
CHAPTER 5

Investment Policy

In order to form opinions about investment policy we must establish what are the significant factors in the decision to invest. This chapter discusses these factors in the context of small open economies, drawing on Caribbean examples. Because of the foreign exchange constraint the focus is on investment in the tradable sector.

Investment Performance in the Caribbean

Investment levels in the Caribbean have not been disastrously low, judging by the performance of the five countries whose prospects are discussed in Chapter 8 (see Table 5.1). In the 1980s investment was in the range of 14 - 22% of GDP for Jamaica (at the low end), with a range of 21 - 33% for Guyana (at the high end). However, investment in all countries during the 1980s fell short of earlier performance. In most countries investment was below what was needed to increase productive capacity and to keep pace with technological change.

More crucially, investment in the export sectors seems to have slackened in relation to investment in non-tradables. Frequently growth was followed by balance of payments crises which brought expansion to a halt. Direct evidence on investment in exports is scanty but the proportion of construction in investment has been especially high in the 1980s in Barbados, Trinidad & Tobago, the Dominican Republic and Guyana, suggesting that the major proportion of investment went to the non-tradable sector.

Government investment has from time to time been severely cut back in efforts to reduce the overall fiscal deficit. However, in general, efforts were made to protect government investment from the most severe cuts. The relationship between government investment and increases in income has generally been positive.

The Dominican Republic seemed in 1990 to have the most promising investment prospects for the 1990s. Although the rate of expansion in investment has slackened, real investment continues to grow. The country attracts direct foreign investment, albeit at levels which have diminished in comparison to those of the 1970s. Investment efficiency, as measured by the incremental capital output ratio, has been improving.

Jamaica's investment performance is not quite so encouraging, but it seems to be on the mend. Real investment increased slowly in the 1980s. Investment

efficiencies measured by the ICOR have been somewhat better in recent years. Nonetheless, there is still no direct foreign investment of any significant magnitude in Jamaica.

Trinidad & Tobago has struggled throughout the late 1980s to maintain real investment and the share of investment in GDP. However, the country has been unable to replace lost oil revenues and to restore output growth. Investment seems to have stabilised in real terms and as a percentage of GDP, but significantly below the 1970s level; there has been no direct foreign investment in recent years.

Barbados has suffered a fall in investment in real terms and as a proportion of GDP during the 1980s. Moreover, an increasing proportion of investment was for house and commercial building. As a result, the investment efficiency measured by the ICOR declined in the 1980s. Direct foreign investment has been negligible for most of the 1980s.

Guyana remains something of an enigma, with sustained real investment and a high ratio of investment to GDP. Investment efficiency seems to have increased, with lower incremental capital output ratios in the 1980s than in earlier periods. However, there has been no direct foreign investment and the economy has stagnated at a low level of production.

Table 5.1 Investment Data – Selected Countries

	<i>B'dos</i>	<i>DR</i>	<i>Guy</i>	<i>Ja</i>	<i>TT</i>
Investment/ GDP ratio, 1980s avg (%)	23	21	27	20	21
ICOR, 1980s					
Max (yr)	6.7(82)	2.4(82)	5.1(88)	1.7(82)	3.1(81)
Min (yr)	0.9(80)	0.5(88)	0.5(87)	0.6(84)	0.8(80)
Direct Foreign Investment/GFCF, 1980s avg (%)	2	4	3	-	6

Source: IMF, *International Financial Statistics*

The Determinants of Investment

The accelerator is the standard approach to the determinants of investment used in most recent analyses of developing countries (for example Khan, 1988, Blejer and Khan, 1984, Tun Wai and Wong, 1982), but it may not be the most useful for open economies. The accelerator, which finds the motive for investment in the growth of income in previous periods, is of importance only for the non-traded sector of open economies. If the accelerator is weak and investment in non-tradables is slow government investment can always be increased to make up the deficit. However, this policy may be sustained only if the output of tradables grows quickly enough to support the importation of the additional investment goods required, and the import demand from the additional income generated by the expansion of non-tradables. To put the argument another way, there is always a rate of growth of non-tradables that can be supported by the growth of tradables. If that growth is not achieved because of limited private investment in non-tradables, and if the excess demand for non-tradables does not produce a sufficient investment response from the private sector, government may make appropriate investment to close the gap.

