premium is, among others, determined by the stock's volatility. Debt costs are the sum of real risk-free interest rates, expected inflation or devaluation, the corporate bond yield spread over risk-free assets and the country's sovereign yield spread over US treasuries.

The tremendous stock market boom in Europe and the United States, in particular for technology, media and telecommunications, lowered equity cost for companies listed there; the introduction of the Euro created a vibrant and liquid debt market, lowering debt cost especially for European companies. While the drop in capital cost in industrial countries stimulated global expansion plans (with hindsight, excessive expansion in some cases), potential acquisition targets in developing countries were hit by rising capital cost. Rising sovereign risk spreads on emerging-market bonds, credit starvation (hence prohibitive debt costs) as local banking systems collapsed, nominal exchange-rate depreciations and a rising equity risk premium for emerging markets all contributed to higher capital cost in emerging markets. This turned emerging-market based companies into attractively priced acquisition targets.

It follows from the above analysis that the rise in FDI flows witnessed over the last years has a temporary element and will probably not continue at these levels, despite the ongoing trend towards globalised production structures. Take the telecommunication sector as an example. Spain's Telefonica has by now acquired the majority of Latin America's telecommunication firms. Since spring 2000, however, the capital cost to Europe's telecommunication firms has soared as investors have been increasingly unwilling to add the sector's stocks and liabilities to their portfolios, which has resulted in plunging stock prices and rising bond yields. At the same time, most Latin American telecommunications firms have already been sold — the family silver is finite.

Meanwhile, the wave of mergers and acquisitions has hollowed out some Latin American stock markets. This has strongly reduced their liquidity, and as illiquid markets are more volatile than liquid markets, investors require a higher risk premium before they invest in them. Some stock markets are now so small in terms of market capitalisation and turnover that they risk fading from institutional investors' radar screens, despite low prospective valuation levels.

Policies Matter

Most countries seem well advised to encourage FDI and portfolio equity investment and to avoid any implicit subsidies for debt-creating flows. Reisen and Soto (2000) measure the independent growth impact of the various broad categories of private inflows, providing a panel data analysis covering 44 developing countries over the period 1986-97. Their findings suggest that both FDI and portfolio equity investment exert a significant independent growth effect (after correcting for other growth determinants). Bond flows do not enter significantly in the growth regressions. Foreign bank lending is shown to contribute to growth only if the local banking system is well capitalised; otherwise its independent growth effect is shown to be negative.

The excessive reliance on short-term borrowing, the single most important trigger of recent currency crises in emerging markets, can be discouraged by flexible exchange rates. By contrast, exchange rate pegs, in combination with high interest rates, typical in developing countries for structural reasons, tend to reinforce bank lending and spending booms (Reisen, 1998). They constitute an incentive for leveraged investors to exploit interest differentials as well as for offshore borrowing by creditworthy banks and non-banks to tap seemingly cheap sources of finance. Central bank intervention on the foreign exchange market to peg the currency in the face of net inflows, unless sterilised fully, is intermediated into the domestic banking system. The exchange rate peg provides the incentive to allocate those funds disregarding currency and maturity risks, as these are being implicitly transferred to the central bank. Keeping nominal exchange rates flexible, even introducing "noise" through central bank intervention when it is seen to be on a too-stable, appreciating trend during inflow periods, improves the mix of inflows towards longer maturities and encourages banks and firms to hedge their foreign-currency exposures.

Bibliography

CHEN, Z. and M. KHAN (1997), "Patterns of Capital Flows to Emerging Markets: A Theoretical Perspective", *IMF Working Paper* WP 97/13.

HULL, L. and L. TESAR (2000), "The Structure of International Capital Flows", paper prepared for the Kiel Week Conference 2000, Michigan University, mimeo.

RAZIN, A., E. SADKA and L.-W. YUEN (1995), "A Pecking Order Theory of Capital Inflows and International Tax Principles", *IMF Working Paper* WP/96/26.

REISEN, H. (1998), *Domestic Causes of Currency Crises: Policy Lessons for Crisis Avoidance*, OECD Development Centre Technical Paper No. 136, Paris.

REISEN, H. and M. SOTO (2000), "Which Types of Capital Inflows Foster Developing-Country Growth?", *International Finance*, forthcoming.

UNCTAD (2000), *World Investment Report*, Geneva.

WEI, S.-J. (2000), *Negative Alchemy? Corruption, Composition of Capital Flows and Currency Crises*, OECD Development Centre Technical Paper No. 165, Paris.

The Perils of Competition for Foreign Direct Investment

Charles P. Oman[1]

Governments throughout Latin America, as elsewhere, have moved actively in recent years to attract foreign direct investment. Many see FDI as vital to strengthening their economy's ability to compete in global markets (including at home). One result has been to intensify competition for FDI by governments at both the national and sub-national levels. Yet the effects of that competition remain poorly understood.

In theory, at least, the growth of competition for FDI could have beneficial effects. Given the well-known importance that serious long-term investors attach to the economic and political "fundamentals" of the locations where they invest, greater competition for FDI could motivate governments to do more, or do a better job, to strengthen the "fundamentals" of the areas under their jurisdiction. It could induce them more effectively to enhance local supplies of education and of transportation and communications infrastructure, for example, and to achieve greater macroeconomic and political stability. By stimulating such government behaviour, greater competition for FDI could thus bring substantial benefits in terms of enhanced local productivity growth and development — practically independently of its effect on FDI flows.

It is equally true, however, that greater competition for FDI can provoke "bidding wars" among governments with negative consequences. One could be an uncontrolled upward spiral in fiscal and financial subsidies to investors ("investment incentives") which both weaken public finances and introduce major distortions into the market allocation of real investment — generally to the detriment of local and smaller firms. Another could be excessive downward pressure on the level of protection of the environment and/or of workers' basic rights. Such a "race to the bottom" in labour and/or environmental standards could of course work seriously to the detriment of the longer-term process of local development. For good or evil, it could also magnify pressures for enhanced use of environmental and labour-rights conditionality in international trade agreements.

This paper seeks to address these issues as they relate to Latin America. It draws on the findings of the Development Centre's research as published in *Policy Competition for Foreign Direct Investment*[2]. That study looks at competition by governments in Argentina, Brazil, Canada, China, India, Malaysia, Singapore, the United States and Western Europe. It distinguishes between "incentives-based" competition, which refers to governments' use of discretionary fiscal and financial incentives targeted to attract FDI, and "rules-based" competition, which refers to such phenomena as governments' relaxation or lowering of core labour and/or environmental standards (*de jure* or *de facto*) or their use of regional integration schemes, such as NAFTA or Mercosul, as policy tools to attract FDI.

Section I of this paper highlights the relevant findings of that study as regards the global trends in policy competition to attract FDI. The next two sections look more closely at such competition's effects and policy implications. Section II focuses on incentives-based competition, Section III on rules-based competition. Section IV concludes.

I. Global Trends in Competition for FDI

Four global trends deserve comment. One is the striking correlation in time between the intensification of the competition for FDI, from about the mid-1980s, and the rapid growth of global FDI flows from that same period. Another is the truly global, and at the same time largely intra-regional, scope of the competition. A third is the importance of sub-national governments as competitors. A fourth is the scarcity of serious attempts to limit competition for FDI — with one major exception.

Regarding the close temporal correlation between the heating up of policy competition, starting in the early to mid-1980s, and the marked acceleration of growth of global FDI flows, from 1985, the point to stress is that one cannot attribute the growth of FDI to policy competition. It might be tempting, in other words, to believe that intensifying competition for FDI pressured many governments to deregulate their economies and liberalise their FDI policies, and that one response to this widespread policy change was the marked increase in global FDI flows. The evidence suggests, however, that for many governments the causal relationship worked just as much or more in the opposite direction: As governments witnessed the spectacular upturn in global FDI flows, many were inspired to compete more actively "to get their share".

In Latin America, of course, the over-riding phenomenon in the mid-1980s was the debt crisis. It marked the virtual end of import-substituting industrialisation policy regimes and the beginning, for many countries, of a sea change in policy orientation. For many years, however, the main attraction for FDI to come to the region, in value terms, was the privatisation of state-owned enterprises. While an objective of privatisation was often to attract investment, including FDI, it was not generally the first objective.

There can be no doubt, moreover, that the competition to attract FDI has become truly global over the last two decades, in the sense that there are few countries in the world where governments — at the sub-national if not the national level — do not actively compete for FDI. Data on the direct financial and/or fiscal "cost-per-job" of incentives received by investors in the automobile industry also reveal similar orders of magnitude of that cost in OECD and developing countries — a cost that has often surpassed $100 000 per job "to be created", and showed a clear upward trend over the 1980s and 1990s[3]. The evidence also suggests, however, that the competition tends to be quite intense only in particular industries (e.g. automobiles, electronics) or for particular investment projects (notably large ones), and in some industries the competition is intense only during particular periods.

Much of the FDI in major production facilities for which governments compete is also investment that investors intend to locate in a particular region (e.g. the Americas, Asia, greater Europe), often to serve markets in that region. Indeed, while it makes sense today to speak of a "globalisation" of competition in general, of many markets, of information flows, of financial activity and of many other things corporate investors do (e.g. manage global information systems), the internationalisation of production *per se*, in the sense of cross-border sourcing of physical inputs, actually tends to be occurring much more *within* each of the major regions than between them[4]. The result is that much of the competition for FDI is effectively among governments in the same geographic region, i.e. among relative neighbours — whether or not the governments themselves realise it (often they do, sometimes they don't).

In many countries, the most active competitors for FDI — at least as regards incentives-based competition — are not the national government but sub-national governments, particularly at the state or provincial level, though local and municipal governments may also compete. Notable examples (among the countries covered in the study) include Brazil, China and India in the developing world, and the United States, Canada and Germany among OECD countries — all large countries with federal systems. National governments can, of course be active and effective competitors, as is well illustrated by Singapore, Malaysia and Ireland, for example. And there are countries where both the national and sub-national governments compete actively, as for example in France and the United Kingdom.

The question of whether or not governments should act to limit competition to attract corporate investors, or at least its negative effects, is thus one that federal governments in some countries have had to face, even before the 1980s, with respect to *internal* competition, particularly among state or provincial governments. The very expression "race to the bottom" was actually coined in the United States, almost a hundred years ago, by Supreme Court Justice Louis Brandeis in reference to the effect of competition among US states to attract companies to incorporate in their state. Though the US federal government has never sought to bar interstate competition for local or foreign corporate investment, and the few agreements among small groups of states themselves to limit such competition have proved ineffective, the issue re-emerges periodically in the United States as a hot domestic political issue.

It has also been an issue in Canada, whose federal government shifted in 1984 from a policy of controlling FDI inflows to one of actively encouraging them. More recently, as part of their 1995 Internal Trade Agreement designed to reduce inter-provincial barriers to trade and investment, Canada's provincial governments have signed a Code of Conduct on Incentives under which they agree to avoid engaging in bidding wars to attract investors. The Code's effectiveness is nevertheless limited by the reputed weakness of the overall Agreement, which requires unanimous agreement on all decisions, and by the fact that the Code allows provincial governments to increase their supply of incentives whenever foreign jurisdictions — notably including potential investment sites in the United States — are perceived as competitors.

Among OECD countries, and indeed world-wide, the one major attempt to limit policy competition for FDI is that of the European Union. Ever since the creation of the European Economic Community, with the signing of the Treaty of Rome in 1957, the European Commission has had significant power to limit the ability of member states to offer subsidies to firms and investors (referred to in the jargon of the Treaty as "state aids"), reflecting a recognition by the Treaty's authors that uncontrolled subsidies could undermine the objective of achieving a common market. The result has been a system of bounded competition, in which EU governments' subsidies to large investment projects — of which many are foreign-owned (FDI) — are confined by the Commission to geographically defined lower-income or "development" areas within each country, and governments' own budget constraints have served to limit their subsidies both in terms of the level of award rates and of overall spending on the subsidies. While the system is far from perfect, it provides a functional regulatory framework, a needed measure of autonomy for the supervisory body and procedures for enforcement and sanctions that are backed by provisions for judicial review. It stands as a valuable example to other countries and regions, both of the challenges posed by the "prisoner's dilemma" governments face in trying to limit competition for FDI (as discussed further below) and of how a group of sovereign states have addressed that challenge with a considerable degree of success. It is unique in international law, and finds no parallel even within countries that have federal structures.

Latin America is no exception to these global patterns, as illustrated by the recent "fiscal war" among state governments in Brazil. That "war" was activated by a combination of several factors. One was the remarkable success of the *Real* stabilisation plan, launched in July 1994, which made the country much more attractive to investors by dramatically cutting inflation and establishing macroeconomic stability. The *Real Plan* culminated the process of dissolution, underway since the mid-1980s, of the country's import-substitution industrialisation strategy, a process of dissolution that has been accompanied by significant policy decentralisation in which sizeable fiscal resources and decision-making power have shifted from the federal government to the states and, secondarily, to municipalities. This process has also been closely linked to the country's process of political democratisation, and growing involvement by sub-national governments in the design and implementation both of social policies (from the early 1990s) and of "industrial" or "competitiveness" policies (since 1994).

A second factor contributing to the activation of the "fiscal war" in Brazil was the consolidation in December 1994 of the Mercosul regional-integration process, whose aim is to create a common market among Argentina, Brazil, Paraguay and Uruguay. A third was Brazil's ongoing unilateral policy and regulatory reforms to liberalise trade, investment and domestic competition, and the steps taken to accelerate privatisation of state-owned enterprises, especially in infrastructure. Also very important, finally, was the federal government's new policy towards the automobile industry (new "Auto Regime") launched in the wake of the 1995 Mexican crisis and Brazil's growing auto trade deficit — the latter caused by the explosion of domestic demand for cars due to reduced import tariffs and the currency appreciation that both followed the *Real Plan*. The new Auto Regime was officially justified as a means to attract investments in this sector needed to compensate for the auto regime Argentina launched in the wake of its own stabilisation policy, in 1991.

In Brazil, as in many large countries with federal systems outside Latin America, the competition for FDI is most intense at the level of state governments, while municipal governments often team up with their state government to compete against municipalities in other states. Brazil's federal government bears considerable responsibility for the "fiscal war", however, both because of its introduction of the new Auto Regime (scheduled from the outset to terminate at the end of 1999 for investments in the country's South and Southeast, and in 2010 for investments in the poorer regions of the North, Northeast and Centre-West) and because it consistently refused to apply existing legislation, notably a 1975 law, that authorises it to restrain such competition. That refusal may reflect the federal government's diminished ability to implement its own internal regional development policy in favour of the poorer states, and, in compensation, the emergence of an alliance between the country's President and the political leadership of those states in favour of allowing the latter to try to use incentives to compete more effectively for FDI. The "fiscal war" has nevertheless seen the cost of incentives per job-to-be-created by a major investment project reach an estimated $340 000, in the case of an investment by Mercedes Benz in the state of Minas Gerais. Tax holidays account for some 92 per cent of this amount, the provision and preparation of the project site, including buildings and dedicated infrastructure, for the remainder.

Countries that nominally are federal systems but whose states control significantly fewer fiscal resources than in Brazil, as is notably the case of Argentina and Mexico, have not witnessed the kind of "fiscal war" that emerged in Brazil — though Argentina has, of course, been directly affected by the turn of events in Brazil. But it is important not to forget, notwithstanding the often overlooked importance of sub-national governments as competitors, that national governments also engage in the competition for FDI. Some rely on financial and especially fiscal incentives while others — including Argentina and Mexico — have tended more in recent years to rely on rules-based forms of competition.

II. Incentives-based Competition

Economists have long argued that governments' use of discretionary fiscal and financial subsidies to attract investors is ineffective. An abundance of studies, using both investor-survey and econometric methods, supports this view[5]. At the end of the day, the studies find, major investors overwhelmingly choose their investment sites much more on the basis of a site's economic and political "fundamentals" than on the basis of government subsidies. Among the key fundamentals are the size and perceived growth potential of the market that a site is well placed to serve, the likely long-term political and macroeconomic stability of the site's location, and the availability of adequate supplies of productive, trainable workers and of modern transportation and communications infrastructure.

Yet all these studies, and all that advice from economists, seem to have little influence on the behaviour of politicians and the government officials under them whose job is to attract corporate investors. These people keep launching new incentive programmes, often argue vehemently that they cannot do their job without them, and seem largely to ignore the wisdom of economists. Why?

Part of the reason may of course be the sway of political opportunism and short-sightedness on the part of politicians, reflecting a mismatch between the visibility and potentially large short-term political gain for them of announcing a major new investment project (with all the jobs it is expected to create) and the less visible longer-term cost of incentives to taxpayers. But economists may also, in an important sense, be wrong. This is because, for all their sophistication in some cases, the studies showing that incentives are ineffective have largely failed to take adequate account of the fact that an investor's choice of location, especially for a major new investment project (the kind governments most want to attract), is normally a two-stage, or multi-stage, decision-making process. It is standard practice for an investor *first* to draw up a "short list" of sites that satisfy his/her "fundamentals test" — that meet or surpass the investor's minimum fundamentals criteria, irrespective of potential host governments' willingness to provide incentives — and then, in a second or later stage, to consider the availability of incentives in making the final site selection.

Thus, despite the much greater overall importance that investors attach to the fundamentals, relative to the importance they attach to the availability of subsidies, discretionary incentives *can* make a difference — even a decisive difference — in an investor's final choice of investment location. It is common, in fact, for investors to seek actively to play governments off against each another to bid up the value of incentives, once the competing sites have passed investors' fundamentals tests and are on their short lists of good potential sites.

While economists rightly claim that investors attach much more importance to fundamentals than to incentives, politicians and government officials charged with attracting FDI are often equally right when they argue that incentives *can* be effective, even decisive, and that it can be very difficult for them *not* to offer incentives if they want to attract a major investment project. Governments that wish to compete for such investment often, in short, face a prisoner's dilemma[6].

Costs of Incentives

Does this prisoner's dilemma, combined with the importance that governments attach to attracting FDI, mean that governments should offer incentives? The answer depends, of course, not only on the ability of governments to find means to escape the prisoner's dilemma, and the cost of those means, but also on the costs to them of providing incentives. Let us first consider the cost of incentives.

One should in principle look both at the relative costs — compare the costs of incentives to the benefits to be derived from the *additional* FDI attracted by incentives (FDI that otherwise would not have come) — and at the determinants or components of the costs *per se*. For our purpose it is largely sufficient to focus on the costs *per se*, though it is important to consider both direct and indirect costs. We can then address the question of how governments might best respond to the prisoner's dilemma.

One type of cost comprises the direct fiscal or financial costs to governments of the incentives they give to investors, including both current costs and the present value — and cost to future taxpayers — of commitments to provide subsidies in the future (e.g. tax holidays). Conceptually easy to measure, even these direct costs are in practice very difficult to gauge because, for both legitimate and questionable reasons, neither the governments that supply them nor the investors that receive them are generally willing to disclose the amount of investment incentives[7]. Data gathered from unofficial sources leave little doubt, however, that the direct cost of financial and fiscal subsidies paid by governments (predominantly sub-national governments) to attract FDI in major automobile factories rose substantially over the course of the 1980s and 1990s, and amounted to hundreds of thousands of dollars per job-to-be-created in countries as diverse as Brazil, Germany, India, Portugal and the United States[8].

Impressive as these orders of magnitude are, it is surprisingly difficult to conclude — based on reasonable assumptions about the likely long-term direct and indirect benefits to be derived by the host economy from a major new investment project — that the real net benefits to the host economy are negative. (Difficult, that is, unless the factory created by the investment shuts down within a few years, which happens less infrequently than one might expect.) But in some cases the cost of incentives is still very large. One can certainly conclude that the net benefits to the host economy, in such cases, would be significantly greater if the investment could have been attracted with less costly incentives.

Though even more difficult to quantify, the indirect costs of incentives may in many cases be significantly greater than the direct costs.

One type of indirect cost stems from the fact that incentives invariably discriminate against all those sectors and investment projects — actual and potential — that are *not* targeted by incentives. Incentives thus typically discriminate against smaller investors and against local investors. They also discriminate against sectors or activities in which the economy might develop — or might have developed — a comparative advantage that those targeting the incentives simply did not foresee, or think about.

A second type of indirect cost results from the fact that it can be highly counter-productive for a government to offer costly incentives if the fundamentals of the sites within its jurisdiction, to which it is hoping to attract the investment, fail to meet serious investors' requirements — their "fundamentals tests". The cost results from the fact that the incentives may well attract the wrong kind of investor. They will tend to attract investors that do not stay beyond the duration of the subsidies and make long-term investments in the community. The spillover benefits to the host economy, in terms of technology transfer, impact on the long-term development of the economy's competitiveness and of skills by those employed by the firm, to cite only three examples, are likely to fall far short of expectations, and the development path of the economy may even tend to be skewed in the wrong direction.

The biggest indirect cost of all, however, stems from the fact that in setting up a system to compete for FDI with discretionary fiscal and financial incentives, governments tend, over time, to develop a system of governance — of public decision-making, political governance and corporate governance — that lacks transparency and ultimately lacks accountability. For a developing or "emerging" economy the long-term effect can be devastating.

Put simply, the effect can be to lead a country in precisely the wrong direction. It can lead it *away* from the establishment of a modern economy and governance structures based on the rule of law, institutional checks and balances, and the accountability of public officials. It not only creates fertile ground for bribery and corruption. The problem of poor accountability can easily spread beyond policy-making on FDI *per se* and infect the broader policy-making process. It tends to have such seemingly paradoxical effects as simultaneously making both the economy and the government more resistant to needed change, and society more rigid, *and* creating more instability and conflict in the economy and society. The rent-seeking behaviour it tends to promote tends, in short, to work against the construction of a competitive market system, and can be very destructive for democracy and the building of a modern state as well.

Addressing the Prisoner's Dilemma

These costs point to the importance for governments to address a dual question. How to deal with the prisoner's dilemma they face in competing for FDI — and face more intensely as the competition heats up? What are the best policy instruments to attract FDI?

The importance of the "fundamentals", combined with the fact that much of the competition for FDI is intra-regional, together provide a key to answering this question. They point to regional integration as a potentially effective policy means to overcome the prisoner's dilemma and, simultaneously, to attract FDI — the latter by enhancing market size, and perhaps enhancing stability as well, which are among investors' most important "fundamentals". It is important, therefore, to focus our attention on rules-based forms of competition for FDI as a whole. We return below to the question of regional integration as a policy tool to attract FDI.

III. Rules-based Competition

Two rules-based forms of competition for FDI that have generated particular controversy in recent years, notably in debates over the effects of "globalisation", stem from the role of government regulations and legal standards in the protection of the environment on the one hand, and in the defence of workers' rights and core labour standards on the other. The concern, expressed by many, is that in competing to attract FDI, governments may overtly or covertly relax their enforcement of those standards — on a *de facto* if not a *de jure* basis — thereby putting pressure on other governments to follow suit. The predicted result is growing downward pressure on those standards world-wide, analogous to the upward pressure on incentives, such that governments of OECD and developing countries alike, caught in a prisoner's dilemma, find it increasingly difficult to resist that pressure — causing the so-called "race to the bottom" in environmental and labour standards.

Environmental Standards

The "pollution haven" argument first emerged as an international debate in the late 1970s, in the wake of US legislation that shifted jurisdiction for many decisions on pollution control in the United States from states to the federal government. A number of Americans, including many who opposed the stronger federal environmental regulations behind the shift, argued that the new federal laws could provoke a massive relocation of industry to "pollution havens", i.e. countries with significantly less stringent regulations — notably developing countries, both within the hemisphere and beyond[9].

Subsequent studies have nevertheless found little evidence of US firms, or other OECD-based firms, moving production to take advantage of lower environmental standards in another country. The main reason is that the costs of complying with anti-pollution laws have turned out to be relatively modest, on the whole, and any lure of weak environmental rules is simply swamped, in most cases, by other factors[10]. Those studies also note that the bulk of OECD countries' outward FDI, including in most "dirty" industries[11], goes to other OECD countries[12].

Significant exceptions to this general pattern, i.e. cases where companies have actually dismantled production facilities in OECD countries and moved them to lower-standard developing countries, appear not only to be few in number, but more often to involve *sales* of outdated equipment to under-capitalised firms in fast-growing developing countries, rather than FDI. Town and village enterprises in rural China have been known to purchase high-polluting used equipment because it is cheap, for example, but the phenomenon does not appear widespread in Latin America[13].

Many of the worst examples of environmentally damaging "technology dumping" also reportedly involve non-OECD suppliers or investors[14]. Where OECD-based investors are involved, the investment projects are often natural-resource-seeking (e.g. in

mining, fisheries, forestry and pulp, plantation crops, petroleum refining) and, not infrequently, are in products for which demand is highly price-elastic, where small cost differences can translate into large market-share effects, and profitability is particularly susceptible to cost differences — including those of protecting the environment.

Even in these industries, however, the trend now is not for major investors to seek to take advantage of potentially weaker standards of environmental protection in developing countries[15]. An important reason is the imposition of higher environmental standards by global investors' home countries, and by the multilateral lending institutions. Numerous studies have also found that large investors in these industries tend to apply a world-wide environmental standard to all of their operations, actually resulting in some "levelling up" of pollution-control technologies across countries[16].

Equally important is the scattered evidence that competition for FDI in relatively knowledge-intensive "high tech" activities can, and in a growing number of cases does, create *upward* pressure on environmental standards. Creating this pressure are the growing tendency for governments to seek to attract investment in relatively "clean" knowledge-intensive manufacturing and service activities, and the growing desire of corporate leaders in these activities to locate in communities where their managers and employees — and their productivity levels and competitiveness[17] — will benefit from high standards of environmental protection. The spillover benefits to firms of "clustering" and "agglomeration economies" tend in turn to attract other corporate investors, thus amplifying the investment-attractiveness of communities, and economies, that set and enforce relatively high standards of environmental protection.

