Foreign Investment and Sustainable Development

Lessons from the Americas

WORKING GROUP ON DEVELOPMENT AND THE ENVIRONMENT IN THE AMERICAS

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GDAE Global Development And Environment Institute at Tufts University
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NEIT-IE-UNICAMP
RIS Research and Information System for the Non-Aligned and Other Developing Countries
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The Working Group on Development and Environment in the Americas, founded in 2004, brings together researchers from several countries in the Americas who have carried out empirical studies of the social and environmental impacts of economic integration. The goal of the Working Group Project is to contribute empirical research and policy analysis to the ongoing policy debates on national economic development strategies and international trade. The project also brings more prominently into U.S. policy debates the rich body of research carried out by Latin American experts, as well as their informed perspectives on trade and development policies. Hosted by Tufts' Global Development and Environment Institute, the Working Group Project has four initiatives. The Working Group's web page is http://ase.tufts.edu/gdae/WGOverview.htm

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Andrés López of Centro de Investigaciones para la Transformación (CENIT) in Argentina and Kevin P. Gallagher of Boston University and the Global Development and Environment Institute (GDAE) at Tufts University in the United States serve as co-chairs of the report. This effort is part of a broader project with Research and Information Systems for Developing Countries (RIS) in Delhi, India. Nagesh Kumar, Director-General of RIS, has provided an afterward to this report that draws out the report's implications for developing countries beyond Latin America.

CENIT and the Center of Industrial and Technology Economics (NEIT) of State University of Campinas in Brazil have published this report in Spanish and Portuguese respectively. Lyuba Zarsky from the Monterey Institute for International Studies and GDAE helped author this report along with Kevin P. Gallagher, Andrés López, and Roberto Porzecanski. Roberto Porzecanski, a pre-doctoral fellow at the Global Development and Environment Institute deserves special thanks. Roberto has faithfully served as the coordinator of this project, providing assistance on everything from background research and writing, to editing, translation, and logistics.

This report is a policy summary of longer and in-depth case studies performed by the members of the Working Group. Those studies will be collected in book form and released in 2009 by Anthem Press. Kevin P. Gallagher co-edited the book length treatment of this issue with Daniel Chudnovsky, the former director of CENIT. Daniel passed away before the policy report began. We dedicate this entire effort to his memory.

This is the second such report of its kind. The first was co-chaired by Kevin P. Gallagher and Luciana Togeiro de Almeida of Sao Paolo State University. Working Group published "Globalization and the Environment: Lessons from the Americas," a policy report summarizing the group's findings. The policy report was later published in Spanish by RIDES in Chile, which also published the group's full papers in book form under the title, *Globalizacion y Medio Ambiente: Lecciones desde las Americas*, edited by Gallagher, Togeiro, and Hernan Blanco.

A third report, "The Promise and the Perils of Agricultural Trade Liberalization: Lessons from the Americas," was also published in 2008 by the Washington Office on Latin America and was chaired by Timothy Wise (GDAE), Mamerto Perez Luna (Bolivia), and Sergio Schlesinger (Brazil).

All of these reports, and the background papers they are drawn from, are available in PDF form at: http://ase.tufts.edu/gdae/wgoverview.htm

Executive Summary

Kevin P. Gallagher, Andrés López

A comprehensive review of the impacts of foreign investment liberalization and related economic reforms in Latin America shows that, with some exceptions, foreign investment has fallen far short of stimulating broad-based economic growth and environmental protection in the region, according to a report by the Working Group on Development and Environment in the Americas. The report recommends that national and regional policies aimed at improving national firms' capabilities should be implemented and that the "policy space" for such policies should be accommodated in bi-lateral, regional, and global trade and investment treaties.

The report, "Foreign Investment and Sustainable Development: Lessons from the Americas," is the product of a series of studies conducted by development and environmental economists from the U.S., Mexico, Brazil, Argentina, Chile, and Costa Rica. Drawing on case studies from across the region—Argentina, Brazil, Bolivia, Chile, Costa Rica, Ecuador, Mexico, Uruguay, and Venezuela—the Working Group examined how foreign investment during the reform period has affected economic growth, environmental policy and performance, and the countries' political economy. The full technical studies are available on the working group web page and will be published in a comprehensive book by Anthem Press in 2009.

Beginning in the early 1990s, nations in the Americas began to liberalize their regimes for foreign investment. Pursued unilaterally or through regional and bilateral trade and/or investment agreements, a typical set of reforms included the elimination of performance requirements such as requirements to source from domestic firms or to export a certain percentage of production, restrictions on the ability to exclude certain sectors from FDI and to "screen" foreign investment for development goals, restrictions on the ability to require joint ventures or research and development facilities, and so forth. Moreover, such reforms alter the nature of settling disputes over foreign investment. Whereas trade agreements have traditionally relied on states to settle disputes among themselves in international fora, newer trade and investor agreements have "investor-state" dispute systems where foreign firms can directly sue a national or local government without host government oversight.

These policies were advocated by the U.S., the World Bank, and the International Monetary Fund and endorsed enthusiastically by many governments across the Americas. They have become enshrined in the 1994 North American Free Trade Agreement (NAFTA) between the U.S., Canada, and Mexico became the template for a range of subsequent regional and bilateral accords, including agreements on the U.S.–Chile Free Trade Agreement, U.S.–The Dominican Republic-Central America Free Trade Agreement (CAFTA), the U.S.–Peru Free Trade Agreement, and countless numbers of Bilateral Investment Treaties (BITS). Investment liberalization of course, has been part of a larger effort broadly referred to as the Washington Consensus. The broader reforms include a package of economic policies that promote economic development by opening national economies to global market forces. Over the last twenty years, governments throughout Latin America have reduced tariffs and subsidies, eliminated barriers to foreign investment, restored fiscal discipline by reducing government spending, and have generally reduced the role of the state in all aspects of the economy.

The promise, among others, of following these policies is that FDI by multinational corporations will flow to and be a source of dynamic growth in host countries. Beyond boosting income and employment, the hope was that manufacturing FDI would bring knowledge spillovers that would build the skill and technological capacities of local firms, catalyzing broad-

based economic growth; and environmental spillovers that would mitigate the domestic ecological impacts of industrial transformation.

These policies and agreements have raised concerns, in part because they have shown poor results. Economic growth in per capita terms in the region was slower—less than 2% since 1990, the period of the reforms, than in the last decades of the import substitution period. **A major finding is that slow growth is in part explained by the fact that FDI failed to crowd in more total investment into Latin American economies.**

Main Findings of the Report

1. **FDI was concentrated in a small handful of countries in the region. Indeed, Brazil, Mexico, Argentina, Chile and Venezuela received more than 80 percent of all the FDI in the region;**
2. **Foreign firms by-and-large located in Mexico and the Caribbean tended to serve as export platforms to the United States, whereas those that located in South America did so to sell to domestic markets in that region.**
3. **FDI was attracted by traditional determinants, not necessarily whether a nation has a regional or bi-lateral trade and/or investment treaty or if it can serve as a pollution haven for foreign firms;**
4. **When FDI did come, foreign firms tend to have higher levels of productivity and higher wages and were likely to increase trade in the region; yet FDI fell far short of generating "spillovers" and backward linkages that help countries develop, and in many cases wiped out locally competing firms thereby "crowding out" domestic investment.**
5. **The environmental performance of foreign firms was mixed, sometimes leading to upgrading of environmental performance, and in others performing the same or worse than domestic counterparts.**

Working Group studies documented and analyzed the track record in specific countries and sectors as well:

- In **Brazil**, **Argentina**, **Mexico**—three countries that have received the lion's share of FDI in the region—and **Costa Rica** it is found that
  - Foreign firms have higher wages, productivity, and trade vis a vis domestic firms;
  - However, linkages with national firms and the domestic economy in general are weak, especially in Mexico and Costa Rica;
  - Although foreign firms may bring the technologies generated in their headquarters, they do not contribute to an increase in R&D expenditures in the host economies

- In **Brazil**, **Mexico**, **Chile**, and **Argentina**
  - Virtually all foreign firms transferred environmental management systems to host countries; however,
  - It is not clear that such firms were actually in compliance with host country laws and in Brazil there is little indication that foreign firms were more likely to be in compliance than domestic firms were;
  - There it little evidence that foreign firms are greening their supply chains (given that so many supply chains were wiped out from FDI in the first place); and
  - In some instances such as the forestry sector in Chile, foreign firms that exported through fair trade certification schemes were "upgrading" to higher levels of environmental standards;
  - In others, such in Mexico's electronics sector, foreign firms were not exporting to meet

strong standards in Europe given that their chief export market, the United States, does not have such standards.

- In **Venezuela**, **Bolivia**, **Ecuador**, and in **Uruguay**
  - A Uruguayan BIT constrained the set of policies available to solve a conflict over foreign investment and transboundary environmental problems with Argentina; whereas
  - BITs in Bolivia, Ecuador, and Venezuela were reneged by government who were able to renegotiate the terms of contracts with foreign hydrocarbon firms.

New Directions for FDI and Sustainable Development

The Working Group, in agreement with the broader literature on the subject, found that investment regime liberalization-led FDI has had at best a limited success in Latin American countries.

Hence, it comes as no surprise to find that virtually all newly elected governments in Latin America are rethinking the role of FDI in their economies. While some countries are simply at the stage of starting to debate the issue, others are going so far as to nationalize foreign firms. Yet, most governments are looking for a more balanced approach. What this report makes clear is that new policies are needed. Based on the research mentioned above, three broad lessons can be drawn out as principles for policy-making in this field:

FDI is not an ends but a means to sustainable development. Simply attracting FDI is not enough to generate economic growth in an environmentally sustainable manner. The report shows that even in the nations that received the lion's share of FDI in the region—Brazil, Argentina, and Mexico—FDI fell short of generating spillovers and sustained economic growth. FDI needs to be part of a comprehensive development strategy aimed at raising the standards of living of the nation's population with minimal damage to the environment.

FDI policy needs to be conducted in parallel with significant and targeted domestic policies that upgrade the capabilities of national firms and provide a benchmark of environmental protection. There are numerous country specific policies that are either being implemented or debated regarding ways in which LAC nations can overcome information and coordination externalities, access to credit problems, and competitiveness issues on the part of their domestic firms. In this regard, parallels or lessons from Asia may be drawn, since many nations in that region have put in place targeted industrial policies to link domestic firms to foreign firms to the extent that the domestic firms develop into competitive exporters themselves.

International agreements, whether at the WTO or at the level of regional or bi-lateral trade and/or investment treaties (RBTIAs), need to leave developing nations the "policy space" to pursue the domestic policies necessary to foster sustainable development through FDI. The emerging international regime of international investment rules is restricting the ability of developing nations to pursue some of the policy instruments that have been successful at channeling FDI for development in Asia and elsewhere. When acting collectively under the auspices of the WTO developing nations have largely succeeded in blocking proposals that would further restrict such policy space. However, slower movement in global trade talks has led to a proliferation of RBTIAs between developed and developing countries where developing countries have much less bargaining power and end up exchanging policy space for market access.

The studies in this report highlight the economic, social and environmental costs of the present approach. Hopefully, they also point to some of the ways in which national policies and international trade agreements can be transformed to better meet societies' goals.

I. Latin America in Comparative Perspective

Does Foreign Investment Lay a Foundation for Economic Growth?

Manuel Agosin

The promise of FDI liberalization is that it will attract new foreign investment and that new FDI will lead to increases in overall investment rates and translate into economic growth. This is termed the "crowding in" of domestic investment. Recent evidence suggests that this promise is not always fulfilled. In the case of Latin America there has not been a strong relationship between liberalizing investment regimes and attracting FDI. Moreover, in the case of Latin America during the period 1971 through 2000, FDI has actually "crowded out" domestic investment—displacing domestic producers. In contrast, East Asia's FDI crowds in domestic investment. These findings partly explain why Latin America has experienced fairly lacklustre growth whereas East Asia has been growing rapidly. The lessons for policy for these findings is that policies solely aimed at attracting investment will not ensure that such investment will translate into growth, but that policies for FDI should be complemented with an effort to ensure that the recipient country attracts those investments that are more likely to maximize their investment rates.

The most far-reaching liberalizations of FDI regimes in the 1990s took place in Latin America, whereas FDI regimes in Asia have remained the least liberal in the developing world. Our recently published work with Roberto Machado, in a 2007 issue *Journal of Development Studies,* found that the most important determinants of variations in FDI flows across countries and over time are country size, the level of educational achievement, and growth. Having a liberal investment regime was only slightly associated with FDI flows. We conclude that the openness of the FDI regime operates as a factor enabling FDI, but that location advantages are paramount in determining the international allocation of FDI. Several Asian countries still practice screening of investment applications and grant differential incentives to different firms, but attract significant amounts of FDI. In Latin America, on the other hand, these practices have been eliminated in most countries.

Not only will an open investment regime not guarantee FDI, but when FDI does come it may not automatically crowd in domestic investment and contribute to the overall economic growth of the economy. Also with Roberto Machado, I published an article in a 2005 issue of *Oxford Development Studies* that found that FDI does not always crowd in domestic investment. Indeed, we found that FDI crowded out domestic investment in Latin America but crowded in investment in Asia and Africa. Given the scarcity of domestic entrepreneurship and the need to nurture existing entrepreneurial talent in Latin America, a finding that foreign firms displace domestic firms would casts doubts on the favourable development effects of FDI. This is of particular concern given that FDI has been a significant part of gross fixed capital formation in the region, as shown in table 1.1.

When does FDI crowd in domestic investment in developing countries? In general, *the relationship between FDI and domestic investment is likely to be complementary when investment is in an undeveloped sector of the economy* (owing to technological factors or to the lack of knowledge of foreign markets). On the other hand, *FDI is more likely to substitute for domestic investment when it takes place in sectors where there exist plenty of domestic firms.* The same may occur where domestic firms already have access to the technology that the MNC brings to the country.