In the tradable sector investment incentives should not vary perceptibly with the growth of incomes in their potential market because small countries account for such a miniscule share. Even in a sluggish world economy such countries may find an abundance of opportunities for expansion, in their areas of comparative advantage.

For investment in the tradable sector we may compare the expected return on the project with the cost of the capital needed to establish it. In small open economies costs are largely exogenous and returns contain a substantial exogenous element, because the product is exported and the capital goods are imported. One may establish a relationship between the expected return, net of costs, at international prices, and compare with investment in the tradable sector, as the basis for investment policy. There are a number of factors and circumstances which have to be allowed for in making this calculation, and we devote this chapter to considering them.

The calculation of the expected net return involves parameters about which judgements may vary. The inferences to be drawn and the policy implications in any particular case will therefore be subject to interpretation. They will depend on the rate used to discount future returns from the project, projections of the technology to be embodied in the investment, the probability distribution of the expected returns, the assumed life of the project and the proportion of the invested capital that may be recouped should the project not live up to expectations. With so many factors about which we cannot be certain, a wide range of possibilities may have to be entertained for the relationship between the rate of return in any country and the rate of investment.

Investment in the local tradable sector may be thought of as a function of the premium that investors receive over the expected return in locations that supply

a product of comparable quality. The analysis is complicated, in cases where structural changes are envisaged, by the need to incorporate potential rivals and new export products. The premium on local investment may be widened by tax and other policies.

We would not expect rates of return to be equalised internationally among all types of activity. The textbook assumptions of shared knowledge and technology, and variable factor proportions, do not obtain in the real world. Within each product grouping, however, we would expect the decision to locate marginal investment to be made with a view to the highest expected net return, allowing for transport cost differentials and country risk. The countries that compete with local suppliers may differ with the economic activity.

This activity-specific equality of international rates of return is to be regarded as a long term tendency, and it may never be fully realised in actual circumstances. In the short run technology and information differs among firms; while differences in existing knowledge will tend to disappear over time, the march of technology and different rates of diffusion mean that there is a continuing (and sometimes widening) gap of knowledge. Measurement of rates of return and associated investment is best done over suitably long periods – with observations averaged over perhaps five years. For shorter periods the assumption of common technologies should be explicitly recognised, particularly when the investment policy is intended to effect a change in the structure of exports, from traditional exports which are losing their comparative advantage to newer products, or from relatively undifferentiated commodities with little value added per unit to higher quality goods with more value added. The policy maker needs estimates of the elasticities of an equation such as:

$$I_i = f((v_i^* - v_{ic}^*) / p_{ki}, z_i)$$

where i indicates the activity, the v_i^* 's are expected rates of return for the home country and the competition, with allowance for country risk, p_{ki} is the price of the investment good and z_i is a vector of other investment determinants. The v_i^* 's are also properly treated as vectors, with values depending on the investor's domicile and his liability for tax on his returns from the project.

The above is a partial approach, and it assumes among other things that factor proportions do not change in response to differing rates of return. An alternative approach, applicable in some cases, would take the point of view of a global firm contemplating its allocation of investment among competing countries, each with different characteristics of risk, return and product quality. In this case technology, information, sources of finance and factor proportions would be common to all producing units.

The rate of investment is related to the maturity of the product in its target market. A new product attracts a rapid surge of investment once a pioneer demonstrates its profitability. This often leads to over-expansion as newcomers crowd the market, and the investment boom may be followed by a slump. This cycle has been evident in the Caribbean in tourism, some export agriculture and

real estate. It suggests that incentives be withdrawn during the boom in order to reduce the danger of over-investment. A variety of circumstances may set the expansion in motion. The maturing of a competing product may set off a search for a replacement which may be marketed on the basis of novelty, as in the case of some tourism. Technical change may stimulate some investment: jet airliners made mass tourism possible, and microcomputers are responsible for the evolution of the data services industry. Technical change may also depress investment, as has happened with sugar and bauxite, both adversely affected by the increasing use of newly developed substitutes (high fructose corn syrup and plastics, respectively). Changes in tastes, which may be engineered by firms with sufficiently large promotional budgets, also spur investment, as in the case of Puerto Rican rums in the 1960s and cruise liners in recent times. Deliberate government action may also stimulate investment; Caribbean examples include casinos and offshore business services. Some investment booms can be put down to pure serendipity.

