

TEXTO PARA DISCUSSÃO Nº 584

**A NOTE ON FOREIGN DIRECT INVESTMENT
(FDI) AND INDUSTRIAL COMPETITIVENESS
IN BRAZIL**

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RESUMO

O texto aborda um tema central da relação entre o aumento dos influxos de capital através do IDE e a competitividade industrial no Brasil. Nesse sentido, confere uma análise da inter-relação existente na teoria entre IDE e competitividade, bem como evidência empírica para o caso brasileiro nos anos 90.

Os fluxos de capital estrangeiro para o Brasil aumentaram expressivamente nos anos 90, especialmente após 1993. Embora a indústria de transformação tenha perdido participação relativa no estoque total do IDE nesses anos, o estoque desse capital estrangeiro na indústria mais do que dobrou de tamanho, quando medido em dólares correntes. Ao mesmo tempo, esse período caracterizou-se por rápido incremento da produtividade industrial, amplamente documentado em diversos estudos. Parece existir, portanto, base para argumentar que o IDE contribuiu para os ganhos de produtividade e de competitividade no Brasil nos anos 90.

Ao examinar os dados desagregados, porém, o quadro torna-se menos nítido. A relação entre o crescimento da competitividade (medida pelos custos unitários da mão-de-obra ou pelo desempenho exportador) e do IDE parece existir apenas para um subgrupo de indústrias.

Se a direção de causalidade é interpretada no sentido oposto, a evidência sugere que não há tendência generalizada para que o investimento estrangeiro seja atraído sobretudo para as indústrias cuja competitividade está em processo de melhora mais flagrante. Isso implica que os ganhos de produtividade e de competitividade podem estar sendo o resultado de outros fatores que não unicamente o IDE. Entre eles, destaca-se a liberalização comercial.

ABSTRACT

This paper addresses a key issue of the link between increased capital inflows through FDI and industrial competitiveness in Brazil. It provides an analysis of the two way relationship which can exist in theory between FDI and competitiveness, as well as some empirical evidence from Brazil in the 1990s.

Inflows of FDI to Brazil have increased significantly during the 1990s, and although manufacturing has been losing out in terms of its share of FDI, the stock of foreign capital in the manufacturing sector more than doubled (in current US dollars) between 1990 and 1996. At the same time, rapid growth of manufacturing productivity has been amply documented, in the same period of time. There seems, therefore, to exist a *prima facie* case for supposing that foreign investment has contributed to increased productivity and competitiveness in Brazil.

When looking at disaggregated data within manufacturing which links the growth of competitiveness (whether measured by unit labor costs or export performance) and FDI, however, there does not appear to be a clear cut relationship with either the growth of FDI or the share of foreign capital within different industries. The link applies to some industries, but not to others. In other words: if one interpreted the causation as running in the opposite direction, this evidence would suggest that there is no general tendency for FDI to be attracted primarily to industries where competitiveness is improving most rapidly. This has the implication that rapid productivity growth might be the result of factors other than FDI — like trade liberalization, for instance.

1 - INTRODUCTION

Brazil, as many other developing countries, has experienced significant progress in terms of trade, finance and FDI liberalization processes since the late 1980s. One result of lower barriers to trade, FDI and other capital movements — coupled with decreased transport and communications costs — has been the expansion of options available to firms as to where to produce and to sell. This, in turn, has contributed to promote more integrated patterns of Transnational Corporation (TNC) production in developing countries, as represented by augmented FDI flows in the 1990s in a number of countries. New FDI flows and policies have reinforced each other. Brazil, as it will be seen, is no exception to these worldwide trends.

In what follows we will begin by drawing attention to selected issues on the relationship between FDI and competitiveness from a conceptual point of view and, later on, will adopt an empirical, more applied approach to illustrate some of the themes involved.

In particular, the objective of the present note is to provide tentative answers to the following questions: to what extent do host countries benefit from the improved competitiveness conditions characteristic of Transnational Corporations (TNCs)? What are the implications of superior economic performance, on average, over domestic firms, for the national economies that host TNCs? And, more specifically, as far as Brazil is concerned: is there a clear relationship between increased FDI presence — as has been the case since the early 1990s — and increased industrial competitiveness? What is the empirical record on this subject? Actually, has there been any increase in competitiveness at all? If Unit Labor Costs (ULCs) are accepted as a measure of (cost) competitiveness, how do ULC trends in the mining and manufacturing industries relate to FDI flows?¹

As it is well known, recession and slower growth of demand, coupled with trade and financial liberalization, have intensified competitive pressures in Brazil since the early 1990s. Later on, a relatively overvalued exchange rate² after the implementation of the stabilization plan (Real Plan; July 1st, 1994) further intensified such pressures. One result of these developments has been an increased concern with competitiveness at plant level, as firms have been forced to exploit every available source of efficiency. Many of them have not survived the

¹ Manufacturing industries are used as examples because of data availability. ULCs have been widely accepted as a core component of competitiveness, as the following passage from Alesina and Perroti (1997) make clear: “we first define ‘competitiveness’ rigorously as ‘unit labor costs in manufacturing in one country, relative to its competitors’ so that an improvement in competitiveness is defined as a fall in relative unit labor costs”.

² It is not our intention here to review the issues related to the appropriate exchange rate that should have been pegged by the monetary authorities in the first few months after the Real Plan’s inauguration date. There is a lively debate still going on in Brazil on this issue. The term “relatively”, used in the text, refers to the fact that real exchange rates, whatever the concept adopted, experienced a peak (in R\$/US\$, for instance) just before the Real Plan’s inauguration date (July 1st, 1994). They fell nearly 15% afterwards, until March-April 1995. Most current estimates point to an exchange rate “overvaluation” of the Real in the 10-15% range.

competitive pressures that followed. Not infrequently, firms succumbed through mergers and acquisitions (M&A). TNCs have been particularly active in these M&A processes.³

For the future, slow growth of demand over the medium term implies that productive capacity should grow at moderate rates as well — which, in turn, suggests that M&A and TNC augmented participation will continue. Besides that, most greenfield projects announced over the past couple of years are to be executed by TNCs.

FDI flows into Brazil displayed new impetus after 1992, initially in the form of portfolio investment, attracted by high real interest rate differentials due to high interest paid on government debt. Later on, stimulated by stabilization, demand growth and privatization, investment flows from TNCs reached historic highs. This has been the record especially since 1994. In 1997, for instance, inflows represented nearly US\$ 17 billion, or about half the Current Account deficit of 4.2% of GDP in that year.

The Asian crisis, despite affecting inflows to Brazil in late 1997, has not been an obstacle to new FDI flows since then: inflows of both short and long term capital in early 1998 have been well above the most optimistic expectations.⁴

Part of this recent success in attracting FDI is due to changes in the legislation governing such flows.⁵ This is particularly true of changes in the legislation related to the Brazilian privatization program, which recently abolished previous existing restrictions (not all, though) on the relative magnitude of foreign capital allowed in privatization transactions.⁶

Whatever the reason, however, it is recognized that developing countries domestic policies play a somewhat passive role in attracting foreign capital. “Getting the fundamentals right” and “adopting market friendly” policies in domestic markets are necessary, but not sufficient, conditions for attracting FDI. The access to these flows is largely determined by events occurring elsewhere in the world economy, as the recent — and yet unfinished — Asian financial crisis painfully demonstrates. Therefore, exogenous factors are a powerful determinant of changes of TNCs presence and importance of FDI in these countries. Even so, it is believed that conditions conducive to competitiveness, size of the market and previous presence of foreign companies are important factors behind FDI inflows.

³ KPMG, the consulting company, regularly conducts surveys on M&A cases in Brazil. A strong TNC presence in M&A has been documented in all their studies. This trend has been recently accelerated.

⁴ Foreign exchange reserves pile up, restrictions on the inflow of short term money, attracted by large interest rate differentials between Brazil and other countries, often give rise to (most of the time timid) measures to control excessive entries. The instability of short term flows in early 1998 has been notorious. As far as FDI is concerned, however, in the first four months of 1998 inflows reached US\$ 5.1 billion, only 12% of which privatization-related.

⁵ See, on this and related points, Baumann (1998).