Companies are thus reporting more benefits than problems from investing in cleaner production in developing as well as in OECD countries[18]. For a growing number of companies, "clean production" which seeks to design-out pollution problems, rather than deal with waste, is a way to design-in efficiency of raw material use as well as to reduce clean-up costs while minimising the environmental impact of production.

There is more evidence, in sum, that governments have tended to refrain from enforcing higher standards of environmental protection out of *fear* that the firms and economies under their jurisdiction may suffer a competitive disadvantage from such enforcement, than there is evidence of firms actually relocating production to take advantage of lower environmental standards in other countries. Many firms want to stay near their major markets and will develop higher-standards technologies, which they often subsequently install in their affiliates in developing countries, rather than moving to lower-standards countries. But there is also ample evidence of firms *threatening* to relocate when negotiating their siting decisions with governments, even when they do not, in the end, carry out their threat.

Enhanced international policy co-operation or co-ordination on environmental standards may thus be needed more to overcome governments' fear, than to counteract actual "pollution haven" competition among them. The argument for such policy

co-operation is strongly reinforced by the free-rider problem in the case of pollution or environmental problems that span national boundaries (i.e. in the frequent cases where some of those who would share in the benefits of an improved environment do not have to share in the costs of making the improvement). The argument for such policy co-ordination is further reinforced by the fact that, while there is little evidence of an actual "race to the bottom" in environmental standards, it is impossible to know to what extent competition for FDI is deterring a socially optimal global *raising* of those standards.

Labour Standards

In many respects the debate over labour standards is similar to that over environmental standards. Both debates have heated up in conjunction with "globalisation" and the parallel rise of unemployment in Europe and of wage inequality and the number of working poor in the United States since the early 1980s[19]. Both include arguments that jobs are being siphoned off from OECD countries to developing countries, and that governments are being drawn into a "race to the bottom" as they compete to attract corporate investors. Both have been at the heart of controversy over regional integration agreements involving OECD countries — leading to NAFTA's "side agreements" and, in the case of labour standards, the EU's Social Charter (envisaged as a bulwark against the competitive lowering of labour standards among EU countries that could arise in conjunction with the deregulatory programme required to complete the Single Market).

The labour-standards debate, more than the debate over environmental standards, has also become a sensitive issue in multilateral trade policy discussions. Some OECD governments actively assert that a set of internationally recognised "core" labour standards should be included in WTO discussions. (Core labour standards are defined as the right of workers to associate, i.e. to form independent unions of their choice, and to bargain collectively; the prohibition of forced labour and of exploitative child labour; and non-discrimination in employment[20].) These governments argue: *i)* that core labour standards reflect basic human rights that should be observed in all countries, irrespective of a country's level of development; *ii)* that observance of these rights can stimulate economic development, and is thus in the interest of all workers (and countries) world-wide; and *iii)* that global observance of these rights would help to neutralise protectionist pressures, notably in high-wage countries, and thus strengthen political support for the open multilateral trading system. These governments further emphasise that multilateral discussions of core labour standards should not focus on specific rules on working conditions (e.g. minimum-wage levels), and would not be prejudicial to any country's pursuit of trade based on a comparative advantage in low-wage industries.

Developing countries nevertheless tend strongly to oppose the proposal, on the grounds that it risks serving as a guise for trade protection directed especially against the labour-intensive products in which they are most likely to be competitive[21].

The relevant question for us is whether competition for FDI is leading governments, on a *de facto* or *de jure* basis, to weaken their protection of workers' rights. To address this question it is important to distinguish four inter-related phenomena, or issues, and consider the evidence on each. One is the trend in wages, in both OECD and developing countries. Another is the trend in market deregulation or regulatory reform and economic policy liberalisation as a whole. A third is government policy on labour standards more specifically. Fourth is the role of labour standards in FDI-location decisions.

First, the trend in wages. Numerous studies have documented a serious deterioration since the 1970s in the relative wage levels of lower-skilled workers — i.e. a growth of wage inequality — in *both* OECD and developing countries, a deterioration that has also meant a real (or absolute) wage and income decline for some. This deterioration goes far to explain the widespread criticism of "globalisation", and the occasional accusations of "social dumping" heard in some OECD countries. Most studies of the deterioration have found its main causes to be the skill-biased employment effects of technological change and the difficulties of the transition from rigid taylorist to flexible post-taylorist systems of organisation — with some disagreement on the relative importance of trade *per se*[22]. In Latin America, major currency devaluations in the wake of financial crises have also been a major cause.

Closely related, of course, has been the global policy move towards market deregulation and economic policy liberalisation. In OECD countries, this move was launched in the late 1970s and early 1980s as a policy response (along with monetary "shock treatment") to the emergence of *stagflation* and the stagnation of productivity growth in the 1970s (it received some renewed impetus in the early 1990s, particularly as regards labour-market deregulation in continental Europe, by prolonged high unemployment in that region). In developing countries, including Latin America, major political change and a marked reorientation of economic and industrial policy away from *dirigisme* in favour of more market-friendly policy regimes — often coming in the wake of major economic difficulties — have led over this same period to a widespread process of market deregulation, regulatory reform, privatisation of state-owned enterprises and trade and investment policy liberalisation.

One cannot, therefore, attribute significant responsibility for the global movement towards deregulation, regulatory reform and more market-friendly policy regimes to increased global competition for FDI *per se*[23].

It is in this policy context that one must also seek to address the question of change, *de facto* or *de jure*, in governments' protection of workers' rights. Data gathered by the OECD on freedom-of-association rights (arguably the most important core labour standard, along with the right to bargain collectively) in 75 countries, since about 1980, are useful in this regard[24]. They reveal, first of all, a significant difference between OECD countries, most of which impose no significant restrictions on workers' freedom of association, and developing countries, most of which do, to varying degrees, impose restrictions on this right. For some people, this difference is *prima facie* evidence of a "race to the bottom" in labour standards, as globalisation lowers barriers to trade between OECD and developing countries and intensifies global competition for FDI.

In fact, however, these data do not support the hypothesis of a race to the bottom in labour standards, because they show no significant *deterioration* of freedom-of-association rights in developing countries (or OECD countries) over the last 20 years. On the contrary, they show that the move to democracy in developing countries has been accompanied in several — notably in Latin America — by some degree of improvement in the protection of workers' right to associate.

What the data cannot show, of course, is whether *in the absence* of competition for FDI, governments would have moved more strongly to protect workers' rights in developing countries. And they leave no doubt that there is still much room, and need, for improvement in that protection.

There is considerable evidence, moreover, that in seeking to attract FDI governments have little to gain by lowering labour standards. Recent studies have shown, for example, that since 1980, countries with high labour standards have maintained or increased their share of global FDI inflows (notwithstanding the importance of flows to China, a low-standards country); that low-standards countries have not increased their share of global exports; and that two-thirds of 39 countries with low labour standards have seen their international competitiveness stagnate or decline — as measured by unit labour costs (whose decline reflects either a decline in labour productivity relative to the nominal cost of labour, or a rise in the nominal cost of labour relative to its productivity) — while 14 of 18 high-standards countries have increased their international competitiveness[25].

Also important is the major recent ILO study of export-processing zones, because the phenomenal growth of EPZs since the 1970s is seen by some as further evidence of a "race to the bottom" in labour standards. The study finds that adequate labour standards and a sound system of labour-management relations are indeed widely lacking in EPZs. But it also leaves little doubt about the dynamics of change that market forces are imposing on firms that operate in EPZs: "Today, globalisation places the emphasis on speed, efficiency and quality as well as cost…shifting the focus from cheap labour to productive labour. For countries to remain competitive, they must get this mix of cost and quality factors right by raising the capacity of their human resources, ensuring stable labour relations, and improving the working and living conditions of zone workers"[26]. The study further notes that: "Countries which have established trade union presence in the zones do not appear to have suffered any loss of investment"; and that: "None of the enterprises interviewed [for the ILO study] stated that a lack of worker organisation was an incentive to invest"[27].

Recent OECD work on international trade and core labour standards also concludes that investors generally prefer a stable social climate, which tends to be associated with "good" standards and consistent enforcement, over one characterised by low standards and social tension[28].

Finally, while the accusations of "social dumping", heard mainly in Europe, may be thought of as directed at low-standards developing countries, they in fact arose largely as an issue among governments within Europe. Particularly important

were the United Kingdom's 1991 refusal to sign the EC's Social Charter (a decision reversed after the election of the Blair government) and the 1993 Hoover Company's decision to relocate a plant from France to Scotland to take advantage of workforce concessions which French workers would have been forbidden to make under French law[29].

The point to be emphasised is that governments in OECD countries, at the sub-national and national levels, compete for FDI primarily with one another — and, again, that governments compete largely *within* their own geographic regions. The negative effects of the competition — notably including some governments' overblown *fear* of losing investment and jobs to low-wage countries — cannot be attributed, to any significant degree, to "social dumping" by low-waged countries, or to any "race to the bottom" in global labour standards caused by developing countries.

This does not mean, of course, that it would not be better for all countries to enforce core labour standards. Rodrik, for example, has found that adherence to core labour standards tends to enhance a country's ability to withstand external shocks[30]. Palley has found that countries that improved workers' freedom-of-association rights benefited on average from between 1.2 and 1.4 percentage points of higher GDP and manufacturing output growth over the subsequent five-year period[31]. Stiglitz argues that countries that protect workers' collective bargaining rights often benefit from greater economic efficiency and labour productivity owing to more workers "buying in" to the goals of, and having a more effective "voice" mechanism with, their immediate work group and their employers; he further argues that collective bargaining can facilitate a degree of efficiency-promoting income distribution that either would not occur, or would be more costly to implement, through the tax and welfare system[32].

It is thus also important to stress that the lack of evidence of an actual "race to the bottom" in labour standards does not mean that competition among governments to attract FDI may not act as a deterrent to a socially optimal global *raising* of those standards.

The implications for policy-makers seem clear: First, use rules-based means to attract FDI that do not involve any weakening of labour standards. Second, for policy-makers in OECD countries: overcome fear of losing FDI to developing countries. And for policy-makers in developing countries: there is no reason why core labour standards should not be respected and enforced — on the contrary.

Constructive Rules-based Policies to Attract FDI

While labour and environmental standards have been the subject of intense debate, other rules-based policies have proved to be effective means to attract FDI. They include regional-integration agreements, privatisation of state-owned enterprises, the strengthening of judicial systems, and enhanced policy transparency and government accountability.

Regional Integration

New regional-integration agreements among national governments and moves to deepen or strengthen existing ones, which have proliferated since the mid-1980s, have been widely effective as policy instruments to attract FDI. NAFTA, Mercosul, and the deepening of European integration are all cases in point. Their considerable power to attract FDI is not difficult to understand.

First, and foremost, they tend significantly to enlarge the market that can effectively be served by an investment in the region. In doing so, they greatly strengthen one of the key "fundamentals" to which investors widely attach great importance in choosing an investment location. But regional-integration agreements can help strengthen other fundamentals as well. In particular, governments often use them as vehicles to achieve a greater degree of internal market deregulation, or regulatory reform, especially when resistance from powerful domestically entrenched interest groups makes needed regulatory reform difficult to achieve at the national level. And, at the same time, they can help to ensure that a necessary process of deregulation does not degenerate into an unmanaged and destructive process of *competitive* deregulation.

Regional-integration agreements can thus also facilitate the co-operation among governments that may be needed to defend standards and regulations — including on the environment and workers' rights — because they can be difficult for governments individually to defend, or enforce, when faced with domestic pressures and the prisoner's dilemma nature of policy competition. Regional agreements can also be a good vehicle to harmonise and regulate governments' use of fiscal and financial incentives to attract FDI. They can contribute to greater macroeconomic and political stability in a region as well.

Privatisation and Competition Policy

Closely associated with deregulation and the liberalisation of trade and investment policy has been the privatisation of state-owned enterprises. During the 1990s alone, privatisation is estimated globally to have generated about $850 billion in revenues, including almost $600 billion in OECD countries and over $200 billion in developing countries — of which those in Latin America account for well over half, a large portion of it via FDI. Here is not the place to enter into a discussion of the advantages and disadvantages of privatisation *per se*, or of the considerable extent to which governments have subsidised privatisation — thereby making it an incentives-based as well as a rules-based means to attract FDI. What is important to stress here, is that a policy to attract FDI should not rely too exclusively on privatisation (if only because of the limits to such a policy imposed by the size of privatiseable assets), and that the long-term benefits of such a policy may depend heavily on the extent to which it is accompanied by an effective policy to ensure vigorous and sustained price competition in the domestic market.

The latter observation, about the importance of competition policy, is particularly important for developing countries, where competition policy is often lacking, and where concentrated oligopolistic structures of local economic and political power often create rigidities that constitute a major hindrance to development. Transforming a public monopoly into a private one, by offering investors a protected market for example, is a common temptation because it increases the market value of assets to be privatised. It is a temptation that must be resisted. The broader point for policy-makers in countries where FDI accounts for a large proportion of privatised assets is the importance of developing a sound competition policy — perhaps including the establishment of an independent and pro-active competition agency — to operate in tandem with policies to attract FDI.

This observation is only reinforced by the fact that major investors often seem to choose sites where the host government's (or governments') strategy to attract investors is part of a broader process of mobilisation around a project of social and political reform in which the government redefines its role, turning away from the rigid structures and exclusive relationships with vested interest groups from the past ("traditional elites") in favour of greater democracy, transparency and competition. This process both enhances, and is reinforced by, the growing exposure of local and foreign firms in the domestic market to greater international competition.

Accountability, the Judiciary and Rules-based Governance

No discussion of rules-based competition for FDI, especially among governments in developing countries, would be complete without mention of the tremendous importance some investors — especially those seeking sites for long-term investment in major production capabilities — attach to the *stability* and *predictability* of the operating environment of their investment sites. This is why political and macroeconomic stability are among the key "fundamentals" noted earlier. Countries that do reasonably well on the "fundamentals" are now finding, moreover, that strengthening their *judiciary* systems, and having judiciary systems that are seen both at home and abroad as fair and consistent, and as having the necessary power and independence to enforce their decisions, can also be a powerful attraction — or their absence a significant deterrent — to many investors.

Among the more sensitive investors in this regard are some whose investable assets include advanced technology or valuable intellectual property. For some of them, the recognition and enforcement of intellectual property rights are of critical importance.

Beyond the matter of the judiciary system, finally, is the broader issue of a government's credibility — first of all as regards macroeconomic stability, but ultimately as regards policy as a whole. Integral to this issue are the degree of *transparency* of policy choices and the *accountability* of policy-makers. While a system based on negotiated incentives to attract investors may appeal to many investors, as well as to some government officials, most investors profit more, in the long run, from the stability, transparency and predictability of a rules-based approach to FDI policy.

IV. Conclusion

For governments in developing countries, whose scarce financial resources often push them into a heavy reliance on fiscal incentives to attract FDI, it is important to stress the value of moving away from incentives-based means towards greater use of domestic and international *rules-based* means of attracting FDI, while maintaining or strengthening their defence of workers' rights and the environment. Strengthening the domestic judiciary system, and domestic competition policy, should be a central part of such a move. Transparency should be one of its objectives.

The overriding problem with incentives-based policy competition is precisely its lack of transparency. While some of the reasons governments and investors cite for keeping their deals secret may be accepted as legitimate (e.g. governments' need to avoid setting precedents that have the effect of ratcheting up incentive levels every time they increase their offer for one project, and investors' need to avoid revealing confidential business information to competitors), that secrecy still creates significant possibilities for graft, corruption and many other types of rent-seeking behaviour. In doing so, it works against the development of competitive markets — markets whose price signals, based on healthy price competition, are an important part of the very foundation for economic and social development that remains fragile in many developing and emerging economies. It also tends to work against the development of a modern state, sound policy-making and accountable government. It can be seen as the ultimate "distortion", one that ultimately penalises competitive firms, both foreign and local. Its cost to developing economies, though impossible to measure, can thus be very high. It can be seen as working against the very process of development.

The prisoner's-dilemma nature of competition for FDI also creates a permanent risk of costly beggar-thy-neighbour bidding wars and downward pressures on environmental and labour standards that cannot fully be addressed by national governments in the absence of international policy co-ordination. That co-ordination makes particular sense at the regional level, whether it is undertaken in conjunction with broader regional-integration agreements or independently. It could be reinforced by, and/or feed into a process of negotiation of, a broader multinational agreement on investment.

Notes

1. The author thanks John Evans, Eduardo Fernández-Arias, Jorge Braga de Macedo, Carlos Hurtado, Daniel Cohen, Lauro Sotello, Rogelio Arellano, Marcelo Soto, Helmut Reisen and other meeting participants for comments on this paper, which remains his responsibility.

2. C. Oman, *Policy Competition for Foreign Direct Investment: A Study of Competition Among Governments to Attract FDI*, OECD Development Centre, Paris, 2000.

3. See note 8 below.

4. Cf. C. Oman, *Globalisation and Regionalisation: The Policy Challenge for Developing Countries*, OECD Development Centre, Paris, 1994.

5. See for example, G. Reuber *et al.*, *Private Foreign Investment in Development*, Clarendon Press for the OECD Development Centre, Oxford, 1973; D. Lim, "Fiscal Incentives and Direct Foreign Investment in Less Developed Countries" in *Journal of Development Studies*, Vol. 19, No. 2, 1983; United Nations Center on Transnational Corporations, *The Determinants of Foreign Direct Investment: A Survey of Evidence*, United Nations, New York, 1992; A. Shah, ed., *Fiscal Incentives for Investment in Developing Countries*, The World Bank, Washington D.C., 1992; R.J. Rolfe *et al.*, "Determinants of FDI Incentive Preferences of Multinational Enterprises" in *Journal of International Business Studies*, Vol. 24, No. 2, 1993; N. Pirnia, "The Role of Investment Incentives in Influencing Investors' Locational Choices: A Literature Survey", Foreign Investment Advisory Service, International Finance Corporation (World Bank Group), 1996.

6. See also Edward M. Graham, *Fighting the Wrong Enemy: Antiglobal Activists and Multinational Enterprises*, Institute for International Economics, Washington DC, 2000, especially pp. 63-67.

7. The "legitimate" reasons include investors' unwillingness to disclose information that could significantly benefit competitors, and governments' desire to avoid an upward ratchet effect on the value of incentives demanded by investors if each successive potential investor knows how much the government has been willing to pay to previous investors. More "questionable" reasons relate to the danger of various forms of corrupt payments, as discussed further below.

8. The most reliable unofficial data on the cost of incentive packages provided over the last two decades to major investment projects in the automobile industry show the following:

Date of package	Country of project	Investor	Amount per job* (US dollars)
1980	United States	Honda	4 000
early 1980s	United States	Nissan	17 000
1984	United States	Mazda-Ford	14 000
mid-1980s	United States	GM Saturn	27 000
mid-1980s	United States	Mitsubishi-Chrysler	35 000
mid-1980s	United States	Toyota	50 000
mid-1980s	United States	Fuji-Isuzu	51 000
early 1990s	United States	Mercedes Benz	168 000
1992	Portugal	Ford-Volkswagen	265 000
1995	Brazil	Volkswagen	54 000 – 94 000
1996	Brazil	Renault	133 000
1996	Brazil	Mercedes Benz	340 000
1997	Germany	Volkswagen	180 000
1997	India	Ford	200 000 – 420 000

* Estimated value of fiscal and financial incentives supplied by national and sub-national governments to a particular investment project, divided by the number of jobs the project was expected directly to create.
Source: Policy Competition for Foreign Direct Investment, Table 2.1, p. 80.

9. B. Castleman, "The Export of Hazardous Industries to Developing Countries" in *International Journal of Health Services*, No. 9, 1979.

10. J. Tobey, "The Effects of Domestic Environmental Policies on Patterns of World Trade" in *Kyklos*, Vol. 43, Autumn 1990.

11. Petroleum and gas, chemicals and related products, and primary and fabricated metals are the main "environmentally sensitive" industries in which FDI is important.

12. Repetto, for example, reports that as of the early 1990s, some 84 per cent of US FDI in pollution-intensive industries was going to other OECD countries, as compared to 49 per cent in other industries, and only 5 per cent of the FDI going to developing countries was in pollution-intensive industries; he further notes that the stock of FDI in the pollution-intensive industries represents a smaller share of total FDI stock in most developing countries than in the 1960s and 1970s (cf. R. Repetto, *Jobs, Competitiveness and Environmental Regulations: What Are the Real Issues*, World Resources Institute, Washington DC, 1995).

13. See for example, D. Esty and R. Mendelsohn, *Powering China: The Environmental Implications of China's Economic Growth*, Yale Center for Environmental Law and Policy, New Haven, 1995.

14. *Ibid*.

15. A 1992 World Bank study found that pollution intensity grew more rapidly in Latin America during the 1970s and 1980s, after environmental regulations were tightened in the United States and other OECD countries. But it also found that this growth of pollution intensity was concentrated in the more protectionist countries of the region, whereas in the countries with more open trade and investment policies pressures grew in parallel with those in OECD countries for more stringent environmental standards, and pollution grew less than in the more protectionist countries. As one of the authors wrote in a companion piece, "Restrictive trade policies…may even have been the main stimulus to toxic industrial migration,

rather than regulatory cost differences between the North and the South". (N. Birdsall and D. Wheeler, "Trade Policy and Industrial Pollution in Latin America: Where Are the Pollution Havens," in P. Low, ed., *International Trade and the Environment*, The World Bank, Washington DC, 1992. The quotation is from R. Lucas, D. Wheeler and H. Hettige, "Economic Development, Environmental Regulation and International Migration of Toxic Pollution, 1960-1988" in the same volume.)

16. Reasons why these investors tend to apply a global standard include the fact that it is often more efficient to run a single set of environmental practices world-wide than to scale back practices at a single location; the high local visibility of larger multinational investors can make them particularly attractive targets for local enforcement officials; and the memory of such events as the Bhopal disaster, in India, and the ensuing problems faced by Union Carbide, have heightened many investors' awareness of their potential environmental liabilities when they invest abroad (cf. S. Schmidheiney and B. Gentry, "Privately Financed Sustainable Development" in D. Esty and M. Chestow, eds., *Next Generation Environmental Policy*, Yale University Press, New Haven, 1997). A major UNCTAD study of multinational corporations' environmental performance also found that larger firms are more likely to have well-established environmental management systems and better environmental performance, which it attributed to economies of scale in production and administration; it also found that environmental management practices are strongly affected by conditions in the investor's country of origin, especially when the investment project is in a developing country (UNCTAD, *Environmental Management in Transnational Corporations*, United Nations, 1993). Moreover, as technologically more demanding "flexible" or "just-in-time" systems of manufacturing organisation take root and spread in developing economies, major foreign manufacturers often help local suppliers greatly to improve their overall efficiency by demanding high quality standards and providing the technical assistance needed to meet them, of which a corollary effect is often to improve their environmental performance as wastage is greatly reduced (cf. M. Blomstrom and A. Kokko, "Multinational Corporations and Spillovers", CEPR Discussion Paper No. 1365, 1996, and C. Oman, 1994, *op. cit.*).

17. Many firms are discovering that locating in a community with high standards of environmental protection can increase their economic competitiveness. It does so via reduced operating costs (e.g. water filtration costs, worker-health problems, risks of incurring clean-up costs) as well as the attraction of high-quality human resources, and via the increased revenues that selling to increasingly environmentally-conscious markets can bring.

18. See for example I. Christie *et al.*, *Cleaner Protection in Industry*, Policy Studies Institute, London, 1995.

19. See for example, R. Lawrence, *Single World, Divided Nations? International Trade and OECD Labor Markets*, OECD Development Centre and the Brookings Institution Press, Paris and Washington DC, 1996; and D. Robbins, *Evidence on Trade and Wages in the Developing World*, Technical Paper No. 119, OECD Development Centre, Paris, 1996.

20. See OECD, "International Trade and Core Labour Standards", OECD Directorates on Trade and Education, Employment, Labour and Social Affairs, July 2000.

21. In December 1996, at the first WTO Ministerial meeting, held in Singapore, ministers thus made the following declaration on core labour standards:

> "We renew our commitment to the observance of internationally recognised core labour standards. The International Labour Organization (ILO) is the competent body to set and deal with these standards, and we affirm our support for its work in promoting them. We believe that economic growth and development fostered by increased trade and further trade liberalisation contribute to the promotion of these standards. We reject the use of labour standards for protectionist purposes, and agree that the comparative advantage of countries, particularly low-wage developing countries, must in no way be put into question. In this regard, we note that the WTO and ILO Secretariats will continue their existing collaborations."

22. See for example, R. Lawrence, *op. cit.*; D. Robbins, *op. cit.*; A. Wood, *North-South Trade, Employment and Inequality*, Clarendon Press, Oxford, 1995; OECD, *The OECD Jobs Study*, OECD, Paris, 1994; and C. Oman, *The Policy Challenges of Globalisation and Regionalisation*, Policy Brief No. 11, OECD Development Centre, 1996.

23. Regarding the causal relationship between these two parallel trends, all one can say, in addition, is that the competition for FDI is probably stimulated by, and may in turn help to reinforce, the policy trend towards economic policy liberalisation and market deregulation — i.e. the two may well be mutually reinforcing.