One can, of course, make an argument for exactly the opposite hypothesis. For instance, MNE investments in new activities may pre-empt investments by domestic firms that, with

Table 1.1 FDI: Crowding Out Domestic Investment?

	1960–1980	1980–2005
East Asia and Pacific		
FDI / GDP	0.4	2.3
GFCF / GDP	24.6	34.9
Latin America and the Carribean		
FDI / GDP	0.8	1.9
GFCF / GDP	21.9	20.0

Source: World Bank 2007

proper nurturing by government, could be in a position to enter the sector. This was the rationale for limiting foreign investments in certain high technology sectors in South Korea and Taiwan. The bet in these cases was that domestic firms could in fact emerge, and it paid off. In most other cases in the developing world, however, the appearance of domestic producers in a new sector is unlikely or might take too long. Policies to foster entrepreneurship in new sectors can be very costly to the economy as a whole, if these sectors have technological requirements that run too far ahead of domestic capabilities. Besides, there are very few countries where governments can be as effective in nurturing technologically advanced domestic firms as the governments of South Korea or Taiwan were in the heyday of their industrialization drive. Examples of botched and costly intervention in favour of domestic firms in high-technology sectors abound in the developing world. One of the most disastrous was the Brazilian "informatics policy" of the early 1980s, which involved severe restrictions on FDI in information technology sectors. These restrictions led to very little domestic investment, and the firms that were created were highly inefficient. The policy was abandoned well before the programme was due to expire.

Also, it could be argued that the entry of a MNCs into a sector where there exist several domestic firms may lead to investments by incumbent domestic firms in order to become more competitive. However, given the vast technological superiority of MNCs, their investments are more likely to displace domestic firms and even cause their bankruptcy than to induce domestic firms to invest. Even where FDI does not displace domestic investment, foreign investments may not stimulate new downstream or upstream production and, therefore, may fail to exert strong crowding-in effects on domestic investment. *Thus the existence of backward or forward linkages from the establishment of foreign investors is a key consideration for determining the total impact of FDI on capital formation.*

This work suggests that there is considerable scope for active policies that discriminate in favour of foreign investments that have positive effects on total investment. This does not mean having to decide on each investment project or to practice cumbersome screening of investments, which will only work to discourage potential investors. But it does mean favoring some investments over others. Better to have greenfield investments than purchases of existing assets. Better to have investments that broaden a country's export portfolio than others that come to do more of the same. Better to have investments outside export-processing zones that use domestic inputs than investments inside export-processing zones that have no connection with the domestic economy other than using labor and paying for utilities. This may require complementing an open investment policy with a simple system of incentives for desired activities. And, of course, it also means discouraging the wrong type of investments. One such case in point is the use of income-tax exemptions for firms located in export-processing zones.

II. Brazil

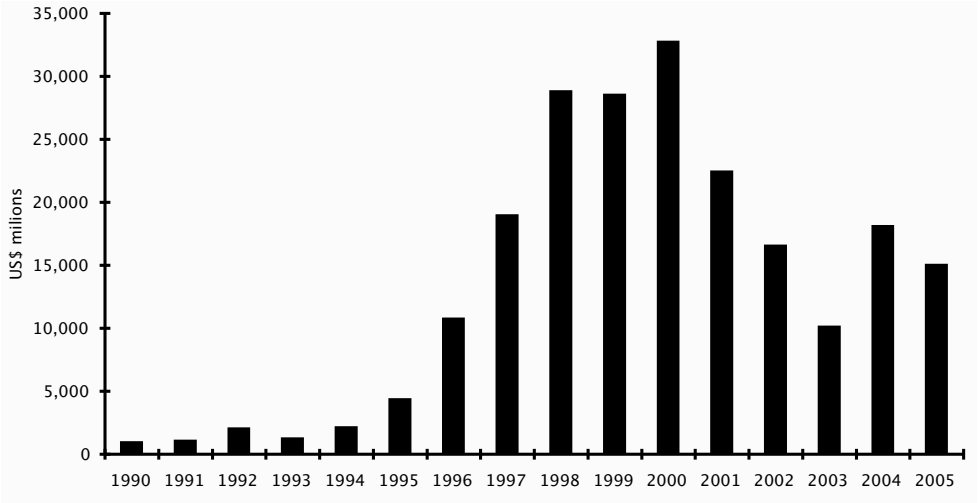
MNCs and Industrial Upgrading

Célio Hiratuka

FDI has always played an important role in Brazil's industrialization process. After World War II, the role of multinational corporations (MNCs) intensified, driven by state planning policies that nurtured connections between foreign and domestic companies, both public and private. Up until the 1970s, this nexus of statist policy, MNCs, and domestic firms generated high, steady GDP growth and created a diversified industry structure resembling that of high-income countries.

The state-lead growth model began to falter in the 1980s, largely due to Brazil's external debt crisis. Volatile GDP growth rates and high, chronic inflation caused FDI inflows to plunge to low levels as MNCs stopped expansion projects. In response, the Brazilian government abandoned the statist model in the 1990s, and embraced liberalization and privatization. The hope was that "hands off" horizontal industry policies would eliminate bottlenecks and upgrade Brazil's technology, management, and productivity to OECD levels.

Figure 2.1 Brazil: Inward Foreign Direct Investment—1990-2005 (US$ millions)



Source: UNCTAD 2005.

Policymakers and scholars expected that the "protagonists" of economic modernization would be Brazilian-based affiliates of MNCs. In the second half of the 1990s, FDI inflows boomed and have remained high, raising the already large share of foreign corporations in the Brazilian economy.

This part of the report examines the effects of the FDI boom on industry upgrading in Brazil. Synthesizing existing studies, the paper considers the effects on foreign trade, productivity growth, wages, and technological capacity and considers what role government policy has played. The overarching conclusion is that, despite some bright spots, FDI has not delivered on its promise. While Brazilian policymakers have begun to shift towards more proactive policies, much scope remains for policy initiatives to harness the potential of MNCs for economic development.

FDI boom: Growing the foreign sector

Brazil's change of direction in macro-policy successfully rekindled MNC interest in more aggressive expansion. In the 1980s, annual FDI inflows averaged only about $1 billion but swelled to $24 billion between 1995 and 2000. Inflows dipped after 2000 but remained high and steady at about $16 billion per year between 2001 and 2005.

Despite an increase in quantity, the 1990s FDI boom had three broad characteristics that mitigated against industry upgrading:

- First, it largely targeted services rather than the manufacturing sector. In 1995, manufacturing accounted for 67% of the stock of FDI. By 2000, services accounted for 64% of FDI stock, with manufacturing accounting for only about 34%.
- Second, FDI inflows mostly took the form of mergers and acquisitions, rather than new "greenfield" investment. On average, 60% of annual FDI inflows between 1995 and 2000 went to mergers and acquisitions. Reflecting a drop in domestic investment, total gross fixed capital formation stagnated during the FDI boom.
- Third, MNC expansion in Brazil was aimed primarily at the domestic or the Latin American market.

The result of the FDI boom and the concomitant stagnation of domestic investment was that foreign companies substantially increased their share of the Brazilian economy. In 1995, the sales of foreign companies accounted for about 14% of Brazil's total output, rising to nearly 20% in 2000.

Productivity spillovers? Some positive, mostly neutral or negative

One of the central goals of the liberalization strategy was to boost industry productivity. Foreign firms in Brazil are on average much larger and much more productive than domestic firms. It was expected that FDI would increase industrial productivity directly by expanding the scale and upgrading the technology of MNC operations. There were also expected productivity spillovers to domestic companies through "competition" and "demonstration" effects.

But the boost in productivity did not materialize. One study found no evidence of faster productivity growth in foreign companies. Indeed, data for 1997–2000 show that productivity growth was greater in domestic than foreign companies. Moreover, there is no evidence of horizontal spillovers—increases in productivity for domestic companies in the same industry as MNCs.

The size of the technology gap between domestic and foreign companies is a key variable. One study distinguished among domestic companies according to their technology gaps. Companies with only a narrow gap suffered negative spillovers—reduced productivity growth—from MNCs, while those with a wider gap captured positive spillovers.

The increased foreign presence did not have a dynamizing effect on productivity for the industrial structure as a whole. The indirect positive impacts were seized by a group of less productive companies that compete less directly with foreign companies, probably in market niches. For high-productivity companies that compete directly with foreign firms in the domestic market, the evidence points to a negative impact, due to a shift to lower-productivity activities and a decline in scale.

Trade: Shift towards imports

What was the contribution of FDI to foreign trade? A number of studies have found that foreign companies in Brazil have a higher "trade orientation" than domestic companies—and that the difference is higher for imports than for exports. For example, one study found that on average, foreign companies exported 70% more and imported 290% more than domestic companies. Moreover, the bulk of FDI was aimed mainly at the Brazilian domestic or Latin American regional market. Between 1996 and 2000, about 49% of FDI inflows was in sectors with a lower than average degree of trade orientation, and 31% in sectors with a high propensity to import and low propensity to export.

FDI inflows, in short, contributed little to boosting exports and substituted foreign for domestic inputs. If it is true that one of the advantages of MNCs over domestic companies is MNCs' well-established trade networks, these advantages were used mainly to increase import flows.

Moreover, MNC imports of inputs and components are highly technology-intensive, creating a gap between export and import flows in both value and technological profile.

Innovation and wages

One potential benefit of liberalization is the capture of R&D spending by MNCs, spurring and diffusing innovation in production processes and product design. Generally, MNCs tend to locate R&D activities within high-income countries. However, internationalization of technology activities has recently spread to developing countries.

In Brazil, foreign companies are more innovative than domestic companies. Between 1998 and 2000, about 68% of foreign companies introduced innovations, compared to only 31% of domestic companies. However, domestic companies spend more on R&D, about 0.73% of total sales in 2000, compared to 0.61% for foreign companies.

The evidence suggests that foreign companies introduce innovations in Brazil developed at MNC headquarters or affiliates located in other countries. A number of Asian countries, especially China, India, Taiwan, and Korea, are emerging as preferred locations for developing country-based R&D.

In China, for example, the ratio of R&D expenditures to sales by foreign affiliates of U.S. companies was 1.0 in 2004, while in Brazil it was 0.5. Although the ratio of R&D expenditures in Brazil was the highest in Latin America, Hiratuka concludes that MNC affiliates in Brazil "could contribute more to Brazilian innovation, just as they do in some Asian countries.

Finally, what have been the effects of the FDI boom on wages? Studies have found that white collar workers in foreign companies earn on average three times more per hour than workers in domestic companies, and have 30% more education and 70% longer tenure. Data for blue collar workers is similar. However, there is no evidence that the FDI inflows have raised wages for blue collar workers in domestic companies. For white collar workers, the effects have been positive but small.

Conclusions and recommendations

The studies examined in this chapter suggest that MNC affiliates in Brazil have a number of advantages over domestic firms. In general, they have higher productivity, a more qualified and better paid labor force, and a higher degree of trade integration. They are also more innovative. The liberalization strategy generated high hopes that MNCs would transfer these

Table 2.1 Brazil: Characteristics of Multinational and National Companies in 2003—Average values

Averages	National	Multinational	MNC/NC
People Employed	128	577	4.5
Gross Revenue (R$ millions)	22.1	252.3	11.4
Value Added (R$ millions)	8.7	83.4	9.6
Productivity (Value Added/People Employed) R$	32.501	138.323	4.3

Source: Author's elaboration based on Hiratuka and Araújo 2007.

"superior characteristics" to Brazilian industry as a whole. However, the actual consequences fell far short of these optimistic expectations.

Why were the positive benefits of FDI so limited? A number of countries, especially in Asia, have been much better able to take advantage of FDI to spur industrial development. The common thread among is the adoption of active industry and technology policies which nurtured important locational advantages, especially for high technology industries. Among these policies were selective investment policies to channel investment to strategic sectors.

Brazil, on the other hand, adopted a horizontal industry policy that aimed to remove the restrictions on FDI and MNC operations. MNCs expanded investment but with limited impact on the competitiveness of the rest of the economy. The chief reasons were: 1) MNCs relied on imported inputs and capital goods, substituting foreign for local suppliers; and 2) a decline in MNC innovation efforts, which had been directed towards adapting products to the local market.

Recently, Brazil has revisited its industrial policy and to provide support for industrial upgrading and innovation, for example, by promoting partnerships among companies, universities and research institutes. It has also providing financing and technology support for four "strategic" sectors-capital goods, pharmaceuticals, software and semiconductors.

However, these policies do not fully harness the potential of MNC affiliates, nor acknowledge that they must compete with other affiliates for expansion and technology development projects. The vast presence of large MNC affiliates remains an untapped source of skill and knowledge. Additional "well-chosen" policies are needed to foster linkages MNC affiliates and domestic companies in ways that will enhance industrial competitiveness and broad-based growth.

III. Mexico

The Impacts of FDI in Manufacturing

Enrique Dussel Peters

In the 1990s, Mexico was a 'poster-child' for globalization, a glowing example of success in garnering FDI, as well as increasing exports. Indeed, Mexico was one of the most successful countries in attracting FDI not only in Latin America but in the developing world.

What impacts has FDI had on the Mexican economy? This chapter argues that to understand the impacts of FDI on growth and competitiveness, researchers must conduct analyses at multiple levels. Beyond micro and macro studies, a robust analytical framework must embrace "meso" or inter-firm, as well as sub-national (regional) levels of analysis.

