Private Foreign Investment in Barbados

(Interim Report)

by

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Over the past thirty years or thereabouts Barbados has moved from among the world's poorest countries to occupy a tenuous position in the ranks of middle income, less developed countries. That development came with the emergence of tourism to a place of dominance in the island's economy, eclipsing the sugar industry, around which economic activity had centred for three hundred years. During this period of transition, light manufacturing expanded to become the main source of employment outside of government service.

Economic development was stimulated by technological change in the industrial world, particularly the introduction of jet transport with its dramatic effect on the time and cost of travel. Barbados was among tropical destinations to benefit from the boom in holiday travel that jets made possible. Growing wage costs in North America created an incentive for American firms to locate assembly and light manufacturing plants in developing areas with lower factor costs; this provided a motive for some of the industries that came to Barbados. Falling air transportation costs in the 1960s also facilitated the offshore move. Barbados offered to potential investors the advantage of a literate population, a stable political system, long-standing ties to North America (dating back to the earliest English settlement of the eastern seaboard), good internal and international communication and well developed infrastructure of roads, ports and utilities.

The signing in 1973 of the treaty creating the Caribbean Economic Community (Caricom), with provision for free trade internally and a common external tariff, created a market of sufficient size to attract some manufacturing of modest scale for sales to the regional market. Government welcomed foreign investment with an incentive package, starting with the Pioneer Industries Act of 1957 and encompassing tax holidays, import rebates, promotional activity, provision of factory shells and other inducements.

The changes in Barbados' economy have come about through the interaction of domestc circumstances and influences drawn from abroad. Foreign investment was an important channel of influences from industrial countries, along with emigration, increased opportunities for foreign travel and the media. Our first task in this study is to establish the importance of foreign investment, for total capital formation and for the performance of specific sectors. Also, we identify peculiarities of foreign investors - whether they were export oriented, whether they used capital-intensive methods and paid high wages. In the second section of this paper, we describe government incentives for investment and for foreign investment in particular. Thirdly, we explore the motives for foreign investment, checking for the relative importance of markets (local and export), cost-factors, incentives, skills and socio-political factors. The fourth section presents an estimate of foreign investment requirements for 1984-88 and the fifth and final section offers some observations on the results so far.

Trends and Characteristics of Foreign Investment

Foreign investment has played a vital role in capital formation and balance of payments financing in Barbados throughout the post World war II period. In the earlier years identified capital inflows were mainly for the public sector, the largest single transaction being a sterling bond issued in London to finance construction of a deep water port at Bridgetown, the island's capital. Private foreign investment rose to significance in the 1960s, and made substantial contributions for the remainder of the period.

In the past twenty years there have been two periods of especially rapid expansion, 1969-71 and 1977-80; the first was due mainly to private sector activity, while the second owed more to government projects. Private long-term capital inflows were quite large throughout the post-1960s period, but their relative importance was greater in the second half of the sixties decade and the early years of the seventies. In more recent years government borrowing and short-term financing have reached larger proportions.

Foreign investment flows have been the equivalent of about one-third of total capital formation for the years when we have detailed information, 1965 onwards. Only in one year did the proportion fall as low as 16%, and it has reached 49%. However, the contribution of private long-term investment to gross capital formation is noticeably lower in the last few years;

between 1966 and 1972 the private investment contribution ranged from 23% to 39%, compared with a range of 4% to 16% for the period 1976-82 (There were erratic fluctuations in between). Foreign capital invariably finances machinery and construction rather than stocks; the contribution to capital formation, other than stocks, does not rise above 20% for the years following 1974, when our series on stock-holding begins.

