TEXTO PARA DISCUSSÃO

Nº 178

# "Direct Investment in Brazil": its role in adjustment and emerglng issues

Gustavo Henrique Barroso Franco*

PUC-Rio – Departamento de Economia

www.econ.puc-rio.br

Outubro de 1987

* Under the usual caveats I would like to thank Luiz Aranha Correa do Lago and Winston Fritsch for comments and suggestions.

## Resumo

O trabalho discute a importância do investimento direto estrangeiro para o esforço de ajustamento efetuado pela economia brasileira a partir de 1974 e seu papel nos próximos anos. Procura-se distinguir entre questões “reais”, isto é, relativas à estrutura e a política industrial e questões financeiras, ou associadas à problemática da dívida.



## Abstract

The paper discusses the importance of foreign direct investment for the adjustment effort conducted by the Brazilian economy since 1974 and its role in the coming years. It distinguishes between “real” and financial issues, the former related to the industrial structure and policy and the latter related to the debt problem.

## I. Introduction

There has been a growing interest in the subject of foreign direct investment in Brazil in recent years. This might be due in part to the possible contribution it might offer to the country's balance of payments difficulties. It is well known, however, that this contribution, although significant, can hardly be considered decisive. The interest in direct investment has been revived to a great extent in view of its *real* dimension, namely its effects on the Brazilian industrial structure and technological base. This paper addresses these two dimensions of foreign direct investment in Brazil and seeks to identify emerging issues in both fields.

The paper's first task is to provide indications on the role played by direct investment in Brazil in the last years. In this connection we examine in the next section the nature of the policies of adjustment adopted by the Brazilian government after the 1974 oil shocks. Evidence is provided on the success of several sectoral import substitution programs and on the very positive export performance achieved in these same sectors; it is then suggested that foreign involvement in the process was crucial for the development of competitiveness in a very short period of time. In section III our focus shifts to the recent discussions on industrial policy and the authorities' perceptions on recent trends in industrial restructuring for the next decade. The existence of priority sectors, which are identified as high tech industries and modernization and update of existing plants are the key aspects of industrial policies to be pursued. The role of foreign capital is likely to be important in this framework and the tendency is to the extension of the successful *joint venture* experience to the new priority sectors. The much debated exception is the computer industry, in which specific policies were adopted; the outcome of this experiment may disturb the apparent consensus on the "triple alliance" or between the articulation of domestic, foreign and state capital into *joint ventures*.

In section IV we consider the financial aspects of direct investment and its relations with the debt issue. Indications are provided on the magnitude of the contribution of direct investment flows to the balance of payments. We comment briefly on the recent trends in debt negotiations and suggest that the successive frustrations collected along the "muddling through" process have contributed to deteriorate the "investment climate" and thus to depress foreign direct investment. We consider then the prospect of an enhanced opportunity for debt-to-equity swaps as crucial for the determination of inflows of direct investment in the years to come. Lastly, section V summarizes the main conclusions.

## II. MNE and Structural Adjustment

Most early perceptions of the Brazilian adjustment strategy towards the first oil shocks characterized it as “postponing” adjustment through debt, or simply evading the issue[1]. Indeed, Brazil did not choose the conventional reduced absorption *cum* real devaluation mix; Brazil’s response to the new conditions was the launching of an extraordinarily ambitious multi-year investment program explicitly designed to “adjust the economic structure to the situation of oil scarcity and to a new stage of industrial evolution”[2]. The core of the program was in fact a “new round of import substitution” – with special emphasis on energy, basic inputs, capital goods and transportation – designed to “correct imbalances in the industrial structure and to save hard currency”[3]. One can hardly take this option to mean “non-adjustment”, for what ultimately redresses the transformation frontier is investment[4]. It has been lately recognized that “sustained adjustment” to the new strained external circumstances requires longer-term restructuring of *production* towards exports and import substitutes rather than continued repression of income and *demand*. And this restructuring requires more, not less, investment"[5].

The motivation behind the initiative hardly reveals a sophisticated understanding of the nature of the process of structural adjustment. The wording of the plan easily supports interpretations taking it as an expression of an outdated “nation-power project”, soon to become a “dead letter"[6]. Yet planners at that time, at least *ex-post*, seemed to display more common sense than assumed by these interpretations[7].