Between 1994 and 2006, in terms of macro and micro variables, FDI has performed well, generating a trade surplus and a large increase in labor productivity. However, FDI has been heavily concentrated by industry and region, and is characterized by a growing gap between productivity and wage growth and by limited linkages with the rest of the Mexican economy. Most important, industries in which FDI is concentrated have suffered from a lack of job creation. In sum, FDI has "exacerbated socioeconomic and territorial polarization" in Mexico.

Analyzing the impacts of FDI: Conceptual framework

The recent surge in FDI across the world over the past 25 years has sparked a raft of studies of both the determinants and the effects of FDI. The findings of these studies depend largely on the level of analysis undertaken: micro (within the firm or sector), macro, meso (inter-firm linkages), or regional, territorial endogeneity.

While the overall debate about the causes and effects of FDI is still unsettled, different levels of analysis highlight and provide insight into different processes and impacts. Most studies focus on aggregate macro variables, such as GDP growth, current account and trade balances, exchange and interest rates, etc., or on aggregate micro variables, such as firm productivity. Three key processes of integration, however, make macro and micro analytic levels insufficient in understanding the impact on FDI on prospects for long term growth and competitiveness.

The first has to do with the dynamics of global commodity chains and their segments. A purely macroeconomic perspective—of structural adjustment, for example—does not explain the specific conditions and challenges of different chains, much less the conditions under which particular firms or countries "upgrade" from one segment to another within a specific chain. If the analysis of FDI does not disaggregate at the product and process level, any specific proposals [to upgrade] may be trivial and lack any content.

The second has to do with the way that different industries interact to create systemic competitiveness and collective efficiency. Studies at different levels show that local institutions promote integration between firms, which in turn fosters learning and innovation, raising the efficiency of the industrial system as a whole. New research on FDI has shown that globalization has greatly increased the potential for technological development, inter-firm network, and new learning.

The third key process of globalization is the integration of specific locales into particular global commodity chains, offering the potential for technological diffusion and learning from

FDI. From this "glocal" perspective, territories or regions, rather than national macro variables, form a key analytical starting point. However, there are few studies of the origins and destinations of FDI at a sub-national level.

A "glocal" perspective also helps to make sense of one of the findings of FDI research, viz. that the most successful countries in terms of GDP growth have not embraced all elements of liberalization but have followed heterodox, home-grown policies.

Highly concentrated: FDI trends in Mexico

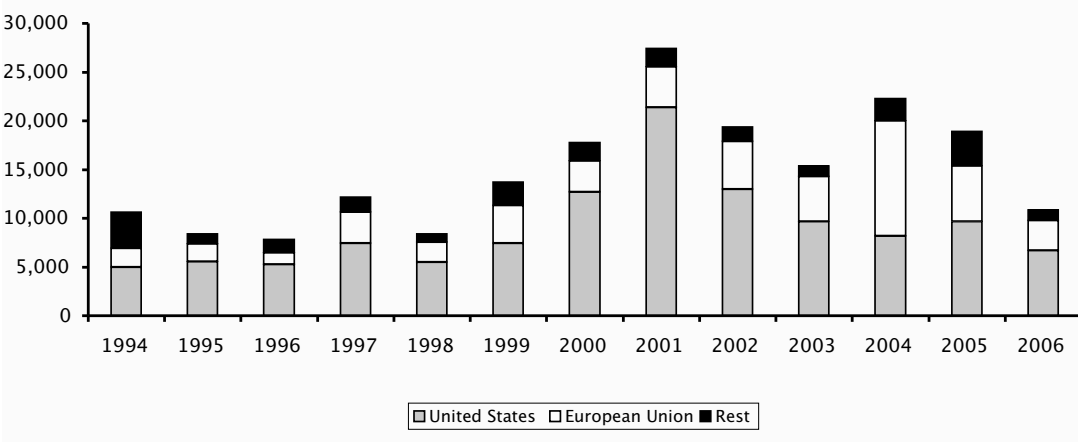
Mexico is an important, though declining, host country for global FDI inflows. In 2005, Mexico accounted for 2.0% of global FDI, down from 3.6% in 1990-1995. Within Mexico, FDI continues to have a "high degree" of importance in the economy, accounting for about 15.6% of total investment and 2.4% of GDP in 2005.

The composition of FDI in Mexico changed substantially between 1994 and 2006, shifting from "new investment" to intra-firm transfers and reinvestment of dividends of firms already in Mexico. Moreover, within the category of "new investment," greenfield investment (new plant and equipment), declined while and mergers and acquisitions rose.

Manufacturing is the most important sector for FDI in Mexico, accounting for 49% of executed FDI between1994-2005. The financial services sector is second, and commerce is third. FDI is minimal in agricultural and mining.

FDI in Mexico is highly concentrated in three ways. First, it is concentrated by place of origin: the U.S. and the EU together accounted for over 87% of FDI inflows between 1994–2006. Second, FDI is concentrated by destination: the Federal District accounted for 57.5% between1994–2006.

Figure 3.1 FDI by Origin, 1994–2006 (millions of dollars)



Source: Author's elaboration based on Secretaría de Economía (México) 2007.

Third, FDI is highly and increasingly concentrated by investing company. Although more than 30,000 companies are registered with the Mexican investment authority,the top 500 and 1000 companies accounted for about 65% and 75% respectively of total executed FDI between 1999–2005.

Where are the jobs? FDI in manufacturing

Newly available data on 653 industries in Mexico's manufacturing sector make possible a much more detailed analysis of FDI trends and their impacts on the Mexican economy. They show that there is a growing concentration of FDI in the top ten and top twenty industries. Indeed, the top twenty industries have been responsible for most of the changes in FDI trends in the manufacturing sector.

The ten fastest growing industries in terms of FDI included auto and truck parts and accessories, food retail and real estate. These ten industries grew from about 9% of total FDI in 1994 to over 45% in 2005. The ten that industries that shrank the most include petroleum retail, telephone services, pharmaceutical products, multiple banking, steel products manufacturing, and restaurants and bars. The share of total FDI of these slow growing ten industries shrank from 45% to 7%.

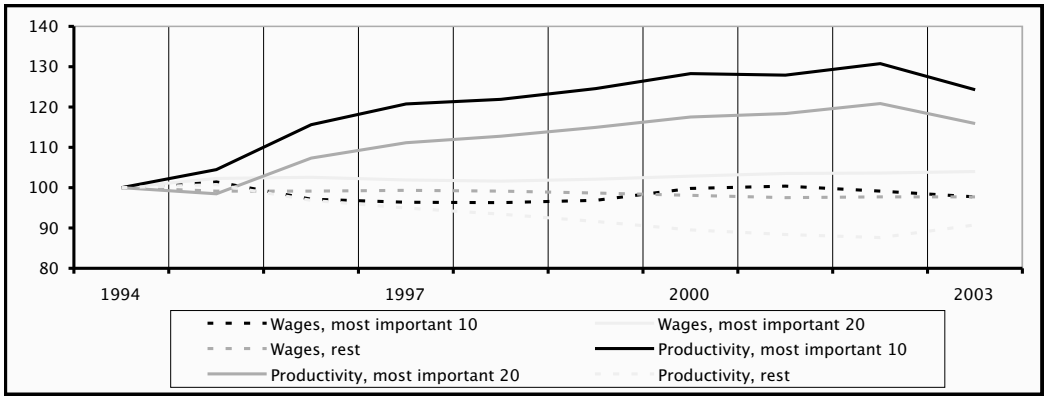
The top three activities in the manufacturing sector in terms of their absolute level of FDI are: 1) automotive and auto parts chain; 2) electronics chain; and 3) manufacturing of consumer products, including beer and non-alcoholic beverages, cigarettes, pharmaceuticals, cosmetics, etc.

Analysis of the data provides several clear and, in some cases, startling insights into the economic impacts of FDI. First, in the manufacturing sector as a whole and in the top twenty industries in particular, FDI has been much more important than domestic investment.

Second, the manufacturing sector did not create but shed jobs. Job creation was negative in the manufacturing sector as a whole, in the ten and twenty most FDI-intensive industries, and in the remaining manufacturing industries.

Third, wages in the top ten and top twenty FDI-intensive firms are significantly higher than the average manufacturing wages in Mexico. But the gap between wages and productivity is also high, suggesting that productivity growth has not been redistributed to workers in terms of wage growth. Troublingly, for the rest of the manufacturing industries, the opposite is true: wage growth exceeded productivity growth between 1994–2003.

Figure 3.2 Wages by Employment and Productivity (1994–2003)
(1994 = 100)



Source: Authors' elaboration based on Secretaría de Economía (México) 2007; INEGI (México) 2007.

Fourth, there are very large differences in productivity between industries. In the 10 top and top twenty industries, productivity was about 86% and 60% respectively above the manufacturing average; for the other 177 industries studied, productivity was 20% below national average.

Fifth, FDI is positively associated with foreign trade, both exports and imports. The top ten and twenty FDI-intensive industries now have a significant trade surplus relative to their total output.

Sixth, FDI is not positively associated with R&D spending. Indeed, R&D expenditures fell by the top twenty firms fell from 0.39% of total output value in 1994 to 0.07% in 2002. Spending by the remaining industries was significantly greater at 0.14% of total output value in 2002.

Overall, the twenty most important industries in terms of FDI exhibit a lack of job creation, a growing gap between productivity and wages, a growing trade surplus, and a lack of R&D expenditures. Added to the concentration of FDI in the Federal District, the performance of FDI in the manufacturing sector suggests that, rather than broad-based growth, FDI has increased the socioeconomic and regional polarization of Mexico.

Expanding the benefits of FDI: Regional and sectoral policies

The analysis of FDI in manufacturing clearly suggests that the potential of FDI inflows has "yet to be exploited." Two key policy directions need to be followed:

First, Mexico needs to put in place a proactive strategy. The benefits of FDI in terms of technology, employment, wages and overall learning processes can be captured, only if it is part of a large socioeconomic strategy. Since the end of the 1980s, the Mexican government's National Development Plans have focused solely on macroeconomic stabilization as the basis for competitiveness, while ignoring trade, industrial, regional and sectoral policies. Despite the constriction of national policy options in NAFTA, there is scope for local policies to enhance FDI.

Second, institutional innovation is required on two counts: 1) to take firm charge of the process of upgrading to more knowledge-intensive and higher value-added segments of global value chains; 2) to strategically promote FDI. Currently, Mexican investment institutions focus only providing licenses and registration to foreign firms.

Finally, it is important not to overemphasize the potential of FDI. While it has brought some positive impacts in terms of trade, productivity and wages, the aggregate impact of FDI on the Mexican economy is relatively small. Even a coherent and long term strategy on FDI, cannot substitute for a long-term national development strategy. FDI will not resolve the structural socioeconomic problems of entire countries, much less of countries as large and complex as Mexico.

IV. Argentina

Foreign Investment and Sustainable Development?

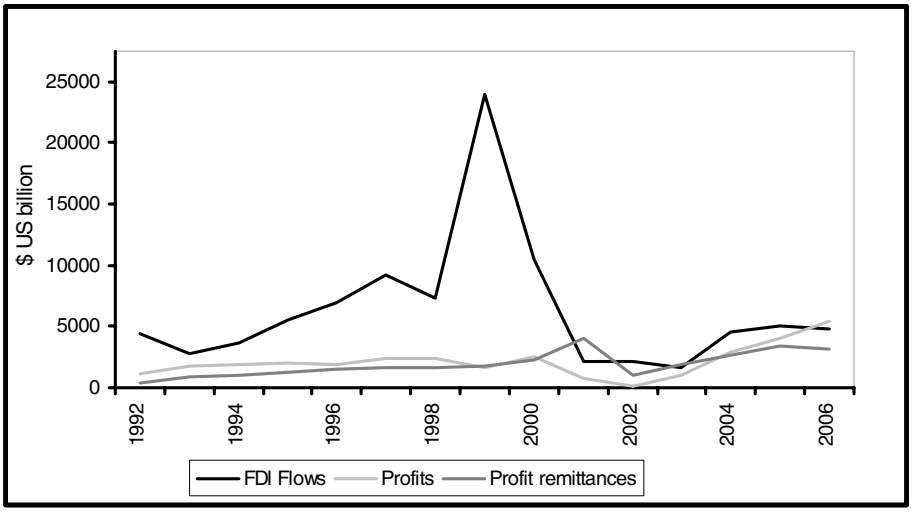
Daniel Chudnovsky and Andrés López

FDI has played a major role in Argentina's economic development process. During the '90s, in a scenario of deep structural reforms largely based on the ideas of the "Washington Consensus," the country was one of the main destinations for FDI among "emerging markets."

Research to date concludes that FDI has not been a panacea for Argentina's economy, but has not been the chief cause of social problems such as unemployment, increasing income inequality or environmental degradation either. Alas, Argentina missed the opportunity to reap more benefits from the large FDI inflows that the country received in the 1990s. National firms were much higher in productivity and technological sophistication yet local firms could not take advantage of almost any kind of spillovers from the MNC's presence. What's more, FDI did not contribute to a diversification of the country's productive structure, to the improvements in trade patterns, to get access to new markets in developed countries, or to growing capital formation. Its impacts on the balance of payments, in turn, were not as positive as expected due to high profit remittances by MNCs affiliates.

Between 1992 and 2001 direct investments of over US$ 76 billion flowed into the country, and nearly two-thirds of these inflows were through takeovers of domestic private and state-owned firms. Although after the collapse of the Convertibility regime Argentina clearly lost attractiveness for FDI, the presence of MNCs in the domestic economy is very high: in 2003 more than 80 per cent of the value added generated by the 500 leading Argentine firms belonged to MNCs affiliates.