⁶ Restrictions on FDI flows related to privatization of Telecoms had been abolished at the time of writing this note.

This note is devoted to an examination of these issues using the recent Brazilian experience as an example. We will be concerned with the recent record and rely mainly on data on mining and manufacturing industries.

The remaining of the paper is organized as follows: Section 2 has a conceptual character; it deals with changes in the role of FDI in the 1990s, taking into account trade liberalization and privatization as the main determinants of change, and competitiveness as the main underlying force behind them; Section 3 is devoted to a closer examination of issues related to trade liberalization *cum* increased TNC presence in developing economies, with an eye to industrial restructuring in contemporary Brazil; Section 4 presents selected aspects of the empirical record on FDI; Section 5 shows empirical links between FDI flows and stocks and competitiveness, with emphasis on the mining and manufacturing industries competitiveness performance; Section 6 closes the paper by summing up the main findings.

2 - SOME CONCEPTUAL ISSUES ON FDI, COMPETITIVENESS AND STRUCTURAL CHANGE IN DEVELOPING ECONOMIES: RECENT AGENDA, OLD THEMES

As it is well known, one of the objectives of FDI, trade and finance liberalization is, from the point of view of host countries, to enhance economic growth, development and welfare. The benefits, however, depend very much not only on the volume of investment, but also on the prevailing market conditions and productive efficiency of both existing and new firms.

FDI can change these conditions in a number of ways. But, how, precisely, does FDI affect competitiveness? And what are the linkages through which competitiveness conditions in a given country attract FDI? It is believed that causality runs both ways: FDI increases competitiveness and the latter attracts the former.

Recent FDI inflows into Latin America, and especially into Brazil, have made these issues very important ones because: first, competitiveness has become a key concern among analysts and policy makers alike, due to the critical need to reduce present Current Account imbalances via augmented competitive exports (and efficient import substitution as well); second, FDI inflows may also represent a substantial complement to domestic savings in financing investment, given the need to increase investment rates for growth resumption at a pace needed to ameliorate social conditions in nearly all countries of the region.

A related, albeit opposite, question is: does FDI helps to create Balance of Payments (BOP) problems which would, in due time, jeopardize the competitiveness strategy associated with increased FDI inflows? As it is by now amply documented, in East and South-East Asia a number of countries experienced rapid export-led growth associated with increased FDI inflows until

the 1997 crisis. Exchange rate devaluation in many countries in the region suggests that exports may grow even further in the future.⁷

Nevertheless, large and persistent current account deficits were registered in some of them (most notably in Malaysia and Thailand), mainly financed by inflows of private capital. FDI constituted a good part of it. The Asian crisis, therefore, occurred amidst (or despite) large (previous) FDI inflows. This episode might suggest that FDI and competitiveness not always come together.

Clearly, however, the events that were to follow in late 1997 early 1998 should not be attributed solely to the availability of enlarged FDI inflows. In general, the impact of FDI flows on the BOP depends on the purpose of the investment they finance, i.e., the nature of the activity (e.g., tradables versus non-tradables goods and services). The final results are ambiguous, as far as external trade is concerned. Some impacts are export-enhancing, while others may entail considerable import growth in the form of capital goods, parts and components, at least for some time.⁸ The final production orientation — whether export oriented or import substituting, as well as differences in comparative advantage among countries — is hard to predict *a priori*. The indirect effects are even more difficult to evaluate.

First of all, FDI is a key variable to increase the contestability of markets. Therefore, it potentially improves both competition⁹ and competitiveness. This is particularly true, in countries such as Brazil, with respect to non-tradables: banking, retail and wholesale trade, insurance (medical and other), public utilities are, each and all of them, sectors in which increased FDI flows are being deemed responsible for substantial efficiency, competition and competitiveness gains. In addition to that, the fact that much recent FDI has been directed to non-tradables sectors has positive implications for the competitiveness of tradables. An efficient services sector is a prerequisite for an efficient export sector both in terms of finance/banking, energy, telecommunications as well as transport systems and ports.

This is so because the (extra) cost of doing business in Brazil, sometimes known as “Brazil-cost” (*custo Brasil*), or Brazil-specific transaction costs, is clearly and repeatedly recognized as very high due to the inefficiency of these services as well as from competitive-harmful effects arising from the existing tax system.

⁷ This is not the place to speculate on how devaluation will affect the competitiveness of regional exports. As it is by now clear, some of it has fueled inflation as well as political and productive disarray in some countries.

⁸ Brazil may be seen as a case in which trade liberalization cum strong TNC presence led to an extraordinary growth of imports of raw materials, parts and components used in manufacturing. Thus, for instance, imports of intermediate goods rose nearly 350% in real terms from 1990 to 1996!

⁹ This aspect is not undisputed: the entry of TNCs tends to reduce market concentration and increase competition, unless entry occurs by M&A. On the other hand, TNC's, on average, larger size than the local rivals — as well as technological, marketing and managerial superiority — can lead to increased concentration and non-competitive conduct. Entry barriers may also lead to increased concentration and non-competitive behavior.

A recent report by McKinsey & Company, Inc. on productivity growth and productivity differentials among countries in eight selected activities makes this point forcefully in passages like the following [See Mckinsey (1998)]:

“Brazil’s current standard of living is primarily due to low labor productivity and low capital inputs ... local markets were and often still are stifled by regulatory limits on local and foreign competition ... the most important product and capital market barriers remaining to be addressed are tariffs and government ownership ... inconsistent tax enforcement also stifles productivity growth ... the capacity of the whole economy to function as one market hinges on an efficient infrastructure that reduces transportation costs ...(but) comparative analysis suggests that Brazil’s road network may not satisfactory fulfill this function ... Brazilian ports are twice as expensive to exporters as other Latin American ports ...”
(*Executive Summary*, p. 3-8).

Second, and given trade policies adopted in Brazil since the early 1990s, a closely related issue is: how does trade liberalization affect competitiveness, directly and indirectly? Liberalization makes it more difficult for domestic firms: *a)* to shelter themselves from competition in their home markets; and *b)* to guarantee secure sources of profits. Therefore, liberalization should be closely associated with inward FDI in the sense that both generate increased competitive pressures. In actual practice, i.e., countries facing structural change of the kind Brazil has been experiencing, these two issues are closely interconnected: one should not be analyzed without the other being taken into account as well.

Rapid labor and total factor productivity (TFP) growth, cost reductions per unit of output, successful product innovation, enlarged market share, increased comparative advantage in foreign trade (as revealed by increased exports of goods) and other performance indicators are typical competitiveness variables associated with the presence of TNCs in developing countries.

Contrary to old FDI motivation — to access markets for final output — the modern TNC is aware of the need to possess a portfolio of locational assets, distributed worldwide, to support and enhance its competitiveness. In doing so it changes productive conditions in the countries they are located in. There are many ways in which this can be done, but the main one is the enlarged access to both qualitative and quantitatively superior resources, tangible and intangible, that TNCs can provide.

The economic performance of individual countries, by its turn, is determined by the ability to mobilize resources obtained either domestically or from external sources. Central among these are: financial and physical capital; technology; technological, managerial and organizational capacities; and quality of the workforce.¹⁰ The extent in which these can be embodied in FDI flows (or brought

¹⁰ We follow, on this point, Unctad (1995) especially Chapters III to V. See also Unctad (1997), especially Chapter IV. These *Reports* deal, respectively, with the two “legs”, or concerns, of contemporary industrial policy: competitiveness policies and competition policies.

about by TNC investment and operation) will help determine the economic performance of countries.

The financial and physical capital provided by TNCs is one of FDI's main contributions to productivity growth in developing countries. For these countries, new FDI flows add to the existing capital stock and lead to a more efficient use of available resources or absorption of non or underutilized ones.

FDI also induces multiplier effects, as all investment does, through forward and backward linkages and spillovers, under the form of positive externalities. Any FDI may be accompanied by investments associated with the original investment to supply inputs and parts, either by foreign or domestic firms. The magnitude of the FDI contribution to domestic capital stocks of developing countries, however, has been small.¹¹

Technology, innovatory capabilities and skills have long been recognized as fundamental sources of competitive strength. Since the generation and diffusion of technological capabilities and skills is largely concentrated in TNCs, their role in enhancing these aspects of competitiveness in developing countries is undisputed. TNC systems are also primary conduits for the transfer of technologies and related skills, with linkages and spillovers to firms and institutions outside the TNC system playing an important role in the diffusion of techniques. The implications for the economic performance of countries are multiple and interrelated.

