IMPORT SUBSTITUTION AND WEST INDIAN AGRICULTURE
Theoretical Issues

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Introduction

The term import substitution is often used in a simple and literal way to denote the reduction or elimination of certain imports and their replacement by domestic products. This definition often leads to the conclusion that an import substitution strategy of development is one aimed at autarky—a development objective which is for most economies, unachievable. For the purposes of this paper, we define import substitution very broadly as the strategy of development which links the overall development process to the import structure and induces the type of internal development which eventually makes the level and composition of imports consistent with excess demand within the economy.

The central issues of an import substitution strategy of development are clearly outlined in the leading arguments in support of and in opposition to this development policy. The rationale for the policy, on the other hand, can be highlighted within the framework of an aggregative model of the economy constructed to facilitate a test of the hypothesis that in the under-developed economy characterized by rigidity of its production structure, the capacity to import represents the main limitation on the growth of output. Such a model is outlined in Appendix I.

Strategies for Import Substitution

In what follows we undertake a brief examination of the arguments advanced by some of the main participants in the debate relating to this development strategy. The main supporting arguments for an import substitution policy are put forward by Prebisch, Nurske, Seers, Hirschman and Chenery.

Prebisch[1] finds that foreign trade has not made an impressive contribution to the economic development of the peripheral countries in the twentieth century because these countries have experienced long-run deterioration in their terms of trade with the centre.[2] Deteriorating terms of trade restrains development in the periphery by curtailing foreign exchange earnings so essential for capital formation in these economies. The adverse movements in the terms of trade is attributed to disparate forces shaping international demand and supply. On the side of demand, there is disparity between the income-elasticity of demand for imports at the centre and at the periphery.

1 Prebisch, Raul, 'Commercial Policy in the Under-developed Countries', **American Economic Review,** Papers, May 1969

2 The centre is represented by all the advanced industrialized countries — Western Europe, North America, Japan, etc. The periphery is comprised of the unindustrialized countries specializing in agricultural and other primary production.

He claims that whereas the income elasticity of demand for imports is less than one in the centre countries taken together, the rate of growth of imports is greater than the rise in income for the countries on the periphery. There are a number of reasons for this. Basically, the imports of the centre countries are essentially food and raw materials. The sluggish growth in the demand for food can be explained by the workings of Engel's Law and the excessive growth of demand for raw materials is explained by the development of synthetic substitutes and the reduction of the input requirements of industry. On the other hand, the imports of the countries on the periphery are essentially manufactured goods which have a high consumer demand, and machinery which are of vital importance in the development process.

Prebisch maintains that as a consequence of the behaviour of the terms of trade, the centre countries are able to keep the whole benefit of the technical development of their industries while the peripheral countries transfer to them a share of the fruits of their own technical progress.[1] Industrialization on the basis of import substitution is thus put forward as an important and effective counter.

Industrialization on the basis of the guide provided by the import structure has been emphasized by Hirschman.[2] The industrialization process in the underdeveloped countries is seen as progressing from the "final touches stage to the domestic production of intermediate goods and finally to that of basic industrial materials". In this pattern of industrial development, the growth of output is accompanied by the establishment of backward or forward linkages.

Imports play an important role in this development. As Hirschman puts it "they bring with them a powerful development stimuli". Imports are reliable indicators of domestic market size and as such they engender confidence in a wide range of industrial products. Implicit in the Hirschman proposition is the point that for the underdeveloped countries, the easiest approach to industrial development is the adoption of an import substitution programme in which there is no excessive restriction of imports.

1 The Prebisch thesis has been strongly challenged by Professor Gottfried Haberler in **International Trade and Economic Development** (1959). Haberler asserts that the Prebisch theory is based on grossly insufficient evidence; that it has misinterpreted the facts upon which it is based; that the attempted explanation of the alleged facts is fallacious and that there is no presumption that the alleged unfavourable tendency of the terms of trade will continue.

2 Hirschman, Albert O., **The Strategy of Economic Development,** Yale University Press, 1961

Seers[1] suggests that in order to prevent the dissipation of a country's export earnings and to improve the indirect employment effect of export development, the developing country should seek to reduce its propensity to import by adapting an import substitution strategy of development. The danger of the dissipation of foreign exchange earnings arises from the social and political pressures which build up as an open developing country grows — pressures which tend to raise the economy's propensity. Import propensity will be raised by the following factors :—

(a) higher wage rates and significantly higher domestic cost and imports;

(b) the growing inequality of income distribution and the relatively high propensity to import of the higher income groups within the country; and

(c) the shift in population from rural to urban areas where the propensity to import is higher.