Figure 4.1 FDI Flows and Profits in Argentina, 1992–2006



Hence, the question naturally arises regarding the impacts of FDI and MNCs on the Argentine economy. These impacts could have very different forms, including: 1) macroeconomic: e.g., growth, investment, exports; 2) microeconomic, e.g., productivity, innovation; 3) social and environmental, e.g., employment, income distribution, pollution levels. In turn, those impacts could be direct (i.e., through the direct activity of MNCs affiliates) or indirect

(i.e., through the impact of MNC's presence on domestic firms' performance, the so-called "spillovers").

What does the available evidence show about these impacts in Argentina's case? On the macroeconomic side, a study by (Bittencourt, Domingo, and Reig 2006) finds no evidence of positive or negative impacts of FDI on growth and investment.

On the microeconomic side, a study by Chudnovsky, López, and Orlicki (2007) focuses on domestic firms that were taken over by MNCs in Argentina during the '90s. The paper finds positive direct effects of FDI through takeover, since the new owners of former domestic firms seem to have transferred inputs (such as organizational and production technologies) to the acquired firms that allowed them to launch new products and to increase labor productivity and trade. However, research and development activities seem to have been unaffected by the takeover. As for the indirect effects of foreign presence in the Argentine manufacturing industry, the results are less encouraging, since spillovers only arise in the case of innovation outputs, meaning that domestic firms need to upgrade their technological assets to become MNCs suppliers.

In another study focused not only on taken-over firms but an all foreign owned firms and based on the same data set mentioned above, evidence was found that domestic firms with high absorption capabilities1 could reap positive spillovers from MNCs competing in the same sector (Chudnovsky, López, and Rossi 2006). This suggests that the probability of receiving positive spillovers from FDI presence is mostly related to factors internal to the domestic firms in host countries.

Regarding the social impacts of FDI, Chudnovsky, López, and Orlicki (2007) deal with unemployment and wage inequality -both variables showed severe increases during the 90s. In the first case, they find that contrary to what is often assumed in Argentina, there is no evidence that total employment decreases (or increases) as a result of the acquisition of a domestic firm by a MNC. As for the impact of FDI on wage inequality, using data from the Permanent Household Survey the study shows that FDI does not seem to be the main cause of the deterioration of income distribution during the last decade.

Regarding the environmental impacts of FDI, Chudnovsky and Pupato (2005) find that foreign firms are more prone to undertake environmental management activities and generate positive environmental spillovers, by inducing the adoption of simple clean production management methods in domestic firms with high absorption capabilities. However, somewhat surprisingly, foreign ownership is associated to a relative decrease in the quality of environmental management. In conclusion, the contribution of FDI to the serious environmental problems that the country faces, although seemingly positive, has been modest.

From this, a policy agenda emerges. First, FDI impacts depend to a large extent on the capabilities of domestic firms in host countries. Hence, it is a priority to work on local firms—especially SMEs—in Argentina in order to improve their competitiveness—via technical assistance, provision of information, fostering linkages with universities and research institutions, creating suppliers development programs, etc.—and mitigate the market failures that could be affecting their performance—especially regarding credit access. This could help local firms both to take advantage of the potential spillovers generated by FDI presence as well as to compete better with foreign firms in their respective markets and to have more close ties with MNCs affiliates as suppliers, clients, partners, etc.

Second, policy efforts in the FDI area must focus not only on the quantity of FDI received but also on its quality. In the '90s most FDI was market-seeking and took place through M&As. At present, efforts should be made to attract more greenfield investments as well as FDI aimed not only at taking advantage of the domestic market but also at integrating local affili-

ates within the respective intra-corporate value chains through efficiency seeking investments. However, efficiency seeking FDI should not be made, as it is often the case in Mexico and Central America, at the expense of local linkages, since in that case productivity and technology spillovers are hardly possible.

The goal of FDI policy should be to induce MNCs operating in Argentina to restructure their affiliates operations in order for them to be part of global corporate competitiveness objectives. This means, for instance, that MNCs affiliates in Argentina could get world or regional "product mandates," that is, products that are assigned exclusively to Argentinean affiliates for exporting to certain countries or regions (and eventually to the whole world).

It is also important to foster MNCs affiliates to engage in innovation activities, as it is the case of many foreign affiliates operating in Brazil. This involves not only in-house R&D but also research linkages with universities and research labs in Argentina. Fiscal and/or financial incentives could be employed for both purposes (i.e., local suppliers development and promotion of domestic innovation activities). The same kind of instrument could be useful for fostering MNCs to improve their environmental management systems and to diffuse their knowledge and practices about environmental issues to local firms.

Regarding the objective of transforming the productive structure in order to increase the presence of knowledge intensive activities, MNCs will not invest in those kinds of sectors unless specific government signals are in place. Recently, we have seen many MNCs investing in Argentina in software and information services, a sector which has been favoured by many policy interventions in last years. This does not necessarily mean granting huge amounts of money to foreign investors, but creating a favorable climate for investing in activities which are new and subject to rapid technological change.

Policy measures in the abovementioned areas should not be taken only at the national level. MERCOSUR could be an adequate space for coordinating actions among governments in the region aimed both at enhancing domestic capabilities and also at improving FDI quality. However, so far this coordination has been mostly absent and in fact there has often been a kind of competition for FDI through fiscal incentives, a phenomenon that peaked in late 1990s (Chudnovsky and López 2002).

Regarding other regional integration alternatives, note must be taken that a recent study shows that MERCOSUR countries could expect increases in FDI inflows as a result of their entrance in a Free Trade Areas of the Americas (FTAA) or the signature of an EU-MERCOSUR agreement (López and Orlicki 2005). In any case, the authors conclude that while it seems reasonable to foresee a positive impact on FDI received by MERCOSUR countries in case the FTAA and/or the EU-MERCOSUR agreement are signed, caution is needed when forecasting its probable magnitude as well as the origins and nature of additional FDI inflows to be received. Furthermore, we could add that nothing guarantees than an increase in FDI "quality" could follow from the signatures of both agreements, while the possibility of coordinating investment policies with partners such as the U.S. or the European Union are mostly confined to granting guarantees to foreign investors, but could hardly include the kind of "pro-development" instruments discussed above.

Finally, MNCs are not a substitute for local entrepreneurs. Argentina's large conglomerates shrank as a group in the last ten years, but a few of them survived and expanded and could be the basis to build a new domestic business elite, jointly with other new emerging big firms that have been growing recently. In this regard, granting these firms access to long term credit in similar conditions to those faced by MNCs in their home countries could be a first step towards the creation of a new business leadership that, in our view, is necessary to build a viable sustainable development strategy for the long term in Argentina.

V. Costa Rica

The Unrealized Potential of FDI for Development

Jose Cordero and Eva Paus

In the mid 1980s, after a long history of dependence on a few traditional exports and three decades of import substitution policies, Costa Rica launched an aggressive effort to strengthen and diversify its industrial base through the liberalization of trade and investment. Abandoning direct government involvement in production, Costa Rica gradually turned from proactive to market-based trade and industrial policies. In addition to increasing exports, the central aim was to attract a greater quantity and a higher quality of FDI, particularly in high-tech manufacturing and tourism.

During the 1940s and 1950s, Costa Rica embraced a series of far-reaching social reforms, including the abolition of the army, broad-based access to education and health care, and institutions which provide a high level of political participation. Underpinning social and political stability, these reforms make Costa Rica unique in Latin America and provide a "location specific asset" to attract FDI.

The Costa Rican government used innovative and assertive tactics, including tax incentives, to attract FDI—with considerable success. On two counts, however, the long-term and broad-based benefits of FDI inflows to the Costa Rican economy are questionable. First, foreign companies, especially in the high tech sector, have generated few backward linkages to domestic firms. Second, a shrinking tax base has undermined public investment, including in the management of Costa Rica's environmental assets that are crucial to its substantial tourism sector. To more fully realize the potential of FDI for sustainable development, Costa Rica needs to move beyond attracting FDI to the articulation and implementation of an overarching development strategy.

Innovative tactics to attract FDI

An early tactic to attract high tech FDI was the government's creation of Free Zones, or Zonas Francas, in the early 1980s. The Zones offer producers duty-free imports and generous tax exemptions: 100 percent for eight years and 50 percent for another four years. More recently, the government has created special tax incentives in the rapidly growing tourism sector.

Another early tactic was the creation of an investment promotion agency, the first in Latin America. CINDE—the Coalicion Costarricense de Iniciativas para el Desarrollo—was established and funded by US-AID in 1982 as a private, non-profit organization. Unconnected to the government, CINDE could pursue its mission regardless of the vicissitudes of government. On the other hand, government commitment to the independent CINDE was less than it might have been for a state-controlled organization.

CINDE initially focused on attracting all foreign investors. However, by the early 1990s, Costa Rica was losing competitiveness to other Latin American countries. CINDE decided to focus on areas in which Costa Rica was thought to have advantages: first electronics, then medical devises, and more recently, IT-enabled services.

Buoyed by Costa Rica's strategic location and human capital, FDI inflows skyrocketed in the 1990s. From an average annual inflow of $40 million in the 1980s, FDI rose to $416 in the 1990s, the bulk of it in the manufacturing sector. Between 1997 and 2006, manufacturing absorbed 54 percent of all FDI inflows. More recently, the purchase of real estate by

Table 5.1 Basic Economic Data for Costa Rica: 1970–2004

	Net FDI Inflows			Investment Rate GFCF as a % of GDP	Real GDP growth based on constant colones
	Millions of current U.S. $	% of GDP	% of GFCF		
Average 1970–1979	44	2.3	10.1	22.7	6.4
Average 1980–1989	70	1.8	8.8	20.3	2.2
Average 1990–2004	416	3.1	16.1	19.9	4.7

Source: Calculated based on World Development Indicators, accessed April 25, 2007.

foreigners has emerged as a key sector, accounting for 25 percent of FDI inflows between 2004 and 2006.

CINDE actively pursued electronics firms in the 1990s, especially the chip-making giant Intel Corporation which was looking for a production base in Latin America. It was at CINDE's headquarters that Intel first made a presentation in 1995. From a short list which included Chile, Brazil, Mexico and Costa Rica, Intel selected Costa Rica for the $ 300 million investment, the largest single coup of the FDI attraction campaign. Intel chose Costa Rica because of its educated and skilled labor force, lack of private sector unions, the government's promotion of the electronics sector, and the incentives of the FZ system.

Of critical importance for Intel's final decision was the personal involvement of then President Figueres. Turning Costa Rica's small size to advantage, the President moved decisively to bring together key Ministries, including Foreign Trade, Environment and Energy, Finance, Transport and Public Works, and Education to address Intel's concerns about infrastructure, education, and financial incentives. In the final analysis, it was this "coordinated and concerted effort" which won Intel's trust—and investment.

The Intel experience offered an ideal opportunity to move beyond attracting MNCs to proactively collaborating with them to capture the potential development benefits of FDI. This would have required the Costa Rican government to "institutionalize modes of cooperation and . . . a division of labor among different institutions and ministries to define in a systematic way FDI's role in Costa Rica's economic development and the role of different players, public and private." In the event, it was an opportunity lost. While there were some piecemeal efforts, no "coherent, well-coordinated strategy" was put in place.

Missing linkages in high tech industries

The potential benefits of FDI fall into two categories—macroeconomic and microeconomic—with the most significant contributions on the micro side stemming from spillovers which promote growth of domestic knowledge assets. In Costa Rica, benefits have been mostly on the macro side, including a positive impact on the investment, balance of trade, employment and wages. Micro-level benefits, on the other hand, have been meager.

One reason is that MNCs have limited their activities to lower-end assembly functions. Rather than upgrade to more knowledge-intensive production and design functions, they are diversifying into IT-enabled services.

The main reason, however, is that backward linkages to domestic supplier firms have been very limited. While the absolute amount quadrupled, the value of locally sourced inputs as a percentage of imports remained low and even fell slightly from 11.8 percent in 1997 to 10.4 percent in 2005. The two industries with the largest amounts of FDI—electronics and medical instruments—have the fewest backward linkages: in 2005, only two percent of machinery

and electrical equipment inputs were sourced domestically. Even this low amount of domestic content is over-stated, since the data do not distinguish between Costa Rican firms and foreign firms based in Costa Rica. Local sourcing by MNCs in Costa Rica consists primarily of printing, packing, and services.

There are several reasons for the lack of backward linkages in high tech industries. First, MNCs source major inputs from a global network of suppliers internal to the company. Second, Costa Rican firms lack the technological sophistication and/or scale capacities to produce inputs for MNCs.

Part of the blame lies with ISI policies which protected domestic firms from imports without reciprocal control mechanisms to require that they become internationally competitive. Moreover, argue Cordoba and Paus, the pervasiveness of market failures—including imperfect information about requisite technology and quality and undeveloped capital markets—made it unlikely that they would become competitive on their own.

The government has made some effort to promote indigenous linkage capacity, including recent efforts of matching national suppliers with MNCs. Moreover, MNCs have helped to raise technical skills through on the job training and upgrading university curricula. However, without an overarching strategy and the resources to implement it, including much greater access to financing, a qualitative jump in domestic linkage capability is unlikely.

Shrinking tax revenues: Killing the golden goose?

Costa Rica's success in attracting FDI is based on its location-specific assets, including human capital, political stability, dependable and state-of-the-art electricity and communications infrastructure and, in the case of tourism, natural capital in the form of national parks and biodiversity. Maintenance and management of these assets depends on tax revenues for public investment.

But the proactive reduction of import tariffs due to trade liberalization and the tax exemptions on nearly all activities of MNCs have made it difficult to increase revenue. In 2004, the ratio of tax revenue to GDP was just over 13 per cent. Such a low tax ratio considerably reduces the government's ability to improve education and infrastructure, both for local development purposes and for the attraction and upgrading of FDI.