Government might choose a judicious mix of activities for intense promotion and support. Some activities might be chosen on the basis of calculations of future comparative advantage, taking account of expected technological changes, expected developments by competitors and product development. Other selections should respond to interest expressed by the private sector.

The investment market in small economies is segmented by size. The small investor, whose capital is typically in the region of US\$0.25 million in the Caribbean, is involved in import substitution and in such non-tradable activities as personal services and retailing. Large and medium sized firms, which, with capital of US\$1-10 million, are still quite small by international standards, are in the export sector as well as the non-tradable sector. Profit rates for the latter are driven by international comparisons, but small firms are not much affected. Their profitability levels are highly variable, and differ widely between firms. Since they are confined to the limited potential of import substitution small businesses may be regarded principally as a school for entrepreneurship, from which people graduate into larger firms, and investment policy may concentrate on large firms.

The quality of the human resource base helps to determine the quantity and quality of investment. A high proportion of skills in the labour force, a sound basic education (generally distributed across the population), and better-than-LDC averages for sophisticated skills, all attract investment with high value added per unit of output. They also form a useful incubator for domestic entrepreneurship, for identifying new products, adapting processes and technology, and increasing product differentiation. In addition, they provide a welcoming environment for the importation of additional skills. There seems to be a high pay-off for government expenditure on education, as an investment incentive for the long term. This poses a severe dilemma for governments needing to trim fiscal spending in order to stabilise the economy, as education accounts for a very large slice of all government budgets.

The pay-off to education is reduced by migration, particularly as the more

skilled have greater international mobility; but remittances and the enhanced contribution of returning migrants, who have added an intimacy with sophisticated technology and modern organisation to their already superior skills, may well compensate fully. Return migration is mainly inhibited by poor economic policy which destabilises the balance of payments, depreciates the currency and results in high inflation. To some extent human resource deficiencies may be supplied by immigration, but unless this is married with a strong domestic skills base, there is an increasing loss of local sovereignty, and the policy making function begins to resemble the model of the French Caribbean dependencies, where living standards are relatively high but the native population does not set economic strategy.

Natural resource endowment has sometimes been considered a factor influencing the rate of investment, but there is no good empirical support for that position. Countries with few natural resources invest as much as countries that are well endowed, and there are numerous examples of well endowed countries where investment is very low. Tastes, technology and geography may determine whether natural resources have economic value and whether they are exploited, and market demand may well determine whether exploration is undertaken to uncover and quantify them.

Fiscal, exchange rate and interest rate policies have an effect on the rate of investment. Because investment involves a long term commitment investors are hesitant when they anticipate exchange rate volatility and high inflation. Although the prices of tradables and the costs of their imported inputs are not affected, inflation and volatile exchange rates make for unpredictable domestic cost movements which increase the uncertainty of expected returns. We have argued in earlier chapters that inflation can be subdued only by stabilising the exchange rate, and that the exchange rate may be controlled in the short run only by adjusting aggregate demand by means of the fiscal balance, so fiscal policy is the key to a macroeconomic policy environment that favours investment.

Policies are likely to carry most conviction with investors in open economies if they manifest a commitment to a fixed exchange rate, in terms of whatever is the commonly regarded *numeraire* (in the Caribbean it is the US dollar); failing that, government must be willing to move the nominal exchange rate so as to avert a build up of arrears of foreign payment and a considerable volume of unofficial foreign transactions. Governments that have failed to achieve economic stability face a dilemma: to maintain a fiscal stance for long enough to establish policy credibility may involve an extended period of little or no growth in incomes and worsening income distribution, circumstances with which the society may grow weary before investor confidence has been restored. There appears to be a way out only if sufficient excess productive capacity exists in the tradable sector to allow export expansion in the short term.

Retained earnings are another variable sometimes suggested as an investment determinant, but we have reservations. Admittedly, retained earnings are the most significant source of new investment, but we are not convinced that they

will be invested in the country or company where they originated. Only in these cases could we enter profits retained in the home country as a factor influencing investment in the country, or retentions by global companies as influencing investment in their principal area of activity. It is surely more plausible to regard them as part of the international flow of finance which may be invested locally depending on the relative rate of expected return, as outlined earlier in this chapter. However, there may exist a tendency in some firms to favour activities with which they are already familiar, and retained earnings may be an important factor in particular circumstances. They must be dealt with by exception.