The role assigned to foreign capital by the program was very substantial; it was mentioned that the new strategy was likely “to consolidate a Brazilian model of industrial capitalism” (p. 28), in which Brazil would sustain a “mature, pragmatic and realistic” (p. 43) position as regards MNEs, from which there would follow an “equilibrium” (pp. 40-41) between state, private sector and foreign interest. Some of the priority sectors, energy, transports and communications were mostly controlled by state enterprises and were deemed to remain so. But in other sectors, the state would stimulate the formation of *joint ventures* to undertake the new projects. This mode of organization would have many advantages: it prevents full foreign control, it increases opportunities to enter international

[1] See, for example, C. Q. Langoni “A Crise do Desenvolvimento: uma estratégia para o futuro” (Apec, Rio de Janeiro, 1985).
[2] *II PND: Plano Nacional de Desenvolvimento* (Brasília, 1975), p. 12.
[3] *Ibid*., p. 28.
[4] The option certainly implies current account deficits for some time; yet it is perfectly “sound” so long as investment is building capacity in the “right” sectors and its counterpart is a (discounted) flow of production of tradable goods. The fact that the Brazilian debt appeared “sound” (at least in 1974-1981) since it corresponded to an overly high investment activity was argued for example by J. D. Sachs “The Current Account and Macroeconomic Adjustment in the 1970s” *Brookings Papers in Economic Activity* 1: 1981, p. 39.
[5] G. K. Helleiner, “Foreign Direct Investment and Balance of Payments Adjustment in Latin America” (Mimeo, 1987) p. 1. Emphasis in the original.
[6] C. Lessa, “A Estratégia de Desenvolvimento 1974-1976: sonho e fracasso” (UFRJ, Rio de Janeiro, 1978).
[7] J. P. Reis Veloso “O Último Trem para Paris” (Rio de Janeiro, 1987). For a discussion of the rationally of the plan see A. B. Castro & F. E. Pires de Souza, “A Economia Brasileira em Marcha Forçada” (Paz e Terra, Rio de Janeiro, 1985), pp. 30-47.

markets and it accelerates the transfer of technology[8]. The forms of state participation varied, though the overall policy was to restrain control by foreign partners and to strengthen the position of focal capital. Much has actually been written on this “alliance” of interests; *joint ventures* in Brazil are actually older than the recent enthusiasm with “new forms” of foreign direct investment[9]. Their diffusion would only accelerate, however, by the late seventies and early eighties; a recent study has related over 1500 *joint ventures* in operation in the Brazilian economy in 1984[10].

The results of the Brazilian adjustment plan were quite impressive by all standards. As regards infrastructure, or the sectors under state control, the more publicized outcome of the plan was Petrobrás’ efforts of oil and gas exploration: domestic oil production rose 54%, and production of natural gas 156% in 1973-1982 (reserves grew 124% and 180% respectively in the same period)[11]. As regards electricity, on the other hand, it is significant that the share of hydroelectricity in the total consumption of primary energy rose form 19% in 1973 to 29% in 1983. The share of electricity in the total industrial consumption of energy rose from 31.8% to 45.8% in the same period[12]. Performance as regards net export/import coefficients in some leading industrial sectors is summarized by Table 1.

The overall picture in the table is that of an uncommon combination of a further deepening of the much maligned import substitution, but accompanied this time by a very sound export performance: exports are generated in the same sectors in which import substitution is taking place. The evolution of the trade accounts is very much consistent with these trends. At constant prices, Brazilian exports rose by an average annual rate of 8.6% in 1975-1980[13], while imports at constant prices fell 18.295 during 1974-1982[14]. Exports of manufactures (at constant prices) grew at an average annual rate of 16.695 in 1975-1980; the share of Brazilian exports of manufactures over total exports of manufactures of developing countries rose from 1.86% in 1973 to 4.28% in 1981[15]. It can

---

[8] For foreigners the advantages would include overcoming lack of familiarity with local conditions, access to subsidies etc. For a discussion see G. K. Helleiner “Transnational Corporations, Direct Foreign Investment and Economic Development” to appear in H. Chenery & T. N. Srinfvasan (eds.) “Handbook of Development Economics” (North Holland, forthcoming), p. 40.

[9] One interesting example is the Usiminas steel plant, a *joint venture* with Japanese associates founded in 1957. A more substantial experiment was undertaken in the petrochemical industry in the early seventies; see J. T. Araujo Jr. & V. M. Dick “Governo, Empresas Multinacionais e Empresas Nacionais: o caso da indústria petroquímica” *Pesquisa e Planejamento Econômico* 4(3) (December, 1974) and E. A Guimarães *et al*. “Changing International Investment Strategies: the “new forms” of foreign investment in Brazil” Texto para Discussão Interna IPEA/INPES nº 45 (January, 1982). On a general view of the above mentioned “alliance” see Peter Evans “Dependent Development: the alliance of multinational, state and local capital in Brazil” (Princeton University Press, 1979).

[10] J. Zoninsein, Política Industrial, *Joint Ventures* e Exportações, p. 17.

[11] J. C. Batista “Brazil’s Second National Development Plan and its Growth cum Debt Strateg” Instituto de Economia Industrial – UFRJ (1986), p. 26a.

[12] The share of oil was reduced from 30.2% to 14.4%. J. C. Batista, p. 76.

[13] M. Peñalver *et al*. “Política Industrial e Exportação de Manufaturados” (FGV, Rio de Janeiro, 1983) p. 17.

[14] J. C. Batista, Brazil’s Second National Development Plan, p. 44a.