Organizational and managerial practices provided by TNCs, central factors to the competitiveness of firms, improve the efficient utilization of capital and technological resources. These practices have been increasingly associated with the extraordinary efficiency, productivity and competitiveness gains recently displayed by a number of developing countries, Brazil not being an exception. They

“... are becoming more important than ever in terms of providing a competitive edge as the costs of capital converge, a good part of technology becomes standardized and skills become similar in their availability” [Unctad (1995, p. 169)].

Clearly, the dissemination of these practices through linkages and spillovers from TNCs to other firms has positive implications for the competitiveness of production in host countries. The impact on country performance will depend on the importance of TNC activities involved relative to the size of the economy. The implications for country performance are the benefits of market access for firms that can be translated into benefits in the form of increased efficiency, economies of scale, induced investment and learning. These often take the form of increased

¹¹ Thus, for instance, a crude estimate for contemporary Brazil would be in the 1.5 to 2.0% range. Recent flows, however, are higher than that: FDI flows accounted for approximately 10% of gross fixed capital formation in 1997.

export propensities, particularly exports directly performed by TNCs — but also through efficient import substitution — as summarized in the following passages:

“Contributions to international competitiveness and export performance have been particularly high in developing economies that are open to both trade and FDI, as the experience of several East and South-East Asian countries attest... In addition to exports, local purchases and subcontracting of parts and components by foreign manufacturing affiliates have an impact on host economies by helping local entrepreneurs establish links with international markets” [Unctad (1995, p. 214)]. “It is clear that TNCs have played an important role in expanding exports, and that access to international marketing networks is one of the important contributions that TNCs make towards the performance of host countries” (ibid, p. 216). Finally, “ ... FDI can also contribute to host countries’ economies through efficient forms of import substitution. Until recently, such import substitution often took place within a protected market. Increasingly, however, a recognition of the high costs of protection has led to a shift of developing countries towards more open FDI regimes that are conducive towards greater efficiency of affiliate production , whether for domestic markets or for export” (ibid, p. 216).¹²

In the process of improving their own competitiveness TNCs also contribute to industrial restructuring across sectors, industries and activities within an industry — a theme that has deserved increasing attention since the late 1980s.¹³ Linkages are also important here because they allow foreign affiliates to act as transmission mechanisms. These multiplier effects will be more effective the greater the number and areas of interface between local and foreign factors of production. The gains will be greater if they take place under conditions of openness and access to competitive markets and technology. In this sense, the export orientation of TNCs provides important multiplier effects as well.

3 - TRADE LIBERALIZATION, PRIVATIZATION AND INCREASED TNC PRESENCE: THE BRAZILIAN RECORD

FDI has long helped to shape the output structure and technological base of Brazilian manufacturing industry, as well as her trade structure and performance. This has been the record especially since World War II. But the role of TNCs in Brazil’s economy has been important before WW II in the services sector as well [See Fritsch and Franco (1991, Chapter 1)]. More recently, as it will be documented below, FDI have been increasingly directed to non-tradables (services).

¹² Note, however, that they also have a high propensity to import parts and components, as well as raw materials and capital goods. The Brazilian record since 1990 provides an example of this propensity.

¹³ The Brazilian record up to the early 1990s is summarized by Fritsch and Franco (1991).

The rapid growth of both FDI and trade in countries that have recently liberalized their trade and investment regimes has drawn attention to the direction of causality and the complementary character of these trends. What are the linkages between FDI and trade?¹⁴ It is widely known that, like trade, FDI provides an important channel for global integration and technology transfer.

As it is well known, the export orientation of foreign firms is, on average, much higher than the export propensities of domestic firms. This is due, in part, to the role and extent of intra-firm trade they tend to perform, relative to domestic firms. In part, the export performance of TNCs often reflects increased competitiveness and diversification, rather than external demand.¹⁵ In addition to that, in many instances local governments in host countries provide export incentives which are taken up by TNCs more quickly than by domestic firms, reflecting competitive advantages in international markets due, for instance, to superior marketing channels and/or superior managerial flexibility. Also, one of the main aspects of export-oriented TNCs is their size: the competitive advantage of TNCs often comes from the possession of some unique asset which, by its turn, is often associated with firm size.

A recent survey has shown that the export propensities of United States majority-owned foreign affiliates in manufacturing industries has increased substantially over the past three decades. The figures concerning all economies surveyed point to an increase from 18.6% in 1966 to 40.3% in 1993. A breaking down according to the development level of host countries shows that for developed economies the rise has been from 20.4% to 40.6%. For developing economies the increase was even greater: from 8.4% to 38.7%.¹⁶ The differences in export propensities can, to a large extent, be attributed to domestic policies towards both trade and FDI.

Whatever the theoretical and empirical difficulties, it is clear that trade and capital liberalization facilitated FDI growth in many countries. Changes included the opening up of industries previously closed to foreign investment, the establishment of liberalization schemes and the enhanced role of intra-firm trade — an essential feature of all international production through FDI. Brazil was no exception. But, as macroeconomic instability reigned up to 1994, FDI inflows to Brazil remained well below flows to other Latin American countries.

¹⁴ A related question is: does freer trade help poor countries grow faster? The positive answer has not been easy to prove incontrovertibly. Theoretical studies show that lowering trade barriers increases economic growth, but not the long run growth rate: it is a one-time gain. The empirical record is also ambiguous. The issue has been recently discussed in *The Economist*, "Much ado about openness", March 21st 1998, p. 92.

¹⁵ A recent study sponsored by Eclac and CNI (National Confederation of Industries) showed that most recent and projected TNC investment in Brazil is aimed at production for the domestic market.

¹⁶ The percentage refers to the ratio of exports (total sales minus local sales or sales to the US plus sales to other countries) to total sales. The figures for Brazil are: 3.0% in 1966 and 17.0% in 1993. Mexico's ratio increased from 3.2% to 32.1% over the same period of time [Unctad (1996, Table IV.7)].

In 1996, however, despite substantial volatility in portfolio investments in Latin America in the previous year (due to the Mexican crisis of late 1994 and its aftermath), FDI inflows to the region increased by 52%, reaching nearly US\$ 39 billion [Unctad (1997, p. 71)]. This represented 30% of all FDI inflows received by developing countries in that year. At the same time, flows became more diversified within the region.

With nearly US\$ 9.5 billion in 1996 and US\$ 16-17 billion in 1997, Brazil was the largest recipient of FDI inflows in the latter year. The privatization program, in which foreign investment played a non-negligible role, is partially responsible for the record.¹⁷ Prospects for the next two to four years are much brighter, as most Telecom and Electric Energy concerns are expected to be privatized during 1998/99, as well as public utilities concessions. At the same time, the automobile industry has proven to be very attractive, as several large TNCs made commitments to invest in Brazil in the coming years.¹⁸ These changes are illustrated in the figures shown in the table below, where we also show selected BOP accounts.

The importance of FDI inflows in Current Account financing stands out clearly, especially in 1997, when the Current Account deficit reached 4.2% of GDP. Note that previous year records for this ratio were: 1974 (6.5%), 1982 (6.0%), 1980 (5.4%), 1975 (5.2%), 1979 (4.8%) and 1981 (4.5%) — all of them just before the external debt crisis.

The observed share of FDI to GDP in 1997, on the order of 2.0%, represents an all time record. Previous peak years were 1973 (1.4%), 1979 (1.2) 1982 and 1988 (both with 1.1%). During 1990/91, on the other hand, the FDI share on GDP reached a little less than 0.3%.

The accumulated Current Account deficit amounted to US\$ 77.4 billion from 1994 to 1997. This total can be decomposed into: US\$ 30.2 billion due to FDI inflows; US\$ 27.2 billion due to increased net external debt; and US\$ 20.0 billion due to the accumulation of foreign exchange reserves.¹⁹ Again, these figures reveal the importance of FDI inflows in financing the Current Account deficits.