Apart from finance for public utilities and companies engaged in oil production and distribution, two-thirds of foreign investment has been equity participation. The remaining one-third portfolio investment was, for the most part, loans from head offices and overseas affiliates of firms which were owned, wholly or in partnership, by foreigners. One of the authors has found evidence of this tendency in a study of a cross-section of industrial activity (Codrington [1984] p. 9). In the 1960s foreign investment was directed mainly towards tourism and manufacturing; both sectors recorded episodes of rapid expansion during that decade, and large individual foreign-owned enterprises that provided much of the impetus can be readily identified. However, we do not have a detailed sectoral breakdown until 1977. Public utilities made substantial foreign loans in the years from 1977 to 1982, especially for financing the purchase and installation

of equipment such as electricity generators, telephone switching gear and transmission facilities. Most of their foreign funding was by loans rather than equity. Both the telephone and the electric supply companies are part-owned by foreign companies, which were used as the source for some of the borrowing. Funds were also obtained from foreign governments and international institutions. Firms engaged in oil exploration, refining and distribution - all foreign-owned up to 1982 - borrowed from overseas affiliates. Apart from oil companies and public utilities, foreign investment in the 1977-82 period went almost exclusively for manufacturing, with only small amounts for tourism (Table 1).

Service charges on private foreign investment substantially exceeded those on government borrowing for the years 1973-82 (the limit of available data) even though the foreign finance accumulated by the two sectors over the decade was of comparable magnitude. Service charges absorbed 61% of net private long-term capital inflows, compared with 41% for government. The private sector's payments were fairly evenly split between dividends and interest, despite the preponderance of private equity (Table 2). The ratio of interest payments to outstanding government debt ranged from 6.9% to 14.5% (except for 1973, which registered 4.5%); the average return to private investors would have been much higher, judging from the ratio of private to government service payments (a comparable figure cannot be directly calculated because estimates of the total of private foreign debt outstanding are subject to a wide margin of error).

Our data permit us to take a closer look at foreign investment in manufacturing between 1977 and 1982. Have foreign investors sought out activities that are export-oriented, capital-intensive and dynamic, and have they benefitted more than others from government incentive programmes? The assembly of electrical components and the manufacture of metal products attracted 66% of all foreign investment in manufacturing; 88% of firms involved in the manufacture of electrical components and electrical goods were foreign-owned. These activities tend to be highly export-oriented, indicated by a value of 1.89 for the ratio of export sales to domestic value added. They are also very dynamic, increasing their local value added by over one and a half times during the five-year period. They are by no means the most capital intensive segment of manufacturing: they show an incremental capital/output ratio (ICOR) significantly lower than for food processing, and somewhat below that for furniture and chemicals. Their average wage levels may also be somewhat below the average for all manufacturing, although our evidence for this is rather out-of-date (Tables 3 and 4).

A long way back in terms of foreign investor interest come chemicals and clothing manufacture. Chemicals accounted for 14% of foreign investment and 41% of firms engaged in the production of chemicals had foreign participation; foreign investment in clothing amounted to 11% of total, and 26% of firms had

foreign equity. Chemicals were destined mainly for the local and Caricom markets, and grew rather slowly. They seem to be about mid-way in the scale for capital intensity in local production, and their wage levels are a little above the industry average. Clothing manufacture was much more export oriented, although it also recorded sluggish growth; the sector was not capital intensive, and wages were at the low end of the scale. The activities in which foreign investors showed little interest included food processing, furniture and plastics. Between them they accounted for no more than 5% of foreign investment; 33% of firms producing plastic products had foreign equity, but for the much larger food processing segment only 18% of firms had foreign ownership connections. Food processing was mainly for the domestic market and output in this sector contracted in the 1977-80 period. Production has been remarkably capital intensive and wages relatively high. Furniture was marketed locally and within the region; production was not particularly capital intensive and relative wage levels were low.

Foreign investors seem largely interested in exploiting extra-regional export markets, if we judge by the characteristics of the assembly activities which attracterd most of their interest. Only 15% of all firms exported outside of the Caricom region, 11% owned by foreigners wholly or jointly and a mere 4% entirely local. Of all foreign wholly firms, 38% produced for extra-Caricom markets, compared with 5% of all locally-owned firms. The assembly activities have been very dynamic, which no doubt contributes to their appeal to foreign investors. It is

often argued that foreign investors use inappropriate capital-intensive technologies developed for industrial countries, but the assembly operators in Barbados are not especially capital-intensive and their wage levels not particularly high. Codrington [1984] p.9) finds an inverse relationship between capital intensity and the proportion of foreign investment by activity.

Foreign investment in the clothing sector was also mainly export oriented. These firms were established in the early 1970s, when clothing was expanding at a healthier pace. The only area where foreign investment was directed towards local and regional production was chemicals, which proves a small exception to the general pattern.

