CHAPTER 1

IMPORT SUBSTITUTION STRATEGY OF ECONOMIC DEVELOPMENT

1.1 Introduction

'Import Substitution' (IS) generally refers to a policy that eliminates the importation of the commodity and allows for the production in the domestic market. The objective of this policy is to bring about structural changes in the economy. The structural change is brought about by creating gaps in the process of eliminating imports and thus making investment possible in the non-traditional sectors (Bruton, 1970).

1.2 Historical Perspective

Import Substitution Industrialization (ISI) had its origins in the writings of List (1841), who in his theory of productive forces, outlined the 'Infant Industry Argument'[1]. He opined that to bring about industrialisation, it was essential that domestic circuits be built in the economy and this could be achieved by protecting the domestic economy from the world economy. ISI had distinct origins in the different countries where it had been adopted. In some Latin American countries ISI was externally enforced. The interruption of shipping and the decline of non-military production in Europe and the US during World War II created severe shortages of manufactured goods in Latin America. This raised the relative prices of such goods and increased the profitability of IS industries. Textiles, food products and various light consumer goods industries were the principal areas of ISI (Baer, 1972). The situation that emerged, thus undermined the traditional acceptance of divi-

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1. *Views regarding the infant industry argument have been mixed. Krueger (1981) has pointed out that infant industry protection does not demarcate, whether it should be given to a particular industry or to a group of industries. Westphal (1982) argued for selective protection and export performance. His conclusion is that 'One possible reason why the industrial sector in a country like Korea following an outward looking strategy performs so well, namely, the possibility that it selectively promoted infant industries which exhibited superior performance as a result of export activity'. Krueger & Tuncer (1982) find no justification for infant industry protection in the case of Turkey as input per unit of output did not fall in the more protected areas.*

sion of labour[2]

Export pessimism was one of the crucial factors that led to ISI in Latin American countries. Prebisch (1960) considered that the