As a result of the stagnant tax revenues, public spending has been lagging. Investment in electricity, for example, is not keeping up with demand; and there is no information about the environmental impacts of hotel development in protected areas. Social spending also lags behind the needs of the population: poverty rates have not declined significantly for more than a decade.

Realizing the potential benefits of FDI

The most important potential benefit of FDI is the advancement of knowledge-based assets in sustainable industries. To capture these benefits, especially in the context of intensifying global competition in high-tech industries, Costa Rica needs four kinds of policy innovation.

First, it needs an overarching development strategy that would map out priorities and the role of different sectors and actors in achieving these priorities. In close interaction with the private sector, the government needs to identify those activities that have the highest potential for successful interaction with FDI.

Second, the government needs to be proactive in building domestic linkage capacities and more generally, knowledge based assets. Positive policies include training, education, credit

Table 5.2 Costa Rica's Tax Ratio, 1987–2004.

Year	Total tax income/GDP* (%)	Year	Total tax income/GDP* (%)
1987	11.22	1996	12.55
1988	10.97	1997	12.53
1989	11.03	1998	12.56
1990	10.81	1999	11.94
1991	11.30	2000	12.29
1992	11.88	2001	13.22
1993	11.99	2002	13.22
1994	11.59	2003	13.35
1995	12.34	2004	13.36

**Total income as a percentage of GDP.*
Source: Author's elaboration based on data from Ministerio de Hacienda (Costa Rica) 2007; Banco Central de Costa Rica 2007.

availability, and support for science and technology. In addition, incentive structures skewed towards foreign investment over domestic producers need to be reformed. Incentives towards imported inputs, for example, should be eliminated.

Third, Costa Rica needs to increase its tax revenues and distribute the tax burden more fairly. The end of tax exemptions for the Free Zones, scheduled for 2008, provides a great opportunity for Costa Rica to establish a positive tax rate that will strike the right balance between generating revenue and not driving foreign investors away.

Fourth, public investment is needed for a data base that tracks the development impact of FDI, including the extent of and obstacles to local linkages and the environmental impact of tourism in national parks.

VI. Uruguay/Argentina

International Commitments and Sustainable Development: Lessons from the Paper Pulp Mill Conflict in Fray Bentos

Martina Chidiak

Uruguay and Argentina have been involved for three years in a conflict about the installation of a large scale paper pulp mill in the Uruguay bank of the Uruguay river, close to the town of Fray Bentos[2]. The conflict has triggered simultaneous demands by Uruguay and Argentina before the International Court of Justice (ICJ), as stipulated by dispute settlement provisions of the Uruguay River statute, which was ratified by both countries in 1975 to regulate the administration of this shared resource. The Argentinian demand focuses on two issues. First, it claims that Uruguay violated the Statute by unilaterally authorizing the construction and operation of the plant. Secondly, it argues that the environmental impact of the plant (which includes trans-boundary effects) will be serious and irreversible. In turn, Uruguay argues that the mill doesn't have and will never have a perceptible environmental impact. Simultaneously, Uruguay presented its own demand to the ICJ arguing that the highway blockades—by local demonstrators on the Argentinean side—that affect transit on the bridge that links the two countries (close to the Argentinean town of Gualeguaychu and the Uruguayan city of Fray Bentos) cause serious economic damages to Uruguay. The ICJ did not give grounds to this complaint.

This purpose of this brief is to highlight the conflict's most important characteristics and to analyze its implications for future policy.

In terms of the conflict's characteristics it is worth noting that it is highly unusual, given the excellent diplomatic relations and the strong cultural and economic links between the two countries. Argentina and Uruguay are both partners in Mercosur, the Customs Union project that also includes Brazil and Paraguay as member countries (a group that soon will be enlarged by Venezuela) and to which Chile and Bolivia are linked as "associated countries." Secondly, it is striking that the conflict has persisted in light of the diverse institutional and political initiatives aimed at solving it. Thirdly, the high and sustained level of conflict is astonishing, and far from receding in the last two years it has deepened, and increased the differences between the two countries. In fact, by the end of 2007 the two parties considered concluded the mediation attempt offered by the King of Spain to refocus the dialogue and cooperation efforts on the issue. Finally, bilateral dialogue has all but terminated while countries wait for the ICJ's verdict, which is expected to be handed towards the end of 2008.

This conflict constitutes the first environmental dispute to gain such prominence in Mercosur and its eventual resolution will undoubtedly have an important impact given the type of development path (with a leading role of the exploitation of natural resources by foreign investors) chosen by countries in the region. To illustrate this point we can consider, for example, not only investment in the forest industry complex, but also in the production of food products, biofuels and the exploitation of mineral and hydrocarbon resources, all rising in the region.

It is for this reason that a regional approach was chosen as the relevant lens through which to focus on this conflict. In addition, this is an important perspective because it can be argued that the early adoption of a regional approach could have contributed to avoid or more effectively address the escalation of the conflict, allowing for a more effective negotiation and the search of a joint solution, instead of legal conflict and impasse in dialogue that finally occurred.

On the other hand, and thinking about the future, it appears that only a regional approach would allow the two countries to successfully address the challenges and potential conflicts facing them at present, notably in terms of their commitments regarding investment protection and international environmental treaties, as pointed out in the discussion below.

From this perspective, the current conflict between Argentina and Uruguay sadly illustrates the national and regional (Mercosur) limitations to respond to international trends and achieve a sustainable development of the forestry-industrial sector. The difficulties observed to achieve a cooperative solution to the conflict and to effectively and jointly monitor the activity of the paper pulp mill highlight the urgent need to strengthen the institutional capacities in the region. In particular, because the latter seem unable at present to guarantee that foreign direct investment (FDI) will bring net benefits at the national and regional levels.

This may seem paradoxical, given that many institutional mechanisms are in place to deal with this kind of regional conflicts. More specifically, it could be argued that both the Uruguay River Statute, which created the Administrative Commission of the Uruguay River—CARU, for its acronym in Spanish—and Mercosur's Environmental Framework Agreement (2001) were signed to this aim. However, these previous agreements proved insufficient to prevent countries from choosing the international legal conflict and to cut off bi-national dialogue instead of using the existing institutional framework to search for joint solutions. Unfortunately, in light of the evolution of the conflict (more specifically, to the avoidance of taking any kind of cooperative approach) it is likely that we will learn too late from this mistake, postponing the build-up of national and regional capacities to adequately confront the challenge of regulating FDI and guaranteeing its contribution to the sustainable development of our countries.

In terms of analyzing and framing this conflict from an economic perspective, it is important to take into consideration some international trends in terms of foreign direct investment, the protection of investor's rights and environmental regulation, as well as some related issues.

First, natural resource intensive sectors face growing limitations to expand their production in industrialized countries, and need to extend their operations to developing countries which have an abundance of raw materials as well as other comparative advantages. In this sense, the great competitive potential of countries in the Southern Cone of South America for forestry production and related industries has been known for decades. This is based, to a great extent, in the availability of adequate land at a reasonable cost and the high yield of biomass. Uruguay (as well as Brazil, Chile, and Argentina) have established a regulatory framework to foster the forestry industry and to capture foreign investment for the sector. From this perspective, it can be argued that the possibility that projects would emerge with an unequal distribution of costs (environmental and social) and benefits (mainly economic) could have been foreseen decades ago. Consequently, one may think that the necessary strengthening of the regional capacities of joint regulation was delayed too much or wasn't adequately assessed.

A second international trend of great importance is the growing share of foreign investment flows protected by investment treaties that guarantee "stable rules" and thus prevent the development of local regulations aimed at, for example, labor or environmental protection. Growing evidence in this sense has accumulated with the practical application of the investment protection chapter (Chapter XI) of NAFTA, the North American Free Trade Agreement, which has similar provisions to bilateral investment treaties. The application of Chapter XI of NAFTA has led local or national governments to pull back environmental regulations in light of complaints presented within the NAFTA Chapter XI framework.

In this sense, it is worth noting that both Argentina and Uruguay have undertaken several commitments that are potentially conflictive. On the one hand, in terms of investment protection,Uruguay and Argentina are among the countries in the region that have signed a large number of bilateral investment treaties over the past decade. On the other hand, we have in-

ternational agreements related to environmental protection (known as multilateral environmental agreements). Uruguay and Argentina (as well as Chile and Brazil) are signatories to the Stockholm Convention (on persistent organic pollutants) and within this framework these countries have committed to introducing new regulations to limit and progressively eliminate the "involuntary" production of dioxins and furans. These substances can be produced in different industrial activities, including the paper pulp mills. In light of the fact that several plants that could produce dioxins and furans are protected by bilateral investment treaties, both the Uruguayan and Argentinean governments may face difficulties introducing new provisions related to dioxins and furans in their environmental laws or in their operation permitting systems. In fact, in the case of the controversial paper pulp mill of Fray Bentos, it has been already argued that the guarantees granted to investors have been detrimental to cooperation and to achieving a bilateral solution to the conflict. After Argentina asked Uruguay to suspend the construction of the plant for 90 days in 2006 with the purpose of conducting a complete and joint environmental assessment, Uruguay decided not to agree in light of the commitments assumed under the Uruguay-Finland bilateral investment treaty. The Finish company Botnia could have used this as a basis to sue the Uruguayan government if it had added new requirements to the ones established in the original construction agreement.

Conclusions

We can conclude that even though we can't foresee a solution to the conflict, the situation already provides some relevant information about the institutional design for environmental protection in Mercosur and allows us to draw several policy lessons.

First, it is important to highlight that Mercosur missed the opportunity to build a regional framework to anticipate the environmental conflicts about the use of shared natural resources and trans-boundary environmental effects that are highly likely to arise. However, not everything is lost. Although valuable time has probably been lost and the bilateral relationship has been unnecessarily damaged by lack of cooperation, the evolution of the conflict and the verdict of the ICJ need to be closely monitored. If it favors—as it appears highly probable—common interest and good sense instead of extreme local positions—this verdict may well require the establishment of joint monitoring and regulation system by the two countries. Such a development could be auspicious for future regional initiatives.

Secondly, a good opportunity was also missed to establish regional rules (within the Mercosur framework) to fulfill the obligations of the Stockholm Convention. A regional normative implemented at national scale would have great interest because it would achieve a similar rank to bilateral investment treaties (because it would be an international obligation) and may facilitate the favorable treatment by international tribunals of new rules based on the obligation.[3]

In terms of lessons, it is clear that this conflict illustrates the need to strengthen regional institutions, because it shows that the widely held view that Mercosur should focus exclusively on its commercial aspects may be mistaken. If the treatment of environmental conflicts would have been addressed at the regional level, the negative effects that this conflict is having for regional integration could have been avoided.

Similarly, from the perspective of the parties to this conflict, it is worth noting that contrary to what governments seem to believe, the ICJ ruling will mark the beginning and not the end of the need for an open dialogue. We hope that this is understood sooner than later because, if an accident or a negative environmental impact eventually occurs, both countries could face liabilities for it, and would thus learn in the worst circumstances about the need for cooperation, regulation, and joint monitoring.

VII. Chile and Brazil

Does FDI Promote or Undermine Sustainable Forest Industries?

Nicola Borregaard, Annie Dufey, and Lucy Winchester

Natural resource based industries play important roles in production and exports of Latin America. In this context, the environmental impact of FDI is a highly sensitive issue. Supporters of FDI argue that foreign companies tend to introduce better environmental technologies and resource management practices. Skeptics of FDI suggest that foreign companies are more interested than domestic companies in rent-seeking and have little incentive to improve their environmental practice.

This paper examines the environmental impact of FDI in the forestry industries of Latin America's two largest producers of forest products—Brazil and Chile. It focuses on three kinds of environmental impacts:

Scale effects: FDI-induced economic growth 1) drives an increase in demand for environmental goods and services (positive) or 2) increases resource depletion and ecosystem degradation in absence of adequate environmental regulation (negative).

Technology effects: Foreign firms introduction and transfer of cleaner technology to domestic firms.

Regulatory effects: Foreign firms drive pressures to raise/lower the stringency and/or enforcement of domestic environmental standards.

Contrary to the views of both FDI supporters and skeptics foreign firms are neither "saviors" nor "invaders" in the forests of Brazil and Chile. While there are "subtle differences" between the environmental performance of foreign and domestic firms, the paper contends that focusing exclusively on ownership is "too simplistic." The overarching conclusion is that the most important factors affecting environmental performance, of both domestic and foreign firms, are robust environmental laws and enforcement, policy incentives and international market exposure.

Forest industries: Production and FDI

The forest sector has different characteristics in Brazil and Chile in terms of industry make-up, the role of forest plantations, the character of ownership, and the economic importance of FDI.

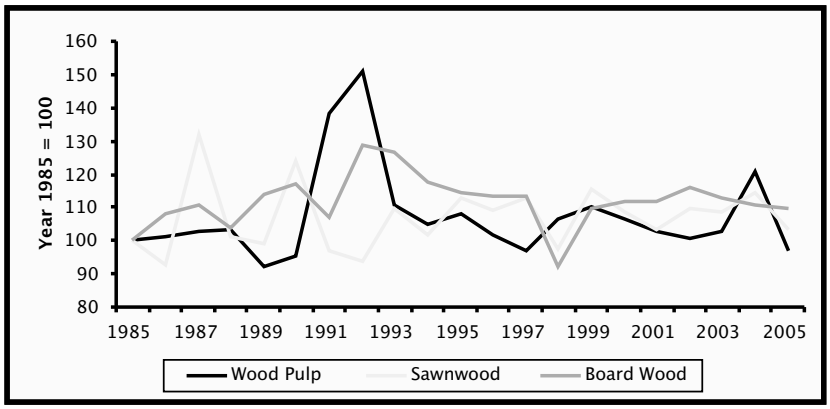
In Chile, the forestry sector is dominated by sawed timber and furniture industries, which made up over 50% of the sector in 2005. Pulp and paper accounted for another 41% and forest planting and timber for about 9%. Ninety eight percent of the raw material used in Chilean forest industries comes from plantations, even though they make up only 7% of total forested land.