The evidence we have does not suggest that official measures for protecting industry have played an important role in attracting foreign investment. Evidence on the level of effective protection in the manufacturing sector is presented in Ranis and associates [1982] and Whitehall [1984]. Only Whitehall offers results for electrical goods, the foreign investor's first choice: levels of protection in these activities range from almost nothing to 67% of value added, a very high figure (Table 5). We cannot locate the majority of foreign-owned firms within the spectrum, so we cannot infer anything about the importance of protection. In chemicals, the second ranking category for foreign investment, protection is low by Whitehall's measure, and negative for the single item reported by Ranis (Table 6). For

clothing Whitehall reports low levels of protection (less than 1% of value added); Ranis reports two items, one with a low level of protection, the second with a remarkably high level (almost 400%). Whitehall finds low to moderate protection levels for the sectors where local investment predominates - food and furniture. Ranis finds negative protection (a reduction in returns to local factors as a result of taxes, concessions, and official measures) for three food items, and high protection only for local sales of rum.

The Motives of Foreign Investors

A country's foreign investment profile almost always reflects a combination of diverse motives and inducements; this section discusses those that seem relevant for Barbados and tries to identify the most influential among them. One possible motive might be to maintain domestic sales in the face of regional protective measures, for products which previously were supplied from non-Caricom sources. Alternatively, firms might see protected regional markets as large enough to attract new lines of production. Lower costs may also have been an inducement - because of lower factor costs in Barbados than in alternative locations, lower costs of transport and tax exemptions. Firms may have been attracted to Barbados because of its natural resources while others may have decided on the basis of the quality of the labour force. Political stability, the climate of industrial relations, proximity to sources of investment, cultural similarity with the investor's

country of origin and purely personal preferences of investors may also have entered the picture. We have no conclusive evidence for the importance of cost factors. Time series analysis which sought to explain foreign investment trends by relative wage levels in Barbados and Mexico (an arbitrary choice of competing location) and by an indicator of the potential benefit of tax exemptions produced no significant effect, either of wages or tax concessions. The methodology and results are detailed in an appendix. Codrington's study ([1984] p. 9) is inconclusive about the effects of incentives; the dummy variable he uses to represent a bias in favour of selected activities in the incentive package suggests a significant preference for such activities by foreign direct investors. However, we cannot be sure that the dummy variable does not in fact pick up other peculiarities of these sectors which are not explicitly accounted for in Codrington's analysis - for example, their export bias or the cost of transporting the commodity or its raw material. In our own examination in the first section we failed to detect a firm association between levels of protection and the proportion of foreign investment, although our data is admittedly incomplete. Our tentative assessment is that cost factors - transport costs in particular - may define the range of possiblities which a foreign investor is willing to consider seriously. Within this range the country's actual rate of foreign investment may depend on other factors.

Interviews conducted by the authors of this study indicates that Barbados' stable political framework has been by far its

greatest asset, in securing foreign investment in manufacturing and tourism. The island has managed a smooth gradual transition from colonial status to independence and has sustained a two-party system with regular elections and a free press. This reputation for stability stood at the top of the list of attractions for many firms, sometimes eclipsing all other factors.

Natural and human resources were an important drawcard, particularly in tourism in the 1960s and in manufacturing in the early 1970s. The island's beaches and climate made it a prime attraction for tourists when air fares fell to levels where tropical holidays became widely accessible to North Americans. Foreign investors were among the first to explore the potential which this offered, often making use of their established marketing strengths in North America and the U.K. to secure growth in visitor arrivals in Barbados. The island offered a literate labour force with good basic education; workers could be quickly trained to competent levels of performance in assembly operations by firms which boasted good organisation. This does not seem to have been a prime consideration for many firms, but it may have been the deciding factor when combined with others already mentioned. It may also have been more important to firms looking at alternative Caribbean locations than to those contemplating a wider range of geographical alternatives.