24. The countries are divided into four categories: *Group 1* comprises countries where freedom of association is practically non-existent (China, Egypt, Iran, Kuwait, Syria and Tanzania). *Group 2* comprises countries where restrictions on freedom of association are significant (Bangladesh, Bolivia, Botswana, Chinese Taipei, Colombia, Guatemala, Haiti, Honduras, Indonesia, Jordan, Kenya, Malaysia, Mauritius, Morocco, Pakistan, Panama, Philippines, Singapore, Sri Lanka, Swaziland, Thailand, Turkey, Uruguay, Zimbabwe). *Group 3* comprises countries where some restrictions exist, but it is nevertheless possible to establish independent workers' organisations and union confederations (Argentina, Brazil, Chile, Ecuador, Ethiopia, Fiji, Hong Kong-China, India, Jamaica, Korea, Mexico, Niger, Papua New Guinea, Peru, South Africa, Venezuela, Zambia). *Group 4* comprises countries where freedom of association is generally guaranteed in law and practice (Australia, Austria, Bahamas, Barbados, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Luxembourg, Malta, Netherlands, New Zealand, Norway, Poland, Portugal, Spain, Surinam, Sweden, Switzerland, United Kingdom, United States).

25. See for example, A. Raynauld and J.P. Vidal, *Labour Standards and International Competitiveness: A Comparative Analysis of Developing and Industrialised Countries*, Edward Elgar, Cheltenham (UK) and Northampton, MA (US), 1998; OECD, 1996, *op. cit.*; and OECD, 2000, *op. cit*.

26. International Labour Organization, *Labour and Social Issues Relating to Export Processing Zones*, ILO, Geneva, 1998.

27. *Ibid.* p. 12.

28. OECD, 1996, *op. cit.*, p. 105. See also OECD, 2000, *op. cit.*

29. The concessions included a no-strike agreement and exclusion of new employees from pension rights for two years.

30. D. Rodrik, "Democracy and Economic Performance", 1997, cited in OECD, 2000, *op. cit.*

31. T.I. Palley, "The Economic Case for International Labor Standards: Theory and Some Evidence", 1999, cited in OECD, *ibid.*

32. J. Stiglitz, "Democratic Development as the Fruits of Labor", Keynote Address, Industrial Relations Research Association, Boston, January 2000 (also cited in OECD, *ibid.*).

A Comment by John Evans

As always, I enjoyed reading Charles Oman's paper and agree with 90 per cent of the policy conclusions, particularly the positive commitment to the need for observance of core labour standards. However, in the interest of the debate today, I would like to make two criticisms. Firstly, I believe the analysis is too sanguine with regard to the risk of negative policy competition in order to attract inward investment on the basis of suppressing core labour standards and even if, as Charles suggests, this has little overall impact on investment flows at the macro level, at the micro level it has become a dangerous day-to-day reality. In this respect, a distinction cannot be made between the effects of incentives-based competition and rules-based competition. A second criticism I would make is that there is a missing dimension to the analysis in that it underestimates the need for international rules to cope with such negative "competition".

With regard to incentives-based competition, the paper makes the important point that multinational firms no longer pay taxes to governments, but rather it is the other way round. It was particularly striking in showing that Mercedes had received 340 000 dollars for each job created in Brazil. It was also an important point made in the paper that economic analyses miss the dynamics of the FDI decisions. However, I would question whether exhortation to stop such competition is enough. It would be feasible and sensible to regulate such competition through international agreements. The MAI would have involved much greater restriction of sovereignty but with a different aim. Perhaps an international agreement on investment subsidies is now necessary.

However, my central quarrel with the paper is its overconfident conclusion that negative policy competition over environmental and labour standards is not taking place.

Only just last week, in a meeting between TUAC and BIAC over climate change, several business representatives drew attention to the fact that an effective carbon tax applied at the OECD level would only lead them to relocate polluting plants to Third World countries.

With regard to labour standards, I agree with the conclusion that the observance of core labour standards such as freedom of association can lead to better economic performance and a "high road" to international competitiveness. I would argue that the shift to democracy in Latin America over the last decade has been behind the better rights performance. However, I disagree with the conclusion that observance of core labour standards is improving. The OECD update of the 1996 Report on Employment and Core Labour Standards has shown that although there has been an increase in the number of ratifications of core ILO standards, there has also been an increase in non-enforcement as indicated by the findings of the ILO Committee of Experts. Specific violations are increasingly related to attracting FDI in global markets, which is replacing the political repression of the past as a major problem.

The recent ILO study on Export Processing Zones (EPZs) drew a rather different conclusion from that indicated in Charles' paper. It pointed out that there is a problem of non-respect for core labour standards in export processing zones and also that export processing zones were growing rapidly in number although it did draw the conclusion that this would be non-sustainable and ultimately self-defeating.

We also see plenty of examples of attempts to publicise the attractiveness of investment locations in EPZs on the grounds that they do not allow core labour standards, core labour rights or else do not enforce them. It is also clear that unions have the biggest difficulty in operating and organising in EPZs, precisely because respecting union rights would be seen as leading to higher levels of wages. If the suppression of core labour standards is thought to be an attraction then *de facto* this becomes the case.

National examples also abound. In the 1980s, I remember from my own experience in the UK that the then government equated globalisation with adjusting labour practices in the UK to those in East Asia on the grounds of competitiveness. When I met the Labour Minister of Korea during the strike in 1997, I was somewhat surprised to hear him say that he had to suppress labour rights in Korea because otherwise Korean companies had said they would move to Wales or Scotland. Similarly, in the early 1990s, multinational electronics firms in Malaysia threatened to leave the country if the government changed its law to conform to ILO standards and allow organising by national unions in the electronics industry in Malaysia. A recent study by Cornell University also found that two-thirds of companies in the US when faced by union organising over the last two years had threatened to relocate to another state or country. It also found that only 6 per cent actually carried out their threat; nevertheless if the threat is perceived as real the effect is the same. China which is now receiving 60 per cent of Asia's foreign direct investment is at the same time one of the world's worst respecters of core labour standards — many foreign investors find disciplined labour forces or labour camps run by the military attractive.

Although some of these examples might be regarded as anecdotal the dividing line between empirical evidence and anecdotes depends on whether you really look for evidence.

Whilst agreeing with the policy conclusions that countries can compete on the basis of the "high road" of observing core labour standards, I would argue that it is not enough simply to exhort them to do so. We need to have effective international rules on core labour standards and the ILO Declaration of Fundamental Rights at Work must become a system-wide standard applied also in investment, trade and development policies.

To conclude, I welcome the fact that the Development Centre and the Inter-American Development Bank are beginning to discuss these issues seriously in today's seminar. In terms of regional economic integration, it is clear that Europe has only been able to go as far as it has by developing a social dimension and encouraging dialogue with the social partners. I would therefore also like to applaud the decision of the Inter-American Development Bank to hold regular consultations with trade unions from the region.

A Comment by Eduardo Fernández-Arias

This paper addresses a highly and increasingly relevant issue in Latin America. The recent trend towards fiscal decentralisation has made possible more fierce competition across states and regions for the allocation of resources, exacerbating their competition for foreign direct investment (FDI). The recent trend towards regional economic integration favours the localisation of FDI in selected economies from which cross-border markets can be served, which exacerbates the competition of countries to attract it and establish regional "hubs". Potential bidding wars would be not only a drain of resources but also a serious threat to regional integration.

The paper offers a useful distinction between incentives-based competition, i.e. fiscal and financial subsidies, and rules-based competition, i.e. favourable legal and regulatory framework. Incentives-based competition would give rise to a "prisoners' dilemma", in which potential hosts would find it in their individual interest to offer subsidies to attract FDI in order not to lose out to another potential host. Rules-based competition would also produce a similarly destructive bidding war if it leads to "a race to the bottom", e.g. the lowering of environmental and labour standards in order to attract FDI. However, rules-based competition may also be "constructive", e.g. improving accountability, the judiciary, and governance in order to attract FDI, in which case competition would take the form of "a beauty contest".

Three main conclusions emerge: *i)* it is important to recognise the value of "beauty contests", that is constructive rules-based competition, for the attraction of FDI; *ii)* competition for FDI through other means is harmful; and *iii)* from a policy viewpoint, it is recommended that international agreements be signed to prevent this harmful competition.

These conclusions are eminently sound and it is difficult to disagree with any of them. Still, the fact that there is no mention of any caveat or limitation constraining the value of the conclusions may leave some readers with the impression that the paper is too complacent with these reassuring conclusions. In the remainder of these comments, I will try to balance the picture and cast some doubts about the value, if not the validity, of each of these conclusions.

1) It is important to recognise the value of "beauty contests" for the attraction of FDI.

— The scope for beauty contests may be quite small as effective ways of attracting FDI. First, there may be strong factors blocking the occurrence of "constructive rules-based competition", such as strengthening the judiciary. In fact, this kind of reform would be beneficial irrespective of its impact on FDI, which implies that it may be naïve to ignore the underlying factors preventing reform. The question of whether beauty contests are relevant for attracting FDI is reminiscent of the question of whether crises help or delay reform, which has received recent professional attention. The answer to this last question depends on the details of the underlying political economy game. A solid answer to the FDI question will require a detailed analysis of the political economy game specifically applicable to it.

— Even if relevant, beauty contests may very well result in less, rather than more, FDI. As emphasised in Hausmann and Fernández-Arias in this volume (2001), direct investment is the most resilient financing choice in terms of the quality of the fundamentals that it requires to prosper. In fact, the improvement of fundamentals, including the legal and regulatory framework, tends to favour debt financing, which requires a better framework to emerge. The implication is that beauty contests may be a winning competitive strategy to attract financing for development but fail to attract FDI.

2) Competition for FDI through other means is harmful.

— Subsidies may actually compensate for other distortions. The traditional literature on FDI and how to attract it used to emphasise the problem of expropriation of FDI once investment is made, either *de facto* or *de jure*, and how host countries could commit not to do it. Subsidies may be a solution to that problem, to compensate for the likely expropriations that may creep in over time. If so, what appears as an unfair subsidy may be the remedy to level the playing field.

— A blanket conclusion on the effect of subsidies omits the key relevance of the structure of subsidies. For example, the promise of credible future fiscal subsidies may buy a larger current investment and end up being an efficient inter-temporal deal between investors and a cash-strapped government with a high rate of time discount. The same may hold true for certain regulations or environmental standards. In fact, the prohibition from offering subsidies along these dimensions may translate into an unnecessarily higher cost of competition, to the extent that direct financial subsidies are less cost-effective.

— For all its cost, incentive-based competition ensures efficiency in the allocation of FDI. In fact, regions or countries willing to offer the winning subsidy reveal that investment in their jurisdictions is more productive, thus ensuring allocative efficiency [see Fernández-Arias, Hausmann and Stein (2000) for a more complete analysis of this issue and of the following remarks on international agreements limiting competition].

3) International agreements ought to be signed to prevent competition.

— The feasibility of international agreements is of course subject to *ex post* enforcement and to the existence of a mutual *ex ante* benefit to the parties involved. First, the prisoner's dilemma nature of the situation poses the problem of enforceability. Second, under the assumption that some co-operative equilibrium can be sustained, perhaps through the interlocking of trade and investment agreements, the question arises as to whether there is a verifiable and simple agreement, e.g. the prohibition of subsidies of any kind, which is beneficial to all parties. A formal model is required to analyse this issue.

— Would an international agreement banning incentive-based competition, assuming it could be enforceable, solve the problem? The answer is no. In the absence of competition, FDI allocation would be determined by private returns only, which may differ from social returns as perceived by governments. Therefore FDI with potentially high social return in a host country may be attracted by another host country in which its social value is low, or may fail to be attracted by any host country at all if private returns are low everywhere. In fact, banning competition may actually be counter-productive under scenarios in which these efficiency losses are large and the competition costs small.

Bibliography

FERNÁNDEZ-ARIAS, E., R. HAUSMANN and E. STEIN (2000), "Attracting FDI: Competitiveness and Fiscal Competition", Working Paper submitted to the ECLAC Conference on Fiscal Issues, Santiago de Chile, January 2001.

HAUSMANN, R. and E. FERNÁNDEZ-ARIAS (2001), "Capital Inflows and Crisis: Does the Mix Matter?" in this volume.

Capital Inflows and Crisis: Does the Mix Matter?

*Eduardo Fernández-Arias and Ricardo Hausmann**

Introduction

Financial crises have been frequent and costly in Latin America and other emerging markets. Currency and banking crises occur everywhere from time to time, but they have been especially virulent in developing countries because they are usually accompanied by a "sudden stop" in capital inflows, i.e. a loss of access to external finance (Calvo and Reinhart, 1999). Consequently, banking and currency crises are associated with dramatic swings in the current account and a collapse in output. Banking and currency crises seem to share common symptoms and may actually cause one another (Kaminsky, Lizondo and Reinhart, 1998). That is why they are often referred to as the twin crises. However, they are usually also accompanied by "sudden stops", making it more a case of "triplets".

It has been common to attribute crises to short-term capital inflows, while FDI is seen as a safer form of finance. The relationship between crises and the composition of capital flows is particularly relevant at present because Latin America has seen a very dramatic change in the nature of the capital flows it attracts. The flow of capital to Latin America is becoming increasingly dominated by foreign direct investment (FDI). In fact, while private capital inflows declined to $68.6 billion in 1999, off 36 per cent from a peak of $107 billion in 1997, FDI has been exploding. From $7.3 billion in the early 1990s, and $35.8 billion (36.8 per cent of private flows) as recently as 1996, FDI reached $66.5 billion in 1999, just under 97 per cent of net private capital inflows in that year.

In this context, it is useful to ask whether the composition of capital flows is at all related to the likelihood of crises. The dominant view is quite straightforward. FDI involves a long-term commitment to a country and is "bolted down" in such a

---

* A version of this chapter will be published as an article in the May 2001 edition of *Emerging Markets Review*. The authors would like to thank Laura Dos Reis, Patricia Cortés and Martin Cumpa for their valuable research support and Rita Funaro for editing this paper.

way that it cannot leave at the first sign of trouble. Hence, it is unlikely to be associated with crises for two reasons: first, because there must be something right about the country if capital is coming in as FDI; second, because even if there were problems, FDI does not have the explosive characteristics of other flows. As expressed by the World Bank (1999): "FDI also is less subject to capital reversals and contagion that affect other flows, since the presence of large, fixed, illiquid assets makes rapid disinvestment more difficult than the withdrawal of short-term bank lending or the sale of stock holdings".

It is therefore important to ask whether the composition of capital inflows and of the stock of foreign liabilities is relevant for these crises, be it their frequency, depth, or length. In this paper, we explore the possible role of FDI as a benign form of external liability relative to other classes of liabilities, reviewing both analytical and empirical arguments.

Theoretical Arguments

Before confronting the evidence, it is important to review the theoretical arguments concerning why FDI may be safer in terms of its differential effect on the risk of crisis.

The traditional argument is related to the illiquidity of FDI, i.e. the notion that it is "bolted down". Hausmann and Fernández-Arias (2000) argue that this view is inappropriate by pointing out that FDI is not a physical asset of a firm, but only one of its liabilities. The firm has other liabilities and assets. Some assets may be "bolted down", but financial claims backed by "bolted down" physical capital can easily fly away. In fact, foreign investors can hedge their earnings and protect the value of their assets, or outright speculate, by borrowing in domestic currency and pledging physical capital as collateral. More than a theoretical possibility, these schemes have been observed in practice[1].

One key implication of the previous "round tripping" scheme is that the degree of risk of various classes of flows cannot be assessed by looking at each flow separately; outflows may be generated under an account other than FDI, a circumstance especially likely during a crisis. Said differently, what comes in through the door may go out through the window. This would be a limitation of any simple-minded analysis of flow reversals or of the relative volatility of flows. If a foreign firm saw a crisis coming and wanted to take money out, it would not choose to repatriate equity. Instead, it would borrow domestically and buy foreign assets or repay foreign loans. More generally, the volatility of FDI provides little information on the overall volatility of the capital account.

There is, however, one serious argument in favour of the greater safety of FDI (and equity in general), concerning financial crises. The argument has to do with incomplete markets, "original sin" and, consequently, crises caused by exchange rate and maturity mismatches.

A currency is said to suffer from original sin when it cannot be used to borrow abroad, or even domestically to borrow long term. This means that firms will be confronted with what Pedro Pou has called the "devil's choice": borrow in dollars and face a currency mismatch or borrow short term and face a maturity mismatch. Both alternatives increase the risks faced by all firms and favour greater reliance on equity finance. Equity from this point of view involves neither currency nor maturity mismatches, since it is a residual claim that has no fixed value or currency denomination and is, in principle, infinitely long-lived.

As argued by Fernández-Arias and Lombardo (1998), Krugman (1999), Chang and Velasco (1998), Calvo (1998) and Eichengreen and Hausmann (1999), if a country has a sufficiently large stock of foreign currency debt, exchange rate movements will have very large balance-sheet effects that will make it vulnerable to self-fulfilling attacks. If the currency were to depreciate significantly, firms would find it impossible to service their debts. Lenders and borrowers would want to take their money out before this happens, thus precipitating a crisis. They would not regret *ex post* having pulled the trigger since the depreciation would precipitate the bankruptcies they were trying to avoid. If the authorities try to defend the currency, they will have to tighten domestic credit conditions, making it difficult for those who borrowed domestically to roll over their short-term debts, generating a potential banking crisis[2]. If a country does not suffer from original sin, the depreciation will have small balance-sheet effects and maturity mismatches will not be as severe, allowing the authorities a freer hand in setting monetary policy[3].

In this context, equity liabilities such as FDI can be expected to be less crisis-prone because, as opposed to debt liabilities, they involve neither currency nor maturity mismatches. Holders of equity are entitled to whatever cash flow is left over, in whatever currency it is denominated in, after paying all other claimants.

The conclusion is that since equity does not involve mismatches it is unlikely to generate crises of this type. The market understands this, as can be seen from the larger proportion of FDI in the external liability mix of countries suffering from original sin (Hausmann and Fernández-Arias, 2000)[4]. Hence, external equity investment is a way of avoiding the debt maturity and currency mismatches caused by original sin.

Empirical Evidence

As an empirical matter, the importance of the composition of capital inflows has been almost invariably studied by comparing the volatility of each class of liability, an approach that is vulnerable to the round-tripping argument. A number of studies have demonstrated that the volatility of FDI is smaller than that of other series[5]. However, as can be seen from Table 1, the standard deviation of FDI is not very different from that of total net flows, especially for Latin America. Moreover, the volatility of FDI itself has been on the rise. Furthermore, while the overall share of FDI in capital inflows has been rising in the 1990s in most developing countries, it does not appear to have helped make the overall capital account more stable.

Table 1. **Emerging Market Economies: Volatility of Net Capital Flows**[1]

	Mean		Standard deviation		Coefficient of variation[2]	
	Percentage of GDP				Ratio	
	1980s	1990s	1980s	1990s	1980s	1990s
FDI						
Developing countries	0.4	1.5	0.1	0.6	0.3	0.4
Africa	0.3	0.9	0.2	0.5	0.6	0.5
ASEAN-4 plus Korea[4]	0.6	1.1	0.3	0.3	0.5	0.2
Latin America	0.7	1.5	0.2	0.8	0.3	0.5
Transition economies	0.0	1.3	0.0	0.8	---	0.6
Portfolio						
Developing countries	0.2	1.0	0.1	0.6	0.7	0.6
Africa	-0.2	0.1	0.1	0.3	-0.8	2.8
ASEAN-4 plus Korea	0.3	0.9	0.3	0.9	1.0	0.9
Latin America	0.1	1.8	0.3	1.0	5.3	0.6
Transition economies	0.0	1.5	0.0	1.2	---	0.8
Other net investment[3]						
Developing countries	1.3	0.5	0.5	1.2	0.4	2.4
Africa	2.9	2.5	1.0	1.6	0.3	0.7
ASEAN-4 plus Korea	2.0	1.0	2.0	3.0	1.0	3.1
Latin America	1.5	-0.3	1.7	1.0	1.2	-3.7
Transition economies	-0.2	-0.4	0.2	1.4	-1.4	-3.4
Total net flow						
Developing countries	1.9	3.0	0.4	1.0	0.2	0.3
Africa	3.0	3.6	1.0	1.0	0.3	0.3
ASEAN-4 plus Korea	2.9	3.0	2.2	3.2	0.8	1.1
Latin America	2.2	3.0	1.9	0.9	0.9	0.3
Transition economies	-0.2	2.4	0.3	1.5	-1.3	0.6

Notes: 1) Categories of capital flow are in accordance with *Balance of Payments Manual* (1993), fifth edition, International Monetary Fund, Washington, DC.
2) Standard deviation divided by mean.
3) Is a residential category including financing from official and private sources. Instruments in this category are usually not traded in secondary markets, in contrast to instruments classified with portfolio investment.
4) The ASEAN-4 countries are Indonesia, Malaysia, the Philippines and Thailand.

Source: International Monetary Fund (1999), *World Economic Outlook*, Washington, D.C.

As argued above, this evidence based on the statistical properties of univariate time series does not appear relevant to the problem at hand, since the flows need not leave from the account in which they entered. In addition, the volatility of capital inflows may be the reflection of volatile demand for funds. For example, if a country suffers from volatile terms of trade and financial markets allow the country to smooth its consumption inter-temporally, capital flows would be volatile but stabilising. This case can be distinguished from a situation in which volatility reflects an unstable and unreliable supply of funds. Only the latter problem is of concern.

Furthermore, the relevant question is whether the composition of foreign liabilities is related to the probability of crisis. This question cannot be answered by examining the evidence during periods of tranquillity, when the fact that countries have market access would make the volatility of a particular class of liabilities largely innocuous. Instead, it requires a comparative analysis of classes of liabilities around

crises, which in traditional time-series studies amount to a minor portion of the sample variation. Surprisingly, very few empirical studies take this approach. Frankel and Rose (1996) is a salient exception. In that study, based on developing country data for the period 1970-92, the authors estimate how the composition of liabilities of developing countries affects the probability of a currency crisis. They use regression analysis to see how the composition of debt stocks and FDI flows (data on FDI stocks were not available at the time) are associated with the probability of suffering a currency crisis in each year[6].

Of the many explanatory variables utilised, they find only a few to be statistically significant. Surprisingly, they do not find that overall indebtedness is a relevant factor, nor is the share of short-term debt in the total debt stock. However, they do find that the ratio of FDI to debt has a negative effect on the probability of crisis and is statistically highly significant. This means that for a given level of debt, more FDI would actually decrease the probability of default! Thus, this study does not find debt to be crisis creating but it identifies FDI as crisis preventing. Said differently, FDI was found not only to be less risky than debt, but also to reduce risk. This "superprotective" FDI is difficult to rationalise[7].

In our own empirical study we follow a similar approach. We update the data to include information up to 1997 and extend the set of countries to include industrial countries but maintain Frankel and Rose's definition of currency crises. Our results are presented in Table 2. The table shows results for the probit regression of the probability of a currency crisis as a function of the stocks of FDI and non-FDI liabilities, using openness (the ratio of exports to GDP) and income per capita as controls. We look at three different sets of countries: *i)* developing countries with a GDP of at least $5 billion in 1997; *ii)* all developing countries; and *iii)* all countries.

Table 2. **Probability of Currency Crisis**
(Frankel and Rose definition)

	Developing Countries (excludes small countries)		All Developing Countries		All Countries	
FDI/GDP	-0.023	-0.052	-0.070	-0.092	-0.028	-0.061
	(0.19)	(0.43)	(0.74)	(0.96)	(0.54)	(1.13)
Non-FDI/GDP	0.387 **	0.428 **	0.299 **	0.311 **	-0.001	0.002
	(4.16)	(4:48)	(5.49)	(5.80)	(0.10)	(0.59)
Exports/GDP	-0.461 **	-0.405 **	-0.388 **	-0.313 **	-0.230 **	-0.135 **
	(3.09)	(2.71)	(3.67)	(2.95)	(4.49)	(2.51)
Per capita GDP	--	-0.930 *	--	-1.110 **	--	-0.270 **
		(1.89)		(2.81)		(3.45)
Sample size	802	802	1436	1436	2107	2107
% Crisis (Obs. P)	9.1	9.1	8.0	8.0	6.4	6.4

Note: Probit slope derivatives (x100, to convert into percentages) estimate the average increase of the annual probability of crisis when the explanatory variable increases by one unit. All ratios measured as percentages. Per capita GDP (1995) measured in thousands of dollars.
Associated z-statistics are between parentheses (in absolute value).

** Significant at the 5 per cent level.

* Significant at the 15 per cent level.

We find that the control variables are highly significant. The level of development and the degree of openness of the economy are related strongly and negatively to the probability of crisis[8]. These traditional risk factors indirectly reflect what may be structural differences in the liability carrying capacity of countries, including the relative importance of the tradable and non-tradable sectors in the economy. Given these controls, we focus on the risk contributions of FDI and non-FDI liabilities.

Within developing countries, non-FDI liabilities have a positive and significant impact on the probability of crises, while FDI liabilities do not seem to have a statistically significant effect (albeit the coefficient is typically negative). This result is robust to different specifications[9] and to the inclusion or not of small countries from the sample. We get similar but somewhat weaker results using Goldstein, Kaminsky and Reinhart's (2000) quite different definition of currency and banking crises, which they apply to a much smaller set of emerging markets (Table 3).

Table 3. **Probability of Currency Crisis**
(Goldstein, Kaminsky and Reinhart sample)

	Currency crisis		Banking crisis	
FDl/GDP	-0.005	0.068	-0.024	-0.090
	(0.02)	(0.26)	(0.14)	(0.51)
Non-FDl/GDP	0.096 *	0.066	0.049	0.082 *
	(1.59)	(1.04	(1.25)	(1.85)
Exports/GDP	-0.180	-0.372 *	-0.096	-0.030
	(1.12)	(1.75)	(0.89)	(0.23)
Per capita GDP	--	0.343	--	-0.280 *
		(1.42)		(1.64)
Sample size	638	638	638	638
% Crisis (Obs. P)	13.0	13.0	5.2	5.2

Note: Probit slope derivatives (x100, to convert into percentages) estimate the average increase of the annual probability of crisis when the explanatory variable increases by one unit. All ratios measured as percentages. Per capita GDP (1995) measured in thousands of dollars.
Associated z-statistics are between parentheses (in absolute value).