It is this rise in import propensity which makes appropriate the pursuit of a policy geared towards securing the internalization of the multiplier effects of income growth through the development of import replacement industries.

Chenery[2] is another of the strong proponents of import substitution as an industrialization strategy. He makes the point on the basis of cross-country data, that import substitution is the most important explanation of growth and change in the relative importance of manufacturing output in the developing economies. He finds that import substitution accounts for 50 per cent of industrialization and is more important than the pure increase of demand. The increase in import substitution, Chenery maintains, is a result of changes in comparative advantage. "If a country has an increase in income with no change in comparative advantage, the analysis suggests that only a third of the normal amount of industrialization will take place. Changes in supply conditions, resulting from a change in relative factor costs as income rises, cause a substitution of domestic production for imports."

Some of the major theoretical issues concerning a programme of deliberate import substitution relate to the real income and other effects of the tools of policy implementation (protective tariffs, import quotas, etc.). In what follows, some of these issues are briefly examined. They are then related to the main problems in West Indian economic development.

Experience has shown that all developing countries which resort to a policy of deliberate import substitution, seek to preserve their local markets for domestic producers. In this policy of market protection, resort is had to tariffs, exchange controls, import restrictions and tax concessions. The basis of support for market protection as a development strategy is well documented and will not be repeated in this paper. We seek to examine, however, those arguments which have been advanced against import substitution as a development strategy based on market protection.

1 Seers, Dudley, 'The Stages of Economic Development of a Primary Producer in the Twentieth Century', **The Economic Bulletin of Ghana, Vol. VII,** November 1963

2 Chenery, Hollis B., 'Patterns of Industrial Growth', **American Economic Review,** September 1960

Johnson[1] maintains that "the rate of protection of value added in a production process can differ widely from the tariff rate applicable to the commodity produced by that process". Thus the cost of import substitution may greatly exceed that indicated by the difference between the protective tariff rates and the import price of the goods produced within the local economy. Johnson's argument is outlined within an input-output framework. The divergence between the "implicit" and "explicit" rates of protection is shown to arise because a given tariff, while providing a subsidy to domestic production of the commodity on which it is placed, imposes at the same time a tax on the domestic production of those goods which use the protected commodity as an input.

The implications of the foregoing analysis for the development of the agricultural sector seems very clear. In so far as the agricultural sector uses manufactured inputs, the prices of which are inclusive of the protective tariff or the tax imposed on the final product the input of which absorbs the protective duty, the consumption by agriculture of such inputs is discouraged. Some of the important manufactured inputs used by the agricultural sector are fertilizers, machinery and other implements. The modernization of the sector is heavily dependent on the extent of their use. The discouragement of their use by an import substitution policy based on protection tends to inhibit structural transformation of the sector. The possible divergence between the "implicit" and the "explicit" rates of tariff protection examined by Johnson, and the inferences drawn from the related analysis, recommends the pursuit of an import substitution policy which seeks to afford maximum protection to industries on the basis of the supply of inputs at the lowest possible prices. This stipulation recommends, therefore, that in so far as local consumer goods industries use imported inputs, such inputs should be accorded duty free entry.

Sheahan[2] in an examination of Columbia's development focuses attention on the investment allocation aspects of protection and at the same time, outlines what could be regarded as a view which when considered in relation to the propositions outlined by Johnson, represents an antithesis. He maintains that by fostering the growth of industries producing consumer goods through the restriction of consumer goods imports, and the grant of tariff concessions on raw materials, investment is biased away from indus-

1 Johnson, Harry G., **The Theory of Tariff Structure, with Special Reference to World Trade and Development, (Trade and Development Studies),** L'institut Universitaire de Hantes, Etudes Internationales, No. 4, Geneva, 1965

2 Sheahan, John, 'Imports, Investment and Growth: Columbian Experience Since 1950', **Research Memo. No. 4,** Centre for Development Economics, Williams College, September 1966

tries the development of which is crucial to an industrialization process with high backward linkage effects. The growth of industrial production leads, therefore, to greater import intensity of the development process and an intensification of the control on consumer goods imports. The apparent conflict between the objectives of fostering development of end products (consumer goods) on the basis of the maximization of implicit tariff rates (the according of duty free entry to intermediate inputs used in their production) and the dynamization of the import substitution process (on the basis of market protection) highlights the dilemma faced by West Indian and other developing economies in their present effort to diversify.

