

SAVINGS AND INVESTMENT IN THE
BARBADOS ECONOMY (1965 - 1990)

by

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November 1994

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Introduction

Barbados' ability to regain the rate of expansion in economic activity of the 1970s and sustain future increases in income and employment hinges critically on an adequate level of investment activity. Achieving the desired higher level of investment also depends on the generation of sufficient level of savings with which to finance the needed investment.

Until recently foreign savings had played a significant role in the financing of investment in Barbados. Indeed, gross capital formation, which had grown steadily from the mid-1960s, began to taper off around 1982, about the same time that foreign savings began to dry up. In order to re-stimulate gross investment in a period of declining foreign savings the role of domestic resource mobilisation becomes critically important. Higher domestic savings help to make up for the shortfall in foreign savings; but equally important, they help to reduce the country's dependence on foreign savings, and hence minimise the risk of possible burdensome debt overhang in future.

This paper is primarily concerned with the behaviour of savings and investment in post-independence Barbados. The focus of the analysis is on the historical evolution of the variables, their critical determinants as well as the relationship that they bear with each other. The role of the state is stressed; for instance, the differential roles of public and private sector investment and their relationship to each other is discussed.

The rest of the paper is organised as follows: Section 2 provides a brief overview of the pattern and behaviour of investment and savings in the post-independence period. In Section 3 we examine the main determinants of the two aggregates, focussing on private investment and private savings. Section 4 is devoted to the way forward, suggesting possible strategies for increasing savings and investment in Barbados. The paper concludes with a brief summary of the main issues discussed.

2. Overview of Investment and Savings

Domestic Investment

Gross domestic investment in Barbados since 1961 falls into three main growth patterns. After a period of modest growth (1961-71) averaging 6.9% per year, gross investment grew rapidly in the late 1960s, achieving an impressive average growth rate of 16% per annum from 1968 to 1981. The ratio of gross capital formation to GDP also averaged 23.3% during this period, from 17.7% for the seven years ending in 1967. This period of strong growth coincides with the time when there was rapid growth in tourism and

manufacturing infrastructure.¹ After 1981, gross capital formation fell, in response to declining profitability in the tourism sector. Between 1982 and 1990, average gross investment growth fell to 4.8% per annum and at the same time the ratio of gross investment to GDP fell to 11.7%. This latter period of declining investment also marked the period of the lowest real growth in the reporting period.

Private capital played a major role in the investment profile, providing about 80% of the investment in the period (1968-81) when investment grew the fastest. However, in the five years to 1990, the share of private sector investment declined to 74%, lending further indicative evidence of resource shift towards the non-traded sector since the 1980s. It may also be argued that the resource shift may be a reaction to the virtual slowdown in external capital inflows; the issuance of too much debt may have induced commercial banks to hold more public debt than warranted and they may have been forced to scale back private sector investment loans. Public sector investment complemented private sector capital, placing strong emphasis on infrastructure, education, health and social services.

Gross Domestic Savings

Both domestic and foreign savings were important sources of finance for domestic investment. Foreign inflows were markedly significant during the 1970s and early 1980s when gross investment grew very strongly, providing more than one-third of investment

finance. From the mid 1960s, gross national savings demonstrated a consistent pattern of growth, expanding steadily at an average annual rate of 14.4% to the mid-1970s. During that period it averaged about 16% of GDP. From that time it grew faster, averaging 21.6% of GDP, in line with the rapid growth in economic activity to the early 1980s. As should be expected, private sector savings provided the bulk of gross national savings, accounting for more than 90% of domestic savings for most of the period of the analysis.

Efficiency of Investment

The grave implications for growth of the post-1981 decline in investment is further brought into sharper focus by indications of a secular deterioration in the efficiency of capital resource use. The available evidence (table 1) suggests that the average incremental capital-output ratio (ICOR) for the ten years ending in 1990 rose to 4.1 compared with about 2.1 in the previous ten years ending in 1980. This implies that prior to 1980 capital stock had to be increased by a factor of 2 to obtain a unit rise in real output. However, between 1980 to 1990, the stock of capital had to be increased by a factor of 4 to get the same unit increase in real output. When the issue is examined in a five year cycle one notices a sharp drop in the efficiency of resource use in the five years to 1990 when the average ICOR rose to 4.7 compared with 3.4 between 1981-88 and 2.2 and 2.1 respectively for the periods 1976-80 and 1971-75².