[15] And as a share of total world exports of manufactured goods, Brazilian exports passed from 0.22% in 1965 to 0.64% in 1980. M. Peñalver *et al*., Política Industrial e Exportação de Manufaturados, pp. 17, 28. See also J. C. Batista, Brazil’s Second National Development Plan, p. 44a.

readily be hypothesized that costly incentives and “bad planning” (as regards domestic market expansion) could generate such performance[16]. But a detailed examination of this performance has concluded otherwise: “the new exports of manufactures in the 70s were not, in fact, an exclusive consequence of incentives to exports, but the “natural” consequence of the maturing of the process of industrial growth”[17]. It follows that, to a significant extent, a “mature” industry is thus displacing competitors at home and abroad; after all a shift of resources towards tradable (and this is what adjustment should ultimately be) might go either way (import substitutes or exports) or even both ways.

Table 1

Import and export coefficients, selected industries, 1974-1983

| | Import coefficients | | | | Export coefficients | | | |
|---|---|---|---|---|---|---|---|---|
| | 1974 | 1978 | 1981 | 1983 | 1974 | 1978 | 1981 | 1983 |
| Steel | 39.1 | 5.7 | 6.0 | 1.0 | 2.2 | 5.4 | 13.9 | 37.8 |
| Ferroalloys | 7.5 | 1.2 | 2.0 | 0.2 | 20.1 | 36.5 | 45.6 | 60.4 |
| Refractories | 25.3 | 4.8 | 14.9 | 5.1 | 8.4 | 10.1 | 17.6 | 17.1 |
| Aluminum | 50.4 | 263 | 12.0 | 2.3 | 1.6 | 2.0 | 8.2 | 40.0 |
| Copper | 72.2 | 80.0 | 79.2 | 40.4 | 2.5 | 11.8 | 27.2 | 15.9 |
| Zinc | 64.2 | 49.7 | 21.7 | 3.3 | 0.0 | 0.1 | 10.6 | 1.9 |
| Sillicon | 94.2 | 0.5 | 0.0 | 0.0 | 46.1 | 31.9 | 71.2 | 70.3 |
| Caustic soda | 53.1 | 6.5 | 1.8 | n.a. | n.a. | n.a. | n.a. | n.a. |
| Fertilizers[1] | 60.4 | 44.1 | 30.3 | n.a. | n.a. | n.a. | n.a | n.a |
| Petrochemicals[2] | 41.0 | 22.0 | 6.0 | 2.0 | 1.9 | 4.9 | 14.6 | 12.2 |
| Petrochemicals[3] | 14.0 | 11.0 | 0.4 | 0.6 | 0.0 | 0.0 | 8.3 | 12.3 |
| Thermoplastic resins | 35.2 | 22.0 | 2.0 | 1.0 | 2.0 | 2.0 | 17.0 | 30.0 |
| Synthetic fibers | 21.6 | 10.2 | 5.0 | 1.1 | 1.3 | 2.2 | 12.3 | 9.6 |
| Paper | 20.4 | 9.8 | 7.8 | n.a. | 1.7 | 4.0 | 10.6 | n.a. |
| Cellulose | 16.6 | 4.4 | 1.0 | n.a. | 11.8 | 14.8 | 31.1 | n.a |
| Capital goods[4] | 39.8 | 37.9 | 37.1[5] | n.a. | 3.0 | 8.9 | 15.9 | n.a |
| Capital goods[6] | 27.0 | 20.5 | 24.9[5] | n.a. | 7.0 | 14.3 | 23.1 | n.a |

NOTES: (1) Average for nitrogen and phosphate based; (2) intermediate products; (3) basic Products; (4) “on order”; (5) 1980; (6) “in series”.

SOURCE: Jorge C. Batista, “A Estratégia de Ajustamento Externo do Segundo Plano Nacional de Desenvolvimento”, *Revista de Economia Política*, 7(2) (April/June, 1987) pp. 73-75.

The process of adjustment pictured in Table 1 reveals a pattern of “learned” comparative advantage which is not commonly found; very little evidence has actually been gathered on the maturation of infant industries. According to a survey of micro studies of infant industries experiences “the evidence shows that maturation is not automatic or instant: reaching and maintaining

---

16 As proposed, in general terms, by Helleiner as regards the “conversion” of import substituting industries to exporting. G. K. Helleiner “Manufactured Exports from Less-Developed Countries from Multinational Firms” *Economic Journal* 83 (March, 1973), pp. 25-26.

17 S. Teitel & F. E. Thoumi “Da Substituição de Importações às Exportações: as experiências argentina e brasileira no campo das exportações de manufaturados” *Pesquisa e Planejamento Econômico* 16(l)(April. 1986), p. 163.

international competitiveness is not simply a matter of developing the right industry... It takes more than effortless learning-by-doing and requires the capability to manage continuous technological change"[18]. Along similar lines, cross country comparisons of the process of acquiring indigenous technological capabilities reveal a mixed picture. Few are the generalizations, and three Brazilian success stories (Usiminas, Romi and Metal Leve[19]) provide some: "when the size of the domestic market led over time to the installation of large plants..., and when the global technological frontier has remained stable for some time, protection policies systematically maintained for at least two decades seem to have induced the development of competitive enterprises in LDCs based on sound indigenous technological capabilities"[20].