¹⁷ In 1996, and for Latin America as a whole, privatization accounted for almost a quarter of all FDI inflows, compared to one half in 1993 [Unctad (1997, p. 73)]. Up to 1995, however, there were sector and other restrictions on foreign investment in Brazil's privatization program.

¹⁸ Surveys conducted by the Brazilian Ministry of Industry and Commerce (MICT) report unbelievably high sums of prospective FDI in manufacturing industries, particularly in the auto industry. They do not reflect real plans, though. As the recent effects of the Asian crisis upon Asian TNCs show, postponement of FDI to the distant future has not been uncommon. Local governments in Brazil, however, continue to be very active in their efforts to attract FDI to their regions using a host of incentives, mainly in the form of tax credits and exemptions of local tax. This is presently a critical area of economic policy in Brazil since a part of overall government deficits is due precisely to the local governments poor fiscal performance.

¹⁹ *Carta da Sobeet* (Sociedade Brasileira de Estudos das Empresas Transnacionais e da Globalização Econômica), Ano II, n.6, jan./fev. 1998.

Table 1
Brazil — Balance of Payments Financing: 1993/97

	(US\$ Billion)				
	1993	1994	1995	1996	1997**
Requirements	-11.07	-15.87	-29.81	-38.84	-57.12
Current Account	-0.59	-1.69	-17.97	-24.35	-33.84
Amortization	-10.47	-11.13	-11.07	-14.50	-23.28
Brady Bonds	0	-3.05	-0.77	0	n.a.
Sources					
Changes in Reserves *	-8.71	-7.22	-12.92	-8.67	7.11
Import Financing	2.38	1.94	2.83	4.3	14.07
Loan Disbursements	10.79	10.42	14.74	22.80	32.62
FDI	0.61	1.89	3.93	9.44	17.05
Portfolio Investment	6.65	7.28	2.29	6.04	5.30
Short Term Capital	-0.66	1.56	18.94	4.92	-19.04
FDI as % current account	103	112	22	39	50

Source: Baumann (1998), op. cit.

* – (minus) = increase.

** Preliminary.

The regional economic integration within Mercosul and the comprehensive economic reforms adopted since the late 1980s are the main forces behind recent changes. The policy reforms, as it is well known, led to a substantial change in business practices in Brazil. They aimed at the replacement of traditional, inward-oriented policies by a new growth strategy in which liberalization would be the driving force to enhance the participation in world flows of trade, capital and technology. This strategy also required a new approach towards FDI. A liberalization of investment regimes followed. As a recent report put it, referring to Latin America:

“The opening of the region’s economies in the late 1980s and early 1990s also brought a liberalization of investment regimes. Just as the protected economies of the past required a restrictive investment framework, the trade-liberalizing economies of the present are seen to demand open investment policies. Policy coherence is meant to maximize the positive effects of the overall development strategy of any particular country” [Unctad (1997, p. 75)].

The revival and dynamism of economic integration — even considering that doubts concerning the creation of a Free Trade Area for the Americas still exist, especially concerning its extent and timing — has been followed by augmented inter-regional investment flows in the region, which have given birth to the negotiation of investment arrangements, both bilateral and multilateral.

Another source of attraction for new FDI, as already mentioned, comes from the privatization programs in Brazil. External constraints following the Asian crisis, particularly its effects upon stock exchange markets all over the world, increased the importance of FDI as a source of deficit financing in Brazil, as in many other non-Asian countries. And this is so because of investment opportunities related to privatization: investment in Telecoms and public utilities can be seen as a safe harbor for FDI due to the small amount of risk they possess in the long term.

From 1991 to 1997 sales of companies and concessions in Brazil totaled more than US\$ 30 billion. The share of foreign investors in overall privatization results increased substantially over time.²⁰ It was only 4.2% up to 1995, but reached more than 30% in 1997 alone.²¹

Sobeet (a Brazilian group devoted to the study of TNC performance and globalization), estimates suggest the following profile of FDI flows into Brazil in 1997: TNCs already based in Brazil were responsible for 40-45% of total FDI; share due to privatization, 30-35%; other M&A by TNCs, 15-20%; and investment made by new TNCs, non-privatization related, 5-10%.²² Prospects are that investments of approximately US\$ 60 — 80 billion will flow into the country over 1998/2000, mainly due to privatization (all levels of government).

4 - FDI PRESENCE IN BRAZIL.²³ ECONOMIC POLICIES AND THE RECENT EMPIRICAL RECORD

Despite the role foreign capital played in Brazilian development, many legal restrictions have historically been placed on FDI remittances, repatriation, sector of investment, etc. The overall direction of change since the early 1990s, however, has been clearly towards greater liberalization of FDI policies. In 1995 new forms of attraction were created: a specific Constitutional Amendment approved by Congress and the new Concessions Law pointed to the new priorities.

At the same time the Central Bank of Brazil began the implementation of legal-administrative measures to avoid discrimination against foreign capital. In fact, the Central Bank has been very active in acting towards greater liberalization of the BOP Capital Account and to increase the degree of convertibility of the domestic currency since the beginning of the 1990s. Thus, for instance, among other liberalizing measures, financial institutions were authorized to keep unlimited amounts of foreign exchange and foreign institutional investors were authorized the access to securities and fixed income bonds markets in Brazil for

²⁰ There were restrictions on the magnitudes of foreign capital allowed in the (federal) privatization program up to 1995.

²¹ See note in Annex for a summing up of recent developments and figures.

²² *Carta da Sobeet*, Ano I, n. 4, set./out. 1997.

²³ Clearly, the dividing line between portfolio and direct investment is somewhat arbitrary. In what follows we keep with the definition adopted by the Central Bank of Brazil: portfolio investment is all foreign capital invested in depository receipts and in securities issued by residents and traded in the domestic financial market. Direct investment includes reinvestment and is represented by flows related to the production, marketing and technological processes.

the first time ever.²⁴ Besides, foreign companies are now subject to the same legal treatment given to domestic ones; profits and dividends on foreign investment are exempt (since January 1996) from taxes on wages; portfolio investment repatriation is exempt from income tax; capital gains are exempt from any taxation — although profits and dividends are taxed. One outcome of these developments is that Brazil presently displays the largest stock of foreign-owned capital among developing countries. Opportunities for investors, both new and old ones, are to be found in a number of activities, involving privatization or not.

Thus, both past tradition, i.e., size of previous stock of FDI — and market size, coupled with the role of an economic policy (most of the time) friendly towards foreign capital are the main responsible for that outcome. This is documented at the global level in the figures below, where it can also be seen that the regional distribution of FDI flows changed markedly over time.

The data reveal that African countries, some Latin American and Caribbean countries lost in terms of decreased shares of incoming foreign capital. On the other hand, South America and Asia (especially China) were particularly successful in attracting FDI in the 1990s. Brazil, for instance, experienced a large increase in her share: from 5.3% of all developing world flows in 1985/90 to 7.4% in 1996. Note that FDI flows into Brazil more than doubled in 1997 relative to 1996. Assuming [as the World Bank (1998)] that FDI flows to developing countries in 1997 were of the same order of magnitude as in 1996, Brazil's share would have increased to nearly 13% of the total in 1997.

In order to explore the cross-country relationship between FDI, economy size, country competitiveness and size of previous stock of foreign capital, a regression equation was fitted based on the data for 28 emerging economies shown in Table A.1, in the Appendix. In the equation FDI inflows in 1996 are “explained” by: an index of competitiveness (real effective exchange rates indices or, alternatively, indices of export growth); a variable representative of country size (GDP or population); and the size of accumulated FDI net inflows, or foreign capital stock. The best results are shown below, where all variables are expressed in logs.

²⁴ An analysis of recent trade and industrial policies in Brazil can be found in Bonelli, Veiga and Brito (1997).