Sligo and Stern,[1] on the basis of their analysis of development trends in Pakistan, maintain that the growth of real income is inhibited by the chanelling of investment in consumer goods industries "because, at world market prices, the marginal productivity of domestic capital and labour is below their opportunity cost and may even be negative". The inefficient use of factors of production is encouraged by the policy which seeks to correct the rising trade imbalance in the face of the growing import demand for intermediate and capital goods, by the application of high tariffs to non essential consumer goods—tariffs which tend to encourage the establishment of import substitution industries in respect of this group of commodities. Sligo and Stern maintain also, that the protection of import substitution industries has the effect of turning the inter-sectoral terms of trade against agriculture. In so far as the terms of trade move against agriculture, it is maintained, industrial development is inhibited since the agricultural sector is potentially a very important market for industrial goods.

It is against the background of the equally powerful arguments by the proponents and opponents of an import substitution strategy of development and the model outlined in Appendix I of the paper, that we turn to an examination of the issues in relation to West Indian economies and in particular agricultural development in these economies.

Import Substitution Policy in the West Indies

The conventional arguments concerning the efficacy of an import substitution strategy of development emphasize import substitution as an approach to industrialization. They are arguments which essentially question or support the Chenery proposition that import substitution is the basis of industrial growth in the developing economies. Some of these arguments are so put as to suggest agricultural development as an alternative to industrial development. The balanced growth thesis in so far as it focuses attention on the simultaneous development of the agricultural and industrial sectors, is mainly concerned with the expansionary effect of agricultural and industrial growth on domestic demand as well as constancy of the relative prices of agricultural and industrial goods.

[1] **Sligo, R. and Stern, Joseph H., 'Tariff Protection, Import Substitution and Investment Efficiency', The Pakistan Development Review, Vol. V, No. 2**

The structure of West Indian economies as described by the model, suggests that whether the policy emphasis is on export stimulation, import substitution or both, the agricultural sector is crucial. Its importance can be guaged in the first instance, on the basis of the significance of export agriculture in net exportable surplus. As has been indicated by Equation (6) in the Appendix, one of the important ways in which net exportable surplus can be raised is through an increase in primary agricultural exports. For the developing economies taken as a group, this approach to export development is rejected on terms of trade grounds.[1] We note, however, that the existing marketing arrangements for West Indian primary exports constitute a shelter against a significant overall decline in primary export prices (Commonwealth Sugar Agreement). Given the existing level and relative stability of export prices under the impact of protective marketing arrangements, net exportable surplus as well as net national import capacity could be significantly increased by raising the rate of growth of export agricultural output.

The appropriateness of a policy aimed at expanding net national import capacity on the basis of an expansion of primary export production is also supported by the fact that the imported intermediate input requirement (R) of the sector is relatively low. We emphasize, however, that notwithstanding the inducements provided for the expansion of export agricultural production in the West Indies and the significance of this group of exports in net national import capacity, import substitution remains an appropriate and very important strategy within the Region. Its importance is indicated by Equation (6) in the Appendix. If imports of consumer goods in final (M_c) and intermediate forms (M_r) proceed at the same or at a higher rate than the growth in exports then the economy does not increase its exportable surplus by increasing exports. Import substitution therefore becomes relevant. Visible import substitution in respect of consumer goods (M_r and M_c) releases foreign exchange to facilitate capital formation. In so far as an import substitution strategy of development in the West Indies is justifiable, the agricultural sector and in particular the domestic agricultural sector becomes a crucial factor.

The importance of domestic agriculture derives in the first place from the significance of food products in total consumer goods imports (M_c and M_r). In the second place its capital intensity is quite low. In examining the question of the significance of food imports in total consumer goods imports, it is proposed that where the ratio of food imports to total domestic food supply is high, the economy could raise net exportable surplus by securing a substantial reduction in the food import co-efficient. A decrease in the food import co-efficient calls for a rate of growth of food production which far outstrips the rate of growth of food imports. We observe that development in the West Indian economies has been accompanied by

[1] **Prebisch, Raul, op. cit.**

rising food import co-efficient — a trend which has tended to inhibit the development process. The reasonableness of the above proposition is examined below on the basis of available data for the year 1966.

