

To Industrialise or Not to Industrialise: That is Not the Question

In the midst of heady growth in energy-based incomes and expenditures and in the context of ongoing arguments as to the merits and demerits of establishing smelter plants, industrialisation is one of several vexing issues confronting the island state of Trinidad and Tobago. The fact is that this country has been industrialising for many decades now. In more recent times, attempts to industrialise can be traced to three broad phases viz. (i) industrialisation by invitation of the fifties, à la Sir Arthur Lewis (ii) import substitution industrialisation of the sixties and (iii) resource-based industrialisation of the seventies, which with minor modifications continues up to today. Understandably, there is some overlap among these phases. Industrialisation has always been accompanied by some degree of discomfort, as it has brought with it both benefits and adversities. This will continue to be the case.

...what is the ultimate objective of industrialisation?

This article seeks to identify fundamental issues that should be addressed in deciding on a path of further industrialisation. Among issues to be considered are, what does industrialisation mean? Since it involves both costs and benefits, is the likely outcome a net cost or a net benefit? How should costs be measured? Specifically, how much weight should be placed on any damage to the environment when the overall cost is being considered? What are the net benefits of a particular path to industrialisation in relation to

alternative ones? What are the proximate costs and benefits of those paths? Who should determine the particular path to industrialisation? Should the “people” have a say at all or is it sufficient to allow any elected government to decide? Why? Indeed, perhaps the most fundamental question is: what is the ultimate objective of industrialisation?

Traditionally, industrialisation has meant the design and construction of factories, installation of machinery, processing of some input to produce a final output, either as final consumption or for input into another process. This manufacturing process usually produced some sort of waste that was re-used in another production process or dumped. In all of this jobs were created, people employed, foreign exchange used and earned through exports and taxes were paid to government. While this is a simplified explanation it should suffice for the purpose at hand. Understandably, a country with mineral resources, such as Trinidad and Tobago will tend to industrialise along a path such as described above.

A country without such resources may import the raw material to process or choose some other path such as fish or agro-processing. While the above seems straightforward one might ask, is tourism a form of industrialisation? What if an economy is largely based on eco-tourism say, can it be described as industrialised? Is that desirable or not? Arguably, in the latter case the country might not be described as industrialised but indeed that may well be a desirable state for that country.

As stated earlier industrialisation involves both costs

and benefits. Costs of industrialisation include not only the direct costs of inputs but also indirect costs as well or what economists call “externalities”, such as damage to the environment. Industrialisation undoubtedly has brought benefits to this country and will continue to do so. Some of these benefits have included well-paid jobs, hard currency, substantial tax payments, trained professionals in engineering and other disciplines and linkages to other support businesses and industries.

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For various reasons, some countries may not choose the traditional path outlined above or depending on the stage of economic development may, over time, shift the form that industrialisation takes. In this context, the February 3rd–9th 2007 issue of the Economist magazine notes that some more-developed countries are placing greater emphasis on what is called “knowledge-based industrialisation”. In choosing this path a process of “de-industrialisation” is said to be occurring, where countries such as Britain, are moving “industrial” activities offshore. The emergence of India and China in the world has made it not only economically advantageous to some developed countries to outsource traditional manufacturing activities to these

countries but environmentally friendly as well. By retaining the more 'high-tech' industries or 'research-based fields', developed countries are more likely to introduce new higher-value goods and services to the market place and thus reap greater rewards than if they were to concentrate on manufacturing standardised products.

A comparison between five developed countries and three Caribbean countries (Table 1) indicates that the developed countries are more service-based. High-tech exports in Singapore and the UK account for 59 percent and 24 percent, respectively, of merchandise exports. To be fair, it may be argued that Trinidad and Tobago is still developing and is on its way to becoming developed. The Wallerfield Business Park may be viewed as part of that new vision which will emphasise knowledge-based industries.

Table 1: International Trends

	GDP per Capita US\$	HDI Rank	High-Tech Export % of Merchandise Exports	Education Exp. % of GDP
Norway	38,454	1	18	7.7
USA	39,676	8	32	5.5
UK	30,821	18	24	5.5
Hong Kong	30,822	22	32	4.7
Singapore	28,077	25	59	N.A.
Barbados	15,720	31	15	4.3
T&T	12,182	57	1	4.3
Jamaica	4,163	104	N.A.	4.9

Source: United Nations Human Development Report 2006.

N.A. Not Available

Whatever the form of industrialisation a country chooses, it is fundamental to ask, what is the purpose of industrialisation? While the intermediate purpose will be to provide jobs, earn foreign exchange and in so doing assist in

the development of the economy the ultimate purpose must be to promote growth and development. The purpose surely cannot be to acquire a multitude of tall buildings and large plants and busy people working shifts or consuming huge amounts of electricity. Rather, the ultimate purpose must be to provide a high standard of living for as many people as possible. This will likely involve some expansion in physical infrastructure but it is important to distinguish here between the ends and the means. Industrialisation is viewed as one of the means through which improvements in human development can be brought about; it cannot be interpreted as "development" per se. It is expected to contribute to higher standards of living without unduly threatening environmental sustainability. Indeed, in the extreme, a country can become very industrialised as is the case in many countries in the world but the quality of life of its citizens can lag very far behind. This cannot be desirable.

Given available choices is there an optimum way to industrialise?

If the ultimate purpose of industrialisation then, is the creation of a higher and sustainable standard of living, as it should be, then the question must be asked, what is the "best" way to achieve this? Put another way, given available choices is there an optimum way to industrialise? The answer will depend on such factors as (a) whether or not a country has natural resources (b) the rate of depletion/accumulation of those resources (c) the trade-offs that the population is willing to make and (d) other options or combinations of options.

For a mineral-based economy like Trinidad and Tobago, industrialisation-related issues such as those raised above are likely to be around for quite a while. The issues are fundamental, have far-reaching consequences and are contentious. On the one hand there are issues such as the optimum number of mega plants, availability and best use of mineral resources and environmental safety and sustainability. On the other hand are issues such as the imperative of economic growth, demand for jobs and expectations of almost instantaneous improvement in the standard of living. This is not an envious mix for any government in a democratic setting characterised by contesting parties. However, no government that embarks on a path to industrialisation can fail to observe the highest standards of debate and democratic practice. The alternative can be far more time consuming and costly!

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