The establishment of the Caribbean common market seems to have been a greater stimulus to domestic than to foreign investors. However,

we have found a significant minority of foreign firms that have put up plants to cater to the Caricom market, mainly to produce cosmetics, personal care products, pesticides and other chemical-based products. There are several examples of domestic firms entering into licensing arrangements to produce local replacements for formerly imported items, in most cases with no foreign equity. Firms engaged in food processing are prominent in this category.

Other factors have played a very minor role. Some investment has come from Trinidad, Barbados' closest neighbour with higher per capita income. Some investment has resulted from personal ties with Barbados or Barbadians and sometimes the foreigners choose to become resident. There have been one or two such cases in the manufacturing sector, and rather more in hotels, restaurants and ancilliary tourism services.

Foreign Investment Projections

Barbados' probable foreign investment needs were projected for 1984-88 on the basis of a growth path for the economy which appears feasible at this point. Projections for real outpt for 1984 and 1985 have been made by the Central Bank of Barbados, and a slightly faster pace of expansion is possible beyond the latter year. We derived foreign capita requirements for the base-line growth from a model which uses a fixed investment to income ratio and a constant savings/income ratio, both approximating to the average for 1978-83. Projections for government saving are incorporated

using the assumption that government spending expands at the same rate as national income and the ratio of government revenues to income remains at the 1978-83 average. Export growth is based on Central Bank projections for 1984 and 1985, and cautious optimism beyond that. Imports are derived by using the average import propensity for 1978-83. Combining exports, imports and domestic savings allows us to make estimates of consumption. Movements in this variable are used as a check of the consistency of the projections: very large year to year movements are to be avoided, even in the unlikely event that they are feasible. All projections are made in 1982 values.

Preliminary results suggest an average annual foreign investment requirement of $105 million over the 1984-88 period, in 1982 values. They are based on a growth path which begins with a 2% rate of expansion in 1984, rising to 5% in the last three years. Because of the number of arbitrary assumptions that had to be made we performed sensitivity tests for alternatives. Small variations in the speed and timing of output growth and export expansion made little difference to the foreign investment requirement. Accepting that any estimate is subject to a margin of error which we have not calculated but which will certainly not be less than 10%, our projection of investment needs is essentially unchanged (within the 10% margin of error) if we vary income growth rates between zero and 7.5% and export growth rate in excess of 2%. Small variations from the average import

propensity of 1978-83 (of about 5% in either direction) also have no significant effect, either on their own or in combination with faster growth rates. However, if a reduction in the investment/income ratio could be achieved foreign investment requirements would be drastically reduced. A 10% fall in the ratio could lower the projected requirement by an amount in excess of 25%.

These results are preliminary and tentative. Sensitivity tests are still under way. A major defect of the model is its inability to provide confidence intervals for the estimates, but for this we must await the results of stochastic models now under development at the Central Bank of Barbados. The base line projections are presented in Table 7.

Observations

We have not reached a stage in our work where we may make recommendations; we conclude with observations based on our results so far and on work now in progress. Because Barbados' requirements are small, the availability of foreign investment has not been a limitation and we would not expect it to circumscribe investment possiblities for the future. However, growth and financial stability in industrialised countries will play an important part in improving the prospects for production in activities geared for exports to these markets. Brightening investment prospects is a catalyst for new commitment by entrepreneurs, both foreign and local. Barbados, with the rest of the developing world, bears a

high cost of debt servicing because of the current - and continuing - extraordinary interest rate levels. Appropriate adjustment of domestic demand in industrial countries would serve to reduce this interest burden. As we have seen, service payments erode a substantial part of gross investment, particularly in the private sector.

Capable political and economic leadership has been the major drawing card for foreign investment. To secure the gains made so far government must seek improved efficiency in the beaurocracy and better intelligence services for its own use and for general information. Open, well informed discussion and debate may be the surest way to preserve political stability.

Barbados needs more effective policies for transferring soft technologies - skills in planning, marketing and management, understanding of organisation behaviour, development of information systems and services to maximise the use of new technologies. It may be necessary to introduce special incentive regimes for crucial skills, combined with selective emphases in the educational system, so as to achieve a critical mass in these human resources.