Some indication of the scope for food import substitution in selected West Indian countries is provided by the data in Appendix I, Table I. The data which relate to the year 1966, show that for the group taken as a whole, food imports were 15.7 per cent of total imports. The significance of food imports in the total imports structure was the greatest in the cases of St. Vincent (approximately 40 per cent), St. Lucia (approximately 20 per cent), Jamaica (approximately 20 per cent) and Barbados (approximately 30 per cent). Viewed in absolute terms, the total food imports is classified as competitive imports (products which can be produced or replaced by acceptable substitutes). The extent of the dependence of West Indian territories on food imports and thus the scope for food import substitution is provided by the fact that imports of food as a percentage of food consumption exceeded 25 per cent in 1966. There was an increase of more than 10 per cent in this ratio during the period 1950 to 1966. The substantial rise in this ratio is indicative of the failure of domestic agriculture to grow at a rate warranted by the growth in disposable income.

The data suggest, therefore, that since food products represent a significant percentage of consumer goods imports and in the light of the low direct and indirect intermediate import requirement of domestic agricultural production, net exportable surplus (Q) or the capacity to import capital goods could be significantly raised by acceleration of the growth of domestic agricultural output. The implications of a rise in domestic agricultural output for the capacity to import capital goods and in effect the overall growth in output are rendered even greater by the fact that the capital intensity of the activity is relatively low. In a situation where the economy's ability to import capital goods is the basic limitation on growth thus making capital intensity an important basis on which to allocate investment, the importance of domestic agriculture in the development schema cannot be overemphasized.

The relatively slow growth of domestic agricultural output in the Region has been ascribed to structural rigidity of the sector. Changes in the structure of production, on the other hand, have important implications for the level of employment in the Region as well as the terms of trade of domestic agricultural products. In what follows we examine some of these implications very briefly if only with a view to focusing attention on some of the problems (real or imagined) which are linked to structural changes in agriculture as part of an overall development strategy.

High unemployment throughout the West Indies in the face of impressive rates of growth of gross domestic product especially in Jamaica and Trinidad and Tobago, has focused attention on the question of the labour absorption effect of the development process within the Region. It is clear that given the high capital intensity of the development process and the technological dependence of the Region, a Lewis-type employment development may not be achievable in the foreseeable future. This point is supported by the manpower absorption effect of industrialization in Jamaica as well as Trinidad and Tobago and the observable technological advance which is taking place in respect of the construction and services sectors. These trends clearly focus attention on the role of agriculture in an import substitution schema geared to the achievement of overall development.

We put forward for investigation the proposition that the achievement of high efficiency in the export and domestic agricultural sectors, thus an adequacy of supply of domestic food products at reasonable prices and a significant improvement in the competitive position of primary exports, may not be compatible with an overall reduction in unemployment in the Region. The examination of this proposition is undertaken at the outset with reference to the foreign exchange limitation proposition and the relative stability of some primary export prices which make logical a policy geared to the maximization of primary export production; and since efficiency in both agricultural subsectors cannot be significantly raised without aggravating the unemployment situation, we are led to the conclusion that from an employment point of view, domestic agriculture within the Region must remain relatively inefficient. Such a policy choice has important implications for domestic food prices and in the light of Equation (6), the economy's capacity to import capital goods. It is inferred from the foregoing, therefore, that the choice open to West Indian economies is the acceptance of a relatively inefficient domestic agriculture sector as an important part of the employment strategy of the Region. The acceptance of an inefficient domestic agricultural sector means relatively high cost of production and therefore high food prices and in so far as the West Indian consumers are compelled to rely more and more on domestic food products, they are in effect taxed in order to facilitate the subsidization of agricultural employment.

We are compelled to consider in addition to the labour displacement effect of efficient export and domestic agricultural production, the limitations imposed by the size of the local market for food products. It appears that the modernization of the domestic agricultural sector throughout the West Indian economies may lead to a rate of growth in output in excess of the level and rate of growth of demand for food products within the Region. The level of food imports suggests, however, that the terms of trade may not in the short run change against agriculture given that the whole range of items presently imported within the Region can be substituted. The substitutability of these items, we have noted, is indicated by the fact that approximately 80 per cent of the food items imported are classified as competitive imports. A great deal depends, however, on the export opportunities for domestic agricultural products. Indeed, it may be found that the income elasticity of demand for vegetables and tropical fruits (processed) may be much higher than that relating to the traditional agricultural exports.

The implications of agricultural development for an import substitution strategy of development can be further examined in relation to the proposition that: