

## **Industrialisation Strategy in the Caribbean: Lessons from the Puerto Rican Experience**

The industrialisation strategy that was promoted in the Caribbean from the late 1940s was based on the Lewis model of “industrialization by invitation”, which essentially envisaged the development of industries through the attraction of foreign direct investment. The output of these industries would have to be exported since the markets of Caribbean countries were too small to sustain the development of manufacturing industries. Puerto Rico’s adaptation of the strategy was significantly different from that of other Caribbean countries and hence is useful as a learning experience.

The Puerto Rican strategy was named “Operation Bootstrap” and was based on attracting US entrepreneurs to the island while channeling the movement of redundant Puerto Rican workers abroad (to the United States). The strategy was conceived in two stages. In the first stage Puerto Rico would provide the social capital and required infrastructure, which would be financed through the sale of bonds in the United States capital market and local taxes. Government expenditures and policies would provide an important stimulus to the expansion of private investment, which assumed a leading role during this phase. In the second stage, American firms would ‘be induced to locate in industrial sites through an elaborate incentives programme. The incentives included: tax concessions, grants, subsidised rentals and utility rates and low wage rates.

The intention of Operation Bootstrap was to create economic self-reliance by attracting foreign seed capital to start new industries using local inputs such as labour, which would absorb the transfer of knowledge and technology. The local industrial class would then take up the baton through import substitution industrialization (ISI) with tariff protection. As these industries matured and capacities and efficiencies improved, ISI would be followed by an export-orientation of industrialization.

The actual experience differed from the intention. Most of the investment during the first phase of Operation Bootstrap was domestic spurred by local tax exemptions, which had been in place since the late 1940s. However, the second phase was marked by significant foreign investment in capital-intensive and assembly plant operations. The Industrial Incentives Act of 1978 was intended to bring Puerto Rican tax legislation in line with that of the mainland United States. The more generous tax incentive legislation was instrumental in facilitating US investment. Between 1960 and 1967 total US investment in Puerto Rico increased from 1.4 to 5 billion and continued to expand to 10, 15 and 20 billion in 1973, 1976 and 1978 respectively.

Puerto Rico experienced significant growth during the 1960s and 1970s with most of the income accruing to the local economy. However, from the 1970s an increasing proportion of income earned, over half by the late 1990s, has accrued to non-residents mainly through profits repatriated by US corporations. This experience is similar to that of other Caribbean countries that pursued a similar industrialization strategy. So what is

unique in the Puerto Rican development strategy? And what is its relevance for countries in the CARICOM region?

There are a number of significant factors in the Puerto Rican development experience. The most important of these is the status of the country as a territory of the United States. That status mitigated some of the problems other Caribbean countries faced during their pursuit of industrialization. Whereas local fiscal incentives were not sufficient to attract US based firms, tax incentives through the US internal revenue tax code stimulated the location of US corporations in Puerto Rico. They also led to the development of a strong manufacturing sector contributing 45% GDP and exporting manufactures of both high skill and technological intensity, in the case of pharmaceuticals and computer equipment, and manufactures of medium skill and technological intensity, in the case of electrical machinery.

Like other Caribbean countries the manufacturing enterprises that developed were capital intensive, which meant that other avenues had to be found to absorb labour. However, again fortunate for Puerto Rico because of its dependent status, the government was able to take advantage of two options that were not available to other Caribbean countries that had adopted the industrialization strategy. One option was migration to the US, which significantly relieved the pressure of unemployment. English speaking Caribbean countries did have this option in relation to the UK until the tightening of immigration laws from the 1960s. The second option that was available to Puerto Rico was federal transfer payments from the US, which as a percentage of national output, grew significantly from the 1970s; from 15% GNP over the period 1947-1971 to 25-30% GNP over the period 1971-1986

Federal transfers (from 10.3% between 1947 and 1971 to 21.4% between 1971 and 1986) were critical for preventing increase in poverty levels consequent on the increase in unemployment. Transfers were in the form of social security and welfare payments, which contributed to significant decline in the proportion of the population living in poverty. The latter fell from about 63% in 1970 to about 49% in 1990. Welfare payments became necessary, just as labour migration had become necessary, on account of the large-scale and capital-intensive nature of manufacturing undertaken by US corporations.

Puerto Rico's industrialization strategy led to significant real output growth during its early phase - 5.3% average during 1950 to 1960 and 6.4% during 1960 to 1970. Such growth was spurred by significant government capital expenditure in education, transportation, housing, communications and irrigation and by domestic investment, which was encouraged by the tax incentives of the 1948 law. Small-scale labour-intensive US firms in declining sectors of the US economy were also encouraged by the tax incentives to locate in Puerto Rico.

Growth slowed dramatically to an average of 2.6% over the decades of the 1970s and 1980s. This corresponded with the location of large-scale heavy capital investment in Puerto Rico by US corporations. This phase of industrialization was marked by assembly

plant operations and capital-intensive technology. It was also the phase of export-oriented industrialization as output was exported back to the United States largely through intra-firm transfers. The free movement of goods between Puerto Rico and mainland United States also facilitated the export-oriented strategy. Exports almost doubled from about 34% GDP in 1970 to about 67% GDP in 1990.

Puerto Rico's significant growth from the late 1940s to the early 1970s was not unique as other Caribbean countries that pursued ISI also experienced significant growth over most of the period. However, the ISI strategy of Puerto Rico was short lived (only until the late 1940s) whereas that of other Caribbean countries lasted until the 1980s. The other difference between Puerto Rico and the rest of the Caribbean is that the short-lived ISI strategy pursued by the former was in terms of state-owned enterprises whereas the strategy pursued in other Caribbean countries was based on private ownership.

The US-ownership led industrialization strategy of development in Puerto Rico constrained the development of a local industrial class. In other Caribbean countries the development of a local industrial class was constrained by the "screw-driver" nature of the manufacturing undertaken. In those countries ISI was developed to satisfy the demand for final goods in regional markets. The high tariff and non-tariff barriers were geared toward securing local and regional markets for the output of import-substitution manufactures. Foreign investment was attracted to Puerto Rico because of the tax exemptions afforded US corporations whereas such investment was attracted to CARICOM countries on account of an enlarged regional market.

CARICOM countries missed the export development stage of industrialization, which was pursued by East Asian countries after embarking on ISI. Export remained concentrated largely on natural resource based products, namely sugar, bananas, rice, bauxite and alumina and petroleum products. In contrast, Puerto Rico missed the ISI stage of industrialization and moved prematurely into export substitution industrialization where the output was not substantially linked to the local economy. Nevertheless, import substitution was not completely absent from the Puerto Rican development experience. It developed from about the mid 1960s to the mid 1970s in sectors such as finance, paper products, printing and publishing, health, furniture and wood products, beverages, textiles and apparel and some chemical products.

Puerto Rico developed its human capital through the significant expenditure on education; the country has the highest tertiary enrollment rate in the Caribbean. However, the ample supply of educated labour did not translate into effective and productive utilization of that labour, as evidenced by the high level of unemployment (among graduates) and the significant migration to the United States. The unemployment situation was attenuated during the third phase of Puerto Rico's development (since the late 1980s) through construction sector activity and growth in the public sector. Employment increased by 40% in the period 1986-2002 compared with an increase of 23% in the previous period of 1971-1986. However, growth in productivity continued to decline, from 5.8% (1947-1971) to 2.6% (1971-1986) and to 2% (1986-2002). This reflected the growth in non-productive investment in real estate and government services.

Overall, Puerto Rico has achieved a high living standard among Caribbean countries. The country's *per capita* GDP is about three times the average for the Caribbean. Its social indicators are close to those of the United States. However, it diverges from the United States in terms of its level of unemployment, wage level and productivity. Puerto Rico has achieved significant income levels and an economic structure based on manufacturing and services rather than on agriculture as a result of its incentive structure and its special relationship with the United States. In the area of services, financial services and tourism are the major sub-sectors. Tourism has grown substantially with the number of tourist arrivals at about 3.6 million in 2001, which was the highest in the Caribbean.

In the CARICOM region, only Antigua and Barbuda, the Bahamas, Barbados and the British Virgin Islands have achieved relatively high levels of *per capita* GDP. All of these countries have been relying on their services sector for their growth and export earnings. The ISI strategy pursued in CARICOM countries did not result in the development of a dynamic manufacturing sector. The manufacturing sector's contribution to GDP in Barbados, Jamaica and Trinidad and Tobago was 8, 14 and 7 percent respectively in 2002. Trade liberalisation since the 1980s has led to the significant decline of the manufacturing sector, in particular in Jamaica where its contribution to output was over 20% during the period of trade protection. Tourism in most islands and financial services in some countries such as Antigua and Barbuda and Barbados were the sub-sectors that provided the bulk of foreign exchange earnings.

CARICOM countries continued to rely on the export of commodities, namely sugar, bananas, rice, bauxite and alumina and petroleum products, which enjoyed preferential access to developed country markets. The earnings from these exports helped to subsidise the import substitution manufacturing, which was based on imported inputs and was directed to domestic and regional markets. This strategy became unsustainable from the late 1970s when the terms of trade deteriorated significantly for primary commodity exporters. CARICOM countries did not have Puerto Rico's options of free movement of goods and services as well as labour in relation to a developed country nor were they able to benefit from financial transfers in order to maintain income levels. Countries therefore had to rely on increased government intervention in the economy to create as well as preserve employment. Transfers were effected through the government's budget in order to redistribute income resulting in significant budget deficits.

The lesson from all of this is that small independent states cannot successfully diversify their economies, through industrialization for example, unless certain conditions are present. Domestic and even regional markets are too small to sustain such development and hence an extra-regional export strategy is a *sine qua non* for increasing or maintaining income levels. A vent for redundant labour, such as access to the labour markets of one or more developed countries, is necessary in order to facilitate efficiency and improved productivity. And finally, access to funds for addressing social issues is a necessary condition as economies adjust to particular development paths.

**Selected References**

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