The existing mechanisms for executing offical policy with respect to foreign investment need to be improved upon. They also need to be selective in the incentives they offer and the support they provide, so as to guide foreign investment into those activities which they judge to have the greatest impact on the economy's capacity for sustained growth. Success will depend on selectivity,

because of the limited supply of personnel with the skills needed to do a good job of industrial programming and promotion. The strategy decided upon be followed up consistently over time, with determination to attain reasonable but challenging targets.

No fundamental changes seem to be called for in Barbados' official policies towards foreign investment. The crucial weaknessess are limited vision on the part of local counterpart investors, limited marketing and promotional skills and weak management and organisational skills in government and the local private sector.

References

Codrington, Harold, 'The Distribution of Private Foreign Capital in Barbados', Central Bank of Barbados, mimeo, April 1984.

Ranis, Gustav and associates, 'Production and Export Incentives in the Caricom Region', mimeo, May 1982.

Whitehall, Peter, 'Production in the Manufacturing Sector of Barbados, 1960-80', Central Bank of Barbados, mimeo, April 1984.

Appendix

Preliminary Tests on The Determinants of Foreign Investment

The test is based on the hypothesis that foreign investment is influenced by the following quantifiable variables:

(a) the growth in real income in Barbados, an indicator of the general level of confidence on the part of investors. Sustained periods of real income encourage new investment and ongoing depression tends to dampen capital formation;

(b) relative wage costs in Barbados and competing investment locations; the wages are adjusted for change in output per worker and measured in U.S dollars;

(c) a measure of the effects of tax sparing provision, explained below;

(d) time, used as a proxy for technological change.

We cannot distinguish between the competing hypothesis (i) that income growth determines investment (ii) that investment determines the growth of income, on the basis of evidence. We use the first of these notions on the basis of our observation of the Barbadians economy. Capital formation will determine production capacity and the highest potential output. However, the economy is never close

to full capacity in any major sector: average hotel occupancy for 1979-83 was no higher than 50%, only a handful of manufacturing firms regularly work more than a single shift and the volume of agricultural output remains substantially below levels which experts in the field believe to be sustainable. However, investors are usually forthcoming in larger numbers when the economy is buoyant, suggesting that this is regarded as an indicator of promising investment opportunities.

The effects of exemptions on company income tax may be calculated as follows. Net profit after tax (PRn), assuming that a foreign company paid income tax in its country of origin at a rate of Txf, is given by

$$PRn = PR(1-txf)$$

Profits before tax (PR) are the difference between earnings on output (Q) sold at price P, and costs, made up of labour costs (WL) and the cost of materials. All materials (IM) are bought outside Barbados (a simplifying assumption) at a price Pm. They are exempt from customs tariff.

$$PR = PQ - WL - PmIM$$

The potential benefit to the foreign company, assuming it has a credit in the country of origin for its national tax liability in Barbados (even though no tax is paid in Barbados) may be calculated from

$$PRs = txf\ (PQ - WL - PmIM)$$

The measure actually used in the texts (TXR) is designed to capture changes in potential saving which result from changes in product and factor prices, and it is computed per unit of output.

$$TXR = (\dot{P}x - b_w \dot{V}_w - b_m \dot{V}_m)\ txf$$

where $V_w = WL/O$

$V_m = PmIM/O$

and the dots indicate rate of change. Computations are made only for exports. Cost factors of this kind are of less importance to investors whose target is the local protected market.

The results of tests for total foreign private (IF), direct foreign investment (IFD) and portfolio foreign investment (IFP) are as follows:

$$IF = \underset{(0.84)}{28.37} - \underset{(-0.52)}{0.47y} \quad \underset{(-0.51)}{-1.57\ RWFX} + \underset{(0.27)}{0.01\ TRX} - \underset{(0)}{0.01t}$$

$R^2 = 0.26$ D.W. = 2.28 SEE = 14.52 F(4,13) = 1.15

$$IFD = \underset{(0.87)}{23.52} \quad \underset{(-0.71)}{-0.51y} - \underset{(-0.12)}{0.29\ RWFX} - \underset{(-1.02)}{0.03TXR} + \underset{(0.77)}{1.47t}$$

$R^2 = 0.11$ D.W. = 2.22 SEE = 11.64 F(4,13) = 0.40

$$IFP = \underset{(0.21)}{4.84} + \underset{(0.06)}{0.04y} \quad \underset{(-0.60)}{-1.28\ RWFX} + \underset{(1.56)}{0.05\ TXR} - \underset{(-0.90)}{1.48t}$$