Since technological change is the crux of the matter it is important to observe that local subsidiaries of MNEs enjoy a number of advantages with respect to domestic firms as regards the development of technological capabilities[21], and the same goes for firms with minority foreign participation. As argued above, the *joint venture* mode of enterprise is explicitly designed, among other things, to facilitate the transfer of technology; very often in Brazil this was the only foreign contribution to the partnership. A significant example is the Usiminas steel plant, which stands as the most notable success story in the survey of infant industries mentioned above; Usiminas is a *joint venture* of the Brazilian government and a group of Japanese investors that was very active in providing technical assistance to the project[22]. One is therefore led to conjecture whether the learning phenomenon of Table 1 was not independent from the structure of ownership of these projects.

The period covered by the table indeed witnessed a very important advance of the process of internationalization of Brazilian industry. From 1973 to 1985 the book value of foreign direct investment in Brazil (at constant prices) has grown at an average annual rate of nearly 12.6%, the ratio between the stock of foreign direct investment and GDP has nearly doubled, raising from 5.9% to 11.6%[23]. The growth of net direct investment flows to non-oil developing countries in this period was only 3% (in real terms)[24]; during 1975-79 Brazil received 7.1% of world direct investment flows, a major increase with respect to 1970-74 (4.0%) and 1965-69 (2.6%)[25]. In some cases the increased foreign participation in industry can be traced directly to the sectors listed in Table I, as for example

18 M. Bell *et al*. "Assessing the Performance of Infant Industries", *Journal of Development Economics* 16 (1984), pp. 123-124.
19 They produce steel, conventional lathes and pistons respectively.
20 Jorge M. Katz "Domestic Technological Innovations and Dynamic Comparative Advantage: further reflections on a comparative case study program" *Journal of Development Economics* 16 (1984), 1984, p. 32**.**
21 Jorge M. Katz, Domestic Technological Innovations, p. 23.
22 H. Nogueira da Cruz "Observações sobre a Mudança Tecnológica de Produto e de Processo na Setor Metal-Mecânico no Brasil" Anais do XIIº Encontro Nacional de Economia (São Paulo, 1984).
23 International Monetary Fund "*Foreign Private Investment in Developing Countries*" Occasional Paper nº 33 (January, 1985), p. 42.
24 *Ibid*., p. 3.
25 In 1980-81 this share was reduced to 4.75%. U.S. Department of Commerce "*International Direct Investment, Global Trends and the U. S. Role*" (August, 1984), p. 47.

in petrochemicals, aluminium, paper and cellulose[26]; a full investigation, however, Is yet to be conducted.

In sum Brazilian adjustment comprised a major effort of import substitution for intermediary inputs and capital goods, along with heavy investments in changing the country's energy matrix. It is very significant that import substitution was conducted without the anti-export bias it exhibited in the past; the export performance of these new industries was very impressive, suggesting that competitiveness was present from the start[27]. This sort of achievement is not to be found in the documented cases of successful infant industries; reaching competitiveness involves managing technological change, and such capabilities take time to be developed. It is very likely though that foreign participation, under *joint ventures* or "traditional forms" of foreign investment, was a crucial factor for this export performance. This might be the case of intermediary inputs[28], but probably less so as far as the capital goods industry is concerned. "Learning" is likely to proceed along more evolutionary lines in this case; the coexistence of domestic firms and MNEs create a pattem of oligopolistic competition favourable to innovation and efficiency. In these conditions competitiveness is likely to develop over time, given the size and growth of the Brazilian market and the potential for economies of scale. Export activity can be a natural development in such conditions, as recently suggested[29]. If, however, triggered by the proper price stimuli.

## III. Industrial restructuring and policy

The completion oí the projects under the 1974 adjustment program has led many observers to conclude that Brazilian industry "has had its structural defficiencies literally overcome", or that "it no longer fits the definition of underdevelopment"[30]. This notion appears very explicitly in the recent discussions around industrial policy within official circles. According to the *Grupo Intemninisterial* appointed in the beginning of 1986 to produce an industrial policy proposal, "the definition of an industrial policy for Brazil has to consider that the current industrial structure is practically complete,

---

[26] J. Zoninsein, Política Industrial, *Joint Ventures* e Exportações; E. A. Guimarães *et al*. "Changing International Investment Strategies; M. A. Suarez "A Evolução da Indústria Petroquímica Brasileira e o Modelo Tripartite de Empresa" *Revista de Economia Política* 3 (July, 1983); J. Zoninsein & A. Teixeira "*Joint Ventures* en la Industrialización brasileña: notas para el estudio de las formas de capital" *Economia de America Latina* 2 1984.

[27] The role of incentives and exchange rate policy for these results is much debated. See for exemple S. Teitel & F. E. Thoumi, da substituição de importações às exportações.

