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POLICY RESEARCH WORKING PAPER 2613

Foreign Direct Investment and Poverty Reduction

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In the 1990s, foreign direct investment began to swamp all other cross-border capital flows into developing countries. Does foreign direct investment support sound development? In particular, does it contribute to poverty reduction?

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Summary findings

Foreign direct investment is a key ingredient of successful economic growth and development in developing countries—partly because the very essence of economic development is the rapid and efficient transfer and cross-border adoption of "best practices." Foreign direct investment is especially well suited to effecting this transfer and translating it into broad-based growth, not least by upgrading human capital.

Growth is the single most important factor in poverty reduction, so foreign direct investment is also central to achieving that important World Bank goal. Government-led programs that improve social safety nets and explicitly redistribute assets and income might direct more of the fruits of growth to the poor. But these are complements—not alternatives—to sensible growth-oriented policies. And growth is needed to fund these government-led programs.

Moreover, the delivery of social services to the poor—from insurance schemes to such basic services as water and energy—can clearly benefit from reliance on foreign investors.

In short, foreign direct investment remains one of the most effective tools in the fight against poverty.

This paper—a product of the Private Sector Advisory Services Department—is part of a larger effort in the department to analyze the role of private sector development in poverty reduction. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Zai Fanai, room I9-121, telephone 202-473-3605, fax 202-522-3262, email address zfanai@ifc.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at mklein@worldbank.org, caaron@ifc.org, or bhadjimichael@worldbank.org. June 2001. (41 pages)

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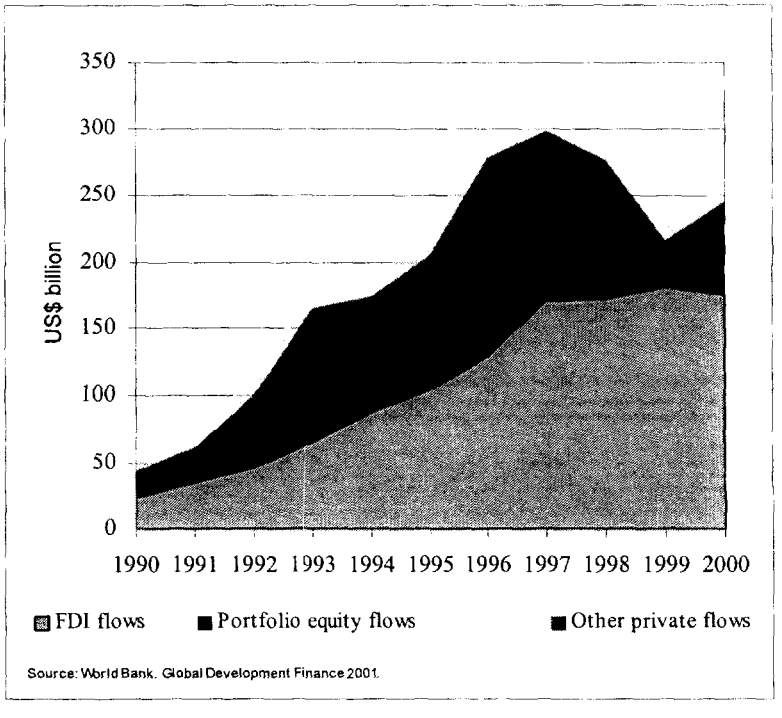
I. EXECUTIVE SUMMARY

Changes in cross-border financial flows – the rise of FDI. The last decade of the 20th century has seen major shifts in the size and composition of cross-border capital flows into developing countries. Net debt flows have become less and less important. Portfolio flows have become firmly established. Foreign direct investment (FDI) has come to swamp all other financial flows (Figure 1).

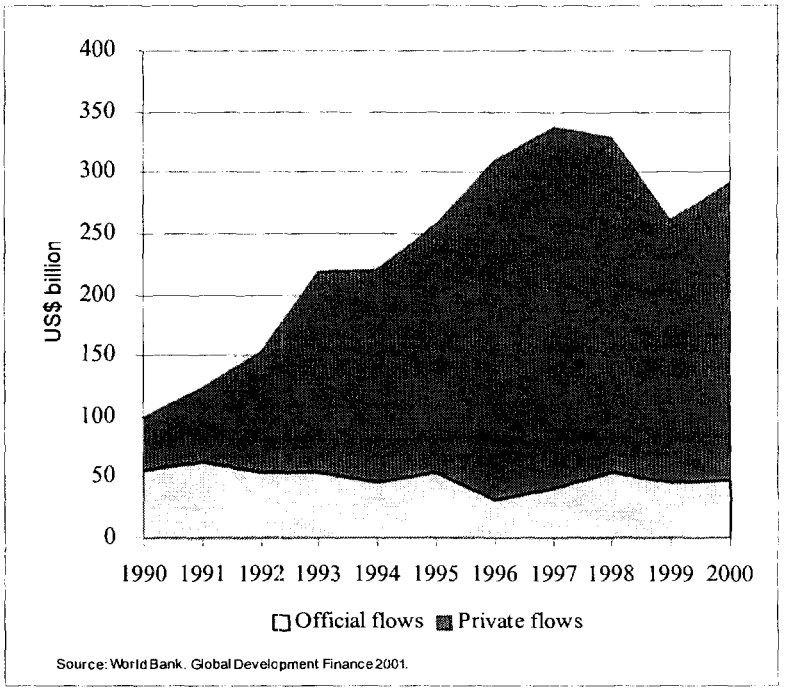
FIGURE 1: Net Long-Term Private Resource Flows to Developing Countries, by Type of Flow, 1990-2000



At the same time, following the collapse of communism in Eastern Europe and the former Soviet Union, official aid flows to developing countries have declined somewhat in absolute terms. In relative terms they have shrunk from roughly 56 percent of total net resource flows to about 16 per cent (Figure 2).

Two key questions arise from these trends. First, how can shrinking aid flows be best used to support the goal of poverty reduction? Second, does foreign direct investment support sound development, in particular, does it contribute to poverty reduction?

FIGURE 2: Total Net Long-Term Resource Flows to all Developing Countries, by Type of Flow, 1990-2000



FDI, growth and poverty reduction. In a nutshell, this paper argues that FDI is a key ingredient for successful economic growth in developing countries. This is because the very essence of economic development is the rapid and efficient transfer and adoption of "best practice" across borders. FDI is particularly well suited to effect this and translate it into broad-based growth, not least by upgrading human capital. As growth is the single-most important factor affecting poverty reduction, FDI is central to achieving that goal.

FDI and the quality of growth. Beyond promoting growth, FDI has other potentially desirable features that affect the quality of growth and assist with poverty reduction. First, it helps reduce adverse shocks to the poor resulting from financial instability as during the recent Asian crisis. Second, relative to other forms of promoting private sector investment FDI helps improve corporate governance. In particular, it is not easily subject to asset stripping that may render property rights distribution more unequal. Third, contrary to popular criticism FDI can help improve environmental and labor standards, because foreign investors tend to be concerned about reputation in markets, where high standards are seen as desirable. Finally, FDI generates taxes that support the development of a safety net for the poor. Many foreign investors also invest substantially in community development in areas where they operate and thus in the safety net for the particular area. Very importantly FDI can help improve the management of the social safety net, particularly service delivery to the poor, for example, water supply.

Pre-conditions for successful FDI. To achieve these positive outcomes for poverty reduction, the environment in which foreign investors operate needs to be "right". Otherwise popular criticism of various forms of exploitation practiced by foreign investors

may well be right. The existence of an equal and competitive playing field without special protection for foreign or domestic investors is crucial. The regulations governing foreign investors need to be reasonable — not unduly burdensome and not arbitrary.

FDI – no panacea but an integral part of the poverty reduction toolkit. This positive appraisal of the impact of FDI on poverty reduction will not easily be shared by those who believe that the current distribution of assets and incomes in the world needs to be rendered drastically more equal. FDI will, indeed, not automatically reduce income inequality. Also FDI will not deal with all dimensions of poverty. It will mainly promote growth and thereby reduce income poverty. However, there appear to be few other basic policies that promise to do systematically more for improving the material well-being of the poor. The key alternative approaches that might direct more of the fruits of growth to the poor are government-led programs that improve social safety nets and explicitly redistribute assets and income. But these are not alternatives to sensible growth-oriented policies. They are complements. Growth is needed to fund these programs. Moreover, the delivery of social services to the poor – from insurance schemes to access to basic services such as water and energy – can clearly benefit from reliance on foreign investors. However we may look at it – among the tools available – FDI remains among the most effective ones in the fight against poverty. Hence, the wide agreement among analysts about the usefulness of FDI, including prominent critics of "growth-first" policies such as Joseph Stiglitz, the former Chief Economist of the World Bank (Stiglitz, 1998b).

II. THE POTENTIAL OF FDI FOR POVERTY REDUCTION

A. FDI and growth

Cross border transfer of best practice and acceleration of growth. The key to economic development is the transfer and adoption of best practice across borders. Before the industrial revolution it took some 350 years for income per capita to double in Europe (Crafts, 2000). As the industrial revolution accelerated in the 19th century it took the lead country, Britain, over 60 years to double per capita income. Towards the end of the 20th century several rather diverse countries managed to double per capita income in just about 10 years — including, for example, Botswana, Chile, China, Ireland, Japan and Thailand. Such rapid growth is now possible for those developing economies that are able to import and imitate technical and organizational innovations from the world's leading countries. Growth of this rapid type makes it possible for the first time in history to propel people from poverty to a reasonably comfortable life within a single life span. Indeed, it is this possibility of near-term poverty eradication that gives rise to both hope about the possibilities and frustration about the shortcomings in the fight against poverty.

FDI — the key mechanism to transfer best practice across borders. Best practice may be transmitted across borders by various mechanisms. Foreign buyers of exports may provide the demand for upgrading, as well as some level of technical assistance to domestic firms (Lim and Fong, 1982; Johansson and Nilsson, 1997). Imported capital goods may embody improved technology. Technology licensing allows countries to acquire innovations. Expatriates transmit knowledge. Yet, arguably the most effective means of transferring best practice is FDI. Foreign investment tends to package

and integrate elements from all of the above mechanisms. A few countries, essentially Japan and Korea, have been able to grow rapidly with minimal reliance on FDI. Many countries have attempted to imitate the Japanese or Korean model, but with limited success. De facto, most other fast-growing countries have relied heavily on FDI (for example Chile, China, Malaysia, Singapore, and Thailand). Most astonishingly, Ireland — despite being a relatively advanced country – has managed to grow at some 8 per cent per year for most of the 1990s due in large part to effective attraction and deployment of foreign investment. This is not to say that FDI is all it takes to achieve rapid growth, but it appears that FDI is a key ingredient.

Many studies show that FDI tends to raise productivity in the recipient economy (Annex 1). Clearly, the key mechanism is the adoption of managerial and technical best practice from abroad. There is a large number of ways by which productivity is raised ranging from better worker training, via improved management methods, to deployment of advanced technology. Yet, it appears that no study explicitly tests, which mechanism for the cross-border transmission of best practice performs best and under what circumstances. However, a few studies have investigated whether firms with foreign investors raise productivity more than other firms. To the extent that such studies show that foreign-owned firms outperform domestic ones, this suggests that they constitute the better overall mechanism to improve management and technology. For example, foreign investment has raised the productivity of small and medium-sized firms in Venezuela more than that of domestically-owned firms (Aitken and Harrison, 1999). In the Czech Republic foreign owned firms out-performed joint ventures with foreign partners, which in turn out-performed locally-owned firms (Djankov and Hoekman, 1998). In Africa, firms with majority foreign ownership perform better than others (Ramachandran and Shah, 1997).

The role of FDI in the domestic diffusion of best practice. The ultimate impact of foreign investment on domestic growth depends not only on the performance of foreign-owned firms, but also on the diffusion of new practices through the economy. Several studies show that effective diffusion is possible and works, for example, through subcontracting arrangements. A study for Malaysia documents that subcontracting for foreign firms helped almost double the productivity of domestic supplier firms (Batra and Tan, 2000).

Overall, the diffusion of best practice in the domestic economy depends on the way domestic markets work, irrespective of the nationality of owners. Surprisingly, the way in which markets really work at the firm level has become a matter of detailed empirical economic analysis only during the 1990s. As usual the most detailed studies are for the United States and are summarized in Caves (1998). However, recently a series of studies have also tackled markets in developing countries, particularly Africa.[1] The general picture is as follows. All markets or individual sectors consist of a mix of small and large firms. A large number of small and medium-sized firms (up to 500 employees) tends to account for the majority of employment. Among such small firms turnover is high. Between 5 and 20 per cent enter and exit the market each year. Typically new entrants are a little more productive than those leaving the market. A few firms grow and become

[1] The Regional Program on Enterprise Development of the World Bank's Africa region is among the most sophisticated such study programs.

large. Large firms tend to be most productive, last longest and pay the highest wages (Caves, 1998; Tybout, 2000).

In growing economies, the average firm size increases and with it productivity and wages. This reflects a more sophisticated division of labor, characterized by complex subcontracting arrangements and industrial "clusters" or effective cities, which are after all the most efficient business "incubators". Larger firms tend to be at the apex of subcontracting chains. Likewise, larger firms are often key to the development of clusters (Iqbal and Urata, forthcoming). Larger firms provide credit to subcontractors as well as technical assistance. Particularly where financial markets are not very well developed and where politically-not-well-connected firms are rationed out of the market, large firms may constitute the key channel to access credit. There is thus a clear symbiosis between large, and small and medium sized firms, with the one dependent on the other.