$R^2 = 0.51$ D.W. = 2.65 SEE = 10.06 F(4,13) = 3.40

Table 1
Part 1

Gross Portfolio Investment

($000)

	1977	1978	1979	1980	1981	1982	Total Portfolio
PUBLIC UTILITIES	-2,625.9	-1,900.8	-4,149.7	2,683.5	53,139.6	-20,955.4	
HOTELS (Tourism)	-79.2	-4,655.6	-6,186.9	747.3	2,167.6	1,162.9	
DISTRIBUTION	310.5	37.0	5,523.3	34,616.6	27,046.6	80.8	
of which oil companies				33,848.1	26,744.9		
MANUFACTURING							
of which							
Food, Beverages	62.6	148.8		413.9	-31.3	176.9	770.9
Chemicals	700.0	137.3			-126.5		710.8
Textiles, Leather Goods	-382.9		1,992.4			1,165.8	2,775.3
Furniture Wood Products		-55.4	-46.6		-40.0	40.0	-102.3
Non-Metallic Minerals	38.9						
Basic Metals Products							
Machinery Equipments and Metal Products	1,231.4		-1,035.9	5,050.9		1,566.7	6,842.0
Miscellaneous Manufacturing		24.4					24.4

Source: Central Bank of Barbados - Balance of Payments Survey

Table 1
Part 2

Gross Portfolio Investment

($000)

	1977	1978	1979	1980	1981	1982	Total Direct	Total Portfolio	Portfolio and Direct
PUBLIC UTILITIES	-8.0			538.4					
HOTELS (Tourism)				728.0	548.9				
DISTRIBUTION	3,755.4	509.4	1,035.2	-47.2	4,768.9	3,358.0			
of which oil companies	3,683.8	332.6	618.9		4,863.1	2,987.4			
MANUFACTURING						5,087.4			
of which									
Food, Beverages	113.3	198.3	372.9	235.4	-11.1		908.8	770.9	1,679.7
Chemicals	1,099.9	67.0	1,103.5	20.0	1,002.4	1,028.0	4,320.8	710.8	5,031.6
Textiles, Leather Goods	-310.8				1,306.4		995.6	2,775.3	3,770.9
Furniture Wood Products					25.0		25.0	-102.3	-77.3
Non-Metallic Minerals						-3.6			
Basic Metals Products							15,996.4	6,842.0	22,838.4
Machinery Equipments and Metal Products			3,000.0		9,477.0	3,523.0			
Miscellaneous Manufacturing	120.0	997.5	-912.4		540.0	540.0	1,285.1	24.4	1,309.5
Total	9,828.0	1,797.4	1,047.6	308.4	1,682.9				

Source: Central Bank of Barbados - Balance of Payments Survey

Table 2

Foreign Debt & Service Payments

($M)

	National Debt(Foreign)	Public Sector Long-Term Investment	Government Interest Payments	Private Sector long-Term Investment	Private Sector		Rate of Government Interest Payments to National Debt
					Dividends	Interest	
1973	55.4	41.0	2.5	5.6	10.4	6.7	4.5
	42.8	-7.1	4.6	28.6	4.5	8.0	10.7
1975	44.1	-0.6	4.5	51.3	8.4	8.7	10.2
	50.2	5.5	3.7	38.8	6.2	3.3	7.4
	55.2	11.1	3.8	27.8	6.6	9.3	6.9
	89.2	32.0	5.7	12.2	7.3	5.5	6.4
	112.1	9.0	16.3	38.4	9.9	10.6	14.5
1980	163.9	53.7	15.6	13.6	9.2	10.3	9.5
	259.4	98.8	21.9	56.6	19.7	14.0	8.4
1982	287.0	35.2	35.2	22.2	14.8	8.0	12.3
Total		278.6	113.8	295.1	97.0	84.4	
			=40.8% of all government investment		181.4 = 61.4% of private long-term investment		