[28] A significant example is given by the cellulose industry. Brazil has turned into an exporter with lhe establishment of a number of *joint ventures* in the 70s; two of which, Cenibra and Aracruz (starting operations in 1976 and 1978 respectively) were responsible alone for 70% of Brazilian exports of cellulose in 1982. J. Zoninsein, Política Industrial, *Joint Ventures* e Exportações, pp. 54-55.

[29] There has been a tendency in the recent work in trade theory to obtain unorthodox results from dropping hypotheses of perfect competition and constant returns to scale. On this specific issue see Paul Krugman "Import Protection as Export Promotion: internattonal competition in the presence of oligopoly and economies of scale" in H. Kierzkonski (ed.) "Monopolistic Competition and International Trade" (Clarendon, Oxford, 1984).

[30] A. B. Castro & F. E. Pires de Souza, A Economia Brasileira em Marcha Forçada, pp. 81-82, my translation.

relatively modern in technological terms and has several segments with strong penetration in international markets"[31]. A more recent entry in the debate would qualify this notion in an important way: "the country's industrial structure has already reached a high degree of maturity. Thus, it is no longer possible to count on opportunities of investment for import substitution in a sufficient magnitude to work as inducers of the economic expansion"[32]. This could be interpreted as meaning that expansion is no longer constrained by bottlenecks, which boils down to saying that imports are now lower for a given activity level. In no sense the foreign exchange "gap" is closed, as the experience of 1986 would plainly demonstrate. "Maturity" should therefore mean a more "balanced" structure, without any major sectoral defficiency, and consequently without an import substitution agenda. This surely shifts the priorities of industrial policy away from establishing industries or sectors of strategic interest; the documents assign top priority to modernization and technological updating of established industries, "permanent technological updating, especially through technologies generated domestically, appear as the main characteristic of the new pattem of industrialization"[33]. The existence of a "technological heterogeneity" is recognized, especially between export oriented sectors and those directed to the domestic market[34]. Investment should therefore be directed to "intensive incorporation of technical progress to industrial activity so as to assure efficiency and competitiveness" and "to develop domestic technological capabilities"[35].

Priority sectors are identified from two sorts of considerations: on one hand, there is an attempt to replicate world trends in industry, from which top priority is assigned to high tech industries: computing, microelectronics, fine chemicals, new materiais, biotechnology etc. On the other hand there are concerns as to sectors approaching full capacity (paper, cellulose, fertilizers) and others requiring major rebuilding and update (steel, segments of capital goods). Emphasis should be given to exporting industries to the continuation of investments in energy (oil, gas and coal) and to some extent to wage-goods, especially textiles and footware[36].

The role assigned to foreign capital in this framework has been evolving very significantly. Some early attempts by the National Industrial Confederatlon to establish guidelines for an industrial policy suggested a "more transparent definitíon of the role to be played by foreign capital"[37]. The *Grupo Interministerial* was explicit as regards existing sectors, suggesting basically the continuation of the *status quo*. In terms of guidelines for the new sectors, it was argued that the contribuition of

[31] "*Política Industrial. Relatório do Grupo Interministerial de Política Industrial*" (representatives from Planning, Industry and commerce, Finance, Science and Technology Ministries, Brasília, July, 1986) p. 1. My emphasis.
[32] Ministério da Indústria e Comércio "*Politica Industrial e Diretrizes Setoriais*" (Brasília, 1987), p. 7. My emphasis.
[33] *Ibid*., p. 8.
[34] Política Industrial, Relatório do Grupo Interministerial, p. 1.
[35] Política Industrial e Diretrizes Setoriais, p. 6.
[36] *Ibid*., p. 10.
[37] Confederação Nacional da Indústria, Departamento Econômico "*Política Industrial*" (ENIND. September, 1984), p. 34.

MNEs “should be predominantly directed to the generation of hard currency”; the formation of *Joint Ventures* would be supported provided control is maintained by nationals[38]. Shortly after the document produced by the Industry and Commerce Ministry would proclaim that “the institutional framework in whlch the proposed policies will be executed is one of a market economy based on free enterprise ... the role of industrial policy is to complement the market”[39]. The document proceeds suggesting that “the private sector has effective and potential conditions ... to lead the new round of industrialization” and that the aim of industrial policy should be to “Increase significantly” the role of domestic enterprises. Yet the crucial point was to reaffirm the support to *joint ventures* with majority voting capital owned by domestic residents, but to establish that they “must be considered as domestic enterprises by all means”[40].

The very latest entry in this debate was a short piece authored by president José Sarney’s influential son-in-law and personal secretary. The document identifies foreign willingness to participate in investments in the high tech sectors and suggests that this could be an asset in the debt negociations. It then proposes to implement “freedom of installation for all sorts of enterprise in the country”, “freedom for technology negotiations, associations and purchase” and “release of [non-transferred] external debt [deposits] for conversion into equity, stimulating investment in priority sectors”[41]. Quite significantly, the president himself, in a couple of occasions, has mentionned the internationalization of the economy as desirable, and also the possibility of establishing “Export Processing Zones” in Brazil’s Northestern region.