Table 2
FDI Inflows to Developing Countries, Average 1985/90 and 1996

(US\$ Million)		
Host region / Country	Annual Average 1985/90	1996
Africa	2,869 (11.6%)	4,949 (3.8%)
South America	3,764 (15.2%)	26,737 (20.8%)
of which		
Brazil	1,315 (5.3%)	9,500 (7.4%)
Argentina	914	4,285
Chile	700	3,140
Peru	30	3,556
Other LA and Caribbean	4,381 (17.7%)	12,326 (9.6%)
of which		
Mexico	2,618	7,535
Bermuda	1,143	2,100
Developing Europe	49 (0.2%)	571 (0.4%)
Asia	13,492 (54.5%)	84,283 (65.5%)
of which:		
China	2,654 (10.7%)	42,300 (32.9%)
Singapore	2,952	9,440
Hong Kong	1,597	2,500
Malaysia	1,054	5,300
Thailand	1,017	2,426
Korea	705	2,308
Indonesia	551	7,960
India	169	2,587
Other	181 (0.7%)	446 (0.3%)
Developing Countries Total	24,736 (100%)	128,741 (100%)

Source: WIR 1997, Annex table B.1.

Dependent variable: log (FDI 96)

Variable	Coefficient	t - value
Constant	-6.516	-3.15
log (Manuf. Exports)	0.994	2.52
log (Capital Stock)	0.75	5.88

R = 0.67

n = 24

Real effective exchange rates do not perform well in the regression exercises, and were replaced by an index of export growth. The same happened with to both population and GDP, variables representative of country size. The reason why GDP is not significant is explained when we perform a regression of GDP on FDI stock: these variables are highly correlated, as shown by the correlation coefficient between them (0.546).

The results reported above have the implication that a 1% increase in manufactured exports²⁵ increases FDI flows by approximately 1% as well. This is in accordance with the observed export propensities of TNCs. An increase in the volume of the stock of foreign capital brings about a $\frac{3}{4}$ of one percent increase in FDI. FDI flows tend to concentrate in countries which already possess large FDI stocks.

These results therefore confirm that there exists a (cross-country) relationship between competitiveness, expressed by export performance, and the size of FDI inflows. We are aware, of course, that nothing can be said on the direction of causality: it can run both ways, in the sense that increased FDI improves competitiveness and enhanced competitiveness attracts FDI — as we have repeatedly suggested above.

Finally, note that the equation “predicts” a value of US\$ 7.3 billion of FDI for Brazil in 1996. The actual value observed in that year was nearly 30% higher than that (9.5 billion), an amount which almost doubled in 1997. This suggests that the attractiveness of the Brazilian market to foreign investors increased relatively to the international norm predicted by our regression equation. The reason has probably to do with privatization of public utilities, Telecoms and electric power firms.²⁶

Besides intense growth of FDI flows, especially after 1993, marked changes characterize the size and structure of foreign capital stock in Brazil over the first half of the 1990s. A glimpse of the nature and extent of this transformation appears in the next table.²⁷

A marked transformation characterizes the period under study: overall, the stock of foreign capital into Brazil grew 192% over a six-year period (when measured in current US dollar terms), most of it concentrated in its second half. The largest gains were observed, as already mentioned, in Services: nearly 400% growth from 1990 to 1996.

²⁵ Exports of manufactures in 1996 are represented by an index equal to 100 in 1990.

²⁶ Generation and distribution plants only; transmission of electric energy is still made by State firms.

²⁷ The breakdown for 1996 is an estimate based on shares observed in mid-1995. For this reason, the reported data do not show the increase that must have occurred in FDI flows into Public Utilities. Brazilian FDI statistics are presently under revision, the last sector figures referring to mid-1995. See the Annex for a brief description of Central Bank FDI data and their characteristics.

Table 3
Brazil – Inward Capital Stock by Sector, 1990 and 1996

(US\$ Million, current)		
Sector of Activity	1990	1996
Agriculture	243	563
Mineral Extraction	836	2,037
Manufacturing Industries	25,729	57,658
Non-Metallic Minerals	635	1,278
Metallurgy & Metal products	3,028	6,013
Mechanical Equipment	3,037	6,175
Electrical & Communications Equipment	3,144	6,890
Transport Equipment	3,473	11,075
Wood and Wood Products	481	617
Paper & Pulp	739	1,506
Rubber & Rubber Products	1,034	1,830
Chemicals	5,054	10,390
Pharmaceuticals	1,627	3,608
Textiles	552	1,278
Clothing & Apparel	267	542
Food Products	1,683	3,911
Beverages	158	477
Tobacco	269	487
Printing & Publishing	95	173
Miscellaneous	550	1,376
Public Utilities	64	130
Services	9,258	46,055
Other	1,013	1,896
TOTAL	37,143	108,339

Source: Central Bank Report, for 1990; WIR/97 for 1996 total; see text and previous footnotes.

Manufacturing, by its turn, was by far the leading sector in the beginning of the period (with a share of 69%), a position it traditionally held since the onset of Brazilian import substitution industrialization after the Second World War. By 1996, however, its share had fallen to 53% of the total. More recent data would probably reveal that Services now represent the largest part of FDI stock.

Note that few industries within the Manufacturing sector received FDI inflows in magnitudes capable of increasing their share in the total stock. This was the case of Transport Equipment (mostly automobile and auto parts) and Beverages. Except for these, all other experienced losses in their shares in the total stock — including some in which foreign capital has traditionally had an important presence (Rubber and Tobacco industries, for instance).

A few industries concentrate most of total FDI stocks. Five among them (Transport Equipment, Chemicals, Electrical and Communications Equipment,

Mechanical Equipment and Metallurgy) had 70% of the total Manufacturing stock in 1996.²⁸ Some among these experienced exceptional labor productivity growth between 1990 and 1996 — and, therefore, are likely to have experienced competitiveness gains as well. Exploring the relationship between these developments is the subject of the next section.

5 - IS FDI RELATED TO MANUFACTURING COMPETITIVENESS?

A conspicuous, albeit intriguing,²⁹ result of recent Brazilian economic performance is her record in terms of productivity growth in many manufacturing industries [see Bonelli and Fonseca (1998)]. Productivity growth had been, on average, virtually nil since the early 1980s. After 1990, however, besides expressive TFP growth, labor productivity in mining and manufacturing industries has also increased on an unprecedented scale. This change has often been related to trade liberalization, stabilization and the adoption/diffusion of new technological and managerial techniques associated with the new production paradigm that replaced the “Fordist-Taylorist model”. All these processes have strong linkages with the enlarged presence of TNCs in Brazil over the recent period, as witnessed by substantially augmented FDI inflows. It is not our purpose to decompose or identify the effects of each of them, separately. Rather, we just want to point out that these phenomena occurred together, and contributed to raise labor productivity levels on a substantial scale.

We begin by presenting, very briefly, the record on recent productivity growth. We then proceed to evaluate the influence of productivity growth upon competitiveness. Finally, we try to infer on the links between cross-industries indicators of competitiveness and TNC presence in the manufacturing and mining industries.

5.1 - Labor Productivity Trends in the 1990s

The series on labor productivity growth in Brazil present a clear discontinuity in the 1990s, relative to historical trends. The next table shows that productivity growth was, on average, very small after the so-called Brazilian “economic miracle” period of the early 1970s. Gains over the 1980s, in particular, were negligible. After 1990, however — year in which labor productivity decreased 5% due to an unprecedented output reduction of 9.3% associated with the implementation of the so-called Collor stabilization plan — growth has averaged more than 8% yearly.³⁰

²⁸ This says little of their importance in terms of (sector) production. Normalizing for the relative size of sectors would augment the relative importance of industries such as Pharmaceuticals, Tobacco and Rubber (almost completely dominated by TNCs).

²⁹ The term seems justified by the fact that physical investment in the manufacturing industries (usually accepted as the main source of productivity change) was rather small in the first half of the 1990s.

³⁰ These estimates follow from monthly industrial surveys conducted by IBGE since 1985. They have been under dispute recently due to methodological shortcomings associated with sample construction and replacement of firms over time. See, for alternative estimates, Considera (1998).

Table 4
Labor Productivity Growth Rates in the Manufacturing Sector, Selected Periods

Periods	Productivity Growth (% per year)
1971/73	5.6
1974/80	1.0
1981/85	0.3
1986/89	0.2
1991/97	8.7

Source: Bonelli and Fonseca (1998) and PIM-DG/PIM-PF (IBGE), various issues.

The second column in the next table presents a breakdown of productivity average growth rates according to selected manufacturing industries between 1990 and 1996. Note that nearly all of them experienced very high rates of productivity growth during the 1990s. The only noticeable exception is the Pharmaceuticals industry.