How does FDI come into this picture? Typically, foreign entrants are larger and more productive than domestic firms in developing countries. They tend to produce higher quality goods and services and export relatively more. By relying on foreign investment, countries can "import" such larger, more productive firms and stimulate productivity improvements throughout the economy. De facto, countries can use such foreign firms as catalysts that allow them to leapfrog stages in the development of local firms. FDI can thus speed up the structural shift in the economy that allows a country to catch-up with advanced economies. From this perspective sound policies that support FDI also are among the best ways to develop domestic small and medium-sized companies.

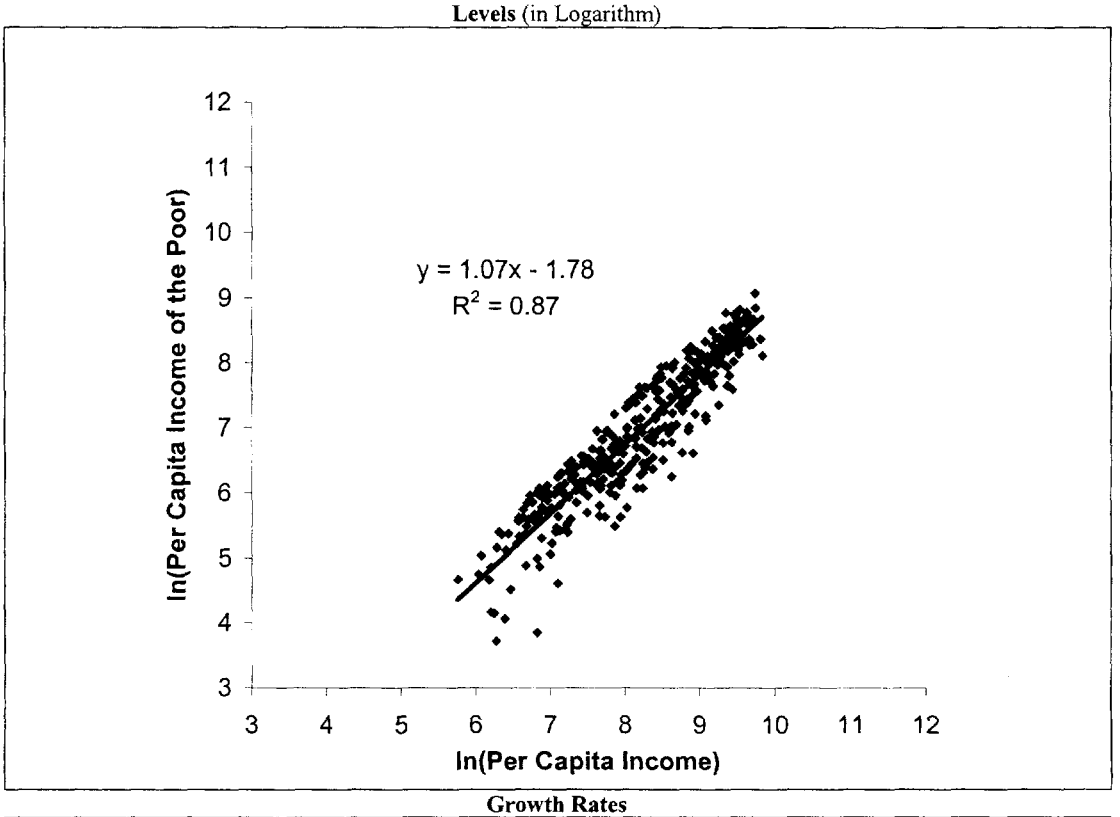
B. FDI and poverty reduction.

Growth and poverty reduction. Economic growth remains a necessary ingredient for poverty reduction. Recent studies suggest that growth tends to lift the incomes of the poor proportionately with overall growth (Dollar and Kraay, 2000). FDI as a key vehicle to generate growth is thus a most important ingredient for poverty reduction.

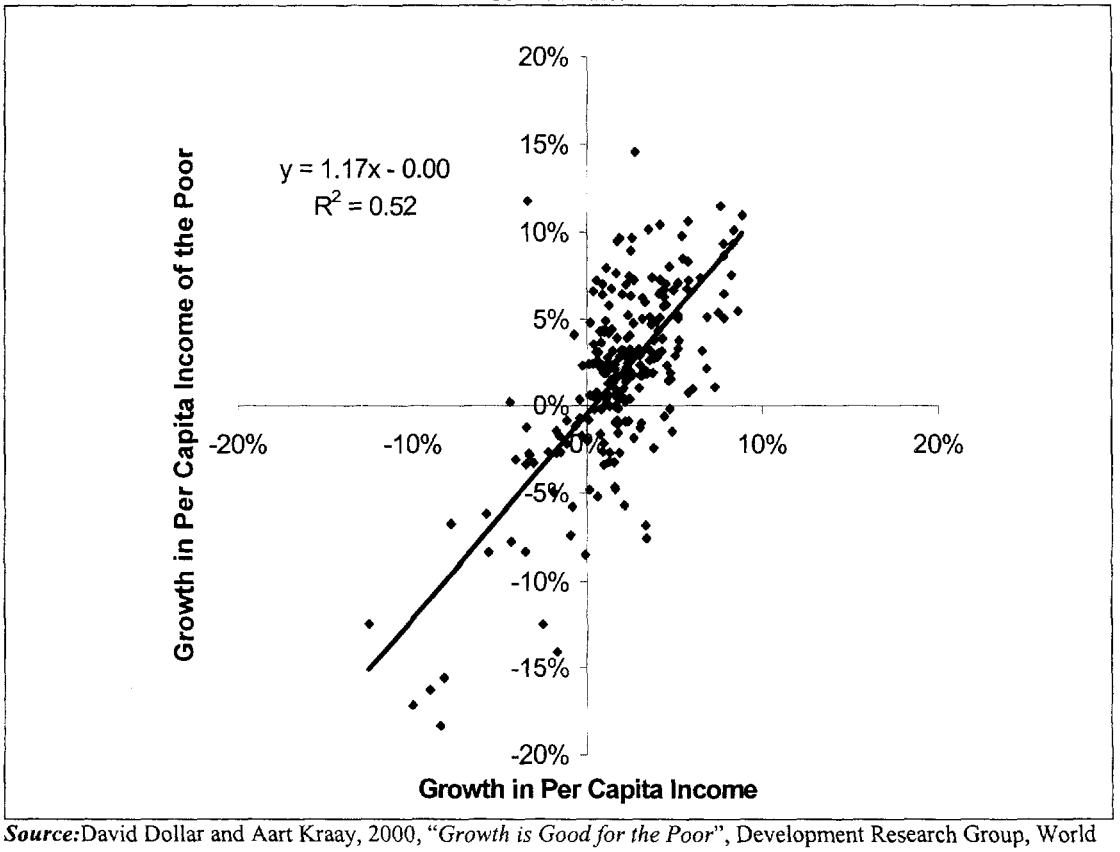
Whether the potential for domestic diffusion of best practice can be exploited depends on the absorption capacity of the host economy. Adequate levels of education and infrastructure are required to fully benefit from FDI (Borenzstein, De Gregoria and Lee, 1998) as well as competition in domestic markets (Bromstrom and Kokko, 1996).

FIGURE 3: Growth and the Poor

Levels (in Logarithm)



Growth Rates



Source: David Dollar and Aart Kraay, 2000, "*Growth is Good for the Poor*", Development Research Group, World Bank, p. 41.

FDI and the quality of growth. While on average growth benefits the poor, there are a number of countries where this has not happened (World Bank, 2000c). Yet, there is no clear recipe for translating growth into poverty reduction for all country cases. Different countries may well require somewhat different approaches to ensure that growth leads to poverty reduction (World Bank, 2000c). In the following it is argued that FDI can actually do more than just generate growth. FDI has the potential to improve the quality of growth by

- reducing the volatility of capital flows and incomes
- improving asset and income distribution at the time of privatization
- helping improve social and environmental standards
- helping improve social safety nets and basic services for the poor

FDI thus also belongs in the toolkit for poverty reduction in countries where simple reliance on "trickle down" does not work.

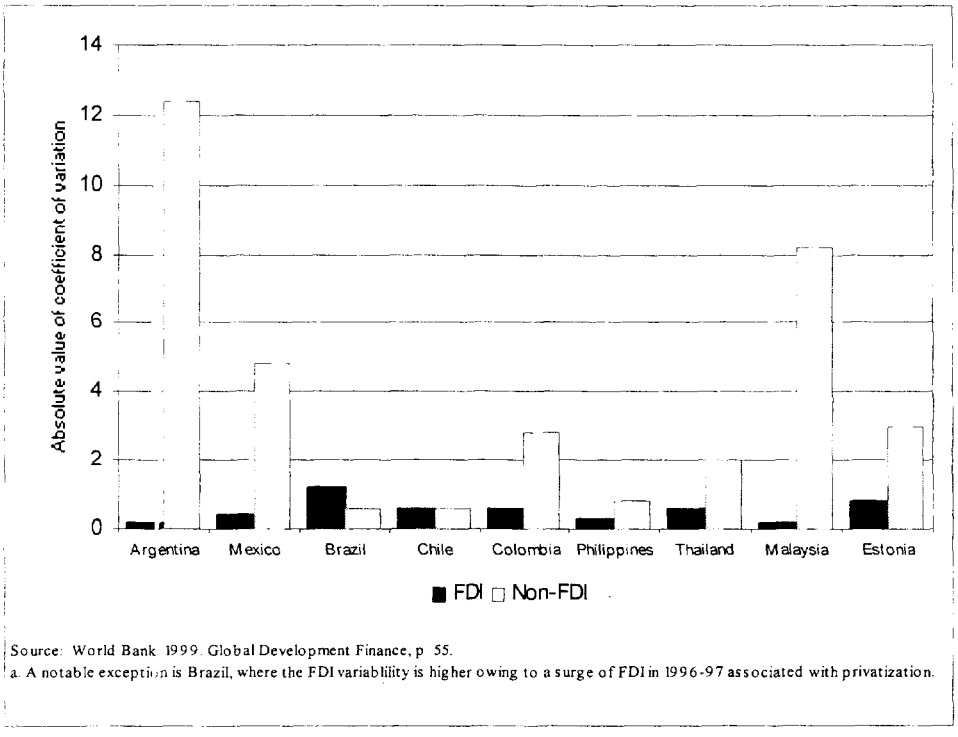
Protecting the poor from bad investment decisions and financial volatility. While foreign investment can be critical for rapid growth, critics fear that the gains from productivity improvements are transferred abroad. However, this is not the case when foreign investors operate under competitive conditions. Under such conditions foreign investors can only expect to obtain a normal return on capital. As in any competitive market some will make big profits and others small ones or losses. On average they will tend to earn just the cost of capital. Indeed, overall countries face a relatively competitive market for foreign investment. For example they have the choice to import capital via bank lending and import technology via licensing – the Korean strategy. The net cost would be interest payments plus license fees. Alternatively, countries can attract foreign investment and allow payment of dividends. Already in the 1970s the all-in-cost of one strategy compared to the other appeared quite similar adjusted for the extra risks assumed by foreign equity investors (Vernon, 1977).

FDI is thus not robbing poor countries. Any strategy that imports funds and technology from abroad requires payments to foreigners — unless pure charity is involved. And rapid development without importing best practice from abroad is not possible. What distinguishes foreign investment from other ways of funding development is not that it is more costly, but the incentive structure for foreign investors. Foreign investment is equity investment. Shareholders gain when projects or firms are successful. They lose when projects or firms fail. Creditors on the other hand often look towards taxpayers to hold them harmless when projects fail. That is clearly so when credits are guaranteed by governments. It is also often so when systemic crises lead to bail-outs of banks, as during the Mexico crisis of 1994/5 and the Asian crises of 1997/8. Foreign investment will by definition not lead to a debt crisis. Debt relief will never be an issue. By the same token, taxpayers in poor countries are not going to suffer from bad decisions by foreign direct investors, because losses will be absorbed by the foreign equity investors.

For the recipient country, the risk profile with FDI is thus better than with debt. By the same token foreign investors have a better incentive to evaluate projects. Once they have made their evaluation, they consequently tend to stay with an investment more

consistently than other types of investors. All this is reflected in the stability of foreign investment flows compared to debt and portfolio flows. Clearly FDI flows are most stable (Figure 4). Given that the poor have suffered disproportionately during currency and financial crises (World Bank, 1999), reliance on FDI helps protect the poor from the impact of volatility in international financial markets.

FIGURE 4: Volatility of Capital Flows - FDI is more stable 1990-1997



Source: World Bank 1999. Global Development Finance, p 55.
a. A notable exception is Brazil, where the FDI variability is higher owing to a surge of FDI in 1996-97 associated with privatization.

FDI exposes investors to significant risk which might imply that they shy away from poorer, more turbulent countries (Box 1). Yet, FDI is much less concentrated on a few countries than other private capital flows. FDI is not much more concentrated than the population of the recipient countries (Table 2).