Source: Col. 1 Central Bank of Barbados, Annual Statistical Digest 1982
Col.2 Central Bank of Barbados, Balance of Payments 1982, Table 3
Col. 3, 5, 6 Central Bank of Barbados, Balance of Payments 1982 p. 11

Table 3

Foreign Investment, Exports and Capital Intensity

	% of Total Foreign Investment	Rate of Exports to Value added	ICOR	Cost Per New job ($000)	Relative Wage	Rate of Output in 1983 to 1978
Public Utilities						
Hotels						
Distribution						
Oil Companies						
Manufacturing	(100)	1.17			100	
Food, Beverages	(4.8)	0.35	1.52	77.43	131	-8.5
Chemicals	(14.4)	0.78	1.09	26.65	115	9.2
Textiles	(10.8)	1.76	0.67	6.80	57	10.1
Furniture, wood products	(-0.2)	1.00	12.90	74		
Metal Products & Assembly	(65.5)	1.89	0.88	23.17	53	165.8[a]
Other						

[a] Electronics, calculated from Economic Outlook 19.4.84 (A3(b)

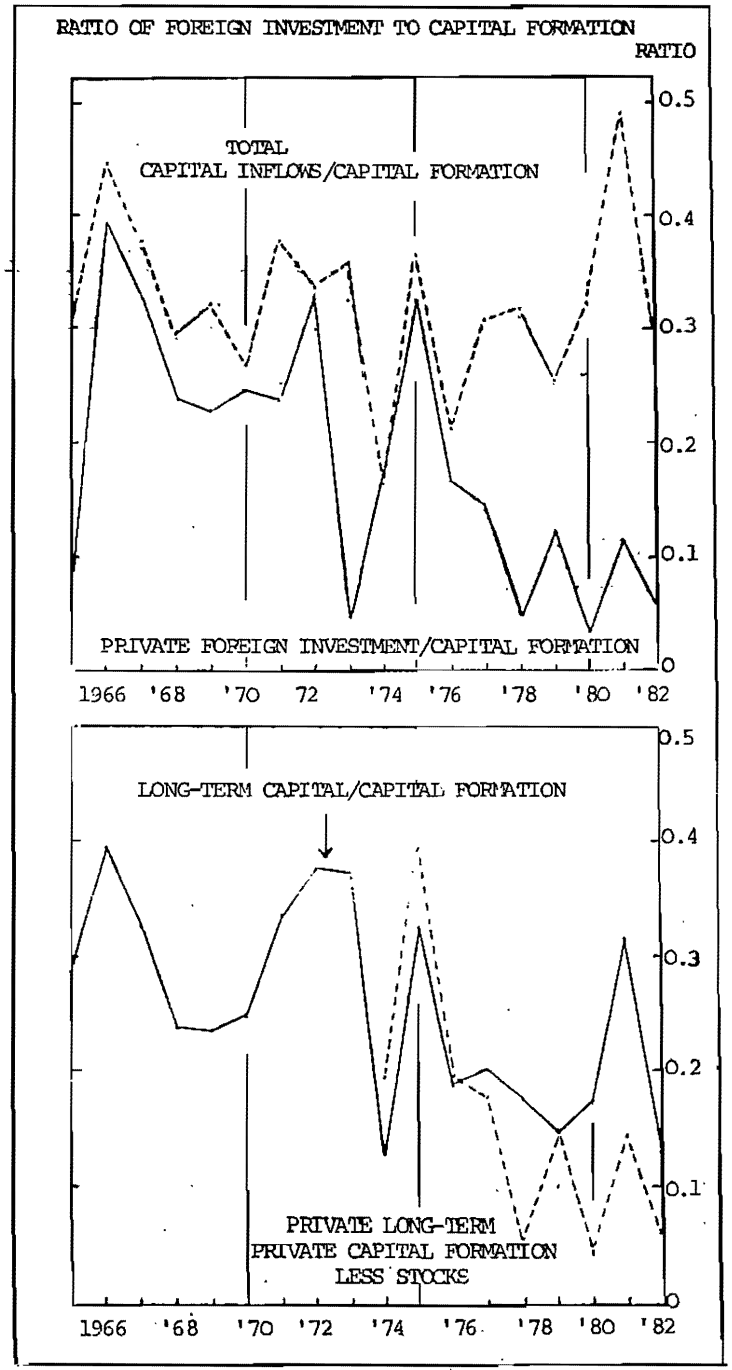
Sources: ICOR (1971-77) Cox [1982] Table 8 p.59
Cost per new job (1971-77) Cox, Table 10
Relative wage index (Average income), Cox, Table 14 (1975)
Ratio of exports to value added (1977-80) Cox, Tables, 7 + 17
Percentage of foreign investment: Central Bank BOP worksheets; in brackets, percentage of total investment in manufacturing