Table 5
Labor Productivity Yearly Average Growth Rates, ULC Change and FDI Stock Growth, Selected Industries — 1991/96

Industries	Productivity (%)	ULC change (%)	FDI stock (%)
Total	8.3	13.8	125
Mineral Extractive	16.1	(-) 4.7	144
Manufacturing total	8.2	14.1	124
Non Metallic Minerals	8.9	12.0	101
Metallurgy	6.9	10.6	99
Mechanical Equipment	6.2	42.4	103
Electrical Equipment	11.8	(-) 8.0	119
Transport Equipment	10.2	(-) 5.8	219
Paper & Pulp	8.2	14.9	104
Rubber	7.4	14.9	76
Chemicals	7.8	22.5	106
Pharmaceuticals	0.8	89.3	122
Cleansing Products	4.5	35.7	n.a.
Plastics	8.2	(-) 1.5	n.a.
Textiles	8.5	1.2	132
Clothing, Apparel & Footwear	6.7	10.1	103
Food products	6.9	16.5	132
Beverages	8.2	25.6	202
Tobacco	7.0	32.4	81

Source: Second column,: IBGE; third column, Bonelli and Fonseca (1998), op. cit.; fourth column, Table 3.

5.2 - Labor Productivity and Competitiveness

The literature on the analysis of actual trade performance experiences presents various alternatives of competitiveness indicators, either of an ex-ante (based on determinants of costs, prices and profitability) or of an ex-post (based on observed trade performance) nature. One widely used indicator among the former is the

Unit Labor Cost (ULC) index, defined as total wage expenditures per unit of output. To facilitate comparison among countries it is usual to estimate ULCs in terms of a common currency — e.g., US dollars.

It is trivial to show that ULCs can be expressed as the ratio between the average wage (in US dollars, for instance) and labor productivity: simply divide both numerator and denominator by the amount of labor input. Therefore one has an accounting relationship between competitiveness, productivity and average wages (including all other costs associated with labor) that clearly shows the impact of productivity growth upon competitiveness.³¹

A ULC indicator built along these lines is also shown in the table above, next to labor productivity and FDI stock growth in the 1990s.³² As a rule, ULCs tend to grow over time due to wage increases over productivity increases. This was particularly the case in Brazil in 1994/95, in the beginning of the stabilization period, when firms granted wage increases expecting to transfer these gains to final prices. Note that average wages also rose, throughout the period, because of the composition effect associated with the laying off of workers in the lowest wage strata. Whatever the reason, stronger than expected deindexation led to price /cost margins squeezes, especially in 1995.

It can also be observed that in many industry cases the competitiveness indicator and the productivity indices are inversely related, i.e., (relative) unit labor costs decreases are associated with labor productivity increases, as expected. There are exceptions to this initial conclusion, though. Notably, Beverages and Tobacco industries (the last one dominated by TNCs). On the other hand, Extractive Minerals (Mining), Transport and Electrical Equipment industries displayed very high productivity growth coupled with ULC reduction.

5.3 - Competitiveness and FDI: the Empirical Record

The previous discussion, as well as common sense, suggest that the links between FDI and competitiveness may be blurred by the joint influences of many forces. Therefore, we should not expect to find a one-to-one correspondence between the variables chosen to represent these concepts. Among other things, the influence of time lags is ignored in the analysis that follows. But the main neglected factor is the existence of barriers to trade, of many natures.³³

If increased TNC presence — represented, for instance, by FDI stock growth rates — were associated with augmented competitiveness — represented, in the present case, by reductions in ULCs — one would expect to find a negative association

³¹ Bonelli and Fonseca have shown that industrial competitiveness represented by relative ULCs are inversely related to trade balances between Brazil and selected groups of countries across time: an increase in relative unit labor costs is associated with a decrease in trade balances (exports minus imports). The relationship does not hold for the Asian countries, though.

³² Estimates from Bonelli and Fonseca, *op. cit.*

³³ A recent report by Fonseca and Carvalho Jr. (1997) includes a comprehensive analysis of trade barriers to Brazilian exports. Ten countries / trade areas are examined: Canada, Chile, China, Cingapura, Colombia, Korea, USA, Japan, Mexico, European Union.

between the figures in the last two columns of the previous table. Thus, for instance, the closer the association, the more negative the correlation between the two column vectors.

From Table 5, above, we note that manufacturing and mining competitiveness, estimated by ULC change, presented substantial variance among industries. Of course, the smaller the indicator (ULC) rate of change, the larger the competitiveness gain, and vice-versa. The largest gains between 1990 and 1996 occurred, in descending order of competitiveness gains, in the following industries: Electrical Equipment, Transport Equipment, Mining, Textiles and Clothing & Footwear. The importance of TNCs is clear in the first two industries, but not in the remaining ones. In the opposite extreme of the distribution one finds: Pharmaceuticals, Mechanical Equipment, Cleansing Products, Beverages and Tobacco. There is a marked presence of TNCs in the first, third and fifth of these. This runs contrary to the null hypothesis stated above.

FDI growth, on the other hand, was led by Transport Equipment, Beverages, Mining, Food products and Textiles. Except for the first one, all of the other are industries in which the presence of TNCs is not very important.³⁴ The laggards were Rubber, Tobacco, Metallurgy, Non metallic minerals and Mechanical Equipment. The first two of these are, characteristically, industries in which foreign capital has had a very strong hold in Brazil.

Therefore, a simple inspection of the figures indicates that there is no close association between the series of data. In fact, the calculated Spearman rank correlation coefficient between the two series is negative, as maintained by the null hypothesis, but barely significant (it reaches a value of -0.23 ; 17 observations).

Not even a weaker hypothesis — that competitiveness gains are associated with the share of TNC output in individual industries — is supported by the data. As stated, the majority of output of industries such as Tobacco, Rubber and Pharmaceuticals comes from TNCs. In all these cases the competitiveness record, as represented by the respective ULCs change, has been far from satisfactory during the period under analysis.³⁵ In the other extreme of the distribution, however, we find a group of case-industries that conform to the null hypothesis: Electrical Equipment, Transport Equipment and, to a certain extent, Textiles.

A tentative conclusion, therefore, is that the hypothesis that ULCs are inversely associated with TNC growth or TNC output share of individual industries is only partially true — at least, as far as ULCs as a measure of competitiveness are concerned.

³⁴ FDI has a very high share of sales among the *largest* firms of many of these sectors, though. Thus, TNCs share in the 20 largest Food Products firms is estimated to be 50%. In Mechanical Equipment the share is 44%. See Laplane and Sarti (1997).

³⁵ Note, in addition, that in all these three cases the very existence of large previous FDI stocks implies slower FDI stock growth than otherwise. Nevertheless, the ULC record was very poor during the 1990s.

The adoption of an index of export growth as a measure of competitiveness does not change the picture in any fundamental way. On average, the leading export-growth industries between 1990 and 1997 were, in terms of export values growth rates:³⁶

1. Wood and Furniture, 18.8% annually;
2. Mechanical equipment, 12.8% per year;
3. Rubber, 12.6% per year;
4. Chemicals (except refined oil), 11.3% per year;
5. Transport equipment, 11.2% annually;
6. Electrical equipment, 7.7% per year;
7. Pulp and Paper, 7.3% per year; and
8. Textiles and Footwear, 6.9% per year.

Of these, the third to sixth are industries in which TNCs have a strong hold — but not the first two. We conclude that this evidence is weak and inconclusive as well. Recall, again, that this may be due to the existence of important trade barriers to Brazilian exports, as mentioned.

A recent report emphasizes the two-way dimension of the competitiveness-FDI link from a different perspective.³⁷ From its concluding remarks we extracted the following illustrative passages:

“The efficiency-seeking dimension of present TNC investments tends to reinforce the competitiveness of local production, deepening advances obtained during the recessive years (of 1990/92) and consolidating consumers’ gains... Paradoxically, these welfare and competitiveness gains may not be sustainable if the cost in terms of foreign exchange be considered too high ... Results from our TNC survey show that these firms have been very quick in reducing competitive disadvantages relative to the rest of the world. Present investments are directed to the same objective. The interviews allowed us to identify (many) TNCs modernization initiatives which contributed to the dissemination of product and process innovations in their supplying firms...emphasis on efficiency-seeking through standardization of products, processes and organizational and managerial techniques leads to specialization and rationalization in the development of innovations as well ... (but) the spillovers of learning processes are low ...” (p. 82-83).