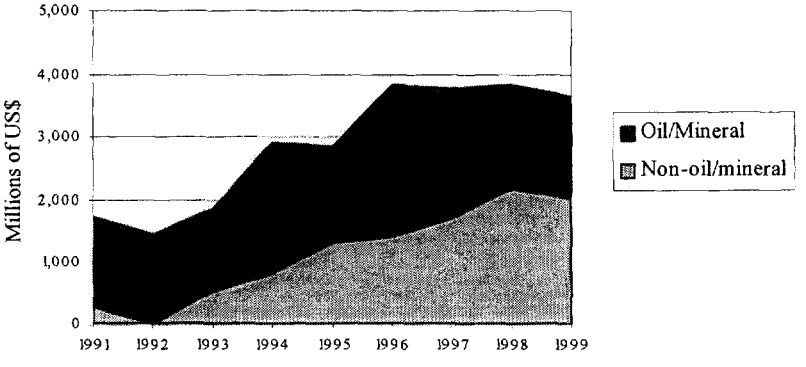
Among different types of private cross-border financial flows FDI is thus both least volatile, most available to poor countries and least likely to saddle taxpayers in poor countries with unbearable debt service obligations. Among private financial flows FDI is thus most conducive to promote sensible development for the poor.

Improved corporate governance. FDI brings with it the superior incentives of equity investors who try to make sure they invest sensibly. Among forms of cross-border equity investments FDI is also clearly the most efficient form of equity in countries with weak corporate governance rules and practices. Portfolio equity investment by minority shareholders in such countries faces severe risks of expropriation by insiders. For example, voucher privatization to dispersed shareholders in countries such as the Czech Republic or Russia has led to inefficient asset stripping, whereas foreign direct investment in countries like Hungary and Poland led to strong productivity increases (Djankov, 2000).

Box 1: Foreign Direct Investment in Africa

FDI inflows to Sub-Saharan Africa have traditionally gone to resource-based sectors. Sub-Saharan African countries, in general, have not been able to attract FDI due to their small market size, poor infrastructure, political uncertainty, corruption, and restrictive policies toward foreign investment. However, several African countries have recently improved the environment for foreign investment and have managed to attract FDI inflows toward activities in nonresource-based sectors. During 1991-94 only 21 percent of FDI inflows to Sub-Saharan Africa went to countries that were not major exporters of oil or minerals. The share of FDI inflows to these countries rose to about 49 percent in 1995-1999 (Figure 5).

FIGURE 5: FDI in Sub-Saharan Africa



Source: World Bank, Global Development Finance 2001.

Countries such as Mozambique, Tanzania, and Uganda, which receive most of the FDI inflows in agriculture, light manufacturing, and utilities saw sharp increases in FDI inflows in 1995-1999. In Lesotho, FDI has been undertaken to service the market in neighboring South Africa through the Lesotho Highlands Water project (Table 1).

TABLE 1: FDI FLOW IN SELECTED FAST-GROWING AFRICAN COUNTRIES, 1991-94 AND 1995-99

	1991-94		1995-99	
Country	Millions of US$	Ratio to GDP (%)	Millions of US$	Ratio to GDP (%)
Lesotho	11	1.4	252	27.1
Mozambique	29	1.3	156	4.7
Tanzania	21	0.4	157	2.1
Uganda	37	1.1	170	2.7
Total	97	0.9	734	4.1

Note: Data are annual averages.

Source: World Bank, Global Development Finance 2001.

TABLE 2. PATTERN OF PRIVATE FINANCIAL FLOWS IN DEVELOPING AND TRANSITION ECONOMIES[a], 1994-1999
(PERCENTAGE OF TOTAL FOR ALL DEVELOPING COUNTRIES)

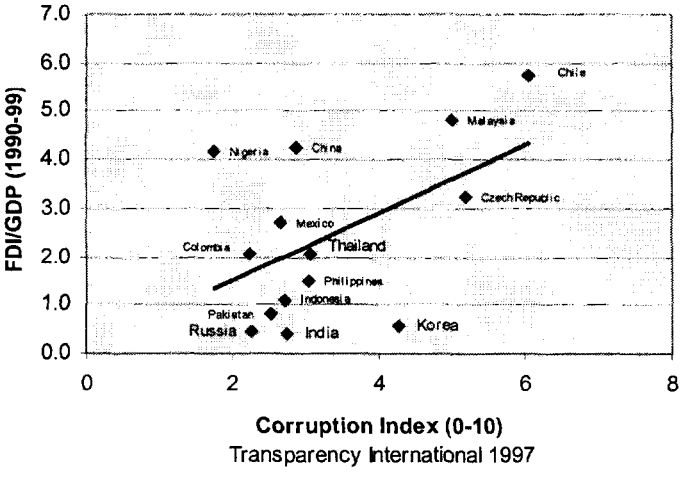
		FDI inflows		Portfolio equity		Bonds		Bank and trade-related lending		Population
Rank	Economy	1994-98	1999	1994-98	1999	1994-98	1999	1994-98	1999	1999
1	China	29.60	21.31	11.99	10.83	4.20	2.59	8.34	9.58	24.59
2	Brazil	10.58	17.96	10.74	5.69	6.16	10.54	31.69	55.31	3.30
3	Mexico	8.05	6.48	7.07	3.28	11.60	22.09	8.87	-31.43	1.91
4	Argentina	4.58	12.97	2.75	1.17	15.97	31.44	4.30	0.14	0.73
5	Poland	3.19	4.00	2.14	2.09	1.36	4.31	0.41	-5.20	0.77
6	Malaysia	3.13	0.85	4.86	1.51	3.58	2.93	5.29	-1.63	0.45
7	Chile	3.00	5.07	1.09	0.05	1.89	3.39	6.03	-6.67	0.30
8	Indonesia	2.54	-1.51	7.34	3.69	4.27	-5.73	2.44	20.91	4.07
9	Thailand	2.46	3.42	3.13	7.33	4.88	-5.34	4.07	18.72	1.22
10	Russian Federation	2.17	1.82	4.17	1.87	7.30	0.00	2.71	0.66	2.89
11	Colombia	2.11	0.63	0.53	0.07	2.82	4.85	4.03	-4.83	0.83
12	Venezuela, RB	2.09	1.75	1.65	0.19	0.25	0.53	1.19	0.98	0.47
13	Korea, Rep.	1.97	5.13	9.11	36.06	18.53	-5.56	1.47	53.12	0.92
14	Hungary	1.82	1.07	2.34	1.72	1.13	2.38	0.81	-6.91	0.20
15	Peru	1.80	1.08	3.73	0.84	-0.34	-1.00	1.01	-4.34	0.49
16	India	1.76	1.19	7.89	3.78	2.74	-4.42	0.43	2.03	19.63
17	Czech Republic	1.33	2.80	0.30	1.45	0.51	0.69	4.09	3.55	0.20
18	Philippines	1.21	0.32	3.15	1.22	3.32	15.31	0.01	-0.10	1.51
19	Nigeria	1.08	0.55	0.02	0.00	0.00	0.00	-0.99	0.56	2.44
20	South Africa	1.02	0.76	5.15	11.19	0.00	0.00	-0.07	0.05	0.04
21	Vietnam	0.99	0.58	0.44	0.00	0.00	0.00	0.27	2.98	1.53
22	Kazakhstan	0.71	0.87	0.03	0.00	0.29	-0.79	0.94	-0.34	0.30
23	Egypt, Arab Rep.	0.67	0.59	2.14	1.60	0.00	0.39	-0.75	0.60	1.22
24	Romania	0.64	0.57	0.03	0.00	0.66	-2.68	1.19	-1.35	0.43
25	Turkey	0.59	0.43	2.37	2.32	2.00	12.66	2.93	-14.72	1.26
26	Panama	0.53	0.01	0.09	0.00	0.34	1.50	-0.04	-1.07	0.06
27	Pakistan	0.49	0.20	1.82	0.00	0.33	-0.29	0.93	1.98	2.66
28	Azerbaijan	0.47	0.28	0.00	0.00	0.00	0.00	0.04	-0.33	0.16
29	Ecuador	0.44	0.38	0.00	0.00	-0.07	-0.08	0.32	-1.04	0.24
30	Trinidad and Tobago	0.43	0.41	0.00	0.00	0.08	0.90	-0.28	0.57	0.03
	Total above	91.45	91.97	96.07	97.98	93.81	90.63	91.68	91.80	74.83
	Top 20	85.49	87.65	89.15	94.06	90.18	79.00	86.14	104.52	66.96
	Top 10	69.30	72.36	55.28	37.53	61.22	66.23	74.16	60.40	40.22

Source: World Bank, Global Development Finance 2001.
a. Top thirty recipients of FDI inflows.

Those companies that are owned and controlled by foreigners have improved productivity more than those under dispersed ownership, and the distributional implications have probably also been more benign. Asset stripping and other forms of de facto expropriation of minority shareholders under schemes like voucher privatization have tended to lead to a concentration of ownership in the hands of relatively few "oligarchs". Relative to that outcome foreign ownership appears to have led to less unequal ownership among nationals. In addition, dispersed minority shareholdings in firms owned by reputable foreign companies tend to be less plagued by de facto expropriation of minority shareholders. All in all, in countries with weak corporate governance rules and practices foreign investment leads to higher productivity and thus wages than experienced in companies sold to dispersed minority owners. At the same time the distribution of assets among nationals would tend to be more equal. On balance the "oligarchs" benefit less and workers more.

In a way this is a special case of the more general notion that foreign investment tends to go badly together with corrupt practices. This is not because owners and managers of foreign companies are a superior breed of people. Indeed, there are a number of examples where foreign investors are accomplices in corrupt practices or where they work in countries that rank low on corruption indices, particular investors in the extractive industries – whether they themselves are associated with corrupt practices or not. However, as a rule it appears that corrupt environments impose excessive costs of doing business, which foreign companies tend to avoid (Drabek and Payne, 1999; Smarzynska and Wei, 2000). In a similar vein, where corporate governance is weak foreign investors will not invest unless they have effective control themselves. Hence, the correlation of FDI with relatively less expropriation of minority shareholders and with less corruption (Figure 6).

FIGURE 6: Corruption and FDI Inflows in Developing Countries



Source: World Bank, GDF 2001; Transparency International 1997 Corruption index.

Foreign companies have the ability to walk away from corruption precisely because they are less beholden to local vested interests, including governments, than domestic companies. The often deplored erosion of sovereign power due to the ability of foreign companies to choose their preferred domicile is thus revealed to be a positive trait in this case. More generally, the arms-length relationship that foreign investors have with government, where playing fields are even and competition prevails, allow foreign investors to provide opportunities to domestic employees or domestic entrepreneurs that might not have been open to them otherwise. Not being beholden to vested interests and domestic politics as much as locals, foreign investors can and do, for example, open up employment opportunities for women, who might otherwise not have found similarly well paying jobs — notwithstanding the low level of their wages.

Better social and environment standards — race to top. Many critics of FDI allege that multinational companies tend to locate production in countries or regions with low wages, low taxes and weak environmental and social standards. They argue that FDI thus contributes to a "race to the bottom", where countries are forced to lower their standards so as not to lose investment and jobs. It is certainly true that these features of the business environment play a significant role in the decisions of multinationals. However, these items are all just part of the cost side of a business. In the end it is not costs that matter, but profits. Foreign investors balance cost considerations with others that determine the productivity of operations in a particular country.

Overall, FDI flows to places where the net profitability is highest, not where costs are lowest. This is reflected in the basic fact that some three quarters of FDI flows to developed countries and not to low cost developing nations. Among OECD countries the experience of Canada and Switzerland is of interest in this regard, because there labor and capital can move freely across provinces with different tax regimes. Studies suggest that firms and individual taxpayers take the tax burden into account, but that other factors such as the state of infrastructure and other available services are even more significant factors for location decisions (OECD, 1998). Regarding FDI numerous studies suggest that special tax incentives are not the key to attracting FDI, but that the presence of business opportunities is much more important. Business opportunities are in turn enhanced by the rule of law, the quality of a country's labor force, its infrastructure, and so on.

The other side of the coin is that FDI will only flow into countries with low productivity when wages and other costs are low enough to offset the productivity disadvantage. By the standards of developed economies foreign investors in developing countries pay low wages. Relative to local wages, however, they tend to pay high wages, because foreign companies tend to be more productive than local ones (Graham and Wada, 2000; Mazumdar and Mazaheri, 2000).

The first round effect of greater foreign investment is often to raise wages of relatively well skilled workers in developing countries. This would increase inequality there. Over time as productivity improvements spread in the recipient economy other people benefit and incomes become again more equal than they would otherwise be. In time, FDI thus helps improve income growth in the low wage countries. To this extent FDI actually helps equalize the global distribution of incomes. For developing countries FDI thus creates a race to the top.