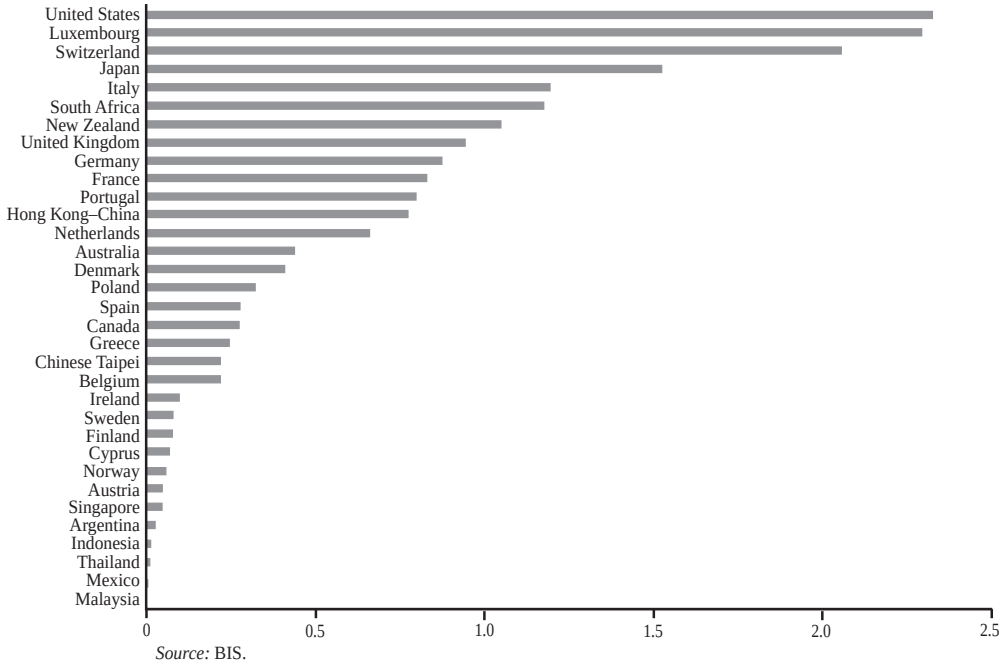
** Significant at the 5 per cent level.
* Significant at the 15 per cent level.

However, when we include industrial countries in the sample (in Table 2) the result breaks down and non-FDI liabilities appear to have no impact on the probability of crisis. Consequently, the evidence suggests that FDI is safer than non-FDI only when we restrict the sample to developing countries. For this set of countries, non-FDI exposure appears to increase the probability of currency crises while FDI appears to be neutral and, if anything, seems to lower it.

Statistically, this may be driven by the fact that these countries have a much larger relative stock of non-FDI liabilities than do developing countries and have a lower frequency of crisis. How can industrial countries support larger debt stocks without a higher risk of crisis? One possible explanation is original sin. Many of them can borrow abroad in the same currency they use domestically and hence can avoid currency mismatches. These currencies also support long-term markets, thus limiting maturity mismatches. Is there any evidence for this hypothesis?

To check this story we developed a variable to measure original sin (see Appendix for more details). Figure 1 uses BIS data to show the proportion of international securities denominated in a country's currency relative to the amount issued by that country's residents. Countries like the United States and Switzerland appear with ratios greater than 1 because many non-residents issue debt denominated in US dollars or Swiss francs. Countries that do not appear in the graph simply have no international issues in their own currencies. Essentially, all of Latin America and East Asia have either zero or insignificant issues in their own currencies. We use these BIS data on the currency denomination of bonds and money market instruments and define a currency as not suffering from original sin if the average 1993-98 ratio of securities issued in that country's currency to the securities issued by the country was larger than 20 per cent[10]. For countries within currency unions, we gave them the classification received by the common currency. We used the data on currency unions in Rose (2000). This leads to the inclusion of a large set of developing countries as not suffering from original sin because they share a currency that can be used to borrow internationally.

Figure 1. **Debt in Currency x Over Debt in Country x, 1998 (Money Market Instruments and Bonds)**



Source: BIS.

It is clear that the association of countries with original sin and developing countries is positive (see Table 4), which suggests that original sin may very well be a key factor underlying the observed statistical difference between developing and developed countries concerning how risky debt flows are. Direct examination of the association between original sin and crisis also suggests this hypothesis. Table 5 shows a two-by-two matrix in which we have classified countries according to whether they suffer from original sin and whether they have suffered currency crises in the 1970-97 period[11]. Of the 170 countries in the sample, 27 are free from original sin and only two register currency crises (7.4 per cent). By contrast, of the 143 countries that suffer from original sin, 99 have had currency crises (69 per cent).

Table 4. **Currency Crises, Original Sin and Developing Countries**

	Industrial Countries	Developing Countries	Total Sin / No Sin
Sin	7	136	143
No Sin	13	14	27
Industrial / Developing	20	150	170

Table 5. **Currency Crises and Original Sin**

	Crisis	Non-crisis	Total Sin / No Sin
Sin	99	44	143
No Sin	2	25	27
Crisis / Non-crisis	101	69	170

This suggests that some interaction between original sin and debt may be part of the story and that the data may be sufficient to establish it. To test this hypothesis, we extended the model presented in Table 2 to include original sin and its interactions with the stocks of FDI and non-FDI liabilities. We use a dummy which is equal to 1 when a country suffers from original sin, according to the definition described above. The results appear in Table 6. The first column repeats the last equation of Table 2. The middle column introduces the original sin dummy, by itself and interacting with FDI and non-FDI stocks. The results are quite telling. First, original sin *per se* is not an independent source of crisis. Second, the only stock variable that is statistically significant is the interaction between original sin and non-FDI liabilities. Hence, this suggests that debt is dangerous only when the country suffers from original sin. Finally,

FDI appears with a negative sign by itself and with a positive sign when interacted with original sin. Moreover, while these two numbers are not statistically different from zero, they are significantly different from each other. This can be interpreted as meaning that even the risks associated with FDI are different under original sin.

Table 6**. Probability of Currency Crisis**
(Frankel and Rose definition)

	Without Controls		Controlling by Original Sin		Controlling by Original Sin and Developing Country	
Per capita GDP	-0.270	**	-0.178	**	-0.012	
	(3.45)		(2.89)		(0.14)	
Exports/GDP	-0.135	**	-0.163	**	-0.163	**
	(2.51)		(4.04)		(4.46)	
Original Sin	--		-0.119		0.404	
			(0.05)		(0.20)	
Developing Country	--		--		-0.218	
					(0.13)	
FDI/Exports	-0.061		-0.313		-0.178	
	(1.13)		(1.04)		(0.68)	
Original Sin x FDI/Exports	--		0.294		0.212	
			(0.97)		(0.85)	
Developing Country x FDI/Exports	--		--		-0.056	
					(0.43)	
Non-FDI/Exports	0.002		-0.002		-0.093	**
	(0.59)		(0.13)		(2.73)	
Original Sin x Non-FDI/Exports	--		0.109	**	0.125	**
			(4.68)		(5.79)	
Developing Country x Non-FDI/Exports	--		--		0.091	**
					(2.80)	
Sample size	2107		2107		2107	
% Crisis (Obs. P)	6.4		6.4		6.4	

Note: Probit slope derivatives (x100, to convert into percentages) estimate the average increase of the annual probability of crisis when the explanatory variable increases by one unit All ratios measured as percentages of per capita GDP (1995) measured in thousands of dollars. Original sin and developing countries are dummies that take the unit value when these conditions are met and zero otherwise (i.e. no original sin and developed country, respectively) Associated z-statistics are between parenthesis (in absolute value).

** Significant at the 5 per cent level.

* Significant at the 15 per cent level.

These results statistically confirm the hypothesis that original sin is behind the comparative safety advantage of FDI over debt. However, is there an even more satisfactory hypothesis? An alternative interpretation of the evidence could be that developing countries are somehow structurally riskier for factors other than original

sin. In this case, original sin could be proxying lack of development in general. However, the correlation coefficient between the original sin and a developing country dummy is only 56 per cent (see Table 4). In fact, the data may suffice to discriminate original sin and developing country risk factors.

To test this hypothesis, we include an additional developing country dummy variable. We also added the interaction of this variable with FDI and non-FDI stocks. The result is shown in the last column of Table 6. Neither the dummy for original sin nor the one for developing country is significant by itself. Both original sin and being a developing country make non-FDI risky. By contrast, for developed countries without original sin, non-FDI is not associated with additional risk. We therefore find that both original sin, as defined in this exercise, and being a developing country are relevant for the greater riskiness of non-FDI stocks. Looking at the magnitude of their coefficient estimates, original sin appears to be the more powerful of the two factors. Combining the relevant estimated coefficients, we find that either redemption from original sin or graduation to industrial country would be enough to eliminate the crisis-generating risk of non-FDI stocks. Finally, we find again that the impact of FDI on the probability of crisis is different when there is original sin.

These results suggest that the level of non-FDI liabilities is not a source of risk in itself. It is more dangerous in developing countries, but is even more problematic when a country suffers from original sin. This evidence supports the idea that a fundamental source of crisis is related to the mismatches in debt exposure caused by original sin[12].

In fact, original sin seems to matter even for FDI. This is consistent with the idea that FDI is not "bolted down". Firms in an environment of original sin will be quick to use their fixed assets as collateral to short the currency if they see the possibility of crisis.

Conclusions and Policy Implications

Emerging markets have suffered from frequent and costly crises. Is the composition of external liabilities relevant for the risk of crisis? This paper has addressed this question by examining the richest data sets on developing country currency and banking crises available. It focused on the hypothesis that FDI offers a safer form of financing and found that the evidence tells a consistent and interesting story, full of new insights and policy ramifications.

FDI liabilities seem to be safer than debt or other forms of non-FDI obligations, irrespective of country risk factors such as income level and degree of openness (consistently found associated with lower risk in all country samples). In particular, non-FDI is crisis-prone but FDI is neutral. This finding is consistent with the conventional view that FDI is safer because it is "bolted down", while other liabilities are crisis-prone because they can "fly away". However, there is a nuance to this result:

it holds true only for developing countries. Developed economies can have large concentrations of external liabilities in the form of debt without generating crises. This finding, as well as other evidence and analysis, does not support the "bolted down" versus "fly away" hypothesis.

Alternatively, we advance the hypothesis that FDI's relative safety springs from the risk of crisis that debt liabilities entail when they suffer from excessive currency or maturity mismatches. This mismatch condition is not relevant to equity liabilities because they are a residual claim. This "debt mismatch" hypothesis implies that FDI is superior when debt is a defective instrument that generates currency and maturity mismatches.

Countries unable to borrow abroad in their domestic currencies can be expected to suffer from excessive debt mismatch. We formalise this "original sin" hypothesis and find that, accordingly, debt liabilities are crisis-prone only in this case. Original sin appears even to increase the risk associated with FDI liabilities, which runs counter to the "bolted down" view. While there are other unspecified relevant explanatory factors related to being a developing economy, the "original sin" hypothesis consistently tells most of the story. Our findings suggest that a crucial difference between industrial and developing countries relates to the fact that many of the former do not suffer from original sin. They can borrow internationally in their own currencies, thus avoiding the mismatches that cause crises in other economies.

What are the policy implications of these findings? Should countries adopt policies that discourage debt and favour FDI? This solution would distance emerging markets from the pattern of finance among developed countries, where FDI represents barely 12 per cent of external liabilities, compared with over 30 per cent in Latin America. Obviously, this solution is, at most, second best.

A first best solution would involve finding a way out of original sin. As long as Latin American companies face the devil's choice of either borrowing short term or borrowing in dollars they will have weak and risky balance sheets. In this environment, even FDI can become a source of problems in a crisis.

How can a country obtain redemption from original sin? Solutions are not obvious. First, it is clear that original sin is not explained by Latin America's history of inflation, since many of the 143 countries suffering from original sin have no history of inflation (e.g. the East Asian economies). Thus, sticking to a policy of fiscal prudence and low inflation may not be enough.

One alternative is to adopt a common currency that does not suffer from original sin. Countries in our sample that have done this appear safer than those that have a national currency that suffers from original sin. In this respect, dollarisation may be a way out and some countries may pursue this course of action. Other countries may want to choose an alternative that achieves redemption without renouncing monetary independence. In this sense, it becomes a critical issue to try to understand how Australia, New Zealand and especially South Africa did it.

Appendix

I. The Sample

The sample consists of all countries where information is available from 1970-97.

Five sub-samples were used:

1) All countries[13].

2) All countries excluding small countries (GDP less than $5 billion in 1997) and financial centres (Panama and Switzerland).

3) Developing countries (103-country sample of J. Frankel and A. Rose, 1996).

4) Developing countries excluding small countries (GDP less than $5 billion in 1997) and financial centres (Panama).

5) 25-country sample of currency and banking crises of M. Goldstein, G. Kaminsky and C. Reinhart (2000).

II. Dependent Variables

Variable	Description	Source
Currency Crisis	Currency Crisis: changes in the annual average US dollar exchange rate of 25% or more and in excess of 10% of the previous year's change. Allow a three-year window around crisis. Period 1971-97.	J. Frankel and A. Rose (1996), updated and with extended country coverage.
	Currency Crisis: weighted average of exchange rate changes and reserve changes, weighted to have equal volatility. Period 1970-97.	M.Goldstein, G.Kaminsky and C.Reinhart (2000)
Banking Crisis	Banking Crisis: 1- Bank runs that lead to closure, merging, takeover or large-scale government assistance to an important financial institution. 2- If no runs, the closure, merging, takeover, or large-scale government assistance to an important financial institution. Period 1970-97.	M.Goldstein, G.Kaminsky and C.Reinhart (2000)

III. Explanatory Variables

Variable	Description	Sources
Income per capita	1990 GNP per capita (constant 1995 US$)	Income per capita
Exports	Current dollars	WEO
GDP	GDP in PPP current dollars	WDI, World Bank
Openness	Exports/GDP	WEO. WDI, World Bank.

IV. The Model

Probit model using maximum likelihood. It reports the average effect of one unit change in the stock of FDI and non-FDI liabilities (as percentage of GDP or exports) on the probability of a currency crisis and a banking crisis. Two sets of regressions with similar specifications and different samples of countries across time.

In the first set, the independent variables are the stock liabilities (FDI and non-FDI) divided by GDP, controlling for the income per capita of the country and its degree of openness across our samples (see below a similar exercise in which openness is controlled, by using FDI and non-FDI divided by exports).

The second set of regressions uses the same specifications with the addition of the "original sin" dummy and a developing country dummy, as well as their interactions with the liabilities. In this case, we study the probability of a currency crisis in the whole sample of countries and across time.

Probability of Currency Crisis
(Frankel and Rose definition)

	Developing Countries (excludes small countries)		All Developing Countries		All Countries	
FDI/Exports	-0.004	-0.005	-0.017 *	-0.013	-0.007	-0.011 *
	(0.26)	(0.28)	(1.86)	(1.42)	(1.11)	(1 77)
Non-FDI/Exports	0.041 **	0.043 **	0.013 **	0.013 **	0.000	0.001 *
	(6.32)	(6.47)	(5.31)	(5.71)	(0.72)	(1.46)
Per capita GDP	--	-0.942 **	--	-1.500 **	--	-0.442 **
		(1.99)		(3.62)		(5.41)
Sample size	846	846	1573	1573	2284	2284
% Crisis (Obs. P)	9.0	9.0	7.9	7.9	6.3	6.3

Note: Probit slope derivatives (x100, to convert into percentages) estimate the average increase of the annual probability of crisis when the explanatory variable increases by one unit. All ratios measured as percentages. Per capita GDP (1995) measured in thousands of dollars. Associated z-statistics are between parentheses (in absolute value).

** Significant at the 5 per cent level.
* Significant at the 15 per cent level.

Probability of Crisis
(Goldstein, Kaminsky and Reinhart sample)

	Currency Crisis				Banking Crisis			
FDI/Exports	-0.005		0.002		-0.003		-0.009	
	(0.18)		(0.08)		(0.19)		(0.46)	
Non-FDI/Exports	0.029	**	0.028	**	0.009	*	0.009	*
	(3.29)		(3.24)		(1.52)		(1.62)	
Per capita GDP	--		0.130		--		-0.103	
			(0.92)				(1.00)	
Sample size	656		656		656		656	
Crisis (Obs. P)	13.1		13.1		5.2		5.2	

Note: Probit slope derivatives (x100, to convert into percentages) estimate the average increase of the annual probability of crisis when the explanatory variable increases by one unit. All ratios measured as percentages. Per capita GDP (1995) measured in thousands of dollars. Associated z-statistics are between parentheses (in absolute value).

** Significant at the 5 per cent level.
* Significant at the 15 per cent level.

Probability of Currency Crisis
(Frankel and Rose definition)

	Without Controls		Controlling by Original Sin		Controlling by Original Sin and Developing Country	
Per capita GDP	-0.442	**	-0.205	**	-0.274	**
	(5.41)		(3.01)		(2.42)	
Original Sin	--		2.702		3.339	
			(1.04)		(1.33)	
Developing Country	--		--		-7.410	
					(1.34)	
FDI/Exports	-0.011	*	-0.051		-0.054	
	(1.77)		(0.89)		(0.82)	
Original Sin x FDI/Exports	--		0.046		0.041	
			(0.80)		(0.68)	
Developing Country x FDI/Exports	--		--		0.008	
					(0.20)	
Non-FDI/Exports	0.001	*	-0.002		-0.014	
	(1.46)		(0.27)		(1.20)	
Original Sin x Non-FDI/Exports	--		0.012	*	0.010	*
			(1.66)		(1.89)	
Developing Country x Non-FDI/Exports	--		--		0.014	
					(1.23)	
Sample size	2284		2284		2284	
% Crisis (Obs. P)	6.3		6.3		6.3	

Note: Probit slope derivatives (x100, to convert into percentages) estimate the average increase of the annual probability of crisis when the explanatory variable increases by one unit. All ratios measured as percentages. Per capita GDP (1995) measured in thousands of dollars. Original sin and developing countries are dummies that take the unit value when these conditions are met and zero otherwise (i.e. no original sin and developed country, respectively). Associated z-statistics are between parentheses (in absolute value).

** Significant at the 5 per cent level.
* Significant at the 15 per cent level.

Notes

1. See IMF (1998), Box 2.2, for a discussion of the Brazilian experience.

2. In fact, after the banking crisis the attempt of the Central Bank to act as lender of last resort by expanding domestic credit usually leads to a currency crisis, as it did for example in Mexico 1994, Venezuela 1994, Thailand 1997 and Ecuador 1999.

3. Hausmann, Panizza and Stein (2000) show that original sin is related to the degree of exchange rate volatility actually allowed by countries that float their currencies.

4. Whether all the beneficial effects of FDI are internalised by the market, i.e. whether the observed liability mix is optimal as a second-best palliative of original sin, remains open to future research.

5. For example, UNCTAD, 1998; and Chuhan, Pérez-Quiros and Popper, 1996. However, Claessens, Dooley and Warner (1995) do not find this pattern. Sarno and Taylor (1999) find that FDI is more persistent.

6. A currency crisis is defined as a nominal exchange depreciation of more than 25 per cent in their annual average levels, with special provisions for high inflation countries. They require that the rate of depreciation accelerate at least 10 per cent relative to the previous year's rate of depreciation in order to control for high inflation cases. Repeated crises in a given country in close years are counted as one crisis. See Appendix for details.

7. Frankel and Rose (1996) are also puzzled by this result and suggest that it might be that FDI flows decline in anticipation of a crisis. We repeated their analysis using stocks and reproduced their results. Hence, the negative coefficient on FDI must have a different explanation.

8. These simple controls worked well when substituted for the set of control variables in Frankel and Rose (1996) and made little difference for their results concerning the variables of interest.

9. We vary the use of controls and we measure liabilities either as a share of GDP or as a share of exports.

10. We checked that our results are not sensitive to the choice of this threshold, since few countries are on the borderline.

11. We use the Frankel and Rose (1996) definition of crisis.

12. Unfortunately, however, the natural experiment of developing countries not suffering from original sin is too rare to confirm this hypothesis in a robust manner.

13. The United States is excluded because its currency is used as numeraire for exchange rates.

Bibliography

CALVO, G. (1998), "Capital Flows and Capital-Market Crises: The Simple Economics of Sudden Stops", *Journal of Applied Economics*, 1(1).

CALVO, G. and C. Reinhart (1999), "When Capital Inflows Come to a Sudden Stop: Consequences and Policy Options", mimeo, University of Maryland, College Park, MD.

CHANG, R. and A. VELASCO (1998), "Financial Fragility and the Exchange Rate Regime", RR#98-05, C.V. Starr Center for Applied Economics, New York University, New York, N.Y.

CHUHAN, P., G. PÉREZ-QUIROS and H. POPPER (1996), "International Capital Flows: Do Short-term Investment and Direct Investment Differ?" *Policy Research Working Paper* 1669, World Bank, Washington, D.C.

CLAESSENS, S., M.P. DOOLEY and A. WARNER (1995), "Portfolio Capital Flows: Hot or Cool?", *World Bank Economic Review*, 9(1).

EICHENGREEN, B. and R. HAUSMANN (1999), "Exchange Rates and Financial Fragility", *NBER Working Paper* No. 7418, National Bureau of Economic Research, Cambridge, MA.

FERNÁNDEZ-ARIAS, E. and D. LOMBARDO (1998), "Market Discipline and Exuberant Foreign Borrowing", mimeo, presented at the Second Annual Conference of the Central Bank of Chile, September 1998.

FRANKEL, J. and A. ROSE (1996), "Currency Crashes in Emerging Markets: An Empirical Treatment", *Journal of International Economics*, 41(3-4).

GOLDSTEIN, M., G. KAMINSKY and R. REINHART (2000), "Assessing Financial Vulnerability: An Early Warning System for Emerging Markets", mimeo, Institute for International Economics, Washington, D.C.

HAUSMANN, R. and E. FERNÁNDEZ-ARIAS (2000), "Foreign Direct Investment: Good Cholesterol?", paper presented at the seminar "The New Wave of Capital Inflows: Sea Change or Just Another Tide?", IDB Annual Meeting, New Orleans.

HAUSMANN, R., U. PANIZZA and E. STEIN (2000), "Why Do Countries Float the Way They Float?" Research Department, Inter-American Development Bank, paper prepared for the NBER Inter-American Seminar in Economics at CEMA, Buenos Aires.

INTERNATIONAL MONETARY FUND (1998), "International Capital Markets Report", International Monetary Fund, Washington, D.C.

KAMINSKY, G., S. LIZONDO and C. REINHART (1998), "Leading Indicators of Currency Crises", *IMF Staff Papers*, 5(1).

KRUGMAN, P. (1999), "Balance Sheets, the Transfer Problem and Financial Crises", paper presented at the Conference in Celebration of the Contributions of Robert Flood, International Monetary Fund, Washington, D.C.

ROSE, A.K. (2000), "One Money One Market", *Economic Policy*.

SARNO, L. and M.P. TAYLOR (1999), "Hot Money, Accounting Labels and the Permanence of Capital Flows to Developing Countries", *Journal of Development Economics*, 59(2).

UNCTAD (1998), "Trends and Determinants", *World Investment Report 1998*.

WORLD BANK (1999), "Foreign Investment Resilient in the Face of Financial Crisis", Chapter 3 *in Global Development Finance 1999, Analysis and Summary Tables*, World Bank, Washington, D.C.

A Comment by Beatrice Weder

It was certainly high time that somebody seriously studied whether the composition of capital inflows matters for the probability of suffering a currency crisis — a proposition which had become part of the conventional wisdom at least since the Asian currency crises. The paper by Eduardo Fernández-Arias and Ricardo Hausmann starts from the premise that this conventional wisdom may be wrong since FDI inflows may be just as prone to sudden reversals as debt. However, one reason to expect that FDI inflows may be safer, after all, is that they do not involve currency and maturity mismatches, whereas debt liabilities in developing countries typically do. This is what the authors call "original sin". The empirical test shows that countries with high non-FDI inflows are more prone to suffer speculative attacks — so the conventional wisdom is right. But, say the authors, the conventional wisdom may be right for the wrong reasons: debt liabilities are not inherently less safe than FDI. This is only the case in countries with "original sin". Industrialised countries have mainly debt liabilities and this does not seem to increase their vulnerability. Furthermore, the authors show that there are some developing countries that can also borrow in their own currencies. They test their hypothesis by constructing a dummy variable of "original sin" (one if the share of securities issued in a country's own currency is greater than 20 per cent). They find that, indeed, debt liabilities are only related to a higher crisis probability in countries with "original sin". They conclude that for crisis prevention promoting FDI is a second best strategy; the first best would be to fight "original sin".

This is an innovative paper and a very useful addition to the literature on contagion and the international transmission of currency crises. As noted above, the question about the composition of capital inflows and the propensity to suffer from currency crises seemed to have been settled in the policy debate without much analytic underpinning. The paper's findings suggest that instead of promoting FDI inflows, emerging markets should work on redeeming themselves from "original sin", e.g. by joining a currency union.

The controversial part of the paper is whether "original sin" is really the main, or even the only, reason why FDI liabilities seem to be safer than debt. There are other possibilities of explaining this result. Although the paper presents some basic robustness tests, there are a number of avenues that remain to be explored.

First, the authors note that one interpretation of the evidence could be that developing countries are somehow structurally riskier. They include a dummy variable to control for this possibility. However, there are many other ways in which crisis-

prone developing countries would differ from others. In particular, they will tend to have weaker macroeconomic fundamentals and they may be more subject to contagion because of close inter-linkages with other crisis countries. The theoretical literature suggests, and the empirical literature finds, a large number of variables which should be included in a currency crises regression. They include: growth of credit to the private sector, current account deficit, real effective exchange rate appreciation, growth of exports, GDP growth, inflation, etc. The specification used in the paper only includes exports/GDP and GDP per capita, two variables which are not standard and for which there are no strong theoretical grounds.