Chile's forest sector is highly concentrated and vertically integrated. Two Chilean companies own more than 75% of plantations, two companies control 100% of pulp production, and three companies control 100% of boardwood production.

The Chilean forest sector has grown rapidly since 1974, propelled by government incentives for private investment including an optional tax regime and a subsidy of 75–90% of costs of reforestation. In 1970, forest industries accounted for only 1.2% of GDP, rising to 3.3% in

2005. FDI inflows swelled in the early to mid 1990s but have shrunk since then due to the vertical integration and market share concentration of two Chilean companies, the Matte and Angelini Groups. Overall, forestry accounted for only 2.7% of total FDI inflows between 1974 and 2005.

Figure 7.1 Production of Key Forest Products, Chile



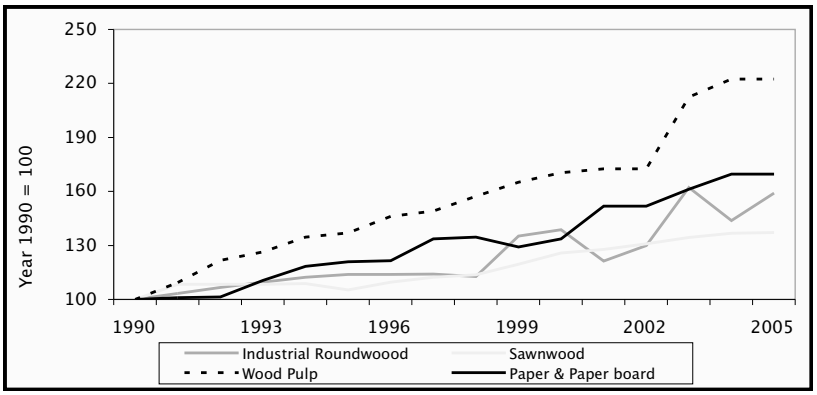
Source: Elaborated from data from INFOR 2005.

In Brazil, the forest sector has two distinct parts: tropical timber production, concentrated in the North (Amazon region); and pulp and paper and related plantations, concentrated in the South.

Brazil is the world's largest producer and consumer of tropical timber. Production is dominated by small and medium size domestic operations and 86% of the timber produced in the Amazon is consumed internally. Foreign companies are concentrated in Amazonas and in 1997 accounted for about 67% of timber exports from the state.

Brazil's pulp and paper sector is conformed by large domestic and foreign companies, with foreign companies accounting for only about 20% of output by 2006. Brazil's pulp and paper industry is highly concentrated and vertically integrated: eight companies account for 87% of output. Six of the eight companies own plantations, as well as pulp processing and paper production facilities. Overall, FDI Brazil's forestry sector is very small, accounting for about 1% or less of total FDI per year between 1996 and 2001.

Figure 7.2 Production of Key Forest Products, Brazil



Source: Elaborated from FAOSTAT 2007.

Environmental impacts: Chile

Scale effects

Despite regulation and new technology, the expansion of forest industry operations poses threats to the sustainability of Chilean forests. Domestic and foreign companies face the same kinds of problems, however, and it is not possible to separate their impacts.

Risks involved in large scale projects, especially given the lack of base lines and clear standards, combined with the challenges this implies for an adequate enforcement of an operation-by-operation based approach regarding environmental conditioning, are the most significant environmental issues in the Chilean forestry sector.

Pulp and paper operations are generally large-scale, creating significant environmental risk. Only strong domestic regulation and enforcement can prevent environmental damage. For example, a US$ 1 billion pulp mill, built by a Chilean company, on the Rio Cruces near a Nature Sanctuary has been the target of repeated public complaints and fines despite the company's agreement to provide tertiary waste treatment and a monitoring plan for waste products.

Forest industry expansion may have positive scale effects if the alternative use is more environmentally degrading. Studies in both Chile and Brazil conclude that forestry investments, especially pine and eucalyptus plantations, provided "significantly larger environmental benefits" than cattle farming. Benefits, including the prevention of soil erosion and carbon sequestration, are enlarged if forest operations are plantation-based and convert lands previously used for agriculture.

Technology effects

Domestic and foreign companies face similar market conditions and international pressures. The construction of pulp and paper mills, for example, is dominated by outside supplier, equipment and engineering firms, leaving limited scope for differences in mill design. International financial institutions tie project lending to environmental performance, regardless of company ownership. As a result, is no clear difference between foreign and domestic owners in the development of new process and production technologies.

In the timber industry, both foreign and domestic companies have largely embraced environmental certification. About 60% of plantations are certified to ISO 14001. One difference is that foreign companies tend to also be certified by the Forest Stewardship Council (FSC), while domestic companies are certified by the domestic CERTFOR label.

Regulatory effects

Foreign investment has generally had a beneficial effect on environmental regulation by spurring public debate and advocacy to fill regulatory gaps. A proposal by two foreign companies, Trillium and Boise Cascade, to build two large-scale pulp mills triggered public concern about the adequacy of environmental impact assessment, lack of regulation and enforcement in native forests, lack of regional planning for sustainable development. Both projects were ultimately abandoned due to precautionary regulatory requirements, environmental group pressure, and financial constraints.

Environmental impacts: Brazil

Scale effects

Expansion of forest operations may generate ecosystem pressure. In Brazil, however, expansion has not been driven primarily by FDI but by domestic investment.

The environmental performance of domestic versus foreign firms differs by sub-sector. In the tropical timber industry, the worst environmental offenders are domestic companies. For-

eign companies are less likely to be involved in illegal logging—the key environmental concern. Intensity in the use per unit, however, it is likely to be higher under FDI due to the usually larger size of operations.

In the pulp and paper industry, studies have found that, in average, domestic companies outperform foreign companies in terms of water consumption, effluent pollution levels, and emissions of odors.

Technology and regulatory effects

Environmental certification is a useful gauge of technology effects.

In the pulp and paper industry, all major foreign and domestic operations are ISO 14001 certified. Many companies also FSC-certified, though more Brazilian-owned plants are certified than foreign-owned plants. Some domestic companies are certified by the national CERFLOR scheme which is "much more flexible" in terms of international environmental norms, socio-cultural impacts, and labour relations with third party suppliers. One study found that "Brazilian companies were leading the transition" towards more advanced environmental management systems and technologies aimed at reducing pollution. In 1998, the domestic company Klabin's operation in Parana was the first in Latin America to be FSC certified. Other companies, domestic and foreign, followed suit.

In the tropical timber industry, only a small number of operations have environmental certification, generally those that are export-oriented. Foreign companies are more likely to be FSC certified. They have substantial financial and technical capacities, while domestic companies—mostly small scale and family based operations-, have a low level of technical and managerial capacity. Foreign owned companies, especially from Europe, have embraced environmental technologies to a greater extent than their national counterparts.

Regulatory effects

Foreign companies, especially in tropical timber, tend to have a higher profile and receive a greater level of scrutiny than domestic companies. For example, the prospect of illegal logging by Asian companies spawned more stringent environmental protection laws. Moreover, small-scale and family-based domestic operations face on oligopsony of timber traders who retain most of the rent. As a result, domestic companies are more rent-seeking and more likely to try to reduce compliance costs.

Conclusions and recommendations

The case studies point to the conclusion that a singular focus on the performance of foreign companies will not promote the sustainable development of forest industries in Chile and Brazil. In both countries, domestic companies play key roles in environmental degradation—and environmental leadership. Rather than ownership, environmental performance is a function of environmental oversight, policy tools as well as exposure to international markets. What is needed is "policy intervention...to increase the [positive] contribution of investment, whether foreign or domestic" in the following ways:

1. Ex ante environmental assessments of forestry industry development policies;
2. More stringent environmental regulation and adequate resources for enforcement;
3. Incentives to facilitate company adoption of better environmental management practices and technologies;
4. Awareness-raising about environment in general and environmental certification in particular;
5. Greater public disclosure of information about FDI and company sustainability performance.

VIII. Bolivia, Ecuador, Venezuela

Natural Resources and Foreign Investors: A Tale of Three Andean countries

Leonardo Stanley

Introduction

After a decade of market-friendly reforms, the beginning of the new millennium in Bolivia, Ecuador and Venezuela was marked by economic crisis, social clashes and political turmoil. In these countries, this turmoil gave rise to new governments which, among other things, introduced legislation to regain control over their natural resources, bypassing previous legislation and moving away from original contracts.

Paradoxically, instead of prompting a legal battle at international tribunals, foreign firms accepted the new rules and agreed to renegotiate contracts. What explains this behavior? Do developing countries have actually more negotiation leverage than before? Or, is oil and gas the only sector where this outcome is possible? What lessons can be learned by developing countries be this experience?

Rules and institutions

At the beginning of the past century, most Latin American governments showed a close relationship with foreign investment that led to granting the exploitation of vast reserves of hydrocarbons (oil and gas) and minerals to private agents. However, since the 1950s, most states in the region adopted a more protectionist view. The fall of export commodity prices along with the irruption of the debt crisis among Latin American countries of the 1980s brought a policy change that included a friendlier attitude towards foreign investors, who then became the new promise for the development process. In the 1990s countries in the region (with the exception of Mexico) began to loosen (previously rigid) entry conditions in the oil and gas sector. Considering former regulations and polices, the transformation was amazing: foreign investors were not only welcomed but even granted proprietary rights over extracted oil. By the same token, most of the countries accepted to fix royalties at very low levels.

Furthermore, the 1990s witnessed the rise of bilateralism that transformed the institutional framework governing the relationship between foreign investors and host states. From a theoretical viewpoint, bilateral investment treaties (BITs) were introduced in order to signal commitment to the new institutional environment. In contrast to trade, direct investment involves the acquisition or creation of productive capacity, thus implying a long-term perspective. Hence, once investment becomes sunk, the host country may have a strong incentive to change the "rules of the game." Therefore, in order to attract FDI, developing countries may wish to signal themselves as investor-friendly. In other words, the recommendation is that further to the adoption of "market friendly policies," including tax incentives and subsidies (both favoring MNCs) and market liberalization, developing countries should sign BITs (change the institutional background).

Although BITs vary across countries, most of them share similar features when it comes to defining foreign investment and laying out the basic principles regarding treatment, transfer of funds, expropriations and mechanisms for dispute settlement. Expropriation clauses included in these agreements generally include some standard "prompt, adequate and effective"

or "just compensation" formula. By contrast, what differs among BITs is the definition of indirect expropriation, of great concern nowadays, related to those actions that substantially impair the value of an investment.

Other important clauses are those dealing with the investor-State investment dispute mechanism, which allows foreign investors to make claims against the host country by way of international arbitration offered by multilateral institutions, such as the International Center for the Settlement of Investment Disputes (ICSID) or the United Nations Commission on International Trade Law (UNCITRAL).

Following the tendency in vogue, Bolivia, Ecuador and Venezuela were very active in signing BITs.

Recent developments

Although political instability has been a common feature of all countries in LAC, as the political situation deteriorated Venezuela, Bolivia, and Ecuador moved towards new political experiences. Venezuela moved first in that direction after the arrival of Hugo Chavez to power in 1999, which signaled the collapse of the bipartite political system. In Bolivia, the transformation came with the election of MAS leader Evo Morales in December 2005 after two years of political turmoil that took three presidents out of office. In Ecuador another political outsider, Rafael Correa, recently won the presidential election (November 2006) backed by a new political party.

For these three countries, energy related income is key, with oil and natural gas exports listing as the main source of foreign exchange. In this respect, Venezuela can be seen as the leading case with oil explaining more than 75% of total exports. Even if, from this perspective, the other two countries are less outstanding, Bolivia ranks as an important regional player in the natural gas market and trade figures also show a high share of hydrocarbon related exports in both Bolivia and Ecuador. In terms of fiscal revenues, oil and gas related income is highly significant in the three countries. In the case of Bolivia, natural gas provided an average of 34% of current revenue during the past decade. In Ecuador, oil explains 40% of public sector proceeds; whereas for Venezuela, the share reaches 50%.

As a result of this new political environment these countries introduced new legislation in order to regain control over their natural resources, bypassing previous legislation and moving away from original contracts. Specific details vary among the three countries, but these changes entail, to different degrees: 1) the nationalization of oil and gas fields; 2) a limitation on the private sector's participation on exploration, production and distribution activities; and 3) a significant increase in both royalties and taxes (for example, in Venezuela royalties were increased from 1 to 33.3 percent).

The relationship with foreign investors is, clearly, under stress.

Foreign investors' treatment and FDI: Recent facts

In terms of actual FDI flows, one salient stylized fact is that regardless of the policies followed and the specific institutional changes introduced, FDI inflows to the Andean region have shown a sharp increase since the beginning of the 90s. Since then, Venezuela became the main receptor of foreign investment, in particular after 1997. For the latest figures available, as of 2005, FDI inflows almost doubled previous year figures.

Regarding the institutional transformations, the drastic changes introduced could trigger a wave of foreign investors' claims before international tribunals. Taking into account foreign

investors' enhanced rights under the bilateral scheme, we would expect to see these countries facing several claims in international tribunals. Paradoxically, in spite of the outstanding legal and contractual changes, Bolivia and Venezuela have hardly any presence at international tribunals' case list. Venezuela presents only one case before ICSID whereas Bolivia is not facing any single oil sector related demand. Ecuador, by contrast, is facing several claims, including two originated in the oil sector.