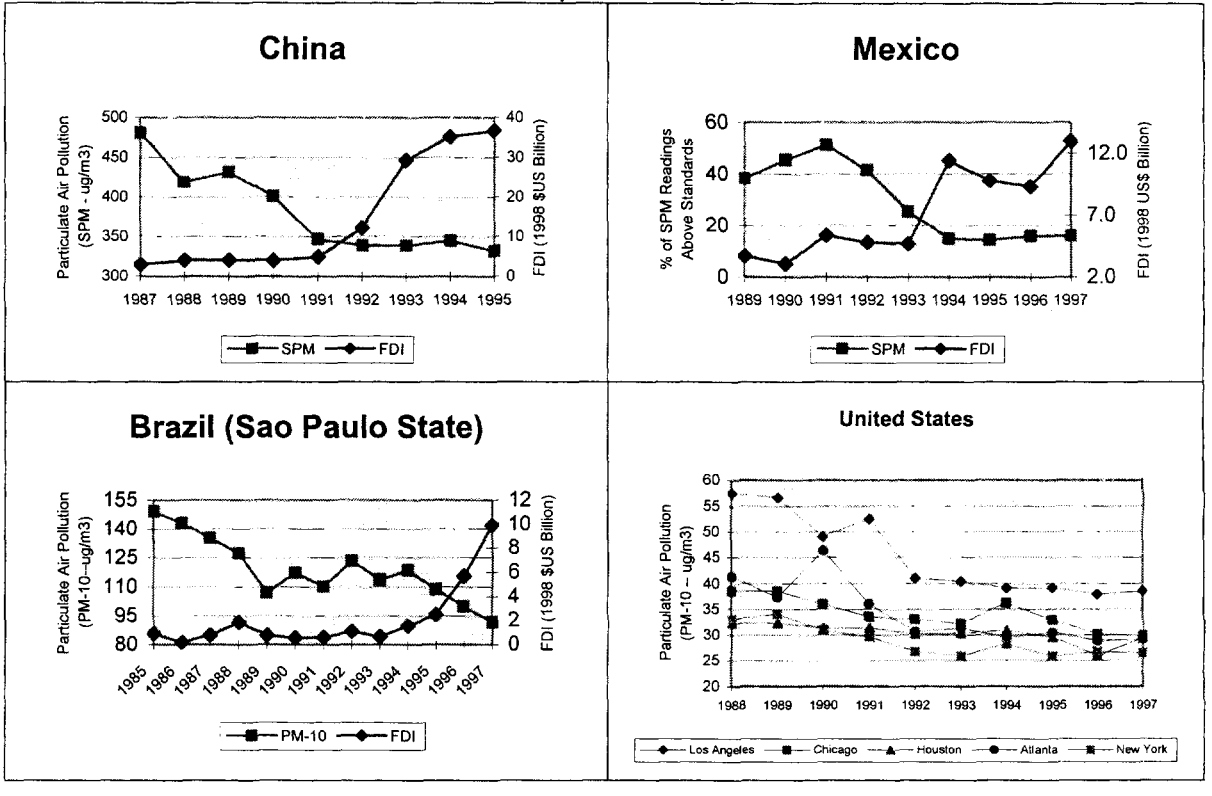
For advanced countries the situation is somewhat different. There the move of companies to low wage locations places downward pressure on the wages of relatively low skilled workers. Only better training and upgrading of jobs will help these workers improve their relative income position. Hence the distrust and dismay, with which many workers in developed countries regard "globalization". Such dismay is a sign that growth that redistributes incomes towards the less well off — as FDI tends to do across countries – easily runs into political constraints, regardless of how many people feel strongly that we need a more equal world. Arguably the relative downward pressure on incomes of workers in high income countries has been one of the major factors behind the disruption of globalization in the beginning of the 20th century (O'Rourke and Williamson, 1999).

FDI can also create a race to the top for environmental and social standards, for example labor standards in developing countries. Again this is not because managers of multinationals are particularly nice people. A number of detailed cases show that some foreign companies have operated with weak environmental and safety procedures or allowed labor to be treated badly by international or by developed country standards. In this they rarely behave worse than is the general practice in the recipient country (Box 2).

Box 2: Racing to the Bottom?

The 'race to the bottom' hypothesis has been tested in a recent study that analyzes air quality trends in the United States and the three largest recipients of foreign direct investment among the developing countries – China, Brazil, and Mexico. The evidence shows that instead of racing toward the bottom, major cities in these countries have experienced significant improvements in air quality (see figure 7). The improvements in the developing countries have occurred in an era of economic liberalization, industrial growth, and rapid expansion of foreign investment flows, thus contradicting the concerns that free trade and capital flows tend to erode global environmental standards. Furthermore, the reduction in air pollution in Mexico City and Los Angeles have occurred despite the fact that these are dominant industrial centers most strongly affected by the North American Free Trade Agreement.

FIGURE 7: Urban air pollution and FDI in China, Mexico, and Brazil, and air pollution in U.S. metropolitan areas, 1985-1997



Evidence from numerous studies suggests that an environmental "race to the bottom" is unlikely for the following reasons:

- Pollution control costs matter to factory owners and managers, but they are generally not a critical factor in location decisions;
- Where regulations are weak or absent, NGOs and community groups pursue informal regulation (threat of social, political or physical sanctions) to convince polluters to compensate the community or reduce pollution;
- At the national level, governments display a tendency to tighten regulation as incomes grow;
- Local businesses control pollution because abatement reduces costs; and
- Due to the scrutiny of consumers and environmental NGOs, multinational firms generally adhere to OECD environmental standards in their developing-country operations.

Source: Wheeler, 2001.

However, foreign investors can afford to observe better standards than domestic firms can due to higher productivity. Particularly large foreign firms are now increasingly pressured by various civil society groups to improve their environmental and labor practices. When foreign companies sell in competitive markets in rich countries it is relatively easy to boycott them, because consumers can at low cost switch to competitors. Hence, large multinationals have a strong interest in preserving their reputation and over time they tend to be a force for raising standards in developing countries (Oman, 2000).

The key to the whole debate is that the race to the top regarding wage levels or environmental or social standards requires improved productivity. Otherwise the higher wages and the higher standards are not affordable. FDI is key here, because it tends to be among the more rapid ways of enhancing productivity and — when subject to effective competition — foreign investors will pass the resulting benefits to the host country via higher wages and/or better standards.

Social safety nets and service for the poor. While FDI has many features that help generate growth and raise wages and standards, it does not per se redistribute income towards the very poor. Social safety nets for the very poor and redistribution of assets and incomes towards them tend to require either important charitable activity or government intervention — not-for-profit intervention in both cases.

Foreign investment can often be important for creating the pre-conditions for such intervention. Foreign investors, by virtue of their productivity, can help generate the tax revenue required to fund assistance to the poor through their own tax contribution and indirectly by stimulating growth and thus broadening the tax base. They also often spend significant resources on community development in the areas that they operate in, so as to demonstrate that they are "good citizens", and they make important charitable contributions.

In addition to helping fund services for the poor foreign companies are often particularly well suited to actually deliver the services to the poor, because foreign direct investment combines the superior performance incentives of equity investors with advanced managerial and technical competence.

For example, the search for better service provided by private, often foreign, investors has characterized the world-wide shift to private provision of infrastructure during the 1990s. Foreign investors in telecommunications, electricity and water have brought more and improved service to millions of households including poor ones. Foreign investors do not shy away from serving poor or remote customers. The key to reach the poor is simply opening up entry into service provision by private companies.[2]

[2] Issues of private participation in provision of infrastructure services for the poor were dealt with at a recent conference "Infrastructure for Development: Private Solutions and the Poor," sponsored by the Public-Private Infrastructure Advisory Facility (PPIAF) and the UK Department for International Development. For background papers, see http://www.ppiaf.org/ppiandthepoor/presentations.html.

III. PRE-CONDITIONS FOR BENEFICIAL FDI

Openness to foreign investment is a strategy that has many potential benefits for poverty reduction. As has been pointed out, many countries have indeed been able to reap many of these benefits. However, the benefits do not flow quite automatically. Foreign investors are fallible people just like any others and they need to operate under the right conditions to bring out the good side of FDI. Otherwise they might be tempted to indulge in corrupt and socially detrimental activities just as domestic firms do. Examples of such behavior figure prominently in critiques of FDI.

Even and competitive playing field. Most importantly, the benefits from FDI tend to be maximized when foreign investors operate on an even and competitive playing field. This means they need to be treated just like domestic companies ("national treatment"). In addition, competition, free entry, customer choice and free exit, should determine who gains and who loses. In particular, foreign investors trying to service the domestic market of the host country should not be protected from import competition. China would in many ways appear the exception to the rule. A lot of foreign investment went into the country despite a less than perfect policy environment. However, in the case of China the special relationship of key provinces that received a large part of foreign investment, Guangdong and Fujian with Chinese communities outside the mainland did much to make up for existing distortions in the playing field. Moreover, China could clearly enhance the contribution of foreign investment through further policy reform (OECD, 2000).

Exposure to effective competition on an even playing field is the single most important incentive for foreign and domestic companies to upgrade management and technology. Existence of significant market power risks reducing the incentives of foreign investors to improve productivity and to exploit consumers or workers in captive markets. Free entry is also the key to establishing effective linkages between foreign investors and domestic buyers or suppliers that help diffuse best practice in the economy.

Domestic capability to exploit FDI. While a competitive and even playing field creates incentives to upgrade productivity throughout the economy, countries also need domestic actors capable of responding to these incentives. Various studies suggest that higher quality of the labor force and infrastructure in a country helps exploit the potential benefits from FDI (Borenzstein, De Gregorio and Lee, 1998; Caves, 1999; Djankov and Hoekman, 1998; Mody and Wang, 1997). Key policy responses will often be measures to improve education and infrastructure. In addition, foreign investors will themselves invest in upgrading domestic capability, for example via on-the-job training or the creation of physical infrastructure, for example by mining companies.

Adjusting environmental and social standards. Finally, as globalization gradually leads to the establishment of more international standards for environmental and social aspects of foreign investment, governments need to adjust their own policy design to fit into the evolving world of norms. If they do not adjust their own norms foreign investors may be forced to stay away out of reputational concerns or they may face too much competition from domestic firms not subject to stringent norms. On the other hand tougher standards have costs, which domestic firms may not be able to afford.

In that case domestic activity could suffer or be driven into uncontrolled or corrupt "informality". Analyses of how governments should position themselves to help match the drive for better corporate responsibility with effective growth at home are becoming increasingly important.

Prudent management of windfall gains from natural resources. Unsurprisingly, as for any investment, a basic pre-requisite for successful foreign investment is a stable macro-economic environment that allows investors to plan. A particular issue here are policies to deal with windfalls resulting from natural resources. Such windfalls resulting from oil, gas and mining projects have very often not lead to prosperity in the exporting country (Auty, 1993; Gelb, 1988; Sachs and Warner, 1995). Large inflows of foreign exchange tend to raise the real exchange rate of an economy and thus render many non-mining activities unprofitable, the so-called "Dutch disease". In addition, the existence of large windfall gains provide incentives for many vested interests and new players to lay a hand on the gains in more or less legal ways. Corruption easily thrives under these conditions and scarce entrepreneurial talent is often diverted from productive pursuit to devising scams. The result is that many times windfalls have not benefited the poor and have even hurt them.

In many developing countries foreign investors manage the extraction and sale of minerals or fuels. Due to the problems sketched above, such foreign investment in enclave projects has often not been associated with growth and poverty reduction in the host country. The key for improvement are ways to manage the windfalls better. This would require prudent macro-economic policies to prevent excessive exchange rate appreciation and policies that minimize the opportunities of insiders for corruption. Countries that have been able to manage resource booms relatively well, albeit by no means perfectly, include Botswana, Chile, Indonesia, Malaysia, Mauritius, Mexico and Oman.

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Website

For conference papers dealing with private participation in the provision of infrastructure services to the poor, see: **http://www.ppiaf.org/ppiandthepoor/presentations.html**

ANNEX 1: STUDIES RELATING TO DIRECT INVESTMENT, ECONOMIC GROWTH, AND POVERTY REDUCTION

AUTHORS	METHODOLOGY	MAIN FINDINGS
Economic Growth, Income Inequality, and Poverty Reduction		
Clarke, George R.G. 1995. "More Evidence on Income Distribution and Growth." *Journal of Development Economics*. 47.	The study uses cross country regressions to examine the link between income inequality and growth.	The results show that under a broad range of assumptions initial income inequality is negatively correlated with growth.
Deininger, Klaus, and Lyn Squire. 1996. "A New Data Set Measuring Income Inequality."*The World Bank Economic Review*. 10(3).	The paper presents a new set of data on inequality in the distribution of income, based on Gini coefficients and on the shares of individual quintile groups in total income for a large number of developing countries.	The authors found that, for the 95 growth spells for which data on income shares were available, there was no systematic link between growth and inequality, but there was a strong positive relationship between growth and poverty alleviation. In particular, growth benefited the poor in the vast majority (87.5 percent) of cases, whereas economic decline hurt the poor disproportionately (in five out of seven cases).
Dollar, David, and Aart Kraay. 2000. "Growth is Good for the Poor." Development Research Group. Washington, D.C.: World Bank.	The study investigates the link between the income of the poor (defined as the bottom 20 percent of the income distribution) and overall income (per capita GDP). The data consists of income of the poor and mean income for 80 countries over 40 years. The study further examines the poverty-growth relationship in cases of poor countries versus rich countries, crisis periods versus normal growth periods, and the recent period compared to earlier times. It also introduces other institutions and policies into the analysis and asks whether these influence the extent to which growth benefits the poor.	The basic finding is that as overall income increases, on average incomes of the poor increase by exactly the same rate. None of the efforts to divide the data points into different groups changes the basic relationship between incomes of the poor and growth. As for the impact of policies and institutions, it is shown that openness to international trade as well as improvement in rule of law (e.g. property rights) raise incomes of the poor by raising overall per capita GDP but do not significantly influence the distribution of income. Policies that introduce fiscal discipline and macroeconomic stability, however, are found not only to raise the overall incomes, but also to have an additional income distribution effect.
IMF. 2000. "How Can the Poorest Countries Catch Up?" *Chapter IV in the World Economic Outlook, May 2000*. Washington, D.C.: International Monetary Fund.	The paper reviews the progress made in recent decades in raising real incomes and alleviating poverty in developing countries and comments on the policy implications.	The paper finds that the progress in raising real incomes and alleviating poverty has been disappointingly slow in many developing countries and the relative gap between the richest and the poorest countries has continued to widen. In Africa, the level of real per capita income today is lower than it was 30 years ago. More broadly, the number of very poor (those living on less than one $1 per day) has remained roughly unchanged over the past decade, and only limited progress has been made in reducing the share of the world population living in poverty. This represents both huge amounts of unnecessary human suffering and an enormous squandering of human potential. The paper argues that the bulk of development research reveals neither a unique set of preconditions that are always present during economic takeoff nor an easily identified set of impediments that have prevented poor countries from achieving sustained growth. There is no single formula for kick-starting growth,

