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INVESTMENT IN FIXED CAPITAL

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Introduction

Investment in fixed capital (often referred to as Fixed Capital Formation) is of vital importance to the economy because it involves expenditures on resources which are intended to enhance the country's capacity to produce goods and services, and therefore the incomes and living standards of its people.

In order to produce the output which generates income, raw materials must be combined with the three factors of production: land, labour and capital. Although these three factors of production are combined in different proportions depending upon the technological characteristics of specific types of production, a sustained increase in output almost invariably depends upon an expansion of the capital stock and/or of the quality and efficiency of the capital stock. Investment is necessary if the capital stock is to be expanded or its quality improved.

Although investment is necessary for economic growth, it does not always ensure growth. Firstly a certain level of investment is necessary simply to maintain the economy's capital stock at its existing level because capital will depreciate over time as equipment, buildings etc. wear out. The investment over and above that which is required to prevent the depreciation of the existing capital stock is referred to as net fixed capital formation.

Secondly investment will only make a contribution to economic growth if it is efficient or has net positive benefits. This means that the value of the resources which the investment generates must exceed the value of the resources which have been used up in undertaking the investment.

Thirdly economic growth will often require a number of complementary developments in addition to investment in capital. Among the most important are usually an increase in the training and skills of the workforce and/or an expansion of the workforce and an enhancement of the managerial, administrative and entrepreneurial capacities of the population.

Policies designed to promote investment in order to expand the capital stock as rapidly as possible formed a central plank of the development strategies in many developing countries in the post war period. In recent years however, much greater emphasis has been placed on the quality and suitability of investment. In particular this has meant promoting investment which is compatible with a country's natural resources and the size and skills of its workforce, and which enhances a country's ability to benefit from international trade. These concerns are evident in the investment policies being undertaken by the Government of Belize.

Investment in fixed capital in Belize takes different forms. Public sector investment involves expenditure on the transport infrastructure, on buildings and equipment for schools, hospitals and public administration, and the buildings and equipment needed for the public utilities.

Private business investment involves the development of land for agriculture, the building of commercial premises and expenditure on a wide variety of machinery, equipment, tools, transport etc. needed to operate the whole range of business activity in the country. Businesses, individuals and the public sector undertake residential investment.

Public Policy towards Investment in Belize

The Government of Belize has implemented a number of policies designed to encourage the private sector to invest in priority areas of the economy and in addition undertakes an investment program of its own along with the public sector enterprises. In this section we examine the economic rationale for the policies implemented in Belize, looking first at investment by the private sector and then at the public sector investment program.

Private Investment

In order to understand public policy in this area, it is necessary to look briefly at the economic factors which encourage private business investment and those which might inhibit investment. The factors which motivate private businesses to invest are often very complex and depend upon market opportunities, the availability of suitable technology and finance, and the relative costs of capital and labour. However, the profitability of investment will always be a major priority of a private business. Firms will undertake a particular investment in fixed capital only if the returns which they expect to receive from the investment exceed the costs which they incur in making the investment. The return to an investment is the contribution which it makes to the firm's output, and this will clearly depend upon the present and future demand for the firm's output and the prices at which it can be sold.

The costs of an investment depend upon the price which a firm must pay for the purchase and installation of capital goods and the cost of borrowing money (the interest rate) to pay for these goods. Borrowing is usually necessary because whereas capital goods must normally be paid for at the time of purchase the returns will only accrue gradually in the future. The costs and returns to other factors of production (land and labour) will also influence the decision to invest in capital equipment because it cannot be used independently of these factors.

In a small country like Belize where a large proportion of output is exported, Government policy can have only a limited effect on the demand for a firm's product, but it can make a contribution towards lowering the cost of investment by allowing firms, which meet certain criteria, exemption from duties payable on their imported capital goods. This is done through the development concessions program administered by the Ministry of Economic Development.

Firms are granted development concessions if they meet certain specified criteria with regard to their likely contribution to the earning or saving of foreign exchange, their employment creation and the size of the investment. These firms, in addition to duty exemptions on capital goods, are also allowed duty exemptions on their imported material inputs into production and exemptions from profits taxes for a limited period of time. The duty concessions in particular are likely to be an important influence on private investment because a very high proportion of fixed capital expenditure is on imported goods and in some industries, such as textiles, most of the raw materials are also imported. Belize must also compete for foreign investment with other Caribbean and Central American countries which offer similar development concessions.

One of the major factors inhibiting investment is the risk entailed in almost all investment projects. The risk arises because as mentioned above the returns to an investment accrue in the future, and so cannot be known with certainty at the time at which an investment is made. There are a number of causes of risk to investors in Belize, including the instability of primary commodity export prices, climatic conditions which affect mainly agricultural production and potential domestic economic instability. With regard to the latter the Government has a vital role to play in implementing the appropriate macroeconomic policies which promote confidence in the future stability of the economy.