Second, the power to distinguish between the two hypotheses "original sin" or "some other characteristic of developing counties" may be very weak. In the paper's definition of "original sin" there are 27 countries that do not suffer from sin and 25 of those did not suffer speculative attacks. According to the data given in Figure 1, most of these countries should be industrialised countries. It follows that there must be a relatively small set of developing countries that qualify as non-sinners. Also, there is probably a small set of industrialised countries that suffer from sin and currency crisis. Together these few data points are probably driving the results (in the last column of Table 5). To attenuate this fear, it would be useful to report whether there are such influential observations and, if yes, which countries they are. Alternatively, the estimates could be conducted only within the sample of developing countries.

Third, the definition of "original sin" as more than 20 per cent of securities issued in a country's home currency is arbitrary *and* may also be crucial for the result. Thus, the paper would benefit from some sensitivity analysis varying the threshold, or alternatively using the continuous variable, that is directly using the share of a country's security issue in the home currency.

The paper would also be strengthened by presenting more empirical evidence about the liquidity of FDI. How common is hedging and round tripping by multinational firms? The IMF Capital Market Report 1998 is cited, which says that during the Brazilian crisis hedging by multinational firms was common. However, the Brazilian crisis was special exactly *because* of how widely it had been expected and the extent of hedging there was *ex ante*. In spite of the theoretically sound arguments that FDI, as measured in the BoP, is not equal to long-term physical investment, such kind of investment would also record as FDI. In other words, it is possible that FDI inflows *are* less prone to reversals and, thus, safer.

Finally, even if we accept the conclusion of the paper, namely that FDI inflows are second best to fighting "original sin", should this change the conventional wisdom? If there was an easy way for countries to start issuing long-term debt in their own currencies this would probably reduce their vulnerability to currency crisis. However, the high road to this goal is very long and most likely involves decades of building credibility in the currency and the institutions. The low road is adopting another currency that already has this credibility and this is, obviously, costly in other dimensions. In this sense, fighting "original sin" may well be second best to changing the mix of capital inflows.

A Comment by Philip Turner

The debate about whether certain forms of capital flows leave capital-importing countries less vulnerable than others is both very old and very diverse. The paper by Eduardo Fernández-Arias and Ricardo Hausmann provided an interesting, provocative and indeed much-quoted perspective on this issue. Rather than address in detail their statistical work, my comments try to put their paper in the broader context of FDI and crisis vulnerability. I have three points to make.

— The argument that FDI is a "safer" form of capital inflow has many, rather distinct roots. It is not just a question of equity versus debt or short term versus long term.

— Different types of FDI are likely to have very different implications for the safety of capital inflows.

— An economy which has had large amounts of FDI may prove to be more resilient after a crisis than an economy with little FDI.

Five Dimensions of Capital Flow

First, take the different dimensions according to which capital flows can be classified. Without attempting to be exhaustive and leaving aside for the moment any critical reservations, several dimensions have been cited in the past:

1) *Equity versus debt.* Equity forms of investment serve to transfer risk to the supplier of funds and away from the user of funds. Debt has to be serviced irrespective of the returns earned on the investment financed by borrowing. The servicing of equity liabilities, on the other hand, depends on the returns actually earned.

2) *Short term versus long term.* Borrowers reliant on long-term debt are less vulnerable to refinancing risk. A decline in the market value of debt paper — e.g. because of changed market assessment of risk, higher interest rates — will be borne by the lender.

3) *Saving versus investment.* If capital inflows are used to boost domestic investment, potential output is raised. If used to replace domestic saving, then potential output is unchanged; as foreigners' claims on output increase over time and have to be serviced, domestic disposable income is reduced.

4) *Public versus private.* Capital inflows to finance public sector deficits may be dangerous because they allow governments to delay measures of fiscal consolidation. By contrast, capital inflows that result from private sector decisions can be viewed as of much less concern to policy makers (the famous Lawson doctrine).

5) *Tradables versus non-tradables.* Capital inflows usually mean that a country's foreign currency liabilities increase. National balance sheet considerations could suggest that such inflows should be used to invest in foreign-currency earning assets — that is in expanding productive capacity in tradables, rather than in non-tradables.

At a very simplistic level, it could be argued that FDI is a "good" capital flow from the point of view of the potential vulnerability of the capital importing country on all five dimensions. It represents equity rather than debt; it is long term rather than short term; it is associated with increased domestic capital formation; it tends to go to the private sector; and because foreign companies tend to be export-oriented, it tends to boost capacity in the tradable sector. *So the first point to make about the argument that FDI is a "safer" form of capital inflow is that it could be defended on several distinct grounds.* The paper presented mentions the short-term/long-term dimension as the traditional argument (i.e. the notion that FDI is "bolted down"), but puts particular emphasis on a version of the equity/debt dimension, arguing that equity does not involve the currency or maturity mismatches involved in debt. The other three dimensions (saving/investment; public/private; tradables versus non-tradables) may also be important in some cases even if not present in all FDI flows.

FDI Means Different Things

A second point is that different forms of FDI can be classified according to these five dimensions in many different ways. For instance, FDI by a major foreign car manufacturer to build a new factory boosts domestic fixed capital formation, is in the private sector and adds to capacity in the tradables sector. But FDI to acquire shares in a privatised company, on the other hand, is quite different. In terms of the saving/investment dimension, it may not necessarily add to domestic fixed capital formation. Indeed, receipts from privatisation often allow governments to run larger budget deficits so that the domestic saving ratio can be reduced. So it would be argued that such FDI permits a reduction in the saving ratio, and not an increase in domestic investment. On the public/private dimension, it does involve a shift of assets from public to private ownership, and may increase the productivity of assets. So it could

be argued that, although such FDI does not increase the investment/GDP ratio, it does raise the productivity of investment. Such examples could be multiplied. The conclusion suggested is that *different forms of FDI are likely to have rather different implications for the "safety" of capital inflows*. One implication of this is that regressions based on FDI aggregates may not be very revealing.

Having said that, let me report on some work done at the BIS on assessing potential vulnerabilities in emerging market countries[1]. This found that two important causes of vulnerability were the real exchange rate (overvaluation causes trouble) and the ratio of external debt to GDP. To see how robust the result about FDI was, I simply added a variable for FDI to the equations estimated by Hawkins and Klau. The ratio of FDI to the stock of total capital inflows (fdi in the table) was not significant. So there must be doubts about the statistical robustness of the result that a higher ratio of FDI in total capital flows can be taken as a sign of weakness.

Resilience After a Crisis

The third point is that an economy with a large amount of FDI may well prove more resilient after a crisis than one with little FDI. Consider the behaviour of foreign companies and FDI after a crisis. The key stylised fact that needs to be kept in mind in addressing this issue is that crises typically lead to a marked depreciation of the real exchange rate. If FDI flows are more responsive to exchange rate changes than other capital flows, then the greater prominence of FDI could exert a stabilising effect on countries' economies by increasing the sensitivity of overall BoP flows (capital and current) to exchange rate changes.

There are a number of channels through which an exchange rate depreciation can induce direct investment inflows. An exchange rate depreciation would reduce the price of non-tradables relative to tradables: to the extent that the local subsidiary's output contains a larger proportion of tradables than its inputs (including labour), the level of profitable local production will rise and thus encourage capital inflows[2]. Secondly, a depreciation lowers the foreign currency cost of acquiring domestic assets: this may lead to increased investment by foreign firms which previously faced some form of capital constraint. There is evidence that FDI flows are sensitive to changes in the real exchange rate, and this is something that merits further consideration.

Is this analysis correct? Successful adjustment in Mexico during the last five years would seem to support this view as the foreign-owned sector has led the recovery.

Table 1. **Fixed Effects Panel Regression**
(dependent variable: *P*, exchange rate market pressure)

	All Countries		Crisis Countries	
P_{t-1}	0.41	0.41	0.38	0.28
	(8.76)	(9.90)	(4.89)	(3.59)
$reer_{t-2}$	0.82	0.82	1.31	1.25
	(4.71)	(5.05)	(4.55)	(4.85)
$debt_{t-2}$	0.68	0.72		
	(2.96)	(3.13)		
$stdebt_{t-2}$			0.63	0.78
			(1.46)	(1.89)
r_{t-4}	0.36	0.42	1.04	1.11
	2.45	(3.05)	(3.41)	(3.80)
$bisdc_{t-4}$			0.71	0.99
			(1.41)	(2.05)
fdi_{t-2}	0.17		0.28	
	(0.77)		(0.49)	

Note: t-statistics in parentheses.

The variables are defined as follows:

reer = Real effective exchange rate, as a percentage deviation from the average level over 1990-98.

debt = "Quick" external debt as a percentage of GDP. GDP is converted into US dollars using an exchange rate based on the World Bank Atlas method.

stdebt = Short-term debt as a percentage of foreign exchange reserves.

r = Three-month interest rate less the annualised percentage change in consumer prices over the previous six months.

bisdc = Liabilities to BIS reporting banks (*vis-à-vis* the banking sector) as a percentage of domestic credit to the private sector.

fdi = Foreign direct investment over total capital inflows.

Notes

1. John Hawkins and Marc Klau, "Measuring the Potential Vulnerabilities in Emerging Market Economies", BIS Working Paper No. 93, October 2000.

2. Note that this argument implicitly assumes that the foreign company has some intrinsic advantage over a domestic company and so exploits the possibility of gain opened up by an exchange rate depreciation.

Will the FDI Boom Bring More Growth?

*Ricardo Hausmann and Patricia Cortés**

Introduction

The boom in capital flows to emerging economies is over, but the boom in FDI is not. In 2000, the developing world is expecting a smaller inflow of capital than in 1992. However, foreign direct investment (FDI) has quadrupled in the last eight years and represents in 2000 more than 100 per cent of both net capital flows and current account deficits. Said differently, nowadays FDI is the only net source of financing for the developing world (see Table 1).

Latin America does not escape this global trend. While total net flows in 2000 are expected to be smaller than in 1992, FDI flows are four times higher than in that year, representing now all the net financing of the current account and 120 per cent of the total net inflows. Is this good news for the growth prospects of Latin America?

This paper asks whether an increase in FDI, in the context of retrenching total net flows, is a harbinger of better times to come. More precisely, it asks whether increased flows or stocks of FDI and other forms of foreign capital tend to cause higher growth. Our analysis is based on a sample of 43 developing countries in the period 1975-95. It uses a two-stage, generalised method of moments (GMM) dynamic panel technique in order to deal with causality problems and take account of country-specific and period-specific characteristics. Its main conclusion is that a higher inflow of FDI is associated with higher growth, but not more and in fact less than the growth spurt generated by higher inflows of private long-term or short-term debt. Hence, a rise in FDI in the context of dwindling flows is not good for growth. Moreover, a higher stock of FDI, which should capture the longer-term effects of FDI, is not associated with higher future growth. This conclusion is no different and, in fact, even worse for countries that have higher education levels, better institutions or are more open.

---

* The authors would like to thank Eduardo Fernández-Arias for his valuable comments and Laura Dos Reis for excellent research support.

Table 1. **Recent Evolution of Capital Flows to Developing Countries (1991-2000)**

Region	Year									
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Developing Countries										
Net private capital flows	118.1	106.9	128.6	142.3	211.4	224.7	115.2	66.2	67.4	36.4
Foreign direct investment	31.5	35.7	57.9	81.0	95.8	119.5	141.3	151.6	154.6	141.9
Current account deficit	-85.1	79.3	119.5	74.2	93.3	94.7	65.2	55.9	-22.7	-65.5
FDI/net private capital flows	26.7%	33.4%	45%	56.9%	45.3%	53.2%	122.7%	229%	229.4%	389.8%
FDI/current account deficit	-37%	45%	48.5%	109.2%	102.7%	126.2%	216.7%	271.2%	-681.1%	-216.6%
Western Hemisphere										
Net private capital flows	24.1	53.4	35.5	39.9	46.0	64.0	67.6	61.7	40.4	47.5
Foreign direct investment	11.3	13.9	13.4	23.1	25.0	39.4	53.4	56.5	65.3	56.6
Current account deficit	-16.9	34.8	46.1	52.2	37.1	38.9	65.1	89.5	56.3	58.7
FDI/net private capital flows	46.9%	26%	37.7%	57.9%	54.3%	61.6%	79%	91.6%	161.6%	119.2%
FDI/current account deficit	-66.9%	39.9%	29.1%	44.3%	67.4%	101.3%	82%	63.1%	116%	96.4%
Share in flows to developing countries										
-Net private capital flows	20.4%	50%	27.6%	28%	21.8%	28.5%	58.7%	93.2%	59.9%	130.5%
-Foreign direct investment	35.9%	38.9%	23.1%	28.5%	26.1%	33%	37.8%	37.3%	42.2%	39.9%
Asian Crisis Countries										
Net private capital flows	24.8	21.4	22.5	33.6	53.9	67.4	15.6	28.2	2.9	22.4
Foreign direct investment	6.2	6.3	6.7	6.5	8.8	9.8	9.8	10.3	13.1	9.1
Current account deficit	-25.2	16.1	13.5	23.2	40.4	53	25	-69.7	-61.7	-44.3
FDI/net private capital flows	25%	29.4%	29.8%	19.3%	16.3%	14.5%	62.8%	36.5%	451.7%	40.6%
FDI/current account deficit	-24.6%	39.1%	49.6%	28%	21.8%	18.5%	39.2%	-14.8%	-21.2%	-20.5%
Other Asian Emerging										
Net private capital flows	7.4	-7.4	20.8	36	38.3	52.6	22.3	-12.5	-0.6	4.6
Foreign direct investment	8.3	8.4	26.3	38.2	39.3	44.4	45.3	49.6	41.1	38.4
Current account deficit	23.7	14.1	-8.2	18.9	9.2	16.3	50.4	41.4	36.7	34.9
FDI/net private capital flows	112.2%	-113.5%	126.4%	106.1%	102.6%	84.4%	203.1%	-396.8%	-6850%	834.8%
FDI/current account deficit	35%	59.6%	-320.7%	202.1%	427.2%	272.4%	89.9%	119.8%	112%	110%
Total Asia										
Net private capital flows	32.2	14.0	43.3	69.6	92.2	120.0	37.9	15.7	2.3	27.0
Foreign direct investment	14.5	14.7	33.0	44.7	48.1	54.2	55.1	59.9	54.2	47.5
Current account deficit	-1.5	30.2	5.3	42.1	49.6	69.3	75.4	-28.3	-25.0	-9.4
FDI/net private capital flows	20.4%	50%	27.6%	28%	21.8%	28.5%	58.7%	93.2%	59.9%	130.5%
FDI/current account deficit	35.9%	38.9%	23.1%	28.5%	26.1%	33%	37.8%	37.3%	42.2%	39.9%

Notes: Asia includes Korea, Singapore and Chinese Taipei. No data for Hong Kong-China are available.
Asian Crisis countries: Indonesia, Korea, Malaysia, the Philippines and Thailand.

Source: 1991 with WEO October 1999; 1992 forecast, WEO, September 2000.

The answer we arrive at may seem surprising and somewhat contradictory to previous studies. Authors most frequently assume that FDI is different from other forms of foreign capital because it implies managerial control of the company. This permits a greater flow of managerial, technological and market know-how which firms would otherwise not provide, given the difficulty in defining property rights over these capabilities. Hence, FDI relieves obstacles to the flow of ideas and technologies across borders and thus makes technological progress more intense. Moreover, once a foreign firm is present in a country, spillover effects to other firms might occur, thus spurring growth. The growth effect may depend on the ability of the country to adapt the new technology, which should be related to its level of education and to some measure of its institutional capabilities. Furthermore, Bhagwati (1978) has argued that inward-looking countries tend to attract FDI directed at the sheltered domestic market, while outward-looking countries attract more world-class technologies and hence derive larger growth benefits.

The empirical growth literature has tried to find evidence to corroborate these views. For example, Borensztein, De Gregorio and Lee (1995) found that, controlling for the level of investment, FDI's impact on growth is 70 per cent greater than that of regular investment. They also found that: "The higher productivity of FDI holds only when the host country has a minimum threshold stock of human capital. In addition, FDI has the effect of increasing total investment in the economy more than one for one, which suggests the predominance of complementarity effects with domestic firms"[1]. Balasubramanyam, Salisu and Sapsford (1996) find support for the assumption proposed by Jagdish Bhagwati, according to which the growth-enhancing effects of FDI are stronger in countries that pursue export promotion policies than in those following an import substitution strategy. Olofsdotter (1998), using a cross-section of 50 countries both developing and developed, concludes that an increase in the stock of FDI appears to be positively related to growth. Furthermore, the regression results suggest that the beneficial effects of FDI are stronger in countries with higher levels of institutional capability. By contrast and in opposition to the previous authors he finds no positive growth effects from the stock of FDI in combination with the degree of openness or the level of human capital. Blomstrom, Lipsey and Zejan (1996) arrive at a similar conclusion. Working with a sample of 69 developing countries they find that FDI has a stronger effect on growth in the richer developing countries, but not in the poorer ones. They find that the effect on growth is not due to the technology embedded in machinery imports, and hence suggest that it must be disembodied in the firm. Moreover, they fail to find a significant growth effect from the interaction between FDI and the level of education. Hejazi and Safarian (1999), using OECD data, study the effect of home country R&D investment on host country FDI and machinery import growth. They find that FDI generates growth spillovers, while machinery imports do not.

These results have a few methodological elements in common. First, they tend to be based on the variance contained in the cross-section variation of the data and not on its time-series component. Hence, this evidence does not allow us to infer what the consequence of the recent rise in FDI will be. Also, these results are vulnerable to the omission of country-specific characteristics from the equation, which may bias the results.

Second, none of these results control for other forms of foreign capital inflows. The assumption that FDI is different is never tested. Technologically advanced, well-managed firms also fund their activities with domestic and international debt. Is the growth effect really related to the amount of financing that takes the form of FDI? Would more debt not allow the same firms to achieve the same growth impact?

This is a serious limitation of current studies. Technology, management, market access are all assets of firms. FDI is a liability. Hence, the implicit assumption is that changes in the activities of foreign firms are well captured by changes in FDI[2]. This assumes that financing decisions are similar across countries and over time. But, as argued in Hausmann and Fernández-Arias (2000*a*, *b*), standard corporate finance models that include taxes and costly bankruptcy would predict that the leverage ratio of the firm would go up with higher expected growth and lower risk. Hence, the leverage ratio should not be constant either over time or across countries. For example, at present FDI is larger than total net capital inflows, implying that we are in the presence of a process of de-leveraging, not of expanding total assets. Moreover, this shift is consistent with lower expected growth and higher risks.

Moreover, FDI is not just equity. It is really a redefinition of the borders of the firm, an integration of the firm into a larger hierarchical unit. Following Coase (1937) and Williamson (1975), integration happens as a way of avoiding transaction costs. Hence, worsening credit markets can justify a move away from market-based intermediation in favour of intra-firm (although international) allocation processes. Foreign companies may be buying domestic firms not only because their superior technology can better exploit the opportunities the market offers, but also because they need not rely on mediocre debt markets. Moreover, foreign companies may be buying domestic firms not with their own equity but by raising debt in world markets. The debt appears in the books of the parent company, while the merger is registered as FDI. This means that in the aggregate, financing still takes the form of debt, albeit raised in a different market and transferred through an intra-firm transaction. In this case, the merger may be efficient, but tends to happen in response to a worsening situation. For these reasons, one may expect to find a negative relationship between FDI and growth. It is when market conditions are bad or worsening that capital flows take the form of FDI.

Finally, the view that FDI is better assumes away the incentive-improving characteristics of debt, when firms suffer from agency problems and other forms of asymmetric information. By forcing managers to divulge information and by forcing them to make payments, debt may improve the efficiency in the allocation and use of resources (Hart, 1995; Aghion and Bolton, 1992). Absence of good institutions to

support financial markets may be deleterious to growth (Beck, Levine and Loayza, 1999), and at the same time may encourage capital flows to take the form of FDI as a second-best way to circumvent these limitations.

Consequently, the link between FDI liabilities and growth is necessarily an empirical issue. Does the technological spillover story dominate, or are there other financial considerations which may cause the story to be reversed?

To answer this question the paper is structured as follows. The next section describes our methodological approach and the general characteristics of the data. Then follows a study of the relationship between capital flows and growth. We then review some of the channels that have been discussed in the literature linking FDI with growth before concluding in the last section.

Methodology and Data

To tackle the issue we use a Barro-style growth framework, as is common in the literature. However, we follow Arellano and Bond (1991) in using a dynamic panel data estimation technique that uses a two-stage generalised method of moments (GMM) approach to deal with problems of endogeneity. This technique uses lagged values of the variables as instruments, given that they are not correlated with the current residual. Also, because it uses country-specific dummies as in a fixed effects estimation, it takes account of any missing variable that may be related to country characteristics not included in the equation. It is the time-series variation that drives the results. This is important for our purposes, as we want to ascertain the impact of rising FDI and other capital flows for the same country over time. We also report tests for the absence of serial correlation, essential for the consistency of the estimators, and for the possibility of over-identifying restrictions (Sargan test).

We constructed a data set of 43 developing countries including 20 Latin American and Caribbean countries, 13 African countries, five East Asian countries, three South Asian countries and two North African countries. The data characteristics and sources are presented in the Appendix. We use data from 1970 to 1995, organised in five-year averages, in order to limit the effect of cyclical fluctuations around the long-run rate of growth. However, the estimation technique will drop the first period in order to use it as an instrument for the right-hand-side variables of the following periods. The sample includes only developing countries because we use the Global Development Finance statistics published by the World Bank to disaggregate capital flows into FDI, long-term public and private debt and short-term debt. Unfortunately, these do not include developed countries.

Table 2 presents the evolution of growth and capital inflows for the different developing regions. Several characteristics emerge from the data. First, the growth experience is very varied and shows no common trend. In general, growth was high in the late 1970s. The early 1980s were a more difficult period in Latin America and

Africa, while the late 1980s were more troublesome in South Asia and the Middle East. The 1990s saw a recovery in growth in South Asia and Latin America but not in the Middle East or in Africa. Growth in East Asia was high throughout the period.

Table 2. **Evolution of Growth and Capital Inflows by Region (Five-year Average)**

Region	Period				
	1971-75	1976-80	1981-85	1986-90	1991-95
Latin America					
Growth of real GDP per capita	0.0200	0.0294	-0.0220	0.0000	0.0188
FDI Flows	0.0084	0.0103	0.0088	0.0088	0.0213
L-T Private debt flows	0.0062	0.0030	0.0011	-0.0007	0.0032
L-T Public debt flows	0.0163	0.0407	0.0398	0.0135	0.0061
S-T Debt flows	0.0031	0.0163	-0.0003	0.0012	0.0088
Africa					
Growth of real GDP per capita	0.0015	0.0296	-0.0139	0.0032	-0.0126
FDI Flows	0.0038	0.0139	0.0061	0.0057	0.0105
L-T Private debt flows	0.0038	0.0026	0.0009	0.0015	-0.0006
L-T Public debt flows	0.0230	0.0579	0.0419	0.0421	0.0345
S-T Debt flows	0.0021	0.0141	0.0024	0.0055	-0.0010
East Asia					
Growth of real GDP per capita	0.0326	0.0544	0.0248	0.0568	0.0480
FDI Flows	0.0263	0.0101	0.0102	0.0141	0.0241
L-T Private debt flows	0.0084	0.0078	0.0075	0.0039	0.0155
L-T Public debt flows	0.0152	0.0326	0.0383	-0.0049	0.0054
S-T Debt flows	0.0048	0.0283	0.0063	0.0037	0.0210
Asia					
Growth of real GDP per capita	0.0073	0.0258	0.0180	0.0002	0.0331
FDI Flows	0.0000	0.0090	0.0173	0.0177	0.0175
L-T Private debt flows	0.0000	-0.0046	0.0257	0.0133	0.0010
L-T Public debt flows	0.0185	0.0299	0.0442	0.0255	0.0164
S-T Debt flows	0.0020	0.0066	0.0035	0.0033	0.0016
Middle East					
Growth of real GDP per capita		0.0416	0.0256	-0.0092	-0.0050
FDI Flows		0.0178	0.0118	0.0140	0.0064
L-T Private debt flows		0.0016	0.0016	0.0005	-0.0016
L-T Public debt flows		0.0997	0.0466	0.0205	0.0077
S-T Debt flows		0.0268	0.0037	-0.0063	-0.0028

Note: All flows are calculated as a percentage of GDP.

Source: GDF and IMF.

While growth shows no common trend, capital flows do. FDI in 1991-95 is at record or near record levels in all regions except the Middle East. Public debt peaked in the late 1970s and early 1980s and is now a small component of the capital account. Short-term debt peaked in the late 1970s and has been important in the recent period only in East Asia and Latin America. By contrast, private long-term debt has been important in East Asia throughout the period and in South Asia only in the 1980s. Hence, there is an interesting variance in both growth experiences and in the composition of capital inflows that may shed some light on their relationship both contemporaneously and in the longer run.