Table 8.1 Selected Countries, Main Statistics (2005)

CONCEPT	UNIT	BOLIVIA	ECUADOR	VENEZUELA
Population	Million	9.4	13.2	26.6
GDP	Current U$S – Billion	9.3	36.5	140.2
Change in GDP	2004 to 2005	4.1	3.9	9.3
GNI per capita	Atlas Methodology - Current U$S	1,010	2,620	4,820
GNI per capita	PPP – International U$S	2,710	4,110	6,540
Hydrocarbon Exports / Total exports	Percentage	46.3	56.9	87.2
Hydrocarbon Revenues	Share of Total Fiscal Revenues (%)	25.3	30	55.2
Oil Production	Barrels per day	15,417	194,169	1,098,218
NG Production	Thousands m^3	12,716.5	1,608	34,755.5
Per capita oil production	Barrels of oil produced / population	16,354	146,975	413,548
Per capita NG production	Cubic feet produced / population	13,489	0.1	13,088
FDI	US$ Million	-242	1,646	2,583
FDI - Natural Resources	Percentage	0.7	0.9	0.3

Source: Data from Jimenez and Tromben 2006; CEPAL 2007; World Bank 2007.

Table 8.2 ICSID Pending Cases

COUNTRY	CASE	FIRM	SECTOR
Bolivia	ARB/06/2	Química e Industrial del Borax Ltd.	Mining concession
Ecuador	ARB/03/6	MCI Power Group and New Turbine INC	Power generation project
	ARB/04/19	Duke Energy Electroquil Partners	Power generation facilities
	ARB/05/9	Empresa eléctrica del Ecuador (EMELEC)	Electricity enterprise
	ARB/05/12	Noble Energy INC and Machala Power Co.	Electricity enterprise
	ARB/06/11	Occidental Petroleum Co.	Hydrocarbon concession
	ARB/06/17	Técnicas Reunidas	Oil refinery expansion
	ARB/06/21	City Oriente Limited	Hydrocarbon concession
Venezuela	ARB (AF)/04/6	Vannessa Ventures Ltd.	Gold and mining project
	ARB/05/4	I&I Beheer B.V.	Debt Instruments
	ARB/06/4	Vestey Group Ltd.	Farming enterprises
	ARB/07/4	ENI Dación B.V.	Hydrocarbon rights

Source: Own elaboration based on ICSID 2007.

Explaining the investors' perspective

The above evidence should not lead to the conclusion that foreign investors accepted the new contracts passively. However, it suggests that investors were open to renegotiate contracts, and to accept new conditions as far as those new rules allowed them to make profits. In other words, contract breaching is not always enough to bring disputes before international tribunals and to hold them. From a strategic point of view, foreign investors' first attitude was to intimidate host countries with the threat of claims before ICSID or other international arbitral tribunal, as experienced both in the case of Bolivia and Venezuela.

In short, for the oil companies, the present situation is not as bad as firstly imagined. Firstly, because of the increase in oil prices, the economic and financial equation may still be positive even after the introduction of the new taxes. Secondly, and related with the previous comment, the government's interest on taxing the new rent is a worldwide phenomenon and, from regional comparison and somehow paradoxically, investors might be better off in the Andes region than in other latitudes. Thirdly, for those companies that entered the market during the past decade, investment may have already been recouped.

The above explanations introduce some clues as to why foreign investors, although initially tempted to sue host countries, finally ended up accepting renegotiation. However, this could not always be the case. For instance, investors' stances could have changed had oil prices fallen. Furthermore, foreign investors could also avoid new investments in the country, if business environment deteriorates further or in the event the country's demands are too ambitious.

Policy lessons

The lessons from this case suggest that these (and other) countries need a longer term strategy in their relationship with foreign investment which is badly needed in view of capital and technology shortage. From this perspective, recent regulatory changes in the oil and gas sector of these countries seem more of a correction of the balance of power and rights after BITs, rather than the optimal policy. In other words, continuing reduction of companies' profits and rights could hardly be seen as the right long term option.

To conclude with a general thought on BITs and renegotiation, it is worth noting that, in principle, these countries may pursue the same strategic behavior observed in the oil and gas industry, and renegotiate treaties at once. However, the new bilateral schemes appear to be more ambitious for instance, by including new guarantees (as those introduced by the new BITs or FTAs in terms of intellectual property). Therefore, although these countries may show high leverage to renegotiate contracts in the oil and gas sector, their bargaining power might be minimal in a broad based negotiation (in terms of investments in general). An alternative could be to suspend those bilateral treaties seen as prejudicial by the host country. This solution was recently suggested by the Ecuadorian government, when it announced its intention to decline a renewal of the BIT signed with the U.S.

However, one may wish to note that decisions regarding BITs (renegotiation or non-renewal) may be dwarfed in their impact on FDI inflows as compared to other policy signals (such as, the more general move towards nationalization in Bolivia and Venezuela). At any rate, breaking with the bilateral scheme (and other policies that may have a negative impact on FDI) could be harmful for long term growth and development given the key role of FDI in developing countries.

IX. Brazil

Are Foreign Firms Cleaner than Domestic Firms?

Luciana Togeiro de Almeida and Sueila dos Santos Rocha

Most research about the environmental impact of FDI starts from one of two conflicting assumptions. On the one hand, MNCs are assumed to transfer cleaner technology and better environmental management practice to developing countries, generating a "pollution halo" effect. On the other hand, TNCs are assumed to strategically search for lower environmental standards or to follow poor local practice, generating "pollution havens." To capture "pollution halo" effects, the recommended policy is liberalization, while to avoid "pollution haven," the right policy is regulation. Interestingly, both views assume that domestic firms in developing countries have poorer environmental technology and management than MNCs.

This part of the report presents detailed case studies of the environmental management practices of domestic and foreign firms in two "dirty industries" in Brazil: pulp and paper and petrochemicals. The key finding is that, "in general, domestic firms in these sectors are just as environmentally friendly as foreign firms."

What explains this convergence in the environmental performance of domestic and foreign firms? The chapter points towards three factors: 1) stringent domestic environmental regulations; 2) international market requirements; and 3) technological competencies acquired by domestic firms as a result of government strategic industry policies.

Importance of the two sectors

Pulp and paper and petrochemicals are particularly important sectors to study on three counts. First, both have potentially high levels of environmental impact. Pulp and paper production is both energy and resource-intensive, consuming large amounts of timber and water. It also generates, smelly and hazardous chemical wastes dangerous for water pollution and human health. The production of petrochemicals requires a high level of non-renewable fossil fuels (oil and natural gas) as inputs, as well as water, and generates hazardous atmospheric emissions, liquid effluents and solid wastes. Of greatest concern are hazardous wastes which can cause soil and water contamination. Moreover, petrochemicals are used as intermediate goods in many other manufacturing processes, generating the potential for negative environmental spillovers.

Second, both pulp and paper and petrochemicals sectors are important to the Brazilian economy, with a high share of GDP and exports. The petrochemicals industry was launched in the 1970s by a "tripartite model" involving the Brazilian government, a foreign multinational, and a Brazilian company. The establishment of the pulp and paper initiated at the end of the 1950s under strong government incentives towards national private companies.

Third, pulp and paper and petrochemicals industries are characterized by a high level of global FDI and trade. In pulp and paper, FDI inflows into Brazil were historically low but have dramatically increased since 2001, rising from an average $8.1 million per year from 1995–2000 to $440.4 million in 2001–2006. The influx of FDI reflects an international trend in the world pulp industry towards new mixtures of short with long fiber pulp, generating a huge increase in global demand for short fiber pulp. With its eucalyptus technology and land and water abundance, Brazil has become a preferential location for pulp and paper MNCs.

With privatization in the 1990s, most assets of the petrochemicals sector were acquired by domestic firms. As a result, basic chemicals are dominated by Brazilian companies, while TNCs are concentrated in the production of higher value aggregated chemicals.

Research questions and method

The case studies were based largely on field research, including interviews with companies, labor unions, and environmental protection agencies.

In the pulp and paper sector, the case studies focused on nine companies—five Brazilian and four foreign. These nine companies were responsible for 81% of pulp and 52% of paper production in Brazil in 2004. The four foreign companies accounted for over 98% of the pulp and 46% of the paper produced by TNCs.

The petrochemicals case study was based on seventeen companies—13 Brazilian, 3 foreign and one joint venture. Together, these companies encompassed 33 out of 57 plants concentrated in Brazil's three major petrochemical complexes.

The case studies addressed three questions:

1. What is the level of environmental management? Is there evidence that practices in Brazil fall below international standards in the "pollution haven" sense?
2. What are the characteristics of environmental leaders: are they foreign or domestic? Large or small and medium size? Large exporters?
3. What factors drive company commitments to environmental management? Are international markets or domestic environmental regulation more important?

To assess the level of environmental management, the we gathered and aggregated a variety of quantitative and qualitative indicators including: 1) emissions data; 2) whether or not the company had obtained ISO 14001 certification; 3) whether and what kind of environmental initiatives had already been introduced; 4) how much the company spent on environmental investment (as a percentage of total annual investment); and 5) whether and what kind of company procedures were in place to get updates on environmental regulations.

Putting together the indicators enabled we developed a three-tier system to classify company environmental management systems:

Initial level (I): Curative "end-of-pipe" treatment of wastes;
Intermediate level (II): Continuous efforts to prevent pollution and reduce resource inputs;
Advanced level (III): Management systems for all environmental impacts of production and the product life cycle.

The empirical findings

The first finding of the case studies is that there is no "pollution haven:" environmental control systems in both the pulp and paper and petrochemicals sectors are no less stringent in Brazil than international norms.

In the pulp and paper sector, all nine companies were found to be operating at least at the intermediate Level II; four were at Level III. All companies were found to be in or beyond compliance with environmental regulations. All had at least one plant certified to ISO 14001.

In the petrochemicals sector 12 of the 17 companies investigated were found to be operating at least at the intermediate level. Of the twelve, seven were nearing the Level II, one was at this level and four were approaching the advanced Level III. The twelve firms overall had high levels of environmental investment (around 10% of total investment); eleven firms

had been subscribers to the Responsible Care Program of the chemical industry for five years or more; and six firms were certified by ISO 14001.

The second research question concerns the profile of firms leading in environmental control. In terms of size, the case studies found that big firms lead in pro-environment initiatives, while small and medium size firms lag behind in both sectors.

In terms of foreign versus domestic firms, the central finding was that the environmental management practices of foreign firms are not ahead of domestic firms. Indeed, in the pulp and paper sector, the opposite is true: national firms are generally ahead of foreign firms. Out of five domestic firms, three were found to be moving to Level III, while only one of four foreign firms was doing so.

In the petrochemicals sector, the environmental performance of foreign and domestic firms was not distinguishable. Of fourteen domestic firms, nine were at Level II and III. Of three foreign firms, one was at Level I, one was in transition to Level II, and one was in transition to Level III. A joint venture foreign-domestic firm was at Level III.

In terms of the importance of exports, there was a divergence in the two sectors. In pulp and paper, exporting firms were clearly the leaders. In petrochemicals, however, some small exporters were environmental leaders, while large exporters were still at Level I. Togeiro and dos Santos conclude that "the petrochemicals case did not corroborate the hypothesis, widely emphasized in the literature that exporter firms are the leaders in environmental management."

Finally, the evidence found different answers in the two sectors to the third research question about the drivers of better environmental practice. In both sectors, the companies interviewed emphasized the importance of domestic environmental regulation. However, in pulp and paper, companies face increasing pressure from international markets to invest in forest and industrial certification systems, introduce new pollution-control technology, and improve resource input efficiency. These pressures are reflected in the fact that the large exporters are the better environmental performers.

In the petrochemicals sector, on the other hand, large exporters performed no better than small ones, leading to the conclusion that "environmental commitments were regulatory-driven rather than market-driven."

Table 9.1 Environmental Control: Comparing Petrochemicals and Pulp and Paper

	SECTORS	
ENVIRONMENTAL CONTROL	**PETROCHEMICALS**	**PULP AND PAPER**
Level	Intermediary, against "pollution haven" hypothesis	Intermediary to advanced, against "pollution haven" hypothesis
Leading firms	National and foreign, large-sized, varied export performance	Most national, large-sized, exporter
Driving forces	Regulatory-driven	Market-driven

Integrating environmental, technology and industry capacities

The case studies reveal a convergence of environmental practice by foreign and domestic firms in two key "dirty" industries in Brazil. They point to the importance of both domestic regulation and international market pressure in driving better environmental management.

The pivot of convergence, however, is the fact that Brazil's domestic firms were able to innovate in response to changes in both regulation and global market demands. Both sectors are historically characterized by domestic firms with a high level of technological capacity. This has two implications for the analysis and for the policy recommendations that flow from it. First, there is not a significant technological gap between the TNC affiliates and local firms. Second, technological capacity, along with quality management systems, is highly correlated with better environmental management.

The technological capacity accumulated by Brazilian firms is closely related to the state industrial policies historically applied to them...especially in the petrochemicals sector where [the state oil company] Petrobras played an important role via technological spillover effects.

The importance of domestic technological capacity suggests that attracting FDI does not by itself guarantee a higher level of environmental protection at the industry level. The domestic policy context is critical. Most important is the need for "an integrated policy approach" which aims to build environmental, technological and industry capacity.

X. Mexico: Sustainable FDI in Mexico's IT Sector

Missing Links, Dashed Hopes

Lyuba Zarsky and Kevin P. Gallagher

From the Mexican vantage point, foreign direct investment was at the center of the 1994 North American Free Trade Agreement (NAFTA). Mexico hoped that liberalization would propel an influx of U.S. investment which, in turn, would fuel its emergence as the continent's manufacturing platform. In addition to industrial transformation, FDI was expected to bring environmental benefits through the growth of cleaner industry sectors, transfer of technology and better management practices. It didn't turn out that way.