Risk not only discourages firms themselves from undertaking investment but perhaps more importantly deters financial institutions from lending the money necessary to purchase capital goods. The commercial banks in Belize have often been reluctant to lend money for investment projects which they perceive to be too risky, especially those by small firms and farmers.

An important contribution to the financing of investment in Belize is made by the Development Finance Corporation (DFC), which extends loans to farmers and others who would normally have difficulty in borrowing money from the commercial banks. The Development Finance Corporation also offers credit at slightly lower interest rates than would be available from commercial banks. In addition, attempts have been made by the Government in recent years to encourage the commercial banks to increase their lending for business investment.

The Public Sector Investment Program

The Central Government and public enterprises are undertaking a major program of capital investment. This investment is concentrated on the rehabilitation and expansion of the transport infrastructure (roads and bridges in the west and south of the country, the international airport etc), and the improvement of electricity, water and sewerage supplies. The building and equipping of a new hospital and schools and a large program of agricultural development and research are also included in the Public Sector Investment Program.

The public sector undertakes this type of investment (often called social overhead capital) either because the private sector would be unwilling to do so (because it would not be profitable) or because it would not be economically rational or socially desirable for the private sector to build and operate these projects on a commercial basis. Many of the public sector investment projects are designed to encourage and facilitate private business investment in priority sectors of the economy. For instance the rehabilitation of the Hummingbird Highway and construction of roads in Toledo will reduce the transport costs of the export industries located in the south while the expansion of the airport is necessary to allow for an increase in the volume of tourist traffic. These public investment projects should therefore stimulate additional private sector investments to expand important foreign exchange earning industries.

Capital investment by the public sector in hospitals, schools and sanitation also makes an important contribution to the future growth of the economy, by providing a healthy and better educated workforce. This type of expenditure is often termed investment in human capital.

The Measurement of Investment in Belize

Fixed capital investment is very difficult to measure accurately even in the developed countries which have extensive facilities for collecting economic statistics. This is because investment is undertaken by a large number of different institutions, enterprises or individuals, many of whom do not keep accurate records of their expenditures and submit them to a relevant authority.

In Belize investment data is compiled by the Central Statistical Office on an annual basis. As most of the equipment and materials used for capital formation in Belize have to be imported, the Central Statistical Office begins by aggregating the value of imported capital goods plus the customs duties paid during the year. The data is obtained from customs receipts. Separate totals are derived for the three different categories of imports used for capital formation: construction materials, transport equipment and other equipment. To the first category is added the value of locally produced construction materials.

The totals in the three categories are then scaled up to allow for the local expenditure incurred in transport, construction activity, trading margins and installation of equipment.

An estimate is also made for expenditures incurred in land development based on budget statistics for Government expenditure and changes in the area under the cultivation of different crops. Land development is a very small proportion of total fixed capital investment spending.

The values obtained for spending in each of the four categories above can then be aggregated to derive the total expenditure on fixed capital formation in each year (see table 1). By deflating these expenditures by the appropriate price indices an estimate of real expenditures can be obtained, i.e. the effects of inflation are removed (see table 2). In table 3 total investment at current prices has been divided into public and private sector investments.

Another source of investment data for Belize is provided by the Ministry of Economic Development which administers the development concessions program of the government mentioned above. The value of the estimated investment in 1987, 1988 and that projected for 1989 by firms operating with concessions is shown in table 4.

The investments shown in table 4 probably includes the bulk of the private investment undertaken by medium-sized and large firms. The industries in which the investments are being made include bananas, citrus products, cattle, shrimps, sugar processing (petrojam), wood products, textiles, matches, soaps and detergents, plastics and tourism. Around 64 percent of the investment in 1988 was by foreign owned firms.

The level of Investment in Belize in the 1980's

The level of Investment in fixed capital in Belize declined very sharply in the early 1980's and remained depressed until 1986. In the last two years however, investment expenditure has recovered strongly (See table 1).

From a level of $95.8 million in 1981, fixed capital investment fell by 26 percent to $71.3 million in 1983. Investment by both the public and private sectors fell in this period, the latter by 38 percent (see table 3). The main reason for this steep fall in private investment is likely to have been the fall in export earnings which resulted from cuts in the U.S. sugar export quota, lower sugar prices, and the impact in general of the world economic recession on commodity prices.

The lower export earnings would have reduced the profitability of the export sectors and therefore discouraged new investment in these industries. In particular there was large scale disinvestment in the sugar industry with between 15 percent and 30 percent of the acreage taken out of cultivation. The lower incomes of exporters would also have fed through into the rest of the economy. With domestic demand depressed as a result, businesses supplying the domestic market would have been reluctant to expand their capital stock.