AUTHORS	METHODOLOGY	MAIN FINDINGS
		and it is more likely that the explanation of the unsatisfactory performance of many developing countries lies in the interplay of economic and political factors that vary by country. Nevertheless, experience in the successful developing countries clearly points to macroeconomic stability, sound institutional arrangements, and openness to trade as factors that are conducive to, or at least associated with, high sustainable growth. Experience in the poorest countries highlights poor education and health, ineffective governance, weak rule of law, and wars as frequent impediments to prosperity.
Ravallion, Martin, and Shaohua Chen. "What Can new Survey Data Tell Us About Changes in Distribution and Poverty." 1997. *The World Bank Economic Review.* 11(2).	The study uses data from household surveys for 67 developing and transitional economies over 1981-94 to test the relationship between changes in inequality and polarization with changes in average living standards.	The study finds that changes in inequality and polarization were uncorrelated with changes in average living standards. It found, however, that almost always, poverty fell with growth in average living standards and rose with contraction.
Roemer, Michael, and Mary Kay Gugerty. 1997. "Does Economic Growth Reduce Poverty." CAER I *Discussion paper No. 5.* Cambridge, MA.: Harvard Institute for International Development.	The growth of average income for the poorest 20% and the poorest 40% of the population are regressed against the growth of GDP per capita.	The results indicate that on average the poor do benefit from economic growth. An increase in the rate of per capita GDP growth translates into a one-for-one increase in average income of the poorest 40%. For the poorest 20%, the elasticity of response is 0.921. Another conclusion of the study is that income distribution changes only very slowly, and that a policy that aims at redistributing income at the expense of economic growth may have very low payoffs in terms of poverty reduction.
Timmer, C. Peter. 1997. "How Well Do the Poor Connect to the Growth Process?" *CAER Discussion paper No. 17.* Cambridge, MA: Harvard Institute for International Development.	Using Deininger-Squire data on income distribution for 27 developing countries, the paper estimates the impact of average per capita income growth on the growth of per capita income of each income quintile.	The paper finds that the distribution of income for the countries in the data sample worsened during the process of economic growth; the elasticity of overall growth and the growth in the per capita income of the poorest quintile was only 0.8 (and significantly less than one) and rose steadily to slightly greater than one for the richest quintile. The paper argues that the apparent failure of growth to reach the poor in the countries with wide income gaps, while disappointing, should not be taken as a general indictment of economic growth itself. The paper calls for visible and pro-active measures to reach the poor so as to sustain growth-friendly reforms.
FDI and Economic Growth		
De Melo, Luiz R. Jr. 1999. "Foreign Direct Investment-led Growth: Evidence from Time Series and Panel Data." 1999. *Oxford Economic papers.* 51(1).	The study tests the hypothesis of increasing returns due to FDI for the five Latin American economies (Brazil, Mexico, Venezuela, Chile, and Colombia) that absorbed most of the FDI in the region in the period 1970-91.	The findings suggest that both directions of causality depend on the recipient economy's trade regime, ranging from import substitution to export promotion. Both open-economy performance variables (e.g. terms of trade, foreign debt, and so on) and domestic policy variables are shown to affect FDI and growth in the long run.
Djankov, Simeon, and Peter Murrell. 2000. "The Determinants of Enterprise Restructuring in Transition: An	The authors have identified more than 125 empirical studies that examine the determinants of	The findings suggest that privatization has had stronger effects on restructuring in East and Central

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Assessment of the Evidence." Unpublished draft. The World Bank, US AID, and the IRIS Center.	enterprise restructuring using sound methodologies applied to data generated at the enterprise level. The paper provides a comprehensive review of the empirical results of privatization in transition economies using the data generated by these studies.	Europe than in the Commonwealth of Independent States (CIS). Evidence from data on ownership shows that worker and diffused individual ownership is more prevalent in the CIS than in non-CIS countries, while concentrated owners, specifically foreign owners, investment funds, and bank ownership is more prevalent in non-CIS countries. The study also finds that state ownership is the worst effective category and foreign ownership is most effective.
Encarnation, Dennis, and Louis T. Wells. 1986. In Theodore Moran (ed.), *Investing in Development: New Roles for Private Capital?* Washington DC: Overseas Development Council.	The paper analyses the contribution of 50 FDI projects to national income, at world market prices, minus the costs to the national economy.	The majority of the projects (55-75%), depending upon assumptions, would increase income whilst the remaining sizeable minority (25-45%), although profitable for the investor, would reduce national income, principally as a result of protectionist barriers.
Graham, Edward H. 1995. "Foreign Direct Investment in the World Economy." *IMF Working Paper WP/95/59.* Washington, D.C.: International Monetary Fund.	The paper surveys the theoretical and empirical literature on the determinants of FDI and the economic consequences of FDI for both host (recipient) and home (investor) countries.	The paper concludes, inter alia, that FDI can have both positive and negative economic effects on host countries. Positive effects come about largely through the transfer of technology and other intangible assets, leading to productivity increases and improvements in the efficiency of resource allocation. Negative effects can arise from the market power of large foreign firms (multinational corporations) and their associated ability to generate very high profits, or from domestic political interference by multinational corporations. Empirical research, however, suggests that the evidence of negative effects from FDI is inconclusive, while the evidence of positive effects is overwhelming.
Kaminski, Bartlomiej. 1999. "Hungary's Integration into European Union Markets: Production and Trade Restructuring." *Policy Research Working Paper 2135.* Washington, D.C.: World Bank.	The paper reviews the factors that have contributed to the changing structure of Hungary's exports to the European Union during the 1990s.	The paper concludes that FDI has played a major role in the shift since 1994 in Hungary's exports to the European Union from natural resource and unskilled labor-intensive products to technology and human capital-intensive products. This restructuring reflects the emergence of second-generation firms, which are mostly foreign-owned, and export-oriented. Hungary has been one of the most successful transition economies because of its openness to FDI from the outset. Between 1990 and 1997, Hungary absorbed roughly half of all foreign capital invested in Central Europe.
Lall, Sanjaya, and Paul Streeten. 1977. *Foreign Investment, Transnationals and Developing Countries.* Boulder, Colorado: Westview Press.	The authors examined 88 foreign- and locally-owned projects in six countries for UNCTAD, using cost-benefit analysis to calculate national income effects.	For two-thirds of the 88 projects, FDI had a net positive effect on national economic welfare. The main determining factor of the remaining negative social income effects was the extent of effective protection granted firms.
Lee, Jong-Wha. 1994. "Capital Goods Imports and Long Run Growth." *NBER Working Paper 4725.* Cambridge, MA.: National Bureau of Economic Research.	The paper examines the role of capital goods imports in economic growth using an endogenous growth framework and a two-sector open economy. Cross country data for	The ratio of imported to domestically produced capital goods in the composition of investment has a significant positive impact on per capita income growth, particularly in

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	1960-85 are used.	developing countries.
Nordstrom, Hakan, Dan Ben-David, and L. Alan Winters. 1999. "Trade, Income Disparity, and Poverty." Geneva: World Trade Organization.	The paper analyzes the impact of trade on global income disparity, and poverty.	The main findings of the paper are that in a world economy marked by increasing income gaps between poor and rich countries, trade can be a factor in bringing about convergence in incomes between countries. This process is accompanied by faster growth in the countries liberalizing their trade regimes. Trade liberalization is generally a positive contributor to poverty alleviation, by allowing people to exploit their productive potential, promoting economic growth, curtailing arbitrary policy interventions, and helping countries to insulate against shocks. However, most trade reforms will create some losers (some even in the long term) and could exacerbate appropriate action to alleviate the social hardships and facilitate adjustment, rather than abandon the reform process.
Ramachandran, Vijaya, and Manju Kedia Shah. 1997. "The Effects of Foreign Ownership in Africa: Evidence from Ghana, Kenya and Zimbabwe." *RPED Paper No. 81.* Washington, D.C.: World Bank.	The paper presents an econometric analysis of the impact of foreign ownership on value-added of firms in sub-Saharan Africa, based on firm-level data from Ghana, Kenya, and Zimbabwe.	The foreign ownership variable is insignificant when included as a dummy or as a measure of minority foreign ownership, weakly significant when measured as a continuous variable, and significant for all three countries when measured as majority equity. A majority of foreign ownership of greater than 55 percent does raise the value-added of the firm. Foreign firms, which have a clear majority in terms of ownership, appear to have greater opportunity or to be more willing to transfer productivity-enhancing technology. Thus, it may be beneficial to pursue "open-door" policies that allow foreign investors to own majority shares or subsidiaries in the industrial sector in Africa.
Sun, Haishun. 1998. "Macro-economic Impact of Direct Foreign Investment in China: 1979-96."	The paper investigates the macroeconomic impact of FDI flows into China during the period 1979-96.	FDI has significantly promoted economic growth in China by contributing to domestic capital formation, increasing exports, and creating new employment. In addition, FDI flows to China have tended to improve the productive efficiency of resource allocation of the Chinese domestic sectors by transferring technology, promoting exports, and facilitating inter-regional and inter-sectoral flows of labor and capital. However, FDI flows to China have had also some negative side effects by (a) worsening of environmental pollution; (b) exacerbating inter-regional economic disparities as a result of the uneven distribution of FDI; (c) transfer pricing; and (d) encouraging round-tripping of the capital of Chinese domestic firms (whereby firms sent money out of China in order to bring it back in as FDI and take advantage of the various fiscal and other incentives offered by the government.

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Thomsen, Stephen. 1999. "Southeast Asia: The Role of Foreign Direct Investment Policies in Development." *Working Papers on International Investment*. Paris: Organization for Economic Cooperation and Development.	The paper reviews the role of foreign direct investment in the economic development of Indonesia, Malaysia, the Philippines and Thailand.	FDI has been, to varying degrees, a key factor driving export-led growth in the countries under review. Foreign firms have played a leading role in the sectors with the fastest growth such as electronics. In all four countries, however, development strategies have included a selective approach to investment promotion. Partial openness has allowed foreign firms to contribute to rapid export-led growth, but in many cases indigenous capabilities have not been developed sufficiently in those export sectors so as to allow a sustainable development. The study suggests a more balanced treatment of foreign investors which would allow foreign firms to play a greater role in the domestic economies of the host countries.
Economic Growth and the Policy Environment		
Easterly, William. "The Mystery of Growth: Shocks, Policies, and Surprises in Old and New Theories of Economic Growth." *The Singapore Economic Review*. 40(1).	This paper is a review of empirical evidence pertaining to the impact of shocks on economic growth, and on the relationship between national policies and economic growth.	Commodity windfalls, terms of trade losses or gains, and other forms of shocks beyond a country's control do matter for growth even in the medium-run. But national policies like financial sector reform, public infrastructure investment, low budget deficits, and maintenance of low and stable inflation also have strong effects on medium-run growth.
Frankel, Jeffrey A. 1997. "Determinants of Long-term Growth." Paper presented at the Meeting of the Asia-Pacific Economic Cooperation in Canada on November 20, 1997.	The paper presents a discussion of the various factors that have been identified in the theoretical and empirical literature as possible determinants of a country's long-term growth, in the context of the experience of Asian countries.	The paper concludes that, according to statistical studies, the strongest determinants of countries' long-term growth rates are investment in physical and human capital (especially investment in infrastructure and education), openness with respect to international trade and investment, and economic freedom. Macroeconomic stability, financial structure, and political and social stability are also important. Many East Asian countries have many of these characteristics in abundance, which explains their miracle growth rates of the past.
Moran, Theodore. 1998. *Foreign Direct Investment and Development*. Washington D.C.: Institute for International Economics.	This book is a synthesis of evidence from literature on FDI that suggests the need for a new agenda for host governments.	The author reviews three separate sets of assessments of the impact of FDI covering 183 projects in some 30 countries over more than 15 years. The results of these assessments show that a majority of the projects (55 percent to 75 percent) usually had a positive impact on the host national income, but a large minority of the projects (25 percent to 45 percent) had a clearly negative impact on the economic welfare of the host. The difference between positive and negative impacts was accounted for by policy variables that the host authorities could control. The author suggests a new policy agenda toward FDI which entails avoiding the use of domestic-content, joint-venture and technology-licensing requirements.