Internationalization has been gathering strength also in sectors associated with industry; after all it can be taken as a *sine qua non* for modernization and continuous technological update. Brazilian industry is surely already very “international” as far as onwership is concemed, but it has had little exposure to world markets. Exporting expertence is recent and still exports represent no more than 12% of GDP. There is a clear perception that tariff protection has become an anachronism, not only for the ridiculous situation of having local consumers subsidizing “leaming” from infants bearing names such as General Motors and Toyota[42], but also from the fact that there are infants that did fall to mature after three decades of full protection. The *Grupo Interministerial*, for example, has proposed a full revision of Brazilian tariffs in order “to adjust the tariff structure to the profile of the existing industrial structure, [i]ntroducing degrees of protection compatible with the levels of competitiveness reached in each sector”[43]. There should be no doubt, however, that import restrictions

[38] Política Industrial, Relatório do Grupo Interministerial, p. 42.
[39] It is perhaps difficult for those not used with the tone of Brazilian official documents to evaluate the extent to which this liberal discourse represents dissent from the past. Política Industrial e Diretrizes Setoriais, p. 11**.**
[40] *Idem*, *ibid*.
[41] J. Murad & M. Ethel “Estratégia para o Desenvolvimento”, reproduced in *Jornal do Brasil***,** 7/9/1987, p. 17.
[42] A keen observation of C. Diaz-Alejandro “*The Less Developed Countries and Transnational Enterprises*”, Economic Growth Center, Yale University, p. 21.
[43] Política Industrial, Relatório do Grupo Interministeríal, p. 24.

will be maintained mostly in view of the needs of the balance of payments. If any slack develops in the latter, that would surely help the cause of industrial modernization, though this is hardly foreseeable.

The apparent consensus on the participation of foreign capital in the new priority sectors through the *joint venture* mode might be disturbed by the experience of the computer industry, in which specific policies were followed. The so-called "market reserve" consisted in closing the lower end of the sector (microcomputers) even to *joint ventures*; this generated an extraordinary mushrooming of domestic manufacturing flrms, first of 8 bit machines and then of IBM-PC clones. Only 18 micros were sold in 1979, but in 1983 this number has reached 55788; the fact that "a fundamental technological breakthrough (the microprocessor) became available on the open market, [or that] it was controlled by firms with no proprietary interest on final demand sales"[44], was crucial for this success. In the minis segment, however, where technology had to be obtained through licensing, this was definitely not the case; the number of units sold in 1983 was nearly 15% less than what it was in 1979[45]. As regards competitiveness the microcomputer success is a mixed one: domestically manufactured microcomputers, printers, disk-drives and peripthericals are priced 2 to 4 times higher than the U.S. equivalent (when still manufactured), and the downward trend of this ratio is slim at best[46]. Even so, the phenomenal sales success has generated much lobbying for extending the "market reserve", which was initially conceived to be temporary and also for adopting the model in other sectors. Yet the high tide of the market reserve appears to be passing; its association wlth former members of the National Information Service (the chief agency organizing the military government's repression policies) has turned further concessions to the sector politically very costly. In sum, it is not likely that the computer model reach other sectors, except in the event of major political turnarounds, left or right; interestingly enough both extremes of the political spectrum are sympathetic wlth the "market reserve"[47].

## IV. Foreign direct investment and the debt issue

Direct investment has played a secondary role *vis a vis* bank lendlng to the Brazilian balance

---

[44] Peter Evans "State, Capital and the Transformation of Dependence: the Brazilian Computer case" *World Development*, 14(7), 1986, pp. 799,803.
[45] *Ibid*., p. 799.
[46] L. Perine "Competitividade dos Periféricos Nacionais: unidades de d1sco (drive)" Instituto de Economia Industrial-UFRJ (May, 1985); C. Piragibe "Competitividade dos Equipamentos Periféricos Fabricados no Brasil" Instituto de Economia Industrial – UFRJ (March, 1985) e P. Tigre & L. Perine "Competitividade dos Microcomputadores Nacionais" Instituto de Economia Industrial – UFRJ (March, 1985). Competitiveness was apparently achieved in manufacturing some older microcomputers' models such as Apple II,TRS-80, HP 85-A and HP 85-B, the latter two manufactured by the local subsidiary of Texas Instruments. Yet, thls is only true for CPUs; configurations including CPU, monitors and drives were priced in May 1984 some 20% to 50% higher than the US equivalent.
[47] This "alliance" has produced much irony along with the debate.

of payments in the last years; its contribution, however, is by no means unimportant. As shown in Table 2, the net inflows of direct investment reached 8.8% of exports on average in 1978-1982; the net foreign exchange result of all dlrect investment related transactions reached about US$ 1.0 billion or nearly 6% of exports during this period. The dramatic reversal of this picture observed after 1982, which is clearly observed in the table, was in itself a significant part of the explanation of the recent Brazilian payments difficulties. It can be observed that net inflows in 1983-1986 have been reduced to a third of their 1978-1982 average, and nearly half of these entered through debt-to-equity swaps ("conversions"). Rates of repatriation and proflt remmitances have increased significantly, especially in 1986 relative to the earlier perlod; this is consistent with the observed reduction in the reinvestment rates. The net result of these influences was, therefore, that a positive inflow of around US$ 1.5 billion has turned into an outflow of nearly half a billion.