Investment briefly recovered in 1984 to $85.0 million but fell back in 1985 to $71.6 million. The fall in private investment in 1985 may have been partly caused by the rise in real interest rates at the beginning of the year. It may also have been caused by a perception by businesses supplying the domestic market that the stabilisation program introduced at the end of 1984 would prevent domestic demand from expanding for the foreseeable future.

In 1986 there were modest rises in both public and private investment with the total increasing to $80.0 million. The following year however, saw a major increase in private investment from $38.9 million to $73.0 million, a rise of 88 percent, while public investment grew more slowly from $41.1 million to $46.2 million. Total investment in 1987 amounted to $119.2 million. The growth continued in 1988 with public investment reaching $63.5 million and private investment estimated to have risen to $96.5 million.

The figures for investment by firms operating under development concessions also indicate a substantial rise in 1988. Investments by these firms increased from $19.8 million in 1987 to $37.0 million in 1988.

It is clear that Belize has undergone something of an investment boom in the last two years, and this is likely to continue in the current year because of both the projected rise in the Central Government's capital budget and the expected further increase to $50.2 million in investment by firms with development concessions. There are probably a number of reasons for this boom in private investment.

A substantial part is likely to have been residential investment, and this may be a reflection of demographic as well as economic factors. The Ministry of Economic Development figures however, suggest that agricultural, industrial and tourist investments are also expanding rapidly. In part, this probably reflects a growing awareness on the part of private business of the profitable opportunities which exist in the export sector as a result of the country's natural resource endowment and the preferential trading arrangements which Belize has with the U.S., U.K. and the Caricom countries. The steady improvement in the country's Balance of Payments since 1984 will also have played a part in promoting a higher level of investment especially by foreign companies because it will have increased confidence in the strength of the economy and the country's ability to maintain the present liberal system of trade and exchange controls. In addition the improvement in the finances of the public sector has boosted the level of deposits in the commercial banks and this has expanded the volume of domestic savings available for financing private sector investment. This will have eased the borrowing constraint which many local investors would have faced in the past.

TABLE 1

Gross Fixed Investment in Current Prices

Year	Gross Fixed Investment ($ Millions)	% of GDP at Market Prices
1980	88.7	25.1
1981	95.8	26.7
1982	81.0	23.3
1983	71.3	20.1
1984	85.0	21.6
1985	71.6	18.2
1986	80.0	18.9
1987	119.2	23.7
1988	160.0p	28.1p

Source: Central Statistical Office

TABLE 2

Gross Fixed Investment in Constant 1984 prices ($ Millions)

Year	Gross Fixed Investment
1980	101.3
1981	103.9
1982	83.0
1983	71.7
1984	85.0
1985	71.1
1986	80.2
1987	122.3
1988p	153.0

Source: Central Statistical Office
p: Provisional

TABLE 3

Investment in Fixed Capital Formation
by Public and Private Sector

$Millions

Year	Public	Private
1980		
1981	43.7	52.1
1982	45.7	35.3
1983	39.2	32.1
1984	36.1	48.9
1985	36.7	34.9
1986	41.1	38.9
1987	46.2	73.0
1988	63.5	96.5

Source: Central Statistical Office
International Monetary Fund

TABLE 4

Investment by Firms Operating with Development
Concessions 1987 - 1989 ($ Millions)

Sector	1987	1988	1989
Agriculture	12.4	23.1	27.1
Industry	4.0	7.8	12.0
Tourism	3.5	6.1	11.1
TOTAL	19.8	37.0	50.3

Source: Ministry of Economic Development

TABLE 5

Central Government Capital Expenditures Fiscal Year 1987/88

Ministry	Capital II	Capital III	Total
Health	809,727	21,055	830,782
Education	360,180	280,816	640,996
Agriculture	274,560	159,668	434,228
Natural Resources	2,627,537	5,942,642	8,570,179
Labour and Social Services	345,843	-	345,845
Works and Housing	6,548,392	1,312,176	7,860,568
TOTAL	12,155,900	7,716,357	19,872,257

TABLE 6

Gross Fixed Capital Formation as a percentage of GDP in Central American and Caribbean Countries

Country	GDCF/GDP	GDP Growth (%)
Bermuda (82-86)	19.7%	1.6
Barbados (82-86)	19.9%	2.6
Guatemala (82-86)	10.9%	-0.7
Guyana (82-87)	26.3%	-1.0
Honduras (82-86)	17.2%	2.2
Grenada (82-87)	33.4%	5.1
Jamaica (82-87)	20.6%	1.4
Belize (82-87)	21.0%	4.0