The results from the research just cited are based on detailed analysis at the firm level. They strongly suggest that TNCs modernization initiatives increase competitiveness very quickly, once adopted. But the authors are skeptical concerning the linkage effects that might be obtained from such initiatives.

³⁶ On average, manufactured exports averaged growth rates of approximately 8% in the period analyzed.

³⁷ Laplane and Sarti (1997), op. cit. Our translation.

6 - CONCLUSION

Brazil has consistently followed a pattern typical of developing countries, as recipient of FDI. But it is to a certain extent remarkable that FDI inflows in both 1996 and 1997 were the largest among all inflows in the last decades — and perhaps the greatest ever. As already shown, Brazil, as other Latin American countries, has not suffered the consequences of the Asian crisis as strongly as many other developing economies — FDI inflows in both 1996 and 1997 were the among the largest in the last decades.

The recently issued [World Bank (1998)] opens with a phrase that aptly summarizes the present fears of many developing countries: “It was a rollercoaster year for emerging markets in 1997”. After recognizing that during the first nine months of that year external finance from private sources rose strongly, the report notes that net FDI flows reached record levels in 1997, despite the events that were to follow in October — but growth rates were down from recent years (see next table). FDI flows to developing countries reached US\$120 billion in 1997,

Table 6
Net Long-Term Resource Flows to Developing Countries, Selected Years

Type of flow	(US\$ Billion)					
	1990	1993	1994	1995	1996	1997*
1. Official Development Finance	56.4	53.6	45.5	54.0	34.7	44.2
2. Total Private Flows	41.9	154.6	160.6	189.1	246.9	256.0
2.1 Debt Flows	15.0	44.0	41.1	55.1	82.2	103.2
2.1.1 Commercial Bank Loans	3.8	2.8	8.9	29.3	34.2	41.1
2.1.2 Bonds	0.1	31.8	27.5	23.8	45.7	53.8
2.1.3 Other	11.1	9.4	4.7	2.0	2.3	8.3
2.2 FDI	23.7	65.6	86.9	101.5	119.0	120.4
2.3 Portfolio Equity	3.2	45.0	32.6	32.5	45.8	32.5
Flows						
TOTAL	98.3	208.1	206.2	243.1	281.6	300.3

Source: Table 1, GDF/98.

*Preliminary.

nearly five times their level in 1990, but nearly the same amount of 1996 (all figures in current US dollars). They became the single most important source of Current Account finance, after the loss of position of official development finance after 1992.³⁸

From the GDF 1998 World Bank report it can also be shown that there were pronounced changes in the regional composition of FDI flows in the period analyzed: the fall in East Asia and the Pacific was offset by a rise in Latin America in response to privatization transactions, especially in Brazil. The same report estimates that the share of FDI to developing countries in total foreign

³⁸ According to *GDF 1988*, “Official development finance is changing in response to budgetary constraints in donor countries and the surge in private flows to developing countries”, p. 5.

capital flows increased from 21% in 1991 to an estimated 36% in 1997, while the ratio of FDI to GDP in these countries jumped from 0.8% to 2.0% in the same period. This huge increase has been motivated by three causes: liberalization of developing countries economies and the role played by privatization and the lifting of restriction on FDI flows; strong growth of GDP in many developing countries recipients of FDI; the falling cost and rising quality of communications and transportation services in nearly all emerging economies. Not all countries benefited equally as recipients of FDI over the 1990s, though. Most of the top recipients are middle-income countries, reflecting large markets and rapid growth in recent years. Of the top 10 recipients on 1997, only China and India are low-income countries (next table).

Table 7

FDI Flows to the Top 10 Recipients Developing Countries, 1991 and 1997

		(US\$ Billion)	
Country	1991	Country	1997
1. Mexico	4.7	1. China	37.0
2. China	4.3	2. Brazil	15.8
3. Malaysia	4.0	3. Mexico	8.1
4. Argentina	2.4	4. Indonesia	5.8
5. Thailand	2.0	5. Poland	4.5
6. Venezuela	1.9	6. Malaysia	4.1
7. Indonesia	1.5	7. Argentina	3.8
8. Hungary	1.5	8. Chile	3.5
9. Brazil	1.1	9. India	3.1
10. Turkey	0.8	10. Venezuela	2.9
Top 10% in dev. Countries	74.2 %		72.3 %

Source: Table 1.8 in GDF 1988.

We can conclude that, as the situation stands in mid-1998, the deterioration in confidence resulting from the East Asian crisis of late 1997 has not affected the supply of funds to Brazil on a considerable scale. Note, from the table above, that Mexico had already recovered, in 1997, after only a couple of years from the Mexican crisis, her position as one of the top FDI recipients — after being second (to China) in 1994, with FDI inflows of US\$ 11.0 billion.

Another feature of FDI in the 1990s is that it increasingly flowed into Services. This has been explained a combination of factors that include: the fact that developing countries are lucrative markets for TNCs, as many firms need a physical presence in the developing country markets to compete effectively. Services have become more attractive after recent advances in communications technology. Liberalization of FDI regimes and privatization of services enterprises constitute another motive. Thus,

“in Brazil, the largest FDI recipient through privatization operations in 1997, roughly 70% of the revenues were raised in service sectors such as telecommunications, power, transport and finance” [Unctad (1998, p. 22)].

Prospects for the future remain good, despite the fact that the impact of the financial crisis in East Asia on FDI flows is still uncertain. Nevertheless, FDI, which has longer term objectives than alternative sources of finance, may remain stable or even increase in the near future due to low asset prices and lower production costs resulting from currency devaluation — especially in sectors producing tradables.

This tentative conclusion is supported by positive growth prospects in most of the developed world and their expected trade expansion and enhanced export orientation which, as we have seen, is complementary to increased FDI. The same can be said of regional economic integration efforts and of the likely results of the MAI — Multilateral Agreement on Investment under negotiation in the OECD.

As for Brazil, the importance of FDI both as a source of finance to the Current Account deficit³⁹ and as a source of technology has been clearly recognized. This is particularly true with respect to the competitiveness-enhancing tangible and intangible resources of TNCs: capital, R&D capacity, technology, skills, organizational and managerial practices. It should also be recalled the impact of the presence of TNCs on the performance of domestic firms due to spillovers on productive efficiency and the development of linkages.

Finally, the conclusion from Eclac’s 1997 FDI report point to same direction, as the following sample of quotations from the report concluding section makes clear:

³⁹ Recall, once more, that FDI inflows to Brazil financed approximately one half of the Current Account deficit in 1997. Preliminary figures for the first four months of 1998 point to FDI inflows of US\$ 5.1 billion, only 12% of which privatization-related.

FDI inflows to Latin America and the Caribbean during 1996 ratify that the region has the capacity of being an attractive port for international investment flows, despite the lack of confidence of institutional investors — more associated to equity investment flows than to FDI flows — due to the Mexican crisis of 1994 and the difficulties faced by Argentina in 1996 ... In most countries (of the region) the record shows sustained FDI growth, maintained throughout 1997, surpassing the US\$ 50 billion mark (total) ... The main host country has been Brazil, which attracted foreign investors due to locational advantages, market size and demand recovery initiated in the early 1990s ... her mature industrial sector, still in need of modernization, suggests, due to the existence of sunk costs, that TNCs should increase their operating efficiency ... demand expansion and privatization are the main forces behind increased FDI inflows ... The evolution of FDI inflows to Latin America is related to important changes presently taking place in the patterns of entrepreneurial organization ... (these changes) have characterized (recent action by) the main entrepreneurial groups within the region ... (aiming at) increasing levels of specialization and reducing risks ...⁴⁰

⁴⁰ Freely translated from *La Inversión Extranjera en América Latina y el Caribe — Informe 1997*, Naciones Unidas, Comisión Económica para América Latina y el Caribe/Cepal, Santiago de Chile, p. 91-94, 1998.