Oligopolies in the production of non-tradables may distort investment allocation by attracting marginal investment to the non-tradable sector at the expense of tradables. While diversion of funds and personnel to import substitutes is of no great consequence, diversion to non-tradables, which account for a larger share of GDP than for tradables even in the most open economies, could inhibit growth by depressing foreign exchange-generating tradables in favour of foreign exchange-using non-tradables. Commonly in small open economies half a dozen large firms are dominant in each of the major non-tradable activities: wholesaling, banking, construction and business services. The prices of non-tradables may therefore be higher, and their quantities lower, than would prevail in a competitive market. This may create over-investment in non-tradables from time to time, diverting human resources towards real estate and other non-tradable activities. The supply of finance for the tradable sector is not affected because funds are available from international markets to satisfy any profitable opportunity, but non-tradables may preoccupy the attention of managers whose skills are needed for export promotion. The existence of domestic oligopoly is a rationale for tax policies that discriminate against investment in non-tradables; taxing away their monopoly profit may serve to focus greater attention on the export sector.

We have several reasons to believe that the amount and productivity of investment increases in response to selected items of government expenditure. Expenditures on education enhance the human resource and thereby attract more productive investment, a factor that was discussed earlier. Government expenditures on economic infrastructure are highly productive of private investment, up to a threshold where the country has been provided with internationally comparable transportation, communications and public utilities. Beyond that, diminishing returns set in, and there will be a point beyond which the productivity of further government investment in infrastructure will be negligible.

Generalisations about the productivity of investment in infrastructure are made difficult by the fact that government may not supply all the services itself, and no guidelines exist for determining under what circumstances they should or will be provided by private firms. The infrastructure threshold, below which no investment takes place, varies with the investment project; companies exploiting minerals or engaging in major export agriculture often require very little by way of infrastructure. They install their own transport, housing, public utilities, social services and recreational facilities, in many cases. Most manufacturers and tour-

ism companies require that these services be provided, while electronics firms and those providing traded services may require a good educational standard as well. The geography and topography of the country also determine the required spending on infrastructure; sea defences for Guyana, where most of the settled area lies below sea level, are an expenditure which most other countries do not incur.

Government expenditure in support of research and developmental activity is another potentially productive incentive for investment. Subventions are most effectively channelled through private firms and institutions. Small developing economies have pressing needs for market and process research, involving such items as standards of acceptability, legal and administrative regulations affecting trade, the liabilities to which suppliers are subject, the nature of the competition, and the evolution of technology in the market for the export and related products. This support might include data gathering and dissemination, quality control, adaptation of techniques to local circumstances, and research into the implications of local peculiarities (such as the effects of soil types and climate on the productivity and quality of agricultural products).

Government subventions may also improve the productivity of investment by defraying some of the costs of developing new markets. In most cases the individual firm cannot fully realise the returns on its development costs, and often firms cannot afford the up-front costs of developing new markets, including learning the market, informing buyers and establishing a track record. Tragically, often firms only realise this when they have already fully committed themselves to new markets, and many promising export ventures have floundered because they found after the fact that they could not afford the cost of learning. Government may need to underwrite some of these costs to permit private investors to realise the potential gains from their experiences.

Funding specifically earmarked for venture capital may be highly productive in selected areas. Unfortunately, there is no way of knowing in advance where the pay-off will come, so direct government subvention is usually not the optimal way to promote venture capital. But budgetary support by way of special tax incentives is a useful alternative. Government finance for export credit and non-commercial insurance may also be effective stimulants for investment.

While the above gives strong reasons to expect increased private investment and more productive investment to result from government expenditure, we have no means of quantifying the relationship. Beyond some point additional government expenditure has diminishing returns, and the returns may even become negative eventually. Long before then, some government expenditures may be quite wasteful – military expenditures are the most frequently cited – but it is not easy to gain a consensus on which areas are to be so classified. The empirical tests that have estimated the effect of government on private investment have concentrated on government's investment spending, but some current expenditures also increase the productivity of private investment, whereas not all government investment does. Furthermore, the private investment yields on government

spending appear with varying lags: market development spending may have a fairly short pay-off, research on suitable crop varieties for local conditions may take somewhat longer to show effects, while educational improvements and infrastructure may yield benefits only in the long term. However, the effects which take longer to appear may be very much more significant.