Table 3 shows the correlation matrix between these variables. Growth has a positive and significant correlation with the contemporaneous flows of FDI but an insignificant positive correlation with the pre-existing stock of FDI. Growth also has a similarly positive and significant correlation with the contemporaneous flow of long-term debt, of similar magnitude, and a stronger positive correlation with the

Table 3. **Correlation Matrix**

	Growth	FDI		L-T Private External Debt		L-T Public External Debt		S-T External Debt	
		Stock	Flow	Stock	Flow	Stock	Flow	Stock	Flow
Growth	1								
FDI									
Stock	0.0315	1							
	0.711								
Flow	0.2962	0.1549	1						
	0.000	0.037							
L-T Private External Debt									
Stock	0.1125	0.1715	0.1045	1					
	0.184	0.021	0.160						
Flow	0.2378	-0.1144	0.2734	0.0022	1				
	0.005	0.124	0.000	0.977					
L-T Public External Debt									
Stock	-0.0762	-0.063	0.1501	-0.0087	-0.1108	1			
	0.369	0.398	0.043	0.907	0.137				
Flow	-0.1793	0.0749	0.0694	-0.1236	-0.061	-0.0047	1		
	0.033	0.315	0.352	0.097	0.413	0.949			
S-T External Debt									
Stock	-0.1838	-0.2294	-0.0949	0.0485	0.0038	0.4322	-0.0592	1	
	0.029	0.002	0.203	0.515	0.960	0.000	0.428		
Flow	0.3903	0.0385	0.0753	0.023	0.2099	-0.2037	0.142	-0.1319	1
	0.000	0.605	0.313	0.758	0.004	0.006	0.056	0.076	

Notes: Growth refers to the growth rate of real GDP per capita.
All stocks are initial and both flows and stocks are calculated as a percentage of GDP.
The smaller numbers represent the p-value.
There are approximately 182 observations per correlation.

pre-existing stock of long-term debt than does FDI. This means that the presence of FDI, as reflected in the stocks, is not more strongly associated with future growth than the presence of long-term private debt.

Growth has an even stronger positive correlation with the contemporaneous flow of short-term debt but has a negative and significant correlation with the pre-existing stock. Hence, the relationship between short-term debt and growth appears to be appropriately short term. Finally, public long-term debt is negatively correlated with growth, much more strongly and significantly in the contemporaneous flows than in the pre-existing stocks. This would be consistent with a counter-cyclical logic in public borrowing.

It is also interesting to note that FDI is the only form of capital that has a positive and significant correlation between its pre-existing stock and the flow during the following five years. This is an indication of persistence. At the opposite extreme is short-term debt, which has a negative and significant correlation between stocks and flows, indicating a strong reversion to some mean value. Long-term private and public debts have essentially no correlation between stocks and flows.

The table also shows some indication of the short- and long-term complementarity between FDI and long-term debt as indicated by the positive and significant correlation between these two variables in both stocks and flows. By contrast, FDI seems to be a long-run substitute of short-term credit as evidenced by the negative and significant relationship between both stocks.

To analyse the relationship between growth and FDI we will follow Beck, Levine and Loayza (1999) and use a benchmark model of growth, which includes seven control variables[3]: initial GDP, the domestic investment ratio, years of secondary education of the labour force, the government consumption ratio, the log of 1 + inflation rate, the log of the black market premium and the degree of openness of the economy. This last variable is constructed by taking the residuals of the regression between (exports+imports)/GDP and the log of population, in order to take account of the fact that smaller countries tend to be more open. We always include the investment ratio because we want to test the impact of capital flows beyond the effect that they may have on domestic investment. We use this benchmark model to study the effect of foreign capital. The results are presented in the following section.

Is FDI More Growth-Promoting than Other Forms of Foreign Capital?

To answer this question, we use our benchmark models and include both stocks and flows of the different forms of foreign capital. As mentioned earlier, we use a two-stage, GMM dynamic panel data estimation technique developed by Arellano and Bond (1991). Table 4 presents the results when we include successively different flows and stocks of foreign capital. Table 5 presents the results when we introduce more than one type of capital at the same time.

We find that the flow of FDI has a positive effect on contemporaneous growth (Table 4, models 3 and 4), but this effect is no larger and in fact somewhat smaller than the effects of the flow of long-term private debt (Table 4, models 6 and 7) or short-term debt (Table 4, models 12 and 13). When different flows are included simultaneously (Table 5, models 4 and 5), a similar result is found: the flow of FDI has a positive effect on growth, but one that is not larger, and in fact is often smaller than other forms of private capital. By contrast, the flow of long-term public debt is negatively associated with contemporaneous growth.

Moreover, the stock of FDI is not associated with subsequent growth. This is an important result, because it means that the presence of foreign firms as captured by the stock of FDI does not have perceptible effects on subsequent growth. This result is obtained when the stock of FDI is introduced by itself (Table 4, model 2), when it is introduced together with the flow of FDI (Table 4, model 4) and when the stock of FDI is included with other stocks of foreign capital (Table 5, models 1, 2 and 3). All estimated coefficients are negative but only one is significantly so.

The effect of the initial stock of FDI on subsequent growth contrasts with that of the other stocks of foreign capital. Long-term debt to the private sector does seem to be associated with subsequent growth in all the estimated models (Table 4, models 5 and 7; and Table 5, models 1, 2 and 3). This would be compatible with the idea that the kinds of institutions that support a large stock of private long-term debt also make resource allocation more efficient, and hence are associated with higher subsequent growth. By contrast, the stocks of both public debt and short-term debt have negative and significant effects on subsequent growth (Table 4, models 8, 10, 11 and 13; and Table 5, models 2 and 3).

It must be pointed out that we do find significant time dummies, indicating that growth varies systematically in the world over time, but inclusion of time dummies does not change any of the results. We also tested whether these results are due to the fast growing East Asian countries. We found that the inclusion of an East Asian dummy does not change the results for the rest of the world[4].

Table 4. **Effects on Growth of Different Forms of External Capital**

Dynamic Panel Model, estimated with 2-stage GMM
Period: 1970-95
Number of Countries: 43 developing

Dependent Variable: GDP per capita growth, 5-year total

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
Independent Variables	Coef.	t-est.	Coef.	t-est.	Coef.	t-est	Coef.	t-est.	Coef.	t-est.	Coef.	t-est.
Initial GDP per capita (log)	0.050	1.1	0.000	0.0	0.000	0.1	0.000	0.1	0.002	0 4	0.001	0.2
Basic Controls												
Domestic investment/GDP	0.513	7.2	0.495	6.3	0.286	3.8	0.395	4.0	0.538	6.5	0.556	7.5
Average years of secondary education	0.014	1.3	0.024	1.9	0.018	1.7	0.016	1.1	0.024	1.9	0.026	3.2
Policy Controls												
Government consumption/GDP	-1.179	-8.7	-1.061	-5.9	-1.020	-6.5	-1.016	-5.8	-1.127	-7.9	-1.165	-11.5
Inflation (log(l+inf))	-0.145	-12.3	-0.111	-3.6	-0.102	-5.4	-0.103	-3.4	-0.135	-4.0	-0.108	-3.3
Black market premium (log)	-0.057	-3.8	-0.070	-3.9	-0.032	-2.0	-0.036	-1.8	-0.057	-3.6	-0.043	-2.8
Openness (*)	0.130	10.4	0.152	6.0	0.151	7.6	0.144	6.1	0.105	6.2	0.103	5.8
FDI												
Initial stock/GDP			-0.010	-0.3			-0.060	-1.6				
Annual average flows/GDP					2.357	4.4	1.793	3.6				
L-T External Private Debt												
Initial stock/GDP									0.347	3.2		
Annual average flows/GDP											3.190	6.2
L-T External Public Debt												
Initial stock/GDP												
Annual average flows/GDP												
S-T External Debt												
Initial stock/GDP												
Annual average flows/GDP												
Tests												
Wald test (p-value)	0		0		0		0		0		0	
Sargan test (p-value)	0.99		0.99		0.99		0.99		0.99		0.99	
Serial correlation test (p-value)	0.60		0.52		0.90		0.86		0.54		0.30	

* Adjusted residuals (all positive values) of the regression (x+m)/gdp = f(log(population)).

Notes: 1) The null hypothesis of the Wald test is that the variables are jointly significant.
2) The null hypothesis of the Sargan test is the validity of the instruments used.
3) The null hypothesis of the serial correlation test is the absence of correlation.

Table 4 (cont'd). **Effects on Growth of Different Forms of External Capital**

Dependent Variable: GDP per capita growth, 5-year total

	Model 7		Model 8		Model 9		Mode1 10		Model 11		Model 12		Model 13	
Independent Variables	Coef.	t-est.	Coef.	t-est.	Coef.	t-est.	Coef.	t-est.	Coef.	t-est.	Coef.	t-est.	Coef.	t-est.
Initial GDP per capita (log)	-0.003	-0.7	0.000	-0.1	0.005	1.5	0.001	0.2	0.006	1.8	-0.011	-3.19	-0.003	-0.60
Basic Controls														
Domestic investment/GDP	0.587	6.4	0.483	6.0	0.506	7.1	0.501	5.8	0.446	5.9	0.293	3.36	0.292	3.85
Average years of secondary education	0.035	3.6	0.037	2.6	0.012	1.1	0.029	2.1	0.040	3.8	0.042	3.93	0.049	4.65
Policy Controls														
Government consumption/GDP	-1.057	-8.6	-0.967	-5.9	-1.096	-7.7	-0.869	-4.3	-1.024	-7.1	-0.629	-4.69	-0.701	-4.69
Inflation (log(1+inf))	-0.103	-2.8	-0.113	-3.7	-0.117	-5.0	-0.106	-3.5	-0.104	-3.3	-0.091	-3.89	-0.086	-2.83
Black market premium (log)	-0.048	-2.9	-0.064	-3.8	-0.061	-4.3	-0.061	-4.5	-0.056	-3.4	-0.019	-1.66	-0.039	-3.54
Openness (*)	0.075	3.3	0.132	5.4	0.122	7.1	0.123	4.5	0.118	4.1	0.146	3.79	0.120	4.09
FDI														
Initial stock/GDP														
Annual average flows/GDP														
L-T External Private Debt														
Initial stock/GDP	0.230	1.6												
Annual average flows/GDP	2.647	2.6												
L-T External Public Debt														
Initial stock/GDP			-0.035	-2.1			-0.035	-1.8						
Annual average flows/GDP					-0.551	-2.3	-0.579	-2.0						
S-T External Debt														
Initial stock/GDP									-0.567	-5.8			-0.464	-3.37
Annual average flows/GDP											6.50691	10.26	4.582	5.04
Tests														
Wald test (p-value)	0		0		0		0		0		0		0	
Sargan test (p-value)	0.99		0.99		0.99		0.99		0.99		0.99		0.99	
Serial correlation test (p-value)	0.38		0.32		0.62		0.43		0.54		0.49		0.34	

*Adjusted residuals (all positive values) of the regression (x+m)/gdp = f(log(population))

Notes: 1) The null hypothesis of the Wald test is that the variables are jointly significant.
2) The null hypothesis of the Sargan test is the validity of the instruments used.
3) The null hypothesis of the serial correlation test is the absence of correlation.

Table 5. **Effects on Growth of Different Forms of External Capital (Jointly Introduced)**

Dynamic Panel Model, estimated with 2-stage GMM.
Period: 1970-95
Number of Countries: 43 developing

Dependent Variable: GDP per capita growth, 5-year total

	Model 1		Model 2		Model 3		Model 4		Model 5	
Independent Variables	Coef.	t-est.	Coef.	t-est.	Coef.	t-est.	Coef.	t-est.	Coef.	t-est.
Initial GDP per capita (log)	-0.004	-0.7	-0.006	-1.2	0.004	0.7	0.003	0.5	-0.006	-1.8
Basic Controls										
Domestic investment/GDP	0.495	4.7	0.497	4.6	0.397	3.9	0.302	2.6	0.195	1.6
Average years of secondary education	0.029	2.0	0.044	3.1	0.042	2.8	0.003	0.2	0.020	1.7
Policy Controls									.	
Government consumption/GDP	-1.011	-5.4	-0.828	-4.4	-0.983	-5.9	-0.984	-7.3	-0.791	-5.8
Inflation (log(1+inf))	-0.116	-3.3	-0.098	-2.5	-0.124	-3.7	-0.063	-2.1	-0.054	-2.1
Black market premium (log)	-0.052	-3.0	-0.060	-3.3	-0.050	-2.9	-0.015	-0.8	0.003	0.2
Openness (*)	0.152	4.0	0.131	3.7	0.146	3.5	0.121	5.0	0.155	4.2
FDI										
Initial stock/GDP	-0.017	-0.5	-0.028	-0.6	-0.118	-2.2				
Annual average flows/GDP							2.333	3.1	1.388	2.5
L-T External Private Debt										
Initial stock/GDP	0.456	2.7	0.439	2.0	0.523	3.0				
Annual average flows/GDP							3.561	4.4	1.403	1.4
L-T External Public Debt										
Initial stock/GDP			-0.033	-1.6						
Annual average flows/GDP							-0.717347	-3.52		
S-T External Debt										
Initial stock/GDP					-0.518	-4.5				
Annual average flows/GDP									5.567	6.2
Tests										
Wald test (p-value)	0		0		0		0		0	
Sargan test (p-value)	0.99		0.99		0.99		0.99		0.99	
Serial correlation test (p-value)	0.50		0.35		0.33		0.57		0.86	

* Adjusted residuals (all positive values) of the regression (x+m)/gdp = f(log(population))

Notes: 1) The null hypothesis of the Wald test is that the variables are jointly significant.
2) The null hypothesis of the Sargan test is the validity of the instruments used.
3) The null hypothesis of the Serial correlation test is the absence of correlation.

Hence, this evidence does not point to any special link between growth and FDI either contemporaneously or in a more long-run fashion, calling into question the special role of FDI financial flows in technological spillovers.

FDI, Other Forms of Capital and the Channels of Growth

We next ask whether the connections between FDI and growth are significantly related to interaction effects with other characteristics of the country, as discussed in the literature, such as the level of education, the level of development, the degree of openness, the importance of natural resources, the degree of financial development and the institutional development of the country. We also ask whether the more recent flows of FDI (1991-95) have different effects from those of previous periods.

Are the growth spillovers caused by FDI related to the level of development of a country?

Education

The idea that the level of development, whether measured as the level of educational attainment of a country or its income, may be related to the growth effects of FDI is persuasive, but the sign is not obvious. On the one hand, spillovers of FDI into other firms may be related to the general capabilities of the country to adapt technologies or otherwise imitate foreign firms. In more backward settings, foreign firms may behave as an enclave and thus generate fewer spillovers. This is the interpretation proposed, for example, by Borenzstein, De Gregorio and Lee (1995). However, Olofsdotter (1998) and Blomstrom, Lipsey and Zejan (1996) fail to find this result when using the level of education, although the latter do find a relationship between the growth effects of FDI and the level of income of the recipient country.

By contrast, as pointed out by de Mello (1997), the more backward the country, the larger the productivity gap with advanced nations. Hence, this would cause the growth effect of FDI to be larger in poorer countries.

To explore this question within our framework, we introduce in the growth regression an interaction term between FDI and the level of educational attainment as measured by the average number of years of secondary schooling of the labour force. The result is presented in Table 6, models 1 and 2. We find a strong negative growth effect of the interaction between the level of educational attainment and FDI, whether we use the pre-existing stock or the contemporaneous flow. The effects are significant

Table 6. **Are the Growth Effects of FDI Related to the Level of Development of a Country?**

Dynamic Panel Model, estimated with 2-stage GMM.
Period: 1970-95
Number of Countries: 43 developing

Dependent Variable: GDP per capita growth, 5-year total

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6		Model 7		Model 8	
Independent Variables	Coef.	t-est.	Coef.	t- est.	Coef.	t-est.	Coef.	t-est.	Coef.	t-est.	Coef.	t-est.	Coef.	t-est.	Coef.	t-est.
Initial GDP per capita (log)	-0.014	-2.6	0.000	0.0	-0.002	-0.3	-0.002	-0.4	0.003	0.4	-0.004	-0.9	0.000	0.0	-0.003	-0.5
Basic Controls	0.572	5.5	0.344	3.0	0.511	4.3	0.441	4.4	0.507	4.8	0.497	11.9	0.535	6.2	0.353	2.8
Domestic investment/GDP	0.085	7.2	0.033	2.6	0.034	3.1	0.025	2.2	0.024	1.5	0.021	2.1	0.038	2.8	0.028	3.0
Average years of secondary education																
Policy Controls	-0.962	-5.5	-1.130	-7.0	-1.136	-8.4	-1.048	-7.3	-1.037	-5.5	-1.111	-8.9	-1.031	-4.4	-1.089	-6.3
Inflation (log(1+inf))	-0.112	-3.0	-0.099	-2.8	-0.096	-2.9	-0.093	-2.9	-0.114	-3.7	-0.126	-4.1	-0.149	-3.4	-0.105	-3.0
Black market premium (log)	-0.035	-2.1	-0.026	-1.3	-0.075	-4.9	-0.030	-1.7	-0.070	-3.9	-0.042	-3.0	-0.072	-4.2	-0.026	-1.4
Openness(*) (')	0.144	3.6	0.147	6.4	0.151	4.6	0.126	7.2	0.106	1.5	0.198	7.1	0.123	4.0	0.173	7.3
FDI																
Initial stock/GDP	0.438	4.9			0.264	1.5			-0.176	-1.0			0.025	0.9		
Annual average flows/GDP			3.432	4.5			3.967	2.3			2.872	3.7			2.811	5.1
Interactions with FDI																
Stock*Average years of secondary education	-0.385	-7.4														
Flows *Average years of secondary education			-1.338	-2.7												
Stock* Index of institutional quality					-0.120	-1.8										
Flows * Index of institutional quality							-0.993	-1.3								
Stock* Openness									0.246	0.9						
Flows * Openness											-2.7882	-4.2334				
Stock* Dummy for oil exporting country													-0.2176	-3.17		
Flows* Dummy for oil exporting country															-2.3875	-2.93
Tests																
Wald test (p-value)	0		0		0		0		0		0		0		0	
Sargan test (p-value)	0.99		0.99		0.99		0.99		0.99		0.99		0.99		0.99	
Serial correlation test (p-value)	0.27		0.94		0.48		0.98		0.39		0.76		0.29		0.92	

* Adjusted residuals (all positive values) of the regression (x+m)/gdp = f(log(population))
Notes: 1) The null hypothesis of the Wald test is that the variables are jointly significant.
2) The null hypothesis of the Sargan test is the validity of the instruments used.
3) The null hypothesis of the Serial correlation test is the absence of correlation.

and relatively large. For a country with a stock of FDI of 10 per cent of GDP, one additional year of secondary schooling lowers the predicted growth rate by four percentage points in the cumulative growth rate of the following five years, i.e. some 0.7 per cent per year. Hence, we find the opposite effect to that reported by Borenzstein, De Gregorio and Lee (1995).

The Level of Development

To study the impact of the level of development we use an interaction term between foreign capital and a dummy that takes the value of 1 if the country is classified, by the World Bank, as having low income. As shown, we find that the effect of the stock of FDI on subsequent growth is insignificant in both low-income and middle-income countries (Table 7, model 1). However, the effect of the contemporaneous flow of FDI seems to be smaller in low-income countries (Table 7, model 2). Still, it would be hard to argue that this result is proof of something related to spillovers special to FDI. For example, we find that the growth effects of private long-term and short-term flows are larger in low-income countries (Table 7, models 4 and 8). By contrast, the negative effect of the stock of public debt on subsequent growth seems to be concentrated in the low-income countries (Table 7, model 5).

Hence, we do not find evidence of differential effects of the stock of FDI in subsequent growth either in low-income or middle-income countries. We do find that private debt flows seem to have a more expansionary effect on low-income countries, which would be consistent with them suffering from a proportionally more constrained private sector. Low-income countries seem to make worse use of public resources.

Institutional Development

We perform a similar analysis using the interaction between FDI and an index of quality of government based on Kaufmann *et al*. (1999)[5]. Again, we find negative effects of the interaction term of FDI and institutional development on growth, whether we look at stocks or flows. Hence, we are unable to reproduce the claim by Olofsdotter (1998) that the growth effects of FDI depend on the institutional development of the country. We do find that institutional development improves the growth effects of both government debt and short-term debt.

Hence, we do not find evidence in favour of a story based on the relationship between FDI and spillovers from the quality of institutions of a country.

Openness

Here we test the idea that FDI may have a larger impact on growth in more open economies, as proposed by Jagdish Bhagwati. The idea is that in more sheltered economies, foreign companies need not use world-class technologies and in fact may be motivated by the rents available in a protected local market. Balasubramanyam, Salisu and Sapsford (1996) find evidence in support of this thesis, but Olofsdotter (1998) does not.

Table 7. **Growth Effects of External Capital in Low- and Middle-Income Countries**

Dynamic Panel Model, estimated with 2-stage GMM.
Period: 1970-95
Number of Countries: 43 developing

Dependent Variable: GDP per capita growth, 5-year total

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6		Model 7	
Independent Variables**	Coef.	t-est.	Coef.	t-est	Coef.	t-est	Coef..	t-est	Coef.	t-est	Coef.	t-est	Coef.	t-est
FDI														
Stock * dummy for low-income countries	-0.007	- 0.1	.											
Stock * dummy for middle-income countries	-0.030	-0.6												
Flows * dummy for low-income countries			0.753	1.2										
Flows dummy for middle-income countries			1.865	2.3										
L-T External Private Debt														
Stock * dummy for low-income countries					0.171	0.4								
Stock * dummy for middle-income countries					0.407	3.7								
Flows * dummy for low-income countries							11.190	3.5						
Flows dummy for middle-income countries							2.497	2.6						
L-T External Public Debt														
Stock * dummy for low-income countries									-0.129	7.3				
Stock * dummy for middle-income countries									0.018	0.9				
Flows* dummy for low-income countries											-0.550	-1.29		
Flows dummy for middle-income countries											-0.969	-3.21		
S-T External Debt														
Stock * dummy for low-income countries													-0.716	-11.03
Stock* dummy for middle-income countries													-0.485	-3.47
Flows * dummy for low-income countries														
Flows dummy for middle-income countries														
Tests														
Wald test (p-value)	0		0		0		0		0		0		0	
Sargan test (p-value)	0.99		0.99		0.99		0.99		0.99		0.99		0.99	
Serial correlation test (p-value)	0.48		0.90		0.50		0.36		0.55		0.86		0.64	

* Stocks and flows are calculated as a percentage of GDP.

** Basic and policy controls were included in all the regressions although not reported.
Notes: 1) The null hypothesis of the Wald test is that the variables are jointly significant.
2) The null hypothesis of the Sargan test is the validity of the instruments used.
3) The null hypothesis of the serial correlation test is the absence of correlation.

We test this hypothesis by including an interaction term between FDI and our measure of openness. The results are presented in Table 6. We find no evidence in favour of a positive growth effect between FDI and openness. Even more, our results show that increased openness reduces the positive growth effect of FDI flows. This result can be interpreted under a Keynesian perspective, in the sense that more closed economies have bigger demand multipliers than open economies.

We also observe stronger interactions of openness with other types of flows. For example, we find a positive interaction between public debt and openness, indicating that openness makes the negative effects of public debt on growth less severe — not that this cannot be rationalised using the Bhagwati hypothesis. We also find that openness makes the flow of short-term debt less expansionary, while the stock of short-term debt is less contractionary in more open economies, leading to a more stable overall effect of short-term debt.

Natural Resources and Oil Exports

Is FDI less effective in resource-rich countries such as the oil exporters? To find out we interact the stock and flow of FDI with a dummy variable that takes the value of 1 if a country exports at least 1 per cent of GDP in petroleum products. We find strong negative effects of this interaction both in stocks and in flows, suggesting that resource-related investments tend to generate less of a growth effect (Table 6, models 7 and 8). This can come about through several channels and the data do not allow for discrimination. It may be that FDI is attracted to the oil sector and this generates rent-seeking activities that lower growth. Or it may be that the oil industry is the enclave *par excellence*. Or it may be that oil-exporting countries have high domestic absorption and attract FDI that targets the domestic market.

However, accounting for oil countries does not change the estimated effects of FDI on growth in non-oil countries. The impact of the stock is still negative and insignificant and the flows are positive, significant and of similar magnitude as previous estimates.

Are Recent FDI Flows Different?

The recent surge in FDI is taking place in a more open, more integrated world, a world that has adopted significant structural reforms to improve the performance of markets and streamline government activities (IDB, 1997; EBRD, 1997; WB, 1994). Moreover, the protection of intellectual property rights has improved in many countries. Hence, it makes sense to ask if in this improved environment the effects of FDI on growth may be larger.

To study this question we interact the different stocks and flows of foreign capital with a dummy that takes the value of 1 for the 1991-95 period (Table 8). We find that the initial stock of FDI has had no different effect on subsequent growth than

Table 8. **Do Recent External Capital Flows Have Different Growth Effects?**

Dynamic Panel Model, estimated with 2-stage GMM.
Period:1970-95
Number of Countries: 43 developing

Dependent Variable: GDP per capita growth, 5-year total

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6		Model 7	
Independent Variables**	Coef.	t-est.	Coef.	t-est.	Coef.	t-est.	Coef.	t-est.	Coef.	t-est.	Coef.	t-est.	Coef.	t-est.
FDI														
Stock	-0.005	-0.2												
Stock* dummy for the 1991-95 period	-0.007	-0.1												
Flows			2.455	4.9										
Flows* dummy for the 1991-95 period			-0.882	-2.1										
L-T external private debt														
Stock					0.231	1.5								
Stock* dummy for the 1991-95 period					0.787	3.8								
Flows							3.066	5.9						
Flows* dummy for the 1991-95 period							0.064	0.1						
L-T external public debt														
Stock									0.001	0.1				
Stock* dummy for the 1991-95 period									-0.059	-3.1				
Flows											-0.582	-2.083454		
Flows* dummy for the 1991-95 period											-1.487	-5.223		
S-T external debt														
Stock													-0.618	-6.06
Stock* dummy for the 1991-95 period													0.067	0.71
Flows														
Flows* dummy for the 1991-95 period														
Tests														
Wald test (p-value)	0		0		0		0		0		0		0	
Sargan test (p-value)	0.99		0.99		0.99		0.99		0.99		0.99		0.99	
Serial correlation test (p-value)	0.50		0.90		0.45		0.30		0.53		0.67		0.51	

* Stocks and flows are calculated as a percentage of GDP.