Table 2

Dlrect Investment, Reinvestments and Dividends in Brazil,

1978-1986 (US$ Millions)

| | 1978-82 | 1983-86 | 1986 |
|---|---|---|---|
| (1) Net inflows | 1682 | 990 | 639 |
| % of exports | 9.5 | 4.1 | 2.9 |
| of which | | | |
| .conversions | 110 | 496 | 206 |
| % of net inflows | 6.8 | 50.1 | 32.2 |
| .repatriation | 176 | 292 | 636 |
| % of total stock | 1.0 | 1.2 | 2.4 |
| (2) Dividends | 492 | 928 | 1100 |
| % of total stock | 2.9 | 3.8 | 4.1 |
| (3) - (1) - (2) | 1190 | 62 | -461 |
| % of exports | 6.6 | 0.2 | -2.1 |
| (4) Reinvestments | 881 | 570 | 449 |
| % of total stock | 5.0 | 1.8 | 1.7 |

Sources: Adapted from L. A. Correa do Lago, "Investimentos Diretos no Brasil e a Conversão de Empréstimos em Capital de Risco", Departamento de Economia, PUC-Rio, 1987. Original figures from Banco Central do Brasil, Bulletin and *Brasil, Programa Econômico*, 15, June 1987.

Most observers of the debt problem have argued that it is very unlikely that direct investment flows could substitute bank lending as a mechanism to finance current account deficits in debtor countries[48]; so that one should not expect from direct investment but a minor contribution to resolve

[48] For example D. Goldsborough "Investment Trends and Prospects: the link with bank lending" in T. Moran (ed.) "*Investing in Development: new roles for prlvate capital*?" overseas Development Council, 1986; also G. K. Hellleiner,

payments imbalances. In Brazil inflows of long term loans during 1978-1982 averaged U5$ 12.7 billion an entirely different order of magnitude from those of inflows reported In Table 2. Yet foreign direct investment can surely help; gains, however small in this area, can improve the trade-offs involved in producing trade surpluses.

The deterioration shown in Table 2 has to do with a combination of domestic policies and developments in the debt front. On account of the former, the chaotic nature of macropolicies followed is very evident: violent shifts in policy have taken place since the inception of the "New Republic" (the civilian government)[49]. To the extent that overall macroeconomlc policies affect direct investment flows, instability and the uncertainties generated by the workings of the Constitutional Assembly elected in November 1986, will probably divert investment away from Brazil in favour of other locations at least temporarily[50].

On the debt front, what is important to observe is that the tone of the negociations has much to do with the "investment climate" that supposedly governs foreign direct investment. In this respect, growing frustrations as regards the so called "muddling through" strategy are producing a more confrontational stance from both sides[51]. The Brazilian moratorium against private banks' debts reflects these global tendencies and surely has had a devastating effect on the "investment climate". There are definite signs of reversal on the part of the Brazilian government, but future developments are very difficult to predict; given the political uncertainties mentioned above there is no indication on who and under what caveats will be in charge of debt negotiations on a medium term perspective. In any event, there are three sorts of mechanisms involved in the next few years' rescheduling exercises: (a) conventional "muddling through" rescheduling with its usual consequences: "frayed nerves, much bad feellng, pointless extra transactions costs and increased uncertanty"[52]; (b) "securitization", namely the exchange of old debt for long term negotiable bonds at a discount, which turns out to be reschedullng *cum* write-offs; and (c) debt-to-equity swaps, again at a díscount. Swaps are of interest here since direct investment is directly involved. Table 2 shows that most direct investment since 1982 has been entering the country through swaps; it follows that regulations regarding these operations can be of crucial importance for future inflows.

Debt-to-equity swaps can in principle reach a volume that is equal to the total net inflows of foreign direct investment; this could mean conversions after 1987 a little higher than the value of total

Foreign Direct Investment, p. 8.

49 President Sarney's administration started with a monetarist economic team, then it sponsored a major "heterodox" stabilization experiment, which gradually took a populist orientation and then it switchad to a more pragmatic, yet halfhearted, reedition of the "heterodox shock" and the latest development in this area is the president's promise to double real wages to the end of his term.

50 D. Goldsborough, Investment Trends and Prospects, p. 185.

51 Edmar L. Bacha "Escaping Confrontation: Latin America's debt crisis in the late eighties", Departamento de Economia, PUC-Rio (September, 1987).