The decline in the productivity of capital appears consistent with the behaviour of the average productivity of labour which also declined at an annual average of 0.5% in the period 1986-90, after increasing at an annual average rate of 1.9% between 1981-90 (see Boamah and Campbell, 1992).

Summary Indicators of Savings and Investment in Barbados

	1966-70	1971-75	1976-80	1981-85	1986-90	1966-90
Savings Ratio (%) GDS/GDP	14.1	13.8	19.7	16.4	14.8	15.8
Investment Ratio (%) GDI/GDP	21.6	21.1	24.6	20.3	17.5	21.0
Resource Gap (%) GDS-GDI/GDP	-7.4	-7.3	-4.9	-4.0	-2.7	-5.3
ICOR	2.33	2.06	2.20	3.44	4.70	2.95

3. Determinants of Domestic Investment and Savings

Domestic Investment

It cannot be gainsaid that statistical models have had limited success in explaining and predicting changes in investment spending. Recognising the inadequacies of the neoclassical investment relations for developing countries, most empirical studies on

investment demand in developing countries have proceeded eclectically, identifying some key economic variables that are more likely to influence investment demand. The works of Blejer and Khan (1984), Greene and Villanueva (1991) and Leff and Sato (1980) are largely along these lines.

These studies identify, *inter alia*, real output, the user cost of capital, real credit availability to the private sector, public sector investment, long-term private foreign capital inflows and the stock of external debt as some of the important determinants of private investment in developing countries. These studies therefore seek explanation to the secular decline in investment as due to inadequacies or otherwise of some of these determinants of investment demand.

On the other hand other researchers attribute the recent decline in investment in heavily indebted countries to a disincentive effect arising from the post-1982 debt crisis. Authors like Krugman (1988) and Sachs (1988) assert that investment has declined since 1982 because of debt servicing obligations which may have prevented them from appropriating additional output for capital accumulation. Others like Cukierman (1980), Bernanke (1983) and Pindyck (1991) also attribute the investment decline to unprecedented policy uncertainty after 1982 which could have increased the perceived risk associated with investment. Since investment is largely irreversible, investment decisions are either cancelled or postponed in response to increased investment risk.

In a recent study of investment pattern in Trinidad and Tobago, St. Cyr (1991) found that changes in investment demand are mainly determined by changes in real GDP. Similarly Boamah and Holder (1993) identify public sector investment, changes in real credit to the private sector for investment purposes and the stock of real external debt as the main determinants of private investment demand in Barbados. The user cost of capital and real foreign inflows were only marginally significant. Public sector investment appears to be largely complementary to private sector investment, a finding which is not surprising in view of the heavy concentration of public sector investment in the provision of basic infrastructure. The strong influence, which public sector investment plays in private investment expenditure for Barbados, corroborates the earlier findings of Blejer and Khan (1984).

Domestic Savings

In the literature, the main saving or consumption determinants fall into four groups, income and wealth, rate of return, foreign saving and demographic variables. Fry (1989) extended the list to include the domestic and foreign debt of government, and the terms of trade. Fry (1980) also emphasises that the growth rate of income is an important complementary determinant of savings irrespective of which of the competing hypotheses of savings one is considering. The rate of return variable is usually proxied by the real rate of interest whose use in studies on developing countries has been to test the interest elasticity of savings and to verify the McKinnon-Shaw hypothesis.³

Fry (1989) finds a positive relationship between the real interest rate and savings for some developing countries, suggesting that the maintenance of positive real interest rates can generate increases in national savings as recommended by advocates of financial liberalization policies. However, Srinivasan (1993) reminds us that the small size of the interest elasticity of savings, even when positive, suggest that policies of financial liberalization may not generate much additional savings, even if they raise the return to saving. Here in the Caribbean Watson and Ramlogan (1991) find evidence of positive and significant influence of the real interest rate on savings in Trinidad and Tobago.