At the top of Mexico's wish list was FDI in the information technology (IT) industry. Beyond benefits common to all FDI, such as jobs and foreign exchange, the IT industry offered the prospect of industry upgrading through the capture of "knowledge spillovers" from MNCs: cutting edge technology, new skills, including business and environmental management, and integration into the world's fastest-growing industry. Spillovers would move local firms and workers up the global IT value chain from low-wage assembly and sub-assembly to knowledge-intensive complex manufacturing and design. A vibrant IT hub could also be the foundation for broad-based, sustained growth in local employment. Moreover, the IT industry was considered a "clean and green" alternative compared to traditional smokestack industries.

From hub to enclave

With its geographic proximity to the huge American IT market, Mexico was well-positioned to evolve into an IT manufacturing hub for North America and indeed, for the entire Western Hemisphere. Under import substitution industry policies from the 1940s to the 1960s, Mexican firms had developed substantial local IT manufacturing and design capacities. In the early 1990s, about fifty Guadalajara firms were producing computers and components sold on both domestic and global markets.

Fueled by U.S. foreign investment, Guadalajara's small but promising IT industry boomed after the signing of NAFTA. Between 1994 and 2000, FDI in the electronics sector grew by five times and the value of exports quadrupled. An influx of "flagship" multinationals expanded or newly located in Guadalajara, including Hewlett Packard, IBM, Intel, Lucent Technologies and NEC. They were soon followed by U.S. contract manufacturing companies, including Flextronics, Solectron, Jabil Circuit, and SCI-Sanmina. By 1998, Guadalajara—newly dubbed "Silicon Valley South—exported nearly $8 billion of IT products.

It was a short-lived triumph. During the industry shake-out of 2001–2003, the flagship MNCs shut down all but sales and service operations of computers and peripherals in Guadalajara, relocating to China or elsewhere in East Asia. Exports dropped by 60 percent, FDI fell by 123 percent, and 20,000 jobs were lost. The contract manufacturers remained, surviving on more diversified product orders.

While global industry shake-outs are difficult for any country to withstand, Mexico was especially vulnerable: there was little to keep the MNCs in Guadalajara. Rather than a hub, the industry evolved as an enclave, with little linkage between foreign IT companies and local

firms or markets. Rather than evolve into a supply base for the MNCs, most local firms went of business.

Since 2003, MNCs in Guadalajara have recouped to some extent since through fairly impressive industrial upgrading from "hard" to "soft" tooling that entails greater worker skill. However, the IT sector in Guadalajara continues to operate in a virtually complete foreign enclave that has few connections to the domestic economy.

Environmental spillovers

The global IT industry presents significant environmental challenges for sustainable industrial development. Given its "clean and green" image, the IT sector is typically a low priority for regulation or monitoring in developing countries. Occupational health standards in particular tend to be sketchy or non-existent. However, there are significant occupational and community health and environmental problems associated with IT manufacturing and assembly. Most important is the wide variety of highly toxic chemicals—solvents, acids, alcohol—used in the manufacture of IT products.

In Mexico, the IT industry was largely left to self-regulate. On the one hand, foreign firms all brought with them environmental management systems such as ISO 14000. Also, given the fact that many of the plants that were built were brand new, they used less amounts of energy and water and had better disposal systems.

The enclave character of IT growth meant that FDI failed to generate much in the way of environmental spillovers since diffusion of clean technology and best practice is accomplished largely through MNC supply chains. Moreover, Mexico made regulation of the IT sector a low priority, leaving firms largely to self-regulate.

Why did FDI fail to promote a dynamic IT hub? The absence of spillovers stemmed from the intersection of two factors: 1) a shift in the global strategy of IT multinationals towards outsourcing to large contract manufacturing firms; and 2) the Mexican government's passive approach to FDI.

Global production networks

In the early 1990s, IT multinationals embraced a new strategy of outsourcing their manufacturing functions, reconfiguring the industry into a three-tiered "global production network." At the top are the global "flagships"—companies like HP, Dell, IBM—who have brand name and global marketing and design capacities and who earn the highest profits. Next are the contract manufacturers (CMs) who assemble components into a variety of electronic products under contract to global flagships. On the third rung are components suppliers—from large companies to mom-and-pop outfits—who sell inputs mainly to the CMs and operate on razor-thin margins.

Rather than a "regional" strategy—outsourcing to companies located in the countries where the flagships already had a presence—the flagships embraced a "global" strategy, turning to Silicon Valley firms like Flextronics, Solectron, Jabil Circuit, and SCI-Sanmina. Relatively small at the outset, these contract manufacturers (CMs) soon swelled to become large multinationals in their own right, largely by developing a highly efficient, very low-margin global supply base.

Under the new strategy, the flagships bypassed Mexican IT manufacturers and invited "their" CM assemblers to co-locate in Guadalajara, driving local IT firms out of business. By 2002, only five remained. Both the flagships and the CMs also bypassed other potential down-

stream supplier firms: over 95% of all the products and services used by both flagships and CMs were imported.

Government policy failure

Following the passage of NAFTA, the Mexican government adopted a passive stance toward FDI. Industry promotion policies were dismantled and there was little government support for technical and management training, research and development, or domestic investment by small and medium size firms. Indeed, Mexico's trade policies *favored* foreign investors and imports. Essentially, the government put its faith in market forces: Mexico's low manufacturing wages and proximity to the U.S. market.

But relying on market forces alone—what we call a "maquila mindset—to upgrade industry has major pitfalls. First, the industry is highly concentrated both geographically and in terms of industry structure. Asia and the U.S. account for the bulk of manufacturing, creating barriers to entry for newcomers. Second, intense cost pressures inside the industry undermine the sustainability of low-wage, assembly work. CMs tend to rapidly shift assembly operations to lower-cost locations when global conditions change. While wages are low in Mexico relative to the U.S., they are much lower in China. Third, there is little skill acquisition in assembly work. Four, thin profit margins mean that supplier firms have little capital for investment in technology upgrading

Countries that have successfully built up knowledge assets which allowed them to move up the value chain—Taiwan, Korea, China, Brazil—have done so with the help of aggressive, proactive industry policies which overcome market failures: worker and management training, support for scientific research and education; access to credit for domestic firms. They have also promoted and leveraged access to their domestic markets, while Mexico focused only on promoting exports.

Lessons for developing countries

The Guadalajara IT experience offers four policy lessons about how governments may increase the benefits of FDI for sustainable industrial development.

- First, capturing FDI spillovers requires governments to explicitly set development goals and to integrate FDI into their achievement. Policies also need to increase the capacities of domestic firms to absorb spillovers. Mexico's experience shows clearly that treating FDI as an end in itself rather than as part of an overarching development strategy is more likely to generate enclaves than broad-based growth.
- Second, relying on low wages alone to attract FDI leaves developing countries vulnerable to pull-out by MNCs. Developing a local supply base and markets enhancing the likelihood that MNCs will stay through crisis times and make additional investments.
- Third, garnering environmental spillovers requires proactive environmental policy. The expectation of MNC "best practice" was not borne out in Mexico. As a result, Mexican-based firms are not equipped to meet the new, high environmental standards of the European Union and will be locked out of that market.
- Fourth, trade and investment agreements need to provide the policy space for developing countries to increase the capacity of domestic firms. Under NAFTA, Mexico has far less room to maneuver than Brazil, China, and India, which operate solely under the WTO.

An Epilogue

Globalization, FDI, and Development

Nagesh Kumar

FDI has come to occupy a center stage in the development policy of most developing countries with most governments seeking to maximize FDI inflows with liberal policy and a variety of incentives. FDI is expected to contribute to host country's development directly and indirectly by generating output, employment, and foreign exchange, and by fostering learning and technological capacity. The developmental literature on experiences of host countries, however, is at best mixed given a wide variation in the quality of FDI. It is often far more difficult to attract FDI of a requisite quality than it is realized. Therefore, it is important to understand the conditions under which FDI can contribute to development. In that context the present report summarizes a very valuable body of new research on Latin American experiences with FDI. These studies come up with findings that corroborate the earlier findings. In this epilogue, I link select findings of the report with those of recent quantitative cross-country studies to put them in a perspective.

The report finds FDI to be concentrated in a handful of countries in the region. This is expected given the fact that FDI continues to be driven overwhelmingly by factors such as size of market, per capita incomes, high levels of urbanization, and well developed infrastructure, among others, as corroborated by among other studies an empirical study explaining FDI by the U.S. and Japanese multinational enterprises (MNCs) in 73 countries at three points of time during the 1980s and 1990s (see Kumar 2000, 2002). Hence, relatively poorer countries that need FDI most may fail to get them. Furthermore, MNCs' investments in technology-intensive modern industries are also concentrated in countries that have already established their presence in those sectors. Hence, developing countries' attempts to find their entry into modern industries with the help of MNCs' resources may be frustrated. Another quantitative study analyzing the relationship between FDI and growth for a sample of 107 countries with a panel data set for the 1980s and 1990s finds that in a majority of cases the direction of causation between FDI and growth is not pronounced, and seems to be running from growth to FDI in a substantial number of countries—especially the poorer ones (Kumar and Pradhan 2005).

The report finds FDI crowding out domestic investments in many cases, which is consistent with the evidence from cross-country studies. A study analyzing this relationship in a dynamic context for a panel data for 107 countries finds crowding out to be dominating the relationship between FDI and domestic investment in the Latin America and Caribbean region. In Asia and Africa, the patterns of FDI crowding in or out of domestic investments are more evenly distributed. These regional patterns appear to be consistent with the observations of Fry (Fry 1992) and Agosin and Meyer (Agosin and Mayer 2000). Therefore, it would appear that the quality of FDI received by Latin American countries is poorer compared to that received by other regions.

An obvious question would be what measures have the governments in other regions employed to improve the overall quality of FDI inflows. Here the evidence is very clear. The selective policies towards FDI complemented by performance requirements seem to have been effectively employed by a number of Asian countries to target more desirable FDI inflows. The quantitative studies have reported evidence on the effectiveness of performance requirements in inter-country context (Kumar 2002). The case study evidence also suggests that many governments—in developed as well as developing countries alike—have imposed per-

formance regulations like local content requirements on MNCs to intensify generation of local linkages or export obligations for triggering a burst of export-focused investments (see Moran 1998, Kumar 2005, for examples).

The report also finds that foreign firms do not increase R&D expenditures in the host economies. Here again the empirical findings from cross-country studies are quite supportive of these findings. A study of U.S. and Japanese FDI in 73 countries for the 1980s and 1990s found that agglomeration economies drive R&D investments of MNCs into countries that have specialized in particular industries and have achieved advanced technological capability (Kumar 2001). Hence, expectations of host governments to develop innovative capability with MNCs' resources also are unlikely to be successful without local initiative.

One implication of the above findings for policy is that the poorest countries need to pursue alternative strategies for kickstarting the process of their development rather than waiting for MNC investment to stimulate the process of their industrialization and development with incentives and policy liberalizations. They would do better by focusing on improving infrastructure, human resources, developing local entrepreneurship and technological capability, creating a stable macroeconomic framework and conditions conducive to productive investments. Once the growth process picks up momentum, FDI would flow in as well, since multinational enterprises pick up winners! In fact, the countries that are able to create a strong nucleus of national champions are also better placed to benefit from FDI, as these national firms are then able to absorb knowledge spillovers from foreign enterprises and strike mutually beneficial alliances (Kumar and Siddharthan 1997, Dunning 1998).

The other implication for policy is about the continued relevance of policy space. As observed earlier, performance requirements and other selective policies have been successfully employed by a number of governments to improve the quality of FDI inflows. Studies have also summarized evidence that suggests that present day developed countries have extensively employed infant industry protection, industrial policy and performance requirements, soft intellectual property protection regimes, subsidies, government procurement and regional economic integration among other policies in their process of industrialization (see Kumar and Gallagher 2007). Many of these policies have also been effectively and successfully emulated by the newly industrializing economies in East Asia to build internationally competitive modern industries despite the lack of the apparent comparative advantage. Unfortunately the space to employ a number of these policy instruments has been squeezed by WTO Agreements such as TRIPs, TRIMs, GATS, among others, without addressing a number of distortions in the developed country policies (see RIS 2007).

In that context, it is imperative to highlight the role of policy space for development. Developing countries in the ongoing Doha Round negotiations should seek to preserve the policy space and attempt to retrieve the space that has been eroded in the previous rounds as a part of the Special and Differential Treatment and other provisions.

To conclude, this is an immensely valuable study that provides a Latin American perspective on the impacts of FDI that is broadly consistent with the broader literature on the subject. Together, all this work underscores the need for governments to retool their policies so that FDI plays a development role in poorer countries. The findings are broadly consistent with previous studies. They highlight the importance of national policy in determining the developmental role of FDI on the host countries. That calls for a response from the governments and international community for preserving the policy space in the trade negotiations for making FDI work for development!

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Notes

1. In order to measure absorption capabilities, the study employs an index including variables related to expenditures in R&D, capital goods and intangible technologies, the use of modern organizational techniques, and the relevance of training activities.

2. Originally, the conflict was triggered by Uruguay's authorization to the construction of two paper pulp mill plants in the Fray Bentos area: one, by a Finnish company (Metsä-Botnia) and the other by a Spanish company (ENCE). Finally, only the Finnish company built the plant (which started to operate in October, 2007) in the original location. The ENCE project was reformulated and relocated, apparently in the department of Colonia, but construction hasn't started yet.

3. For example, it is usually argued that the decision by the NAFTA tribunal establishing that environmental regulations cannot be, in any case, considered expropriation marks a change and limits the unlimited rights that foreign investors seem to have (with greater individual and constitutional rights than national citizens).

Argentinians protesting the location of a foreign pulp mill in neighboring Uruquay.

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