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Rodrik, Dani. 2000. "Institutions for High-Quality Growth: What They Are and How to Acquire Them." NBER *Working Paper 7540.* Cambridge, MA: National Bureau of Economic Research.	The paper reviews the types of institutions that allow markets to perform and to promote growth.	The paper concludes that while the institutions that allow markets to perform adequately can be identified in broad terms, there is no unique mapping between markets and the non-market institutions that underpin them. The paper emphasizes the importance of "local knowledge," and argues that a strategy of institution building must not over-emphasize best-practice "blueprints" at the expense of experimentation. Participatory political systems are the most effective ones in processing and aggregating local knowledge. A range of evidence indicates that participatory democracy enables higher-quality growth.
Stiglitz, Joseph E. 1998. "More Instruments and Broader Goals: Moving Toward the Post-Washington Consensus." *The 1998 WIDER Annual Lecture*, Helsinki, Finland, January 7, 1998.	This is a discussion of the failures of the "Washington consensus" as well as a discussion of the emerging consensus or the so-called "post-Washington consensus" on what makes markets work well and what are the instruments that promote well-functioning markets.	Making markets work requires more than just low inflation; it requires sound financial regulation, competition policy, and policies to facilitate the transfer of technology and to encourage transparency. The East Asian crisis was not a refutation of the East Asian miracle. The problem was that governments underestimated the importance of financial regulation and corporate governance. It remains a fact that no other region in the world has ever had incomes rise so dramatically and seen so many people move out of poverty in such a short time.
Stiglitz, Joseph E. 1998. "Towards a New Paradigm for Development: Strategies, Policies, and Processes." *Prebisch Lecture at UNCTAD*, Geneva, October 19, 1998.	This is a discussion of how in recent years there has been increasing attention paid, within the World Bank and the development community, to issues of health and education, literacy rates and life expectancy, the importance of economic security and creation of safety nets, and the promotion of democratic, equitable, and sustainable development.	It is in the interest of developing countries to become fully involved in the global economy through trade and through attracting foreign direct investment (FDI). Development is not just a matter of technical adjustments, but a transformation of society. Both trade and FDI play important roles in this area. However, it is crucial that trade and FDI not be confined to small enclaves, even if those enclaves give a temporary boost to national output (e.g. a wealth of gold resources away from the country's population base may attract FDI and boost mineral exports, but it may do little for long-term development). The capital that enters a country through FDI typically comes in with management expertise, technical human capital, product and process technologies, and overseas marketing channels. If the host country puts in place the appropriate complementary policies and structures, FDI can give a boost to the technological level and growth of that country. The fears about FDI in the 1960s and 1970 were based largely on the notion of FDI as an enclave phenomenon. In its modern incarnation, FDI is something to attract, not to fear. With the growing international competition among multinationals, foreign corporations receive fewer monopoly rents and the host countries get a larger share of the benefits from investment. As the

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		experience of the recent financial crisis has shown, short-term capital is volatile. As FDI flows largely continued unchanged, short-term capital flows reversed in many of the crisis countries. In addition, short-term capital does not have the added benefits of FDI. The high development costs brought about by abrupt capital-flow reversals can easily diminish any marginal benefit from such flows.
Stiglitz, Joseph, E. 1999. "Back to Basics: Policies and Strategies for Enhanced Growth and Equity in Post-Crisis East Asia." Speech given in Bangkok, Thailand, July 29, 1999.	This is a discussion of the prospects for East Asian economics after the financial crisis.	Despite the recent financial crisis, East Asia remains the best model of development. Between 1960 and 1995, eight economies in East Asia grew approximately three times as fast as Latin America and South Asia, five times faster than Sub-Saharan Africa, and outperformed the economies of Middle East and North Africa region. The increases in income were matched by improvements in living standards, increases in life expectancy, and a reduction by half in the number of people living in absolute poverty over a two-decade period. Countries in the region should therefore not step back from openness to the outside world, especially to ideas and knowledge, investment capital, and competition; but at the same time they must not ignore the structural weaknesses that contributed to their vulnerability. They must also avoid subjecting themselves to the risks of short-term capital flows.
Vernon, Raymond. 1998. *In the Hurricane's Eye: The Troubled Prospects of Multinational Enterprises*. Cambridge, MA: Harvard University Press.	An analysis of the role of multinationals in the globalizing economy.	Despite the cordial relationship between governments and multinational enterprises, there is an inherent tension between the two that needs to be addressed. The world is likely to go through a long period of learning as nation states search for proper responses to the problems of openness. During that period, multinational enterprises will be vulnerable to the accusation that they are the prime cause of those problems. The author calls for restraint from leaders on both sides of this struggle.
Volatility of FDI Relative to Other Capital Flows		
Chuhan, Punam, Gabriel Perez-Quiros, and Helen Popper. 1996. International Capital Flows: Do Short-term Investment and Direct Investment Differ?" *Policy Research Working Paper 1669*. Washington, D.C.: World Bank.	The paper examines the behavior of international capital flows through an empirical analysis of four major components of international capital flows in 15 developing and industrial countries.	The behavior of short-term investment appears to be sensitive to changes in all the other types of international capital flows, but direct investment appears to be insensitive to such changes.

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Eichengreen, Barry. 2000. "Taming Capital Flows." *World Development.* 28(6).	The paper discusses how to cope with high capital mobility and how to proceed with capital market liberalization.	The author suggests the opening of inward foreign investment early in the process of liberalizing the capital account. As of 1996, 144 of 184 countries surveyed by the IMF had not eased controls on FDI. The author argues that one of the factors contributing to the Korean crisis was the fact that the government had been reluctant to allow inward FDI but that under foreign pressure opened other components of the capital account. In the case of Thailand, even though the lifting of restrictions on inward FDI did not help prevent the crisis, the problem was that the capital account was also opened to portfolio flows without the presence of a strong financial system.
Stiglitz, Joseph E. 2000. "Capital Market Liberalization, Economic Growth, and Instability." *World Development.* 28(6).	The paper reviews the arguments for capital market liberalization and suggests intervention in short-term capital flows.	Foreign direct investment brings with it not only resources, but technology, access to markets, and training. Foreign direct investment is also not as volatile and disruptive as short-term capital flows. In the case of East Asia as a whole, the turnaround in capital flows during 1996-97 amounted to $105 billion, more than 10% of the GDP of these economies.
Economic Growth and Natural Resource Windfalls		
Auty, Richard M. 1993. *Sustaining Development in Mineral Economies: the Resource Curse Thesis.* London: Routledge.	This study uses cross-country comparisons to explain why the hard mineral economies have performed less well than the developing countries as a whole.	Mineral production in developing countries is strongly capital intensive and employs a small fraction of the total national workforce with large inputs of capital from foreign sources. Consequently, the mining sector displays marked enclave tendencies. This means that few local factories are established to supply inputs or to further process the ore prior to export. The insulation of the non-mining tradeables from import competition makes it especially difficult to generate the foreign exchange and tax revenues needed to substitute for those lost from mining during a mineral downswing. The mining sector also displays low revenue retention since a large fraction of export earnings flow immediately overseas to service the foreign capital investment. The cause of the underperformance of the hard mineral economies, therefore, lies not so much in a lack of investment resources as in the inefficiency with which those investment resources were deployed.
Sachs, Jeffrey D., and Andrew M. Warner. 1995. "Natural Resource Abundance and Economic Growth." *NBER Working Paper 5398.* Cambridge, MA.: National Bureau of Economic Research.	Cross-country regressions are used to study the association between natural resource intensity and economic growth from 1971 to 1989 in a sample of 97 countries. The results remain significant even after controlling for a number of additional variables that other studies have found to be important in explaining cross-country growth. These variables include initial GDP, trade policy, terms of trade volatility, inequality, and effectiveness of the	There is a statistically significant, inverse relationship between natural resource intensity and growth rate. Out of 18 countries, only two resource abundant countries, Malaysia and Mauritius, were found to have sustained a 2 percent per annum growth during the period under study.

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	bureaucracy. Adding regional dummy variables and introducing alternative measures of natural resource abundance do not affect the results.	
Impact of Corruption on FDI		
Drabek, Zdenek, and Warren Payne. 1999. "The Impact of Transparency on Foreign Direct Investment." *Staff Working paper ERAD-99-02.* Geneva: World Trade Organization.	The paper investigates the impact of non-transparent government policies on the inflows of FDI.	The paper finds on the basis of empirical analysis that the degree of non-transparency is an important factor in a country's attractiveness to foreign investors. High levels of non-transparency can greatly retard the amount of foreign investment that a country might otherwise expect. Simulations presented in the paper suggest that on average, a country could expect a 40 percent increase in FDI from a one point increase in its transparency ranking. Similarly, non-transparent policies translate into lower levels of FDI.
Kaufmann, Daniel, and Shang-Jin Wei. 1999. "Does 'Grease Money' Speed Up the Wheels of Commerce?" *Policy Research Working Paper 2254.* Washington, D.C.: World Bank.	The paper examines the validity of the "efficient grease" hypothesis, according to which corruption can improve economic efficiency and that fighting bribery would be counter-productive.	The paper finds that contrary to the "efficient grease" hypothesis, firms that pay more bribes are also likely to spend more, not less, management time with bureaucrats negotiating regulations, and face higher, not lower, cost of capital. By way of policy implications, the paper suggests that the business community as a whole can benefit from international laws that strengthen their ability to credibly commit to no-bribery, even if an individual firm may find it otherwise optimal to bribe in a corrupt environment.
Smarzynska, Beata K., and Shang-Jin Wei. 2000. "Corruption and Composition of Foreign Direct Investment: Firm-Level Evidence." *Policy Research Working Paper 2360.* Washington, D.C.: World Bank.	The paper studies the impact of corruption in a host country on foreign investors' preferences for a joint venture versus a wholly-owned subsidiary.	In a simple model, the paper highlights the basic trade-off in using local partners. On the one hand, corruption makes local bureaucracy less transparent and increases the value of using a local partner to cut through the bureaucratic maze. On the other hand, corruption decreases the effective protection of the investors' intangible assets and lowers the probability that disputes between foreign and domestic partners will be adjudicated fairly, which reduces the value of having a local partner. The importance of protecting intangible assets increases with the investor's technological sophistication. Empirical tests of the hypothesis on a firm-level data set show that corruption reduces inward FDI and shifts the ownership structure toward joint ventures. Technologically more advanced firms are found to be less likely to engage in joint ventures. However, US firms are found to be more averse to joint ventures in corrupt countries than investors of other nationalities. This may be due to the US Foreign Corrupt Practices Act.
Wei, Shang-Jin. 1999. "Does Corruption Relieve Foreign Investors of the Burden of Taxes and Capital Controls." *Policy Research Working*	In a sample of 14 countries making bilateral investments in 45 host countries, the study investigates whether corruption ("grease money")	The study finds no robust support in the data for the "efficient grease" hypothesis. Instead, the paper finds that taxes, capital controls, and corruption

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Paper 2209. Washington, D.C.: World Bank.	helps to attract foreign investment by reducing foreign firms' tax burden and provide them with relief from capital controls.	all have large, statistically significant negative effects on foreign direct investment. Bureaucratic corruption adds to the burdens of taxes and capital controls rather than reduces them.
FDI, Linkages and Spillovers		
Aitken, Brian, and Ann Harrison. 1999. "Do Domestic Firms Benefit from Foreign Direct Investment?" *The American Economic Review*. 89(3): 605-618.	This paper uses panel regressions of more than 4,000 Venezuelan plants between 1976 and 1989 to investigate backward and forward linkage effects, and spillovers in the same industry.	An increase in foreign ownership is correlated with declines in the productivity of larger wholly domestically-owned firms in the same industry as multinationals tend to invest in more productive sectors and more productive domestic firms/ enterprises. The benefits of FDI have largely been internalized by joint ventures. For smaller local firms in the same industry (< 50 employees) increases in foreign participation in the industry lead to rises in productivity due to linkage/spillover effects. The output of domestically owned firms contracts in response to a rise in foreign share. If foreign investors increase their total sales in an industry by 10 percentage points, output produced by plants without foreign investment in that industry declines by 12.58 percentage points, suggesting that FDI reduces domestic plant productivity in the short run by forcing domestic firms to contract, thereby increasing their average costs. Long-run effects of FDI were not captured in this study.
Aitken, Brian, Gordon H. Hanson, and Ann E. Harrison. 1997. "Spillovers, Foreign Investment and Export Behavior." *Journal of International Economics*. 43: 103-132.	In this study, the authors test the hypothesis that multinational companies (MNCs) act as export catalysts using panel data for 1986-90 for 2104 Mexican manufacturing plants following Mexico's trade liberalization in 1985. A two-stage probit model, is used.	The probability that a domestic plant exports is positively correlated with proximity to MNC affiliates, even when other factors such as overall industrial activity, capital city proximity,and so on, are controlled for. Export propensity is uncorrelated with the concentration of exporters generally. This suggests that export spillovers are restricted to MNC activity, with affiliates being a natural conduit for information about foreign markets and technology, and so on.
Barrel, Ray, and Nigel Pain. 1997. "Foreign Direct Investment, Technological Change, and Economic Growth within Europe." *The Economic Journal*. 107: 1770-1786.	This study estimates the efficiency spillover from FDI for the UK and West Germany.	Each 1 per cent rise in the stock of inward investment raised labor-augmenting efficiency by 0.27% over the period 1972-95 in West Germany, and by 0.26% in the UK (manufacturing sector only). For the UK, therefore, inward FDI over 1985-95 seemed to raise manufacturing output by 12.5% or 1.2% per year, accounting for 30% of the growth of the UK manufacturing sector over the ten year period.
Batra, Geeta, and Hong Tan. 2000. *Interfirm Linkages and Productivity Growth: Evidence from Malaysian Manufacturing*. Washington DC: World Bank.	The study investigates the relationship between interfirm linkages and productivity growth using evidence from Malaysian manufacturing.	Foreign firms in Malaysia are more likely (than local large firms) to subcontract to foreign and local suppliers, and rely more heavily on the latter. Production function results show that "having any subcontracting links with other firms is associated with higher productivity, a relationship that is large, positive and statistically significant." Subcontractors were 45% less productive when they first became