The relationship between savings rates and the age structure of the population is still not a definitely settled issue in the literature. Leff (1969) finds an inverse relationship between dependency rates and savings but this has been challenged by Rossi (1989) and Ram (1989) on grounds of specification error and selection bias. However, Craigwell and Rock (1990), using cointegration methodology, confirm the significant impact of dependency rates in the savings function for Trinidad and Tobago.

Not much work has been done on savings in Barbados. A study by Boamah and Holder (1993) suggest that real private savings in Barbados appear to be largely determined by real output, the stock of real external debt the real foreign savings, the terms of trade and a demographic dependency rate. Real output and the terms of trade exert a strong positive influence on private savings. However, the proportion of people under 15 years and over 65 years in the overall population seem to have an inverse influence on private sector

savings. Foreign saving is seen in the literature as a substitute of domestic savings, encouraging a higher consumption pattern than would otherwise be the case. The results for Barbados appear to corroborate this view.

4. The Way Forward

The chart (p.5) suggests that a fair proportion of investment in Barbados has been accounted for by foreign capital. The relative decline in the resource gap in the 1980s compared to the 1970s is more the result of a faster rate of decline in the investment rate relative to the savings rate than any significant improvement in the external current account. Efforts to raise both the savings and investment rates must be intensified, at least to the levels of the mid-1970s when they averaged about 20% and 25%, respectively. Favourable results with regards to savings depend on the success of increasing public sector savings to complement private sector savings. This may be achieved through more effective tax policies and greater economy in government consumption expenditure. It is hoped that the on-going reforms in the taxation system would provide a useful impetus in this direction.

Current evidence suggests possible resource shift away from the traded sector towards the non-traded sector. (See Boamah and Campbell (1992)). This implies a secular decline in relative profitability in the traded-sector when compared with the non-traded sector. To the extent that the non-traded sector is foreign exchange using, it is important that this

trend be reversed otherwise future growth in overall economic activity would be hampered. Moreover, a more competitive traded sector could help stimulate non-traditional exports and efficient import substitution. This calls for changes in the structure of trade and fiscal incentives to make them patently biased toward investment activity in tourism, export agriculture, export manufacturing, information services and other export-oriented services. The on-going efforts to remove the present anti-export trade bias should provide a necessary fillip in this direction.

Policies to raise investment have traditionally focussed on attracting new investment under liberal fiscal incentives. However, equally important is capital spending on the refurbishing of existing manufacturing and tourism plants to equip them with new technology to improve operational efficiency. It may, therefore, be important to extend the existing fiscal incentive regime to allow retooling and refurbishing investment activities to benefit. Also important is human resource development in new and emerging technologies. A properly trained labour force in these areas should help raise average productivity in the country. As a spin-off, the country may place itself in good position to sell consulting services, in say, software development, engineering, economics, finance, accounting and general management to the region and to other developing areas like Africa.

Conclusion

The paper has examined the pattern of savings and investment in Barbados in the post-independence period of its development. The evidence points to declining trend in both the savings and investment rates, the latter exacerbated by indications of declining efficiency of capital resource use. Possible ways of raising both savings and investment have been discussed. In addition to measures to make more effective use of investment resources to raise efficiency, it cannot be over-emphasised that the investment climate must be supported by prudent fiscal and monetary policies to control inflation and provide an environment for improved real return on capital invested.

NOTES

1. Capacity in the tourism sector doubled during this period, peaking in 1983, after which profitability in the sector declined (Worrell, 1990)
2. To the extent that the ICOR attributes growth of output to the increment in the stock of physical capital due to new investment, it reflects the contribution of more effective use of the total existing stock of investment in human capital. Care should be taken therefore when the ICOR is used as a measure of efficiency. Also the overall ICOR for a national economy glosses over many complex economic facts.
3. The Mackinnon-Shaw (MS) hypothesis asserts that raising the interest rates to the free market equilibrium level increases the level of savings and investment for growth. Watson (1991) appears to confirm the M-S hypothesis for Trinidad and Tobago.

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