** Basic and policy controls were included in all the regressions although not reported.
Notes: 1) The null hypothesis of the Wald test is that the variables are jointly significant.
2) The null hypothesis of the Sargan test is the validity of the instruments used.
3) The null hypothesis of the serial correlation test is the absence of correlation.

in other periods, the estimated coefficient being negative, close to zero and insignificant. By contrast, the flow of FDI in recent periods has been less expansionary than in the past, with a negative and significant coefficient. Its magnitude implies that the growth effect of the flow of FDI in the recent past has been about a third smaller than in other periods. This result is consistent with the idea that recent flows have been less related to investment and more driven by privatisations and mergers and acquisitions (M&A).

By contrast, there is evidence that the stock of long-term private debt has had a much stronger effect on subsequent growth in the recent past than at other times. The estimated effect is three times larger and very significant. We also find that the negative effect of the stock of public debt on growth is almost exclusively a recent phenomenon. This can be seen by noting that the coefficient on the stock of public debt becomes positive and insignificant while the interaction is very significant and negative. By the same token, the flow of public debt is estimated to have been three times more contractionary in the more recent past than at other times. We find no significant effects with the stock of short-term debt but do find that the flow has been about 40 per cent less expansionary than in previous periods.

Hence, the evidence does not support the idea that the new FDI has a bigger growth effect. However, the results do support the idea that in the recent period, long-term debt can have a more potent growth effect.

Conclusions

What should we make of the recent boom in FDI? The conventional wisdom is clear. This boom is likely to lead to an acceleration in the rate of growth because FDI facilitates technological transfer by easing the movement of firm-specific capabilities. This is because FDI involves managerial control and permits the foreign firm to deploy the kind of know-how that cannot be adequately protected by law. In countries with higher education, more open economies and better institutions, these capabilities are likely to spill over to other firms and thus further accelerate growth in the economy.

The empirical growth literature has looked at these issues and has found mixed results. This paper presents a contribution to this literature that provides two innovations. First, it uses a more appropriate methodology that exploits the information in the time-variance of the data and takes into account unobserved country-specific characteristics. Second, and more importantly, it studies whether FDI is different from other flows and hence indirectly questions whether what is being observed is in fact related to the assumed uniqueness of FDI.

An implicit assumption of the standard view is that the principal actor of the story is spillovers. Hence, it assumes that changes in the capital structure of firms, i.e. the composition of their liabilities, are not an important part of the story. In other words, it assumes that changes in FDI reflect mainly changes in the assets of firms,

not a re-composition of their liabilities. Hence, more FDI is assumed to mean more assets, and it is the assets that cause the growth. However, the recent boom in FDI has been accompanied by negative net flows in other types of financing and hence point to a significant de-leveraging of the balance sheets of developing-country firms. As argued in Hausmann and Fernández-Arias (2000*a*, *b*), this trend is compatible with lower growth expectations and higher risks.

In this paper we have investigated the relationship between FDI and growth by looking both at the contemporaneous effects of FDI flows on growth and at the longer-term effects of the stock of FDI. We fail to find any effect of the pre-existing stock of FDI on subsequent growth. This questions the idea that the presence of foreign firms has longer-term growth effects. We do find that an increase in the flow of FDI tends to cause a contemporaneous increase in each five-year period. However, this effect is no larger and often smaller than the effects caused by either long-term private debt or short-term debt. Hence, given that other flows are now declining, we find no evidence to suggest that the current rise in FDI is good for growth either in the short run or in the long run. This conclusion is no different for countries that have higher education levels, better institutions or are more open.

Has the effect of FDI been different in the more recent past? Is there evidence of a break in the latter period, a time characterised by significant trade liberalisation, privatisation and structural reform? Does the new, improved market-friendly environment with stronger enforcement of intellectual property rights imply a bigger impact of FDI on growth? We find no evidence in favour of this view when we ask whether the last period in our sample (1991-95) is different from previous periods. We find no significant long-run effects and a more subdued short-run impact.

In short, we find no evidence to suggest that the current boom in FDI is a harbinger of better times to come.

APPENDIX

Variable	Notes	Source
Real GDP per capita	In constant US$	World Bank
GDP at market prices	In current US$	World Bank
Population	Log	World Bank
Domestic investment/GDP	%	World Bank
Average years of secondary education		Barro and Lee
Government consumption/GDP	%	World Bank
Inflation	(log(1+inf))	World Bank
Black market premium	(Log)	World Bank
Openness	Adjusted residuals of the regression (x+m)/gdp=f(log(population))	Series of (X+M)/GDP, World Bank
Index of institutional quality	Principal component of the indexes of regulatory burden, rule of law, political instability, graft, government effectiveness and accountability	Kaufmann *et al*.
Low-income country dummy		World Bank
Foreign Capital		
FDI		
Initial stock	Direct investment in reporting economy	IMF
Annual average flows	Direct investment in reporting economy	IMF
L-T External Private Debt		
Initial stock	PNG, total private non-guaranteed (DOD, US$)	GDF, WB
Annual average flows	PNG, total private non-guaranteed (NFL, US$)	GDF, WB
L-T External Public Debt		
Initial stock	PPG, total (DOD, US$)	GDF, WB
Annual average flows	PPG, total (NFL, US$)	GDF, WB
S-T External Debt		
Initial stock	Short-term debt outstanding (DOD, US$)	GDF, WB
Annual average flows	Short-term debt net flows (NFL, US$)	GDF, WB

PNG = total private non-guaranteed; PPG = Public and publicly guaranteed; DOD = the total outstanding; NFL = net flows (or net lending or net disbursements).

Notes

1. As they put it: “The effect of FDI on economic growth is dependent on the level of human capital available in the host economy. There is a strong positive interaction between FDI and the level of educational attainment in our sample.” They use a sample of 69 developing countries between 1970 and 1990 and organise their data in two 10-year periods.

2. In summarising the literature, de Mello states that: “Overall, the impact of FDI on growth depends on various types of externalities and productivity spillovers. These in turn depend on the degree of non-rivalry and non-excludability of innovations transferred via FDI, conferred by intellectual property legislation, the amount of learning-by-doing, and the value-added content of FDI-related production in the host country.” No reference is made to any financial consideration that may be involved in the fact that capital moves as FDI and not debt.

3. We also carried out the analysis with a benchmark model that only includes three variables: the initial level of income, the years of secondary schooling of the population and the investment ratio. The results reported here do not change.

4. There seems to be a positive effect of the stock of FDI on growth in East Asia, but not in the rest of the world. There is no difference in the effect of the flow of FDI on growth in the two regions. The impact of the stock of long-term private debt on subsequent growth seems to be larger in East Asia than in the rest of the world, but the contemporaneous impact of the flow is no different. Hence, while East Asia shows some differences from the rest of the sample, it does not drive the results reported here.

5. The index is the principal component of the six indexes compiled by Kaufmann: graft, regulatory burden, government efficiency, political instability, accountability and rule of law.

Bibliography

AGHION, P. and P. BOLTON (1992), "An 'Incomplete Contracts' Approach to Financial Contracting", *Review of Economic Studies*, 59.

ARELLANO, M. and S. BOND (1991), "Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations", *Review of Economic Studies*, 58.

BALASUBRAMANYAM, V.N., M. SALISU and D. SAPSFORD (1996), "Foreign Direct Investment and Growth in EP and IS Countries", *The Economic Journal*, Vol. 106, January.

BECK, T., R. LEVINE and N. LOAYZA (1999), "Finance and the Sources of Growth", World Bank, Washington, D.C.

BHAGWATI, J.N. (1978), "Anatomy and Consequences of Exchange Rate Regimes", Vol. 1, *Studies in International Economic Relations* No. 10, National Bureau of Economic Research, New York.

BLOMSTROM, M., R.E. LIPSEY and M. ZEJAN (1996), "Is Fixed Investment the Key to Economic Growth?" *Quarterly Journal of Economics*, Vol. 111, No. 1, February.

BORENSZTEIN, E., J. DE GREGORIO and J.-W. LEE (1995), "How Does Foreign Direct Investment Affect Economic Growth?" *NBER Working Paper* No. 5057, National Bureau of Economic Research, Cambridge, MA.

COASE, R.H. (1937), "The Nature of the Firm", reprinted in COASE, R.H. (1988), *The Firm, the Market and the Law*, University of Chicago Press, Chicago.

EUROPEAN BANK FOR RECONSTRUCTION AND DEVELOPMENT (1997), *Transition Report*, London.

HART, O. (1995), *Firms, Contracts and Financial Structure*, Oxford University Press.

HAUSMANN, R. and E. FERNÁNDEZ-ARIAS (2000*a*), "Foreign Direct Investment: Good Cholesterol?", Working Paper Series 417, Inter-American Development Bank, Washington, D.C.

HAUSMANN, R. and E. FERNÁNDEZ-ARIAS (2000*b*), "Is FDI a Safer Form of Financing?", Working Paper Series 416, Inter-American Development Bank, Washington, D.C.

HEJAZI,W. and A.E. SAFARIAN (1999), "Modelling the Simultaneity between Trade and FDI: Evidence from the OECD".

INTER-AMERICAN DEVELOPMENT BANK (1997), *Economic and Social Progress in Latin America*, Washington, D.C.

KAUFMANN, D., A. KRAAY and P. ZOIDO-LOBATON (1999), "Aggregating Governance Indicators", *World Bank Working Paper* No. 2195, Washington, D.C.

MELLO Jr, L.R. DE (1997), "Foreign Direct Investment in Developing Countries and Growth: A Selective Survey", *Journal of Development Studies* 34, No. 1.

OLOFSDOTTER, K. (1998), "Foreign Direct Investment, Country Capabilities and Economic Growth", *Weltwirtschaftliches Archiv*, Vol. 134(3).

WILLIAMSON, O.E. (1975), *Markets and Hierarchies: Analysis and Antitrust Implications.* The Free Press, New York, NY.

WORLD BANK (1994), *Adjustment in Africa: Reforms, Results and the Road Ahead*, Oxford University Press, New York.

A Comment by Daniel Cohen

It is always a great pleasure to discuss a paper written by Ricardo Hausmann. He takes the opposite view to the prevailing conventional wisdom, and always does so with extremely convincing arguments, which leave the reader wondering: is this too good to be true? The first paper by Ricardo Hausmann which I discussed at an earlier meeting of this very Forum challenged the view that the high saving rates of the Asian countries were a good thing. At the time, such statements seemed counter-productive. This happened, however, just before the Asian crisis, so perhaps I should have been more cautious with my comments at the time!

Now the same paradoxical wit strikes. FDI, we are now told, is not such a good thing as most people think. The simple correlation between FDI and growth, to start with, is not even there: FDI appears to do no better for growth than debt, be it long- or short-term. The most compelling picture in the paper comes where it is shown that the share of FDI in total external financing goes in the opposite direction than the prevailing view would have us believe: it is, indeed, highest for Africa, and moves down in Latin America and Asia. The theoretical reasoning behind such inverse correlation is itself very compelling. From the modern theory of the firm, we learn that FDIs, being a mixture of many different types of contract, are all the more essential because market failures deter other combinations. Why not borrow only when external savings are required, or simply buy patents or technologies only when necessary, and so forth? The fact that FDI packs different items into one kind of instrument may tell us more about the inability of the economy to do otherwise than about growth prospects.

I am not sure that the results of Hausmann's argument are convincing.

First of all, the econometric evidence is insufficient to carry the point for one reason in particular: the treatment of investment, which is taken here as given when it should not be. If the effect of FDI is simply to boost investment, it will not be found in the regressions for which it is controlled. What should be the relevant test here? One can get back to a procedure that was once suggested by Paul Romer. If the economy is subject to decreasing returns, then any exogenous factor such as, say, the life cycle, which raises investment without raising the return to capital accumulation, should have a marginal impact on growth which is negative. Interacting investment

and dependency ratios should then show such a negative effect. On the other hand, such factors as trade, in Romer's suggestion, raise investment without being subject to decreasing returns: in this case, one should find that trade interacted with investment should have no effect. My suggestion here would be to proceed along the same lines: what is the impact of the interaction of FDI and investment on growth, when compared to other determinants? Does it operate as trade, i.e. does it show no impact? Only such second order effects will reveal the impact of FDI on growth.

The second point is on the influence of debt on growth. It is very hard to believe that short-term debt has a larger impact on growth than long-term debt or FDI. These flows are probably very procyclical, and the instruments used are not powerful enough to avoid measuring reverse causality. The fact is that we are dealing with five-year intervals, using lagged values, which may be too short and I would like to see the results when ten-year averages are taken into account. I should stress that the work done at the Development Centre by Marcello Soto points to exactly the opposite conclusion, namely that the impact of short-term debt on growth is virtually nil, while long-term equity and FDI see their role increasing as one should expect usually. I suggest that the two methods be compared to see where the discrepancy comes from.

One final point is on the influence of the fixed effects. All the results that are presented are estimated with fixed effects so that basically we are estimating the influence of a variation over the average of FDI on the corresponding variation on growth. It may be that the distribution of FDI over the world is associated with long-run growth rather than with short-term variations. In that case, the influence will show up in the correlation between the fixed effect that is estimated for growth and the average values of FDI over the period. This is a useful statistic that the paper could present.

Let me conclude by saying again that I find the paper extremely stimulating. The theoretical argument makes sense, and the empirical results are there to support the theoretical reasoning. I cannot help thinking however that a country which relies on short-term debt is potentially in trouble, and this is indeed the lesson that I thought people usually took from the Asian crisis. But again, who really knows?

A Comment by Peter Nunnenkamp

The paper challenges the widely-held belief that foreign direct investment (FDI) is superior to other forms of capital inflows. Nowadays, even former critics of multinational enterprises expect FDI to provide a comparatively strong stimulus to income growth in the host countries. The basic argument is that FDI, in contrast to debt inflows, offers access to internationally available technologies and managerial know-how, and may render it easier to penetrate world markets. However, Hausmann finds that a higher stock of FDI is not associated with higher subsequent growth, and that rising FDI inflows are not growth-enhancing when this rise is offset by declining debt inflows.

For two reasons, the paper may be less unconventional to me than to many other readers. First, the Kiel Institute of World Economics performed a research project in the late 1980s which was explicitly based on the proposition that debt may have incentive-improving characteristics, an argument referred to by Hausmann as well. A major conclusion of this project was "that neither form of capital inflow [debt or FDI] can be judged unambiguously superior to the other, and thus recommended for all countries" (Corsepius *et al*. 1989: 5).

Second, I argued in a recent paper that positive effects of FDI inflows on economic growth in developing and newly industrialising economies cannot be taken for granted (Nunnenkamp, 2000)[1]. FDI was shown to be a fairly heterogeneous phenomenon. Correlation analyses revealed that it depends on time-varying and location-specific factors whether FDI and growth are positively correlated altogether, and which of these variables leads or lags the other. The latter finding underlines Hausmann's point that causality may run both ways. Empirical studies on the FDI-growth nexus have to take into account that growth is typically considered to be a major determinant of FDI. As concerns the factors that shape the FDI-growth relationship, the following appeared to be of particular interest: the form in which FDI takes place (greenfield investment vs. M&As), the motivation underlying FDI (resource seeking, market seeking, efficiency seeking), and the economic policy environment prevailing in the host countries.

An important argument underlying Hausmann's analysis is that FDI is not just equity[2]. What is registered as FDI may actually be debt. This argument is reasonable in principle, while the empirical relevance of accounting problems remains open to debate (see Beatrice Weder's comments on Fernández-Arias and Hausmann on p. 111 in this volume).

Hausmann seems to suggest that "accounting gimmicks" are pervasive. It is at this point that the paper runs into trouble. If Hausmann is right, FDI altogether is not too different from debt and the growth effects of financing corporate assets through FDI should be the same as the growth effects of financing these assets through debt. However, in various estimates presented in the paper, the growth effects of FDI turn out to be considerably lower than the growth effects of debt. This result is difficult to reconcile with Hausmann's reasoning that it is the assets of companies which matter for growth, rather than the way of financing these assets (i.e. the structure of liabilities).

Moreover, Hausmann criticises previous studies on the growth impact of FDI for not having controlled for debt. It is claimed that controlling for debt represents a major innovation to the existing literature. This claim is not only mistaken, but also somewhat puzzling when Hausmann's view on the significance of accounting problems is accepted.

— Soto (2000) explicitly compares the growth impact of different forms of capital inflows. His results are strictly opposed to Hausmann's findings. One wonders why Soto's study is not mentioned at all in the paper.

— Controlling for debt inflows should have little effect on the growth effects of FDI according to Hausmann's reasoning. Hence, the results of previous studies (without controls for debt) are unlikely to be distorted. In other words, the paper's "innovation" does not explain results which are frequently in striking contrast to the results of previous studies.

The paper leaves much to be desired when it comes to explaining surprising results. For example, it simply notes that the finding on the interaction between FDI and education is strictly opposed to the results presented by Borensztein *et al*. (1998). The interesting question obviously is: What is wrong with the Borensztein study, and why should we accept Hausmann's results as more compelling? The need for explanation becomes all the more important in the case of extremely strange results. According to model 2 in Table 6, FDI would have *negative* growth effects when average years of secondary education exceed 2.5 years. Likewise, it is difficult to conceive why institutional development improves the growth effects of debt, whereas the interaction term of FDI and institutional development is negative.

In summary, FDI may not be a unique, but rather a fairly heterogeneous phenomenon. The growth effects of FDI are not necessarily higher than the growth effects of debt. However, it is more difficult to explain why the growth effects of FDI are inferior to debt, or even negative. It is one thing to argue that the recent FDI boom is due to the reaction of foreign companies to higher risk and impaired growth prospects in developing and newly industrialising countries. It is a completely different thing to argue that rising FDI, in the context of dwindling debt inflows, is bad for growth. The latter reasoning confuses causes and effects of FDI.

Notes

1. An English version of this paper is available from the author upon request.
2. For a detailed discussion, see Hausmann and Fernández-Arias (2000).

Bibliography

Borensztein, E., J. de Gregorio and J.-W. Lee (1998), "How Does Foreign Direct Investment Affect Economic Growth?" *Journal of International Economics* 45: 115-135.

Corsepius, U., P. Nunnenkamp and R. Schweickert (1989), "Debt versus Equity Finance in Developing Countries: An Empirical Analysis of the Agent-Principal Model of International Capital Transfers", *Kiel Studies* 229, J.C.B. Mohr, Tübingen.

Hausmann, R. and E. Fernández-Arias (2000), "Surges in Foreign Direct Investment: Good or Bad News for Latin America?" Paper presented at the 11th International Forum on Latin American Perspectives.

Nunnenkamp, P. (2000), "Ausländische Direktinvestitionen und gesamtwirtschaftliches Wachstum in Entwicklungs- und Schwellenländern", *Die Weltwirtschaft* 2/2000: 187-206.

Soto, M. (2000), *Capital Flows and Growth in Developing Countries: Recent Empirical Evidence*, OECD Development Centre Technical Paper No. 160, Paris.

Part Two

The View from the Corporate Sector

Preliminary Remarks

Enrique V. Iglesias

The past few years of experience have taught us a number of lessons about what contributes to growth and what does not. The lessons include:

— growth helps to resolve social and economic problems, but is not, by itself, sufficient;

— growth in Latin America has been associated with volatility, much of which comes from outside, often linked with commodity prices;

— the pace of reform in the context of globalisation and in the wake of crises has led to disenchantment with it in the post-crisis period;

— there appears to be some relationship between foreign direct investment and growth, but the role of "original sin" has to be factored in and dealt with;

— in the recent past, the Latin American region has become attractive for financial flows. The question of whether there has been too much or too little is a bit like the choice between fat and anaemia. In this case, we should clearly choose fat;

— there is some concern that foreign resources may be replacing local ones, instead of being alongside them.

We have also learned that, whatever other factors might be in operation, it is still necessary to get and keep the fundamentals right. That means: encouraging the development of capital markets; refining financial systems; the establishment and protection of an efficient and fair regulatory environment; clear competition rules; protection of property rights and continued microeconomic reform. The regional development banks in Latin America, especially the IDB, can help to resolve the problems caused by "original sin" by, for example, co-financing and guaranteeing loans. "Original sin" remains a problem, but it should not be seen as a fatality and there are a number of ways in which it can be redeemed. Political reform will help and, here, the activities of civil society are just as important as global economic and financial strategies.

The so-called new economy could have wide implications for the region which we have only just begun to think about. Thanks to demographic transition, new opportunities are opening up for Latin America, particularly compared to Asia. The challenge now facing the region is how to make best use of all sources of finance, and especially of FDI, to exploit those opportunities to the maximum.

A Summary of the Discussions

Colm Foy

The relationship between rates of growth and FDI flows is still unclear, but it is obvious that problems remain in Latin America and they are closely related to shortcomings in the domestic reform policies of individual Latin American countries, as well as to a global financial environment which is still very timid following the crises of the 1990s. In the future, there could be an overall reduction in financial flows to the region, partly because of the current trend in mergers and acquisitions which tends to disadvantage developing countries generally. This has to be added, says Helmut Reisen, to the fact that capital costs are now higher in Latin America than they are in Europe, and that Latin American markets have become illiquid as a result of mergers and acquisitions.

One response might be to consolidate capital markets on a regional basis, suggests Reisen. The role of capital markets in attracting FDI is very important, but so is the problem of the weakness of local stock exchanges which encourages successful firms to abandon them in preference for London, New York or Paris in the search for fresh sources of finance. The creation of regional centres and the concentration on regional capital markets, rather than domestic ones, would seem to offer an opportunity to get around this problem. This, however, is not the easy solution it might appear. As Frans van Loon points out, many things, such as insurance and social security, remain the responsibility of national governments. There is a need to separate instruments from products.

Returning to the question of whether foreign direct investment is any indicator of the health of a country's development prospects, it may be too simplistic to look at FDI out of context. As Reisen points out elsewhere in this volume, after the crises, FDI is almost the only soldier left on the battlefield. Banks were frightened off into the safety of mature markets and portfolio investment is yet to recover. Meanwhile, the reform of the global financial architecture goes on, and the outcome of it may not, necessarily, be all that favourable to the banks, since one of the clear options is to "bail them in", raising their potential risks and, consequently, providing a further disincentive for them to lend to emerging markets. In this scenario, despite any decline in FDI, foreign direct investment would still by default figure more prominently in financial flows to emerging markets.

Whatever the technical arrangements which might be necessary to finance development in Latin America, the need for continued reform remains. Yet, this is constrained by the opposition noted, among others, by Hurtado. The causes of this resistance may be manifold but they all come down to one, central factor: the feeling that reform is good for only an already comfortable minority. This belief may be reinforced by the international nature of firms which appear to be remote from local people but still controlling the economy through their investments. Indeed, even "domestic" institutional investors in Latin America, says Ricardo Hausmann, are becoming "international" in their dealings on both a regional and a global scale.

Ulrich Hiemenz believes there is a problem of perspectives, "a different speed between the market and the people". Resistance, says Peter Nunnenkamp, is not limited to Latin America, but is a cross-region problem derived from a conflict of distribution. The "faceless market" is a popular perception of a system which enriches some at the expense of others and is a result of the reforms so far. The people, says Hiemenz, cannot grasp recent developments and they react to them by trying to defend their positions and acquired rights. This leads to conflict on one hand and rigidity on the other. This conflict can only be resolved by a social policy response designed to protect the losers from the negative impact of globalisation and the reforms which represent it in the minds of ordinary people.

The reforms in Latin America and elsewhere, and which are a response to globalisation, should also be seen in the light of a general and necessary movement towards good governance. If it is imperative to reform capital markets, the judicial system and the regulatory framework, these changes should be seen alongside an increase in democracy, an enhanced role for civil society and the emergence of more consensual political systems. Whatever final conclusions we come to about FDI and growth, there is no longer any doubt that FDI represents a remarkably stable form of financial flow. Without stability, democratic reforms are harder to introduce and to maintain. There is thus another link — that between stability and growth — which needs to be introduced into the discussion.

Business Activity Is a Factor

Antonio Estrany-Gendre

The proposition that foreign direct investment is an indicator of fragile or arrested growth is interesting in itself, but the case needs to be proved. In addition, what private business needs to know is the proportion of public, compared to private flows, whatever their source. Economists have a temptation to want to talk about FDI and "other flows", but for business people, this has no meaning. Similarly, measures of flows according to their direction is less relevant to the private sector than the volume of flows combined as an indicator of economic activity in the country. Depending on the sector of activity, business also is interested in whether flows are directed towards infrastructure and services, or to industrial investment.

Thus, when we come to analyse the stability or sustainability of growth, business activity is itself a factor; and business activity is stimulated or stifled by the type and destination of flows, not simply by whether they are classified as FDI or bank lending. The role of the state is also of central interest to the private sector, and not just in the sense of opportunities brought about by privatisation. Privatisation was a symptom, among other things, of weakness in the public sector, but that does not mean that the state no longer has a role in oversight and stimulation of infrastructure projects. On the contrary, this is an essential role which business wants to see reinforced. In order for it to be so, however, the continuing weakness of the state, especially its financial weakness, has to be confronted and diminished. Where the private sector participates alongside the state in public works or infrastructure projects, it needs reassurance about the sustainability of those projects. One source of reassurance, of course, is the IDB. When the IDB is ready to support a project, the private sector immediately takes that as a sign that there is some security in the investment and will follow. It is essential, therefore, that the IDB continue to support infrastructure projects and to encourage private sector participation in them.