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		suppliers compared to the survey point – in other words, the productivity disadvantage diminishes over time.
Batra, Geeta, and Hong Tan. 1997. *Malaysia: Enterprise Training, Technology and Productivity.* Washington DC: World Bank.	The study investigates the productivity effect of employee-sponsored and other training programs using data from a survey of 2200 companies.	The major finding is that the productivity of local firms lags behind that of foreign affiliates because local firms invest relatively less in training and new technology. Affiliates do less R&D than local firms suggesting technology can be effectively acquired through licensing agreements and technology embodied in new equipment.
Bende-Nabende, Anthony. 1998. "A Static Analysis of the Impact of FDI on the Host Developing Countries' Economic Growth: A Case for the ASEAN-5 Economies." Paper presented at the ESRC Conference 'Finance and Development', Birmingham, UK, September 7-8, 1998. Mimeo.	The paper investigates whether FDI has caused spillover effects that have led to economic growth of the ASEAN-5 economies over the period 1970-94. The article also has an overview of the theoretical and empirical literature on employment, human capital formation, technology transfer and growth.	FDI has stimulated economic growth by spilling mainly through its impact on workforce training and skill-upgrading, followed by technology transfer, international trade and learning by doing. FDI has created incentives for human skills improvement, and governments have played an important role in the process of improving human skill quality through "formal" channels.
Biggs, Tyler, Manju Shah, and Pradeep Srivastava. 1995. "Technological Capabilities and Learning in African Enterprises." *World Bank Technical Paper 288* (Africa Technical Department Series). Washington DC: World Bank.	The study investigates the production function for manufacturing companies in Ghana, Kenya and Zimbabwe in the early 1990s.	Both foreign ownership and technology transfer are found to have a significant impact on firm efficiency. Both increase value added by 30% for the sample as a whole, and by over 60% in Ghana.
Biggs, Tyler. 1995. "Training and Productivity in African Manufacturing Enterprises." *Regional Program on Enterprise Development Discussion Papers.* Washington DC: World Bank.	The study investigates the impact of firm-based training and investments in technology on enterprise productivity in Ghana, Kenya and Zimbabwe, using 1992-3 RPED Survey data.	The main finding is that 56% of foreign-owned firms conduct in-house training of employees, compared with 17% for domestic firms.
Blomstrom, Magnus, and Hakan Persson. 1983. "Foreign Investment and Spillover Efficiency in an Underdeveloped Economy: Evidence from Mexican Manufacturing Industry." *World Development.* 11(6).	The paper investigates the spillover effect of FDI in Mexico.	Foreign firms may help developing country firms to enter world markets by providing links to final buyers outside their own country.
Blomstrom, Magnus. 1990. *Transnational Corporations and Manufacturing Exports from Developing Countries.* New York: United Nations Center on Transnational Corporations.	The study looks at the effect of FDI on export competitiveness in Latin America.	Evidence shows that FDI positively affects export performance of indigenous companies in Latin America.
Blomstrom, Magnus, and Ari Kokko. 1996. "The Impact of Foreign Investment on Host Countries: A Review of the Empirical Evidence." *Policy Research Working Paper 1745.* Washington DC: World Bank.	This paper is a reviewof empirical evidence on host country effects of foreign direct investment.	Multinational companies play an important role for productivity and export growth in their host countries, but the exact nature of the impact of FDI varies between industries and countries. The characteristics of the host country's industry and policy environment are important determinants of the net benefits of FDI.
Borenzstein, Eduardo, Jose De Gregorio, and Jong-Wha Lee. 1998. "How does Foreign Direct Investment Affect Economic Growth?" *Journal of International Economics.* 45: 115-135.	The paper investigates the effect of FDI on economic growth in a cross-country regression framework using FDI flow data to 69 developing countries for 1970-89.	Results show that FDI is an important vehicle for the diffusion of technology contributing relatively more to growth than domestic investment, but the result holds only when there is some threshold stock of human capital. FDI has the effect of increasing total investment by more than one for one suggesting complementary rather than substituting effects of FDI (in other words a "crowding-in" effect).

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Brimble, Peter, and James Sherman. 1998. "The Broader Impacts of Foreign Direct Investment on Economic Development in Thailand: Corporate Responses." Paper prepared for High Level Roundtable on *FDI and its Impact on Poverty Alleviation*, December 1998.	This is an analysis of macro indicators (FDI Flows, employment figures, and multiplier effects), micro case studies, and firm-level perspectives.	FDI accounts for some 17% of total manufacturing employment, up from 8.8% in the mid-1980s. FDI also accounts for an increasing share of new employment generation in the poorer provinces far away from Bangkok.
Caves, Richard. 1999. "Spillovers from Multinationals in Developing Countries: the Mechanisms at Work." *William Davidson Institute Working Paper* 247. Michigan: William Davidson Institute.	The paper presents an overview of empirical and theoretical literature on spillovers.	Managerial skill spillovers are high for countries whose firms have reached a moderate level of productivity, i.e. have a high absorptive capacity.
Chan, Vei-Lin. 2000. "FDI and Economic Growth in Taiwan's Manufacturing Industries." In Takatoshi Itoh and Anne O. Krueger, *The Role of Foreign Direct Investment in East Asian Economic Development*, Chicago and London: Chicago University Press. Pp.349-366.	Chan uses two-digit industry panel data (1962-96) for Taiwan to assess the impact of FDI on economic growth, controlling for human capital, fixed capital formation and exports, and to check the direction of causality.	Using Granger causality tests, Chan finds a causal relation from FDI to economic growth. The results do not find a positive causal relation from FDI to fixed investment to exports indicating that FDI promotes economic growth through technology improvement, consistent with R&D-based endogenous growth theory.
Chuang, Yih-Chyi, and Chi-Mei Lin. 1999. "Foreign Direct Investment, R&D and Spillover Efficiency: Evidence from Taiwan's Manufacturing Firms." *The Journal of Development Studies*. 35(4): 117-137.	The paper presents the results of regression analysis on the impact of FDI on labor quality, market structure, export performance, and the impact of R&D on productivity using firm-level data of 8,846 manufacturing establishments.	Existence of beneficial spillovers from both FDI and R&D is confirmed. A 1% increase in an industry's FDI ratio produces a 1.40% to 1.88% increase in domestic firm's productivity, while a 1% point increase in the industry's R&D intensity will generate a 19.1% to 41.7% increase in firms' productivity.
Djankov, Simeon, and Bernard Hoekman. 1998. "Foreign Investment and Productivity Growth in Czech Enterprises." *Policy Research Working Paper 2115.* Washington, DC: World Bank.	The paper presents panel regression estimates of firm-level data of 173 foreign-owned (joint venture or foreign direct investment) firms in the Czech Republic for 1992-1996.	Total factor productivity (TFP) growth is higher in firms with foreign partnerships: firms that have been acquired by foreign owners have the highest TFP growth, followed by firms with joint ventures. Firms without foreign partnerships have the lowest TFP growth as a group. Results also indicate that know-how spillovers require a minimum level of technological capacity to be absorbed.
Haddad, Mona, and Ann Harrison. 1993. "Are there Positive Spillovers from Direct Foreign Investment?" *Journal of Development Economics*. 42: 51-74.	A firm-level data set is employed to test for dynamic externalities in the Moroccan manufacturing sector.	FDI has a statistically insignificant impact on total factor productivity growth. Sectors with a higher foreign presence had a lower dispersion of productivity amongst all firms, suggesting that there may be spillovers that moved local firms closer to the productivity frontier.
Hong, Kyttack. 1997. "Foreign Capital and Economic Growth in Korea: 1970-1990." *Journal of Economic Development*. 22(1): 79-89.	The author analyzes the contribution of various types of foreign capital to growth of Korean industries in 1970-1990, by modeling the productivity elasticities of FDI, commercial loans and public loans.	The findings suggest the importance of FDI, accounting for perhaps 20% of manufacturing growth, despite low levels of FDI during the period and a preference for technology licensing.
Hubert, F., and Nigel Pain. 2000. "Inward Investment and Technical Progress in the United Kingdom, 1999." Reported in Gary Gillespie, Peter McGregor, J. Kim Swales, and Ya Ping Yin, "A Regional Computable General Equilibrium Analysis of Demand and 'Efficiency-Spillover' Effects of Foreign Direct Investment," *Strathclyde Papers in Economics* 2000(2). Glasgow: University of Strathclyde, Dept. of Economics.	The authors extend previous Barrel and Pain (1997) analysis to test for compositional effects – Does FDI raise productivity in the UK / West Germany without producing spillover effects?	FDI raises productivity through spillover effects, indeed FDI produces an effect almost four times larger for common long run elasticity of labor-augmenting efficiency than other firms.

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Johansson, Helena, and Lars Nilsson. 1997. "Export Processing Zones as Catalysts." *World Development.* 25(17): 2115-2128.	The paper uses a cross-sectional gravity model of export processing zone (EPZ) performance in 13 countries to test the impact of EPZ establishment on total exports of a country. The existence of a positive catalyst effect of EPZs is tested for.	EPZs have increased total exports of several developing countries, with countries with outward-oriented trade strategies more likely to experience a positive impact on exports. The establishment of EPZs containing many foreign investors had a strong statistical impact during the 80s on Malaysian exports outside the zones – a catalytic effect, beyond what would be expected from straight linkages.
Kim, June-Dong, and Sang-In Hwang. 2000. "The Role of FDI in Korea's Economic Development." In Takatoshi Itoh and Anne O. Krueger, *The Role of Foreign Direct Investment in East Asian Economic Development,* Chicago and London: Chicago University Press. Pp.267-294.	This is an investigation of the productivity spillover effects of FDI on Korean manufacturing using aggregate data from six industries (food, textiles/clothing, chemicals/petroleum, metals, machinery, electronics) over the period 1974-96 using a random-effects model.	Although case study evidence suggests that FDI has had a significant impact on Korean economic development through the dispersion of skilled workers and managers, and through technical guidance of subcontractors (despite FDI averaging around 1% of GFCF), estimation of a random-effects model finds the productivity spillover effect to be positive but not statistically significant.
Kokko, Ari, Ruben Tansini, and Mario C. Zejan. 1996. "Local Technological Capability and Productivity Spillovers from FDI in the Uruguayan Manufacturing Sector." *The Journal of Development Studies.* 32(4): 602-611.	The study uses a regression analysis of 159 Uruguayan manufacturing plants to test for spillover effects.	Spillovers were positive and statistically significant in the sub-sample of plants with moderate technology gaps vis-à-vis foreign firms, but not in groups of local plants facing large technology gaps.
Kokko, Ari. 1996. "Productivity Spillovers from Competition Between Local Firms and Foreign Affiliates." *Journal of International Development* 8(4): 517-530.	Using detailed data from Mexican manufacturing sectors, a simple simultaneous model is used to test for productivity spillovers from competition between local firms and foreign affiliates.	Productivity spillovers are found to exist, but only when "enclave" industries are dropped from the sample. Spillovers are determined not by foreign presence alone but by simultaneous interaction between foreign and local firms.
Lall, Sanjaya. 1980. "Vertical Interfirm Linkages in LDCs: An Empirical Study." *Oxford Bulletin of Economics and Statistics.* 42: 203-226.	The study investigates the economic determinants of backward linkages, at the micro level, of the two principal truck manufacturers in India (one majority foreign-owned, the other majority domestic-owned), and their suppliers.	An extensive web of backward linkages of various types was identified: technical, financial, managerial, coaching and diversification, and so on. Two Indian truck companies (JV + WFOE) are found to have various types of backward linkages.
Lim, Linda, and Pang Eng Fong. 1982. "Vertical Linkages and Multinational Enterprises in Developing Countries." *World Development.* 10: 585-595.	The study investigates the linkages and spillover benefits of three electronics investors in Singapore.	These foreign affiliates helped their local suppliers become exporters to regional sister plants, and to unaffiliated buyers, as part of an effort to enable them to achieve economies of scale, more automation, better quality control, and lower prices.
Lipsey, Robert E. 1999. "Affiliates of US and Japanese Multinationals in East Asian Production and Trade." *NBER Working Paper* 7292. Cambridge, MA: National Bureau of Economic Research.	The study investigates five industry group patterns in Hong Kong, Indonesia, Singapore, Malaysia, Thailand, Philippines, Taiwan and South Korea to see how foreign multinationals affect export growth and competitiveness.	Indigenous business tends to grow up around export-oriented operations established by foreigners. In the countries studied, foreigners seem to be responsible for early surges in exports but are subsequently overtaken by indigenous companies as a proportion of total exports (although foreigner share continues to grow in absolute terms). In electrical machinery, for example, US and Japanese affiliates accounted for over half of exports in 1977, but only 22 per cent in the mid-1990s, indicating a "maturing of the domestic industry." In faster changing industries (high tech) foreign affiliates share has changed less.