Table 4

Foreign Ownership and Export Orientation

	Firms with Foreign Participation			Firms with no Foreign Participation			Total All Firms
	Export Oriented	Not Export Oriented	Total Foreign	Export Oriented	Not Export Oriented	Total Foreign	
Food & Beverages	-	7	7	2	31	33	40
Clothing	7	6	13	4	33	37	50
Furniture	-	2	2	-	15	15	17
Paper & Printing	-	3	3	-	22	22	25
Chemicals	1	8	9	-	13	13	22
Plastics	-	4	4	-	8	8	12
Electrical	12	3	15	1	1	2	17
Total	20	33	53	7	23	130	183
%	11	18		4	67		100

Source: Extracted from IDC List of Manufacturing Establishments 1983


RATIO OF FOREIGN INVESTMENT TO CAPITAL FORMATION
RATIO
TOTAL
CAPITAL INFLOWS/CAPITAL FORMATION
PRIVATE FOREIGN INVESTMENT/CAPITAL FORMATION
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0.3
0.2
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1966 '68 '70 72 '74 '76 '78 '80 '82
LONG-TERM CAPITAL/CAPITAL FORMATION
PRIVATE LONG-TERM
PRIVATE CAPITAL FORMATION
LESS STOCKS
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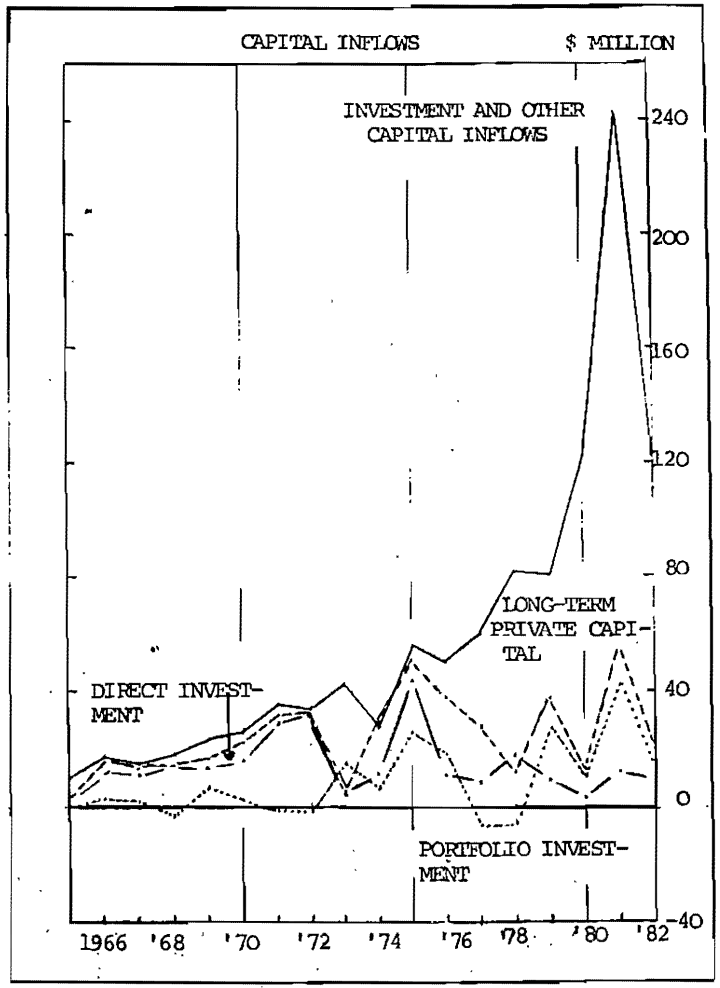
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