When it comes to industrial investment, private business finds it more difficult to read the signs of viability. The exception is the automobile and steel industries in Argentina which, in any case, attract large-scale investment from both within and outside the country. The problems occur in the small and medium-sized enterprises

which, though they attract much interest, encounter difficulties in turning that interest into investment. Here, the role of FDI may be very important if it shows the way to local investors, but the paradox is that FDI does not habitually go to the SMEs, partly because of a chronic lack of information about them despite the central role of SMEs in growth. This information gap must be bridged if the small and medium-scale sector is to fulfil its growth and development role fully. If FDI were to begin to flow more substantially to SMEs, this would certainly be an indication that the prospects for the economy are sound as well as contributing to that soundness.

Global Markets, Local Institutions

Frans van Loon

The question of whether FDI flows are an indicator of the sustainability of growth is really one of perceptions. In itself, money is not important; what counts is what it is used for. Thus, simply measuring flows of FDI and then attempting to draw reliable conclusions may be an interesting exercise in itself, but it is still unclear what it is, exactly, that is being measured. The distinction between FDI and portfolio flows is a fine one and may be linked to other factors than the stability of growth. We also have to consider the evolution of private flows as a whole over public ones to developing countries. This has been a very rapid evolution, the consequences of which are as yet still to be evaluated.

When considering FDI flows, two factors are of major importance: globalisation and changes in financial infrastructures and culture since the various crises erupted. Globalisation is perhaps at its most obvious in financial markets where nationality is now of such little importance that it is almost a nonsense to mention it at all. Traditional and historical links between countries and societies are diminishing into insignificance as far as financial flows are concerned, so that money goes to where it can be made to earn a profit. Thus, the trade-off today is between the growth of earnings and stability, rather than common cultures, geographic proximity, or even shareholder residence.

At the same time as globalisation is changing the habits of international investors, it has also revealed weaknesses in the international financial system which resulted in the crises at the end of the 1990s. The consequence is the determination of banks to avoid country risk, and the best way of doing that is to stop lending money to developing countries and emerging markets. Bank-to-bank lending in these markets has dwindled to almost nothing since the crises, while there has been a rise in the trade in financial instruments. Thus, the conclusion is clear: the apparent rise in FDI flows to Latin America has little to do with the growth potential of the region and everything to do with the weakness of other flows.

In the real world, there is still no reason to discourage FDI on the grounds that it might somehow be responsible for worsening growth prospects. FDI is still the most stable form of financial flows and stock, and countries need that stability to

develop. On the other hand, there is a very strong case for developing and strengthening domestic capital markets in emerging economies. FDI is only a part of the picture, local companies and enterprises need to have access to local sources of capital. At the moment, due to the weakness of the local capital markets, this access is restricted. This is particularly true where local businesses are looking for long-term debt possibilities which can only come from institutional investors. To resolve this problem, public and private insurance and social security structures need to be strengthened and this is one area where the IDB can make and is making a serious impact.

Another thing the IDB can do to encourage financial flows, both FDI and other flows, is to support catalytic instruments aimed at reducing country risk. As we have seen, bank-to-bank lending has virtually ceased and has been replaced by other flows, notably FDI and the trade in financial instruments, but bank lending is an important source of financing in any economy and this situation cannot be allowed to last forever. The international financial institutions, especially the IDB in Latin America, can support confidence rebuilding in the region through co-financing deals and investment guarantees. Measures such as these are regarded by business as being much more reliable than any supposed link between increased FDI flows and economic instability.

Private enterprise is based upon hard business decisions made on the basis of profitability, growth prospects, business appropriateness, and political and economic predictability. Any other considerations, such as potential subsidies and other encouragement, come a long way behind.

“Reform Fatigue” Must Be Overcome

Carlos Hurtado Lopez

The significance of internal, domestic reforms, especially in the financial and capital markets, is very high, but external flows are also important. Clearly, the two are linked and certain types of financial flows are attracted by certain reforms. There is thus ample evidence for the argument that domestic economic reforms must be continued and even intensified. In many countries of Latin America, and in Mexico, in particular, macroeconomic reforms have been relatively successful and can be said to remain on track.

On the micro side, trade liberalisation has been well done, for example, and we have seen positive reactions to it in terms of inward investment and local economic activity. Other things, however, are lagging behind. Regulatory reforms and capital market reforms to enhance their efficiency still need to be deepened and continued. The problem is that there is growing resistance to further reform. People are becoming tired of all this reform; they are subject to a kind of “reform fatigue” which is more than unfortunate because the political-economy need for further reform is greater than ever. The resistance to reform comes from many, seemingly incongruous quarters and we have seen coalitions between NGOs and big monopoly corporations to protest against reforms. We seem to be in a phase where people see governments carrying out reforms against their wishes.

Competition policy reform is an area which evokes particular opposition and the determination of governments to carry it through may be weakened by the “market for votes” that is modern democracy. At the same time, it is being recognised that there are no longer any “natural” monopolies in services, for example, and privatisation is now accepted as a legitimate political-economy instrument. However, privatisation has to be carried out in such a way that the resulting enterprises are run in ways compatible with the free market and open competition. Some of the privatised companies and utilities need to be rebuilt after years of neglect. New technologies can help to some extent in this process, but companies still have to make profits, so a way has to be found around this problem. The regulatory authorities have to take these considerations into account and, if need be, they should be strengthened in order properly to fulfil their roles.

There are a number of actions which can be taken to ensure that the reform process is not stopped by popular resistance or administrative torpor. The first is to prove that markets actually work. People will not be weaned away from their old reliance on the state, however imperfect the state has been, if they cannot be convinced that the market not only works, but is better. In some countries of Latin America, this is a hypothesis which still requires some faith because people do not see markets working in an equitable way and have not seen a radical improvement in the delivery of services.

The second action which can restore faith in reform is institution building. In the past, discrete political linkages have had more influence in economic decision making than the state structures. These structures were weak, in any case, and were generally at the service of the ruling party or clique. The challenge now is to demonstrate that it is the ministry that counts, not the minister. The same applies to the regulatory authorities, so that it is the authority and not the regulator which is responsible. Again, this restoring of faith in the structures will require action, and cannot be built upon faith alone. The regulatory authorities and ministries must be seen to be behaving in the public interest and not in the interest of private companies, monopolies or political parties. In short, rules must replace discretion and oppression; the bureaucracy itself must be reformed to provide predictability to the economic system.

Finally, in an imperfect world, the judicial system must be reformed to provide safe recourse to citizens dissatisfied with the activities of the regulatory authorities and to provide legal guarantees for the enforcement of contracts and business activity in general. Both for domestic and foreign investors, a legal framework which protects property rights and provides protection for capital is essential. Court procedures need to be transparent and understandable by citizens and foreigners alike, and legal systems have to be streamlined to enable remedies to be delivered expeditiously. In many countries of Latin America, this is far from the case today, but reform of the judicial system is the cornerstone of infrastructure and regulatory reform.

The advantage of a crisis is that it stimulates and provides support for reform, as well as allowing the identification of the reforms which are most critical. When the worst of the crisis passes, however, enthusiasm for reform wanes and opposition sets in. This is what we see today in Latin America. Yet reform remains essential. Latin American authorities must therefore take the steps necessary in a democratic environment to regain public support and to restore confidence of the public in the reform process. Only in that way can the task be continued and growth and development sustained.

The Globalisation of Business Can Be Good for Development

Douglas C. Worth

Globalisation has brought us some remarkable revelations, not the least of which is the fragility of democratic, market-based economies. This is not to say that democracy itself is faltering, but that countries new to the market — or even those that have lived with it for a long time — are finding that free markets have to be nurtured and helped to grow. In developing countries and emerging markets like those of Latin America, there is a need for "market preparation", so that private capital can feel comfortable in going there.

Since the acceleration in globalisation, there have been clear changes in the way investment moves around the world. Partly helped by new technology, decisions are now more volatile than ever before, so that investment can move out of a market as quickly as it came in. That can be very quickly. Decisions today are based upon global strategies defined in boardrooms where previously such strategies were merely illusions made up of the combined whole of local strategies. This means that global companies are using business models which can be applied wherever the company is active, albeit with local adaptations. Thus local offshoots anywhere, including in emerging markets, operate according to the same model and according to the same criteria for profitability, segmentation and activity.

The "globalisation of business" has provoked an adverse reaction on the part of some parts of what we now call "civil society". Since business is seen as global, since decisions made in remote boardrooms affect the way companies behave on a world scale, there is an impression that the market is, in some way, inhuman. Such a conclusion, however, ignores the fact that the market is simply a collection of human beings, and that the institutional investors which come in for so much criticism are merely acting on behalf of small investors and retirees the world over. Thus, at the end of the day, it is not in the interests of the institutional investors' clients to stifle or limit growth when it is clear that to do so would affect people's lives adversely.

Foreign direct investment, while obviously seeking profitability, actually reinforces the development process of emerging markets in a number of ways. Specifically, it has the effect of exporting management models to different circumstances, but, drawing on the experience of large corporations in modern times, the model is adapted to the local environment. Thus FDI can bring leadership by example to the local operation, introducing new, efficient practices, streamlining management and building successful companies which create jobs and wealth. Foreign investors seek what investors are looking for everywhere: profits with security. Risk management is the central question of modern global capitalism. It encourages companies to diversify into product ranges or sectors, rather than the products themselves. In the energy sector, for example, companies are concerned to be involved in extraction, transmission and services. The reasoning behind specific decisions can be complex, but basically boils down to two objectives: trade in order to invest, or invest in order to trade. Where countries seek to attract foreign investment, these two questions should be borne in mind.

Much has been said, especially in the FDI debate, about what has been called "hot money". Even the phrase itself suggests that it is "bad". Not all short-term flows, however, even if they are referred to as hot money, are bad. On the contrary, short-term flows are essential to daily business transactions across borders. For this reason, no attempt should be made to limit short-term flows *per se*. Indeed, any policy which sought to do so might be a sign of weakness elsewhere in the economy; at least it might be interpreted as such by potential foreign investors, with the same result. Subsidies to attract business and investment may also not quite be what they seem, but might be substitutes for policy failures such as high taxes, complicated regulations and missing infrastructures. The countries which succeed in attracting outside, high-quality investment are those which can promise an integrated, well-organised policy environment to facilitate and protect investment.

One final thing we should consider is the role of FDI in encouraging innovation. We have seen that it tends to attract, support and stimulate good management practices, but the evidence on innovation is less clear. Numerous studies have shown that FDI has a tendency to go into traditional, heavyweight sectors where, perhaps, innovation is less widespread. There may be some truth in the proposition that FDI might be a sign of a slowdown in growth if it were to be found that it does not encourage innovation, for innovation equals growth.

Conclusions to the Forum

Jorge Braga de Macedo

The theme of the eleventh International Forum on Latin American Perspectives was a polemical one. Polemical in the OECD and polemical elsewhere as well. The idea that foreign direct investment, universally accepted as the most stable and desirable form of financial flow, might somehow be bad for growth is for some a heresy, for others madness. Yet, with customary aplomb, Ricardo Hausmann would have us believe just that. Further, he would like to convince us that in the final analysis FDI is a sign of bad governance.

A hint of how the IDB team reached this at first sight astonishing conclusion comes from recent work they have done on interdisciplinary analysis of development, work which demonstrates that they, like us at the OECD Development Centre, can see beyond economic analysis into cultural, social and political analysis of the phenomenon we have come to call "development".

A recent book published by the IDB, *Development Beyond Economics: Economic and Social Progress in Latin America*, provides a background to the current situation in Latin America and explains why economic arguments alone are insufficient. The book points out that 50 years ago, Latin America was the second most developed region in the world, while today it is the fifth. Growth throughout the period was not only mediocre, it was also unstable. Moreover, poverty and inequality in the distribution of wealth have reached intolerable levels in some countries. The IDB reacted to these sobering facts by looking at three factors often neglected by economists: demography, geography and institutions. The researchers' conclusion is that the failure of institutions is responsible for half the region's backwardness, while geography and demography account for only a quarter each. These are astonishing findings which suggest that governance reforms in the region are more urgent than ever.

The IDB, of course, recognises the shortcomings of its study and the limitations it placed upon itself by being obliged to choose only certain institutions for its analysis, notably those associated with political activity. Clearly, the study of institutions must go beyond the purely political into the realm of civil society, enterprises and the legal rights of the citizen or firm. On a ranking of the reliability of the rule of law, for

example, it emerges that Latin America is the second last region, just in front of Africa. Such a situation is quite unacceptable, but it leads to a conclusion which is none the less enlightening: if the institutions are wrong, then there is something wrong with the politics and the politicians charged with their safekeeping. The institutions and the politicians go together. If we compare the Latin American situation with that of Eastern Europe before the Wall came down, we see similarities; and these similarities can be instructive, because those Eastern European societies have reformed themselves and their political systems. If they can do it, why not Latin America?

The Development Centre's 2000/2001 Programme of Work has as its theme "Globalisation and Governance", and it is a theme which is entirely appropriate to the analysis of the problems highlighted both in the IDB's book and in the subject of the eleventh International Forum on Latin American Perspectives. Globalisation offers opportunities, but taking advantage of those opportunities and responding to them depends on governance in the public sector, in enterprises and in civil society. Work at the World Trade Organisation has demonstrated that transparency and FDI go hand in hand, and we know that FDI flows are the most stable, so governance issues do have an influence on the nature of financial flows. A Development Centre Technical Paper by Shang-Jin Wei, *Negative Alchemy? Corruption and Composition of Capital Flows*, further demonstrates that corruption actively discourages FDI and leaves a country prey to short-term flows which can be volatile and unproductive.

Thus, there is no longer any doubt about the need for countries wishing to attract investment from the outside, to stimulate it inside and to discourage capital flight, to adopt and follow principles of good governance. There is no longer any doubt, either, about the need for enterprises themselves to adopt high principles of governance in order to provide a sound environment for investment. There is, however, more. Civil society has come to play such a large role in all democratic countries, and even in some that are not, that it can no longer hope to expect to escape scrutiny in the context of its own governance structures. This means employers' and employees' organisations, as well as those in defence of the environment, working on development issues and on a whole host of social issues, must accept the need for them, too, to be included in the national drive for good governance at all levels.

The chapters in this book all deal in some way or another with foreign direct investment, but none of them seriously suggests that FDI can be definitively bad for a country. On the contrary, there is unanimity that investment is an absolute requisite for growth, for wealth creation and for development. A number of chapters and comments reinforce the need for reform in societies in order to increase their attractiveness for FDI. However, that is not to say that developing countries and emerging markets should take part in a beauty contest leading, as Charles Oman would have it, to a "race to the bottom", competing with each other in a beggar-thy-neighbour fashion. In any case, it is becoming more and more clear that subsidies and other incentives offered on the state level are of little importance in convincing foreign investors to come to a country.

The European experience has much to offer in presenting a different model of inter-state behaviour. The formation of the Common Market reduced the scope for policy competition. Of course, it did not eliminate it entirely, but it encouraged national authorities to seek to emulate each other; to stress their similarities, rather than their differences. This led to convergence through peer pressure. In Latin America, the situation is different from the Europe of the second half of the last century, but there is no reason why Latin Americans should not seek to find solutions for the region together and according to common principles.

By getting the policies right on a regional basis, by paying close attention to governance issues, and by continuing the reforms in a climate of democratic consensus, Latin Americans can assure sustained growth. When countries are failing or their growth is slowing down, economists seek solutions in the data they have available to them. Hausmann's proposition that FDI is somehow linked to poor growth performance must be seen in that light, but we have also found that there are other issues affecting financial flows and investment to the region: bank nervousness, faltering reforms, weak infrastructure, poor governance. These issues, individually and together, also affect growth; so there is more to the question than measuring FDI flows and comparing them to growth.

Our conclusion must be that FDI, while an essential element in assuring long-term and stable growth, may be one of a number of indicators in certain circumstances which might suggest a weakening of growth. If that is the case, then it is a welcome indicator to add to others we already have available. To go from there to discourage FDI would, however, clearly be a mistake and is not what is being suggested in this book. On the contrary, what has emerged from the discussions reported in this volume is a consensus that investment is good, that reforms must be made to benefit the people, that governments must be both responsive and responsible, and that governance is an issue which involves all sectors of the community. These are all very positive conclusions, because all the elements are feasible. Finding the appropriate methods is another matter, but it may well be that solutions are nearer at hand than we might have thought. Several contributions to this book mention the regional dimension and this is something Europe has learned to use to great effect. Perhaps it is to Europe that Latin America should look for inspiration.

Eleventh International Forum on Latin American Perspectives

PROGRAMME

Eleventh International Forum on Latin American Perspectives

2-3 November 2000

Foreign Direct Investment versus Other Capital Flows to Latin America

Experts' Seminar

Thursday 2 November 2000

Session I What Is FDI Doing for Latin America?

Chair:	Ulrich Hiemenz, Director, OECD Development Centre
Introductory Remarks:	Jorge Braga de Macedo, President, OECD Development Centre
Introductory Remarks/ Presentation:	Ricardo Hausmann, Professor, Harvard University, and former Chief Economist, Inter-American Development Bank
Discussants:	Stefano Manzocchi, Professor of Economics, University of Perugia
	Helmut Reisen, Head of Research Division, OECD Development Centre

Session II The Perils of Competition for Foreign Direct Investment

Chair:	Ricardo Hausmann, Professor, Harvard University, and former Chief Economist, Inter-American Development Bank
Presentation:	Charles Oman, Head of Programme, OECD Development Centre
Discussants:	John Evans, Secretary-General, Trade Union Advisory Committee to the OECD (TUAC)
	Eduardo Fernández-Arias, Lead Economist, Inter-American Development Bank

Session III The Mix of Capital Inflows: Does It Matter for Crisis Vulnerability?

Chair:	Carlos Hurtado Lopez, Chief Advisor to the Presidency for Economic and Social Policy, Mexico, and former Mexican Ambassador to the OECD
Presentation:	Ricardo Hausmann, Professor, Harvard University, and former Chief Economist, Inter-American Development Bank
Discussants:	Beatrice Weder di Mauro, Professor of Economics, University of Basel
	Philip Turner, Head, Emerging Markets, Bank for International Settlements (BIS)

Session IV The Impact of Foreign Direct Investment on Productivity and Growth

Chair:	Jorge Braga de Macedo, President, OECD Development Centre
Presentation:	Eduardo Fernández-Arias, Lead Economist, Inter-American Development Bank
Discussants:	Daniel Cohen, Professor, *Ecole Normale Supérieure*, and Special Advisor, OECD Development Centre
	Peter Nunnenkamp, Senior Economist, Kiel Institute of World Economics
Conclusions:	Jorge Braga de Macedo, President, OECD Development Centre

Friday 3 November 2000

Session V Rapporteur Session on Thursday's Findings

Presentation: IDB and OECD Development Centre

Session VI Round Table: Corporate Perspectives on Capital Flows to Latin America

Chair: Enrique V. Iglesias, President, Inter-American Development Bank

Antonio Estrany-Gendre, President, CICYP Continental (Consejo Interamericano de Comercio y Producción), Argentina

Frans van Loon, Managing Director, Emerging Markets Group, ING Barings, Netherlands

Carlos Hurtado Lopez, Chief Advisor to the Presidency for Economic and Social Policy, Mexico, and former Mexican Ambassador to the OECD

Douglas C. Worth, Secretary-General, Business and Industry Advisory Committee to the OECD (BIAC)

Concluding Remarks:

Ricardo Hausmann, Professor, Harvard University, and former Chief Economist, Inter-American Development Bank

Jorge Braga de Macedo, President, OECD Development Centre

LIST OF AUTHORS AND PARTICIPANTS

Chairs

Jorge Braga de Macedo	President, OECD Development Centre
Enrique V. Iglesias	President, Inter-American Development Bank
Ulrich Hiemenz	Director for Co-ordination, OECD Development Centre
Ricardo Hausmann	Professor, Harvard University, and former Chief Economist, Inter-American Development Bank
Carlos Hurtado Lopez	Chief Advisor to the Presidency for Economic and Social Policy, Mexico

High level panelists

Klaus Engelen	Verlagsgruppe Handelsblatt, Germany
Alessandro Merli	Il Sole/24 Ore, Italy
Luisa Palacios	Emerging Markets Economist, Direction des Risques, Sociéte Générale, France
Andy Robinson	Cinco Dias, Spain
Javier Santiso	Research Fellow, Latin America, CERI (Sciences Po), France
Antonio Estrany-Gendre	President, CICYP Continental, Argentina
Frans van Loon	Managing Director, Emerging Markets Group, ING Barings, Netherlands
Douglas C. Worth	Secretary-General, Business & Industry Advisory Committee to the OECD (BIAC)

Authors

Patricia Cortés	Inter-American Development Bank
Eduardo Fernández-Arias	Lead Economist, Inter-American Development Bank
Charles Oman	Head of Programme, Research, OECD Development Centre

Discussants

Daniel Cohen	Professor, École Normale Supérieure / Special Advisor, OECD Development Centre
John Evans	Secretary General, Trade Union Advisory Committee to the OECD (TUAC), France
Stefano Manzocchi	Professor of Economics, University of Perugia, Italy
Peter Nunnenkamp	Senior Economist, Kiel Institute of World Economics, Germany
Helmut Reisen	Head of Division, Research, OECD Development Centre
Philip Turner	Head, Emerging Markets, Bank for International Settlements (BIS), Basel, Switzerland
Beatrice Weder di Mauro	Professor of Economics, University of Basel, Switzerland

Other participants

Oscar Alcamán	Economic Counsellor, Embassy of Chile
Jean Bonvin	Professor at the Institut des Hautes Etudes en Administration Publique and former President of the OECD Development Centre
Nicole Cadwallader	Economic Policy Department, Foreign and Commonwealth Office
Rod Chapman	Press and Information Officer, European Office, Inter-American Development Bank, France
Simona Ciuffoni	Economic Analyst, Ministry for Foreign Trade, Italy
Richard Fox	Senior Director, Fitch IBCA, Duff & Phelps, United Kingdom
Paolo Giordano	Economist – Chaire Mercosur, Institut d'Études Politiques de Paris, France
Iris Kroening	Regierungsdirektorin, Federal Ministry of Economy and Technology, Germany

Carlos Quenan	Professor, France
Gabriella Robalino Aguirre	Economist, Banco Central del Ecuador
Javier Santiso	Research Fellow, Latin America, CERI (Sciences Po), Paris, France

National Delegations to the OECD and Members of the Inter-American Development Bank and the OECD Development Centre

Argentina

H.E. Mr. Carlos Perez Llana	Ambassador of Argentina
Horacio Doval	Counsellor
Alberto J. Kaminker	Counsellor
Nelson Martin	Secretary

Brazil

Adalnio Ganem	Minister Counsellor, Embassy of Brazil
Lauro Eduardo Soutello-Alves	Head of the OECD Liaison Section, Embassy of Brazil

Chile

Oscar Alcamán	Economic Counsellor, Embassy of Chile

Colombia

Olga Bula	Minister Counsellor, Embassy of Colombia

Costa Rica

H.E. Mr. Rodrigo Montealegre	Ambassador of Costa Rica

Dominican Republic

H.E. Mr. Guillermo Piña Contreras	Ambassador of the Dominican Republic

El Salvador

H.E. Mr. Pedro Luis Apostolo	Ambassador of El Salvador

Germany

Yildiz Götze	Second Secretary

Mexico

Rogelio Arellano	Minister, trade and investment issues, Mexican Delegation to the OECD
Magdalena Diaz	Third Secretary, Mexican Delegation to the OECD

Nicaragua

Milena Lanzas	Minister-Counsellor, Chargée d'Affaires a.i., Embassy of Nicaragua
Marta Caldera	First Secretary, Chargée des Affaires économiques et commerciales

Panama

H.E. Mr. Alberto Btesh	Ambassador of Panama
Isaac Btesh	Member of the Council of Foreign Relations

Portugal

Graça Mira Gomez	Deputy Head, Delegation of Portugal to the OECD
Irene Parades	Technical Counsellor, Delegation of Portugal to the OECD

Switzerland

Rudolf A. Mueller	Deputy Head of Directorate, State Secretariat for Economic Affairs (seco)

United Kingdom

Nicole Cadwallader	Economic Policy Department, Foreign and Commonwealth Office

Uruguay

H.E. Mr. Miguel Angel Semino	Ambassador of Uruguay

Venezuela

H.E. Mr. Hiram Gaviria	Ambassador of Venezuela
Marco Penaloza	Attaché économique

IDB European Office

Yann Brenner	Consultant
Rod Chapman	Press and Information Officer
Annie Dupuy	Chargée de Conférences
Leo Harari	Special Representative in Europe
Ziga Vodušek	Senior Economist

OECD Secretariat

Norio Ehara	Head, Non-Member Countries Division Asia/Pacific & Latin America, International Energy Agency
Fabienne Fortanier	Directorate for Financial, Fiscal and Enterprise Affairs
Maria Maher	Directorate for Financial, Fiscal and Enterprise Affairs
Daniel Malkin	Directorate for Science, Technology and Industry
Joaquim Oliveira Martins	Economics Department
Tristan Price	Economics Department
Teresa Santero	Economics Department
Bernadete Sarmiento Perreira	Centre for Co-operation with Non-Members
Gert D. Wehinger	Economics Department
Silvia Zucchini	Trade Directorate

OECD Development Centre

Maurizio Bussolo	Economist
Catherine Duport	Head of Support Services
Colm Foy	Head of Communication
Martin Grandes	Consultant (Financial Globalisation and Governance)
Henny Helmich	Head of Policy Dialogue & External Co-operation
Ida Mc Donnell	Policy Dialogue Unit
Marcelo Soto	Consultant
Jorge Velazquez	Consultant

Conference Secretariat

Marsha Beaudoin

Mayrose Tucci

OECD PUBLICATIONS, 2, rue André-Pascal, 75775 PARIS CEDEX 16
PRINTED IN FRANCE
(41 2001 02 1 P) ISBN 92-64-18645-X – No. 51733 2001