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Markusen, James R., and Anthony Venables. 1999. "Foreign Direct Investment as a Catalyst for Industrial Development." *European Economic Review.* 43: 335-356.	The study investigates how FDI affects host economy welfare, looking at knowledge spillovers or demonstration effects, distortionary effects through market imperfections, and linkage effects on the domestic industry.	The findings confirm that the presence of FDI can have a positive effect on domestic firms' productivity, and on their propensity to export. The authors show that FDI can act as a catalyst leading to the development of local industry which may displace to some degree the original MNC entrants. The model supports findings in Taiwan that initial foreign investments created demand from local suppliers, raising quality, productivity and product diversity (e.g. keyboards, bicycles, PCs, athletic shoes).
Markusen, James R., Thomas F. Rutherford, and David Tarr. 2000. "Foreign Direct Investments in Services and the Domestic Market for Expertise." *Policy Research Working Paper 2413.* Washington DC: World Bank.	The study investigates the impact of FDI in producer services (e.g. managerial and engineering consulting) on host-country firms.	The findings show that FDI in producer services can provide local firms with the substantial benefits of specialized knowledge that would be costly in time and money for those firms to develop on their own. Liberalizing restraints on inward FDI (in producer services, in particular) has a powerful positive impact on the income and welfare of the importing country. Also, policies to protect domestic skilled labor are counterproductive due to productivity increases in downstream industries.
Mody, Ashoka, and Fang-Yi Wang. 1997. "Determinants of Industrial Growth in Coastal China, 1986-9." *The World Bank Economic Review.* 1(2): 293-325.	The study uses output data from 23 industrial sectors in seven coastal regions of China in 1985-89 to analyze the correlates of growth.	FDI is found to have a strong impact on growth particularly in the short run, with a 10% increase in FDI able to raise the growth rate by 1%. Over the longer run Mody and Wang suggest that variables such as education levels and infrastructure are crucial. However, there is a significant and positive correlation between education levels and FDI suggesting a mutually reinforcing link whereby much of the power of foreign knowledge is transmitted through the local human capital base.
Moran, Theodore. 2000. "What Are the Implications of Raymond Vernon's Product-Cycle Model of Parental Control and Supervision over Subsidiaries for The Growth and Welfare of Host Countries in the Developing World?" Raymond Vernon Memorial Lecture. Washington DC: Georgetown University. Mimeo.	The paper investigates how allowing closer relations between parent and affiliates can enhance the impact of FDI on productivity in host countries.	The benefits from allowing a close relationship between foreign parent investor and local affiliate can have vastly greater impacts on the host economy (12 to 20 times) than conventional trade liberalization or protection alone.
Rhee, Yung Whee, and Therese Belot. 1990. "Export Catalysts in Low-Income Countries." *World Bank Discussion Paper* 72. Washington DC: World Bank.	The study traces eleven export success stories in various countries.	Presence of foreign and/or domestic catalysts was almost always found to be a critical ingredient in successful penetration of international markets. Foreign catalysts pioneered outward-oriented development through the provision of technical, marketing and managerial know-how.
Rodriguez-Clare, Andres. 1996. "Multinationals, Linkages and Economic Development." *American Economic Review.* 86(4): 852-873.	The study investigates the impact of multinational companies (MNCs) on developing countries through the generation of backward and forward linkages.	The model suggests that the backward and forward linkage effects of MNCs on host countries is more likely to be favorable when: a) the intermediate goods are used intensively; b) there are large communication costs with MNC headquarters; and c) home and host countries are not too different in the variety of intermediate goods produced. Otherwise MNCs could hurt the

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		developing economy by creating "enclave" economies.
Sibunruang, Atchaka, and Peter Brimble. 1988. "The Employment Effects of Manufacturing Multinational Enterprises in Thailand." *Multinational Enterprises Programme Working Paper* 54. Geneva: International Labor Office.	This is a survey analysis on the employment effects of 678 manufacturing multinational enterprises (MNEs) in Thailand.	Although direct employment effects were not large (600 MNEs employed just over 180,000 persons, which was 0.7% of the total labor force or 8.8% of total employment in the manufacturing sector in 1985), it was estimated that over 400,000 jobs were generated by foreign firms through their backward linkages to other sectors. Furthermore, the MNE's played an important role in improving the production processes of local subcontractors through the diffusion of training practices from foreign to local firms.
Sjöholm, Frederik. 1999. "Productivity Growth in Indonesia: The Role of Regional Characteristics and Direct Foreign Investment." *Economic Development and Cultural Change*. Chicago, IL. April.	The study is based on a regression analysis of regional characteristics and productivity growth in Indonesia.	Inter-industry knowledge flows are found for spillovers from FDI, since domestic establishments benefit from a regional presence of foreign establishments in neighboring industries.
Urata, Shujiro, and Hiroki Kawai. 2000. "Intrafirm Technology Transfer by Japanese Manufacturing Firms in Asia." In Takatoshi Itoh and Anne O. Krueger, *The Role of Foreign Direct Investment in East Asian Economic Development,* Chicago and London: Chicago University Press. Pp.49-77.	The sample consists of 266 Japanese parent firms and 744 affiliates in textiles, chemicals, general machinery and electric machinery. The objective is to analyze the extent of intrafirm technology transfer and its determinants. The authors do not use patent/licensing transactions, costs of technology transfers or R&D levels at affiliates, but compare the level of TFP at parent firms and affiliates.	Intrafirm technology transfer has advanced most in electric machinery, general machinery and textiles, with NIEs having high levels, often higher than the parent firms. Small firms lag large firms in transferring technology; intrafirm technology transfer is strongly correlated with technology absorption capacity (proxied by secondary school enrolment) and industrial experience (value added in industrial activities). Technology transfer builds over time; reliance on parent firms for equity, personnel and capital goods increases technology transfer; FDI regime liberalization promotes technology transfer.
West, Gerald T., and Ethel I. Tarazona. 1998. "MIGA and Foreign Direct Investment: Evaluating Developmental Impacts." Washington, DC: World Bank.	The authors monitored and evaluated 25 projects (case studies) using four indicators: taxes/duties paid, exports generated, number of new jobs directly created, and total investment facilitated.	The results showed improvements in various projects: increased number and wages of employees; increased employment opportunities for women, and provision of training to upgrade skills.
FDI and Wages		
Aitken, Brian, Ann Harrison, and Robert E. Lipsey. 1996. "Wages and Foreign Ownership: A comparative Study of Mexico, Venezuela, and the United States." *Journal of International Economics*. 40: 345-371.	The study investigates the relationship between wages and FDI in Mexico, Venezuela and the US.	Higher levels of FDI are associated with higher wages. However, in Mexico and Venezuela FDI is associated with higher wages only for affiliates, suggesting an absence of wage spillovers.
Feenstra, Robert C., and Gordon H. Hanson. 1995. "Foreign Direct Investment and Relative Wages: Evidence from Mexico's Maquiladoras." *NBER Working Paper* 5122. Cambridge, MA: National Bureau of Economic Research.	The study investigates the impact of FDI on the share of skilled labor in total wages in Mexico during the 1980s, using data for 1975-88.	Rising FDI inflows are positively correlated with the demand for skilled labor, with FDI accounting for over 50% of the increase in the skilled labor share of total wages in the late 1980s.
Graham, Edward, and Erika Wada. 2000. "Foreign Direct Investment in Mexico." *The World Economy*. 20(6): 777-797.	The study investigates the effect of foreign investment in Mexico on relative wage levels.	Foreign companies pay above average wages and income inequality can rise as the relative returns to low-skilled labor decline. One policy response to such effects of economic change should be to use rising incomes to provide various social safety nets.

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Mazumdar, Dipak, and Ata Mazaheri. 2000. "Wages and Employment in Africa." *Regional Program on Enterprise Development Discussion Papers.* Washington DC: World Bank.	The study analyses earnings functions for eight African countries (Cameroon, Cote d'Ivoire, Ghana, Kenya, Tanzania, Zambia, Zimbabwe) using pooled data for various years and dummy variables for the ownership structure of companies. It also investigates (using Oaxaca decomposition) whether higher earnings are due to better skill-endowments of workers they employ or superior endowments of foreign firms themselves.	In most countries, foreign firms (including joint ventures) as well as state firms have a large and significant positive impact on earnings of employees, even after controlling for firm size. Higher earnings are found to be due to superior skill-endowments of the workers employed.
Impact of FDI on Labor Standards and the Environment		
Eskeland, Gunnar S., and Ann E. Harrison. 1997. "Moving to Greener Pastures: Multinationals and the Pollution-haven Hypothesis." *Policy Research Working Paper 1744.* Washington DC: World Bank.	The study utilizes an empirical model to analyze the potential determinants of foreign investment based on various independent variables (including pollution abatement costs). It examines FDI in four developing countries: Mexico, Morocco, Cote d'Ivoire, and Venezuela.	Foreign plants in these four developing countries are significantly more energy-efficient and use cleaner types of energy than their domestic counterparts. The results show no evidence that foreign investors are concentrated in "dirty" sectors.
Grossman, Gene M., and Alan B. Krueger. 1994. "Economic Growth and the Environment." *NBER Working Paper Series 4634.* Cambridge, MA: National Bureau of Economic Research.	The study utilizes several reduced form equations that relate the level of pollution (in air or water) to a flexible function of the current and lagged income per capita in the country and to other covariates. The study covers four types of indicators: concentrations of urban air pollution, measures of the sate of the oxygen regime in river basins, concentrations of fecal contaminants in river basins, and concentrations of heavy metals in river basins.	The results show no evidence that environmental quality deteriorates steadily with economic growth. Rather, for most indicators, economic growth brings an initial phase of deterioration followed by a subsequent phase of improvement.
Jacobson, Marc. 1998. "Alleviating Poverty Through Foreign Direct Investment: Company Case Studies (Nike and Levi Strauss)." Paper prepared for High Level Roundtable on *FDI and its Impact on Poverty Alleviation*, December, 1998.	This is a case study analysis of the strategies and corporate behavior for producing the Nike and Levi Strauss' respective outputs and its effect on poverty alleviation.	While poverty alleviation is not an explicit goal for either company, both companies nevertheless generate employment in developing countries (China, Indonesia, Vietnam) that would otherwise not exist. NGOs have also played an important role in monitoring the behavior of global corporations and their subcontractors.
Karmakolias, Yannis. 1996. "Cost Benefit Analysis of Private Sector Environmental Investments: A Case Study of the Kunda Cement Factory." *IFC Discussion Paper 30.* Washington, DC: World Bank.	This is a case study using an environmental cost-benefit analysis (soiling and material damage, health, global effects of SO_2 and NO_2 emissions, and so on) of a private sector project. Kunda, a cement factory in Estonia, was selected because prior to its privatization it was a heavy polluter.	Foreign investment to reduce air pollution at the Kunda cement factory would, once fully implemented, result in significant net economic benefits. The most important benefits identified are: Reduced global effects of SO_2 and NO_2 emissions, better health costs, reduced soiling and material damage, and increased forestry and agricultural yields.
Martin, Will, and Keith E. Maskus. 1999. "Core Labor Standards and Competitiveness." Washington, DC: World Bank. Mimeo.	The study uses simple models and a review of empirical evidence to analyze the relationship between weak Core Labor Standards (CLS) and export performance.	Although there are no findings about FDI, the study states that imposing trade sanctions on nations with weak Core Labor Standards (CLS) would generally worsen the negative impacts of poor labor rights, thereby damaging prospects for trade and growth. In most cases, trade barriers imposed against countries with weak CLS would be counterproductive if their goal is to improve the well-being of workers.

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Oman, Charles P. 2000. "Policy Competition for Foreign Direct Investment." Paper prepared for FIAS Seminar Series *Rules-Based Competition for FDI: Is There a Race to the Bottom?* Geneva: UNCTAD. Mimeo.	This is an empirical study based on information largely derived from a group of country reports (Argentina, Brazil, Canada, the Caribbean Basin, China, Europe, India, Malaysia, Mexico, Singapore, and the U.S.	There are several findings and conclusions, but the most relevant are the following: - Incentives-based competition can be intense, but the evidence suggests that competition tends to be intense only in particular industries (e.g., automobiles) or for particular investment projects (e.g. large ones) - Undiscerning use of investment incentives and other discretionary policies by governments to attract FDI can have a negative effect on FDI inflows, in part because the incentive programs and policies tend to be seen by investors as unsustainable. - There is little evidence to support the "race to the bottom" hypotheses concerning governments' defense of labor and environmental standards. Competition for FDI exerts some upward pressure on labor and environmental standards.
World Bank. 1994. "Foreign Direct Investment and Environment in Central and Eastern Europe: A Survey." World Bank Internal Documents. Washington, DC: World Bank, Environment Division.	In a survey of 1001 of the largest corporations (by sales) in mining, construction and manufacturing in North America, firms were asked to rank the importance of environmental issues in their investment decisions in Central and Eastern Europe.	Companies that had made or considered investment in the region rated environmental risks on par with many factors usually important in forming investment decisions, including exchange rate and political risks. Only economic and business risks were considered more important.
Zarsky, Lyuba. 1999. "Havens, Halos, and Spaghetti: Untangling the Evidence about Foreign Direct Investment and the Environment." Paper prepared for the OECD Conference on *Foreign Direct Investment and the Environment*, January, 1999.	The study develops an analytical framework to map potential linkages between FDI and the environment, including micro-level decisions such as industry location and firm environmental performance and micro-level impacts on eco-systems, indigenous cultures, income and consumption. It also summarizes and evaluates statistical and case study evidence.	Although there is no evidence of a "race to the bottom" the absence of a global regulatory framework for the environment has inhibited a "race to the top." To date, governments have exhibited little determination to support social regulation of investment at either the global or regional level. Rather, there has been an emphasis on corporate "self regulation" through voluntary systems such as ISO 14000 and codes of conduct. There is no evidence to support the "pollution haven" argument, but clearly some countries and subnational regions contain firms (foreign and domestic) that perform worse, and where regulation is less effective. The propensity of businesses to pollute is generally associated with their age rather than the foreign or domestic nature of ownership.

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