With the present state of our knowledge on these matters, an incremental approach to the assessment of government's effect on investment is perhaps the best that may be suggested. Existing government spending would be examined, item by item, and judgements entered about the probable investment effect of increasing or decreasing expenditure by some standard increment. These calculations would then be used to help in assigning priorities for expansion and contraction of spending to achieve the overall fiscal target.

The placement of international investment so as to minimise tax liability is a possible motive for the location of investment. To measure investment response to this motive requires explicit comparison of the tax provisions of the countries the investor might be expected to consider, as well as the provisions included in double taxation treaties among them. This adds a major additional data burden for the analysis of investment determination, and there has been no attempt to establish a quantitative relationship, though the tools exist for the exercise to be undertaken. The amount invested with LDCs in response to such incentives appears to be quite modest, however. Most financial institutions set up in LDCs for tax purposes manage investments which are placed in industrial countries.

A more substantial proportion of investment in LDCs may be motivated by opportunities for transfer pricing that minimises taxation. Estimates of the extent of transfer pricing are highly controversial, and knowledge of how a particular firm has benefited from transfer pricing does not indicate how important these considerations were in the investment decision. While governments ought to be aware of transfer pricing possibilities there is little that can be inferred by way of policy recommendation.

Investment decisions are influenced by non-economic factors, most crucially by the stability of political arrangements. In the absence of a stable polity investment is unlikely, no matter how strong the other incentives may be. A satisfactory political reputation is built up over a decade or more, and is an asset to be jealously guarded, since it may be dissipated quite rapidly. Many other factors may influence specific investments, and policy makers should not neglect them, though they cannot formulate economic policy to take advantage of any incentive they provide. They include personal preferences of investors, traditional ties of trade and finance, similarity of language and culture between the origin and destination of investment, the attractiveness of the social and physical environment, and the strategic importance of the host country, which may sometimes benefit from political pressure on its behalf.

The efficiency of government administration and government's philosophy with respect to private investment are fundamentals for the growth of investment. This study does not attempt to discuss their importance, but that is not to deny that they are an essential prerequisite.

The Policy Implications

Our analysis suggests that the following have a strong influence on investment: the expected return, compared to that of competitors and to the cost of the investment project, the development of the economic infrastructure, the choice of products at a suitable maturity on the product cycle, the quality of human resources, the credibility of economic policies and the stability of political arrangements. Government expenditures have a strong but diffuse effect, operating at several levels and through different channels. Firm size is strongly correlated with investment in the tradable sector, while the prevalence of oligopoly exerts a weak influence in favour of non-tradables. Tax management considerations are a weak influence on investment in LDCs, as are non-economic factors. Natural resource endowments and retained earnings are not expected to exert any influence.

The most attractive policy regime for investment in tradables would therefore seem to be as follows: a strong tax bias in favour of the expected returns on tradables, through the use of selected tax incentives; a well developed economic infrastructure; a high standard of education at all levels (this might in practice imply competitive rather than general access to education, though a case can be made for universal primary education); fiscal policy that maintains a balance of external receipts and payments over the medium term, so as to avoid exchange rate movement and contain inflation; and government expenditure on selected areas of support for exporters, such as market research and quality control, using a judicious mix of its own initiatives and accommodation to private interests.

Devaluation, which has tended to be the central investment promotion policy in recent "growth oriented" adjustment programmes, will promote investment to the extent that domestic costs are expected to lag behind exchange rate changes, thereby increasing expected net returns. In practice, there is often some doubt as to how the market will project the domestic cost reaction. Devaluation is definitely investment-promoting when it brings the exchange rate in line with the trend in fiscal policy, and is accepted as a means of making the overall government economic strategy credible. It must not lead the country backwards along the product cycle, by making the cost of labour so cheap in countries with relatively well educated labour forces that investment is attracted to products which cannot make use of the comparative advantage offered by education. The exchange rate that satisfies these conditions is to be engineered through fiscal adjustment. The equation of domestic resource costs in export and import-substituting activities, which has also attracted considerable attention in recent adjustment programmes, is not considered important because of the limited potential for import substitutes.