52 G. K. Helleiner, Foreign Direct Investment.

inflows for 1978-1982. It can be more, as a matter of fact, if dividends remitted are used to buy debt at a discount and reenter the country through a conversion into equity. Gains in these operations can be substantial. By the same token, a significant volume of swaps can be made if the government allows the reinternalization, again through debt purchase and conversion Into equity, of past capital flights, estimated to reach some US$ 9.0 billion[53]. Creditor banks themselves could, if regulations thus allowed[54], be interested in turning substantial portions of their portfolios into equity; it is impossible to assess this willingness *a priori*, yet their interest on the issue hints it can be a large one.

Swaps totalling around US$ 2.0 to US$ 3.0 billion yearly would mean annual reductions of 2% to 3% in the stock of debt approximately[55]; it can surely make a difference over the years, especially if we note that the terms of the "servicing" of the stock of direct investment are much better than those of loans. In 1986, for example, repatriations plus dividends represented a record high 5.9% of total stock; in the same year the stock of debt was of US$ 110.2 billion, amortizations summed US$ 10.1 billion and interest payments US$ 9.6 billion, together representing 17.9% of total debt[56].

Another beneficial aspect of a more extensive use of swaps is that it can offer a contribution to domestic capital formation; the benefits are the ones of ordinary foreign direct investment, namely, transfer of technology, access to foreign markets etc. These are likely to be especially relevant if swaps are governed by the priorities of industrial restructuring and policy discussed in the last section.

Objections to a larger scale use of swaps come from concerns about the denationalization of the economy. Yet the enforcement of the *joint venture* mode, along with investors increased willingness to engage into "new forms" of international investment[57] should result in forms of involvement of foreign capital in domestic enterprises not especially vulnerable to nationalist concerns. The truly decisive objections to debt-to-equity conversions have been from the Central Bank, who is mostly concerned with monetary control. A US$ 3.0 billion value of conversions, for instance, would imply an increase of around 50% in high powered money. This would not be a

[53] Estimates for capital flights in Brazil are highly sensitive to the period chosen. Taking the cummulative sum of "errors and omissions" for 1974-1982 one gets insignificant values; J. T. Cuddington "Capital Flight: estimates, issues and explanations" *Princeton Studies in International Finance* 58 (December, 1986) table 1. Taking 1978-1982, R. Dornbush gets US$ 1.9 billion, but adjusting his estimate for the change in International reserves observed in this period, one gets nearly US$ 9.0 billion; R. Dornbush "External Debt, Budget Deficits and Disequilibrium Exchange Rates" in G. W. Smith & J. T. Cuddington (eds.) "*International Debt and the Developing Countries*" (The World Bank, Washington, 1985) table 8-3. This high value appears consistent with the observed magnitudes transacted in Brazil, in markets such as the "black" market for dollars, gold markets and recently created trust funds for "cold" money". The recent performance of these funds have been very impressive; since their creation in 1986 their assets have reached nearly US$ 2.0 billion, according to *Gazeta Mercantil*, 10/12/1987.

[54] Current provisions only permit the conversion of intercompany loans. See L. A. Corrêa do Lago, Investimentos Diretos no Brasil.

[55] Recall that total debt is somewhat higher than US$ 100.0 billion; actually US$ 110.2 billion at the end of 1986. Yet conversions are made at a discount. A 10% discout for instance would mean that for each dollar converted debt would be reduced by US$ 1.1; in this case US$ 2.0 billion in swaps would mean an exact 2% reduction in debt.

[56] These are contrectual values only. The amounts actually Iransfered are much smaller.

[57] See Charles Oman "New Forms of International Investment in Developing Countries", (OECD, Paris, 1985) and also E. A. Guimarães *et al*., Changing Investment Strategies.

problem if inflation has this same magnitude and under reasonably orderly public flnances. But under a public déficit of about 8% of GDP, there is little room for further pressures over domestic public debt. The problem is therefore not the unfeasibility of a large scale debt-to-equity conversion program in itself, but the fact that the huge budget deficit precludes this and other projects of the nation's interest[58].

In sum, domestic policies and developments on the debt ftont tend to contribute negatively to the "investment climate" and depress direct investment even further. A more extensive use of debt-to-equity swaps which could, in principle, revive foreign direct investment, is blocked by domestic financial constraints imposed by an uncontrolled budget deficit. One cannot fail to be impressed by the amount of negative influences on direct investment generated domestically.

## V. Summary

The paper discussed real and financial dimensions of foreign direct investment in Brazil, considering briefly the experience of adjustment after the oil shocks and prospects for the future. A survey was provided on Brazilian adjustment strategy after 1974 and on the basis of this evidence we suggested ways through which foreign involvement might have been important to the success of such policies. Next we discussed the authorities' views on industrial policies and their perceptions as to the ways Brazilian industrialization is likely to proceed. Special attention was devoted to the issue of foreign investors role in this process and the alternatives open to policy makers. Lastly we focused on the financial aspects of direct investment and its connections with the debt problem. It was argued that the potential contribution of direct investment to a solution to the debt issue might be very significant, especially if the government chooses to make a more liberal use of debt-to-equity swaps.

[58] For an illuminating discussion see Edmar L. Bacha, Escaping Confrontation, esp. pp. 8-9.