Appendix

Table A.1
28 Emerging Countries: Selected Variables*

Countries	(1) FDI Inflow 1996	(2) Exports 1996 (1990=100)	(3) GDP	(4) FDI Stock 1996
Morocco	0.40	162	36.8	3.4
Nigeria	1.72	104	28.5**	16.5
South Africa	0.33	123	126.1	10.8
Hong Kong	2.50	220	154.2	24.3
India	2.59	317	350.0	8.5
Indonesia	7.96	194	228.5	58.6
Korea	2.31	200	484.8	12.5
Malaysia	5.30	247	99.3	42.1
Philippines	1.41	254	83.8	8.2
Singapore	9.44	230	94.1	66.8
Taiwan	1.40	159	272.3	17.1
Thailand	2.43	239	185.1	19.6
Bulgaria	0.15	n.a.	9.3	0.5
Czech Republic	1.20	n.a.	56.2	5.3
Greece	1.00	91	123.0	20.3
Hungary	1.98	155	44.8	15.0
Poland	5.20	174	134.4	13.7
Slovak Republic	0.15	n.a.	12.7	0.7
Slovenia	0.16	n.a.	12.5	0.7
Turkey	1.12	248	182.4	6.2
Argentina	4.29	193	297.4	28.4
Brazil	9.50	152	775.1	108.3
Chile	3.14	183	71.9	18.7
Colombia	3.00	156	85.7	12.8
Ecuador	0.45	180	19.0	3.6
Mexico	7.54	235	334.8	71.5
Peru	3.56	183	61.0	9.0
Venezuela	1.30	160	67.5	8.3

Sources: Col. (1) and (4), *WIR — World Investment Report 1997* (Unctad), Geneva; Col. (2) *International Financial Statistics*, Jan. 1998 (IMF), Washington, D.C.; Col. (3) JPMorgan, *Emerging Markets: Economic Indicators*, New York, Mar. 6/1998.

*Values in US\$ billion.

** 1994.

Annex 1

A Note on Recent Privatization in Brazil

Brazil raised more than US\$ 5.7 billion in 1996, mainly from the sale of the electricity distribution company Light (sold for US\$ 2.4 billion). Proceeds from the sale of Light amounted to more than half the targeted privatization revenue for 1996.

Contrary to Argentina and Chile, for instance, only recently has Brazil embarked on full-scale privatization of state and federal utilities, which are estimated to be worth several billion dollars. The first state telephone company sale took place in 1996 (CRT, a sale of a minority stake of 35%, for US\$ 660 million). Restructuring of the Brazilian railway system was nearly completed in 1996, with concessions/rents worth more than 1 billion dollars awarded for five of the six networks.

The sale of the mining giant Vale do Rio Doce raised more than US\$ 3 billion in May, 1997, the largest deal in Latin America to date. Proceeds from telecommunications concessions in 1997 amounted to US\$ 4.7 billion.

Privatization *state* level continued strong in 1997 as almost 10 billion dollars (9.945) were raised in the electricity sector only. To this it should be added the US\$ 1.284 billion due to state level privatization banks of gas, transport and insurance companies. In the same year the sale of minority shareholdings (state level) raised revenues of US\$ 2.388 billion.

A summary of revenues at the *federal* level privatization in 1996/97 is shown next, together with the grand total up to 1997 (1991/97, in million dollars)

Sector	1996	1997	1996+1997 as % 1991/97
Electricity	2.356	272	86.8
Railway	1.477	15	100
Mining	-	3.299	99.8
Other	-	-	0
Port	-	251	100.0
Financial	-	2401	100.0
Sales of Minority Holdings	4.078	4.267	46.8
TOTAL	7.911	8.344	61.1

Source: BNDES, National Privatization Program — Sale proceeds by company, annual breakdown.

Annex 2

A Note on Brazilian FDI Statistics⁴¹

There are two types of Brazilian FDI statistics: flows recorded in the BOP accounts and the book value of foreign-owned shares of firms established in Brazil, produced by the Central Bank. The latter figures contain additional information on country and sector distribution of FDI stocks and flows. For this reason, they are more frequently used in economic analyses of foreign capital. This definition, however, tends to bias the concept of foreign investment because for economic purposes the relevant magnitude should be the market value of assets of TNCs. Second, registration with the Central Bank is not compulsory: it is an option available to firms that wish to buy foreign exchange to cover their profits and dividends remittances abroad. It is likely that TNCs register their initial capital and subsequent increases at the Central Bank when they are interested in paying dividends to foreign residents. But registration not necessarily takes place when investments are made. Instead, firms tend to register when willing to remit profits. Therefore, there may be lags between actual investment and registration. It is believed that this source of bias has been diminishing with time, though.

Another problem is that figures consider the nationality of the firms that own the shares of the company established in Brazil, but ignore the nationality of the controllers of the TNC. Thus, for instance, Panama or the Cayman Islands, appear as very important investors in Brazil.

At the same time, there is the distortion represented by the fact that FDI is often underestimated by the main investor countries. Thus, for instance, the stock of US investments in Brazil recorded by the US Department of Commerce is far greater than the corresponding Brazilian figures. This distortion reflects two things: first, the fact that US statistics include inter-company loans, while the Brazilian official data do not; second, it results from the way Brazilian statistics treats holdings established in third countries.

Another aspect is their currency denomination. Since all Brazilian official figures are published in US dollars, investments made in other currencies are converted into US dollars according to exchange rates prevailing at the base date of the statistics. Under these norms, any exchange rate fluctuations over time are reflected in the value of FDI stocks and flows.

Finally, there are problems with the classification of firms in given sectors, notably Services. Brazilian statistics register ownership of shares in holdings as “Services”, even though the holding company only owns firms in one given sector like, for instance, Manufacturing.

⁴¹ Based on Fritsch and Franco (1991, p. 139-141).

BIBLIOGRAPHY

- ALESINA, A., PERROTI, R. The welfare state and competitiveness. *The American Economic Review*, p. 921, Dec. 1997.
- BAUMANN, R. *Foreign investment in Brazil and the international financial markets*. Paper prepared for the conference Brazil in the world context. London, Feb. 1998.
- BONELLI, R. *Evolução da competitividade da produção manufatureira no Brasil*. Rio de Janeiro: IPEA/DIPES (Texto para Discussão, forthcoming).
- BONELLI, R., FONSECA, R. *Ganhos de produtividade e de eficiência: novos resultados para a economia brasileira*. Rio de Janeiro: IPEA/DIPES, abr. 1998 (Texto para Discussão, 557).
- BONELLI, R., VEIGA, P. da M., BRITO, A. F. *As políticas industrial e de comércio exterior no Brasil*. Rio de Janeiro: IPEA/DIPES, nov. 1997 (Texto para Discussão, 527).
- . *Evolução da Competitividade da produção manufatureira no Brasil*. Rio de Janeiro: IPEA/DIPES (Texto para Discussão, forthcoming).
- CONSIDERA, C. *Produto, emprego e produtividades industriais: resultado das novas contas nacionais*. Rio de Janeiro: IPEA/DIPES, 1998 (processed).
- FONSECA, R., CARVALHO JR., M. C. de. *Barreiras externas às exportações brasileiras — 1997*. Rio de Janeiro, Funcex, 1997.
- FRITSCH, W., FRANCO, G. *Foreign direct investment in Brazil: its impact on industrial restructuring*. Paris: OECD, 1991 (Development Centre Studies).
- LAPLANE, M. F., SARTI, F. *O investimento direto estrangeiro no Brasil nos anos 90: determinantes e estratégias*. Campinas, p. 20, jun. 1997 (processed).
- McKINSEY & COMPANY. *Productivity - the key to an accelerated development path for Brazil*. Mckinsey Brazil Office, Mckinsey Global Institute, São Paulo and Washington, Mar. 1998.
- UNCTAD. *Transnational corporations and competitiveness*. Geneva: United Nations, 1995 (World Investment Report).
- . *Investment, trade and international policy arrangements*. Geneva: United Nations, 1996 (World Investment Report).
- . *Transnational corporations market structure and competition policy*. Geneva: United Nations, 1997 (World Investment Report).

WORLD BANK. *Analysis and summary tables*. Washington, D. C., v.1, p.3, Mar. 1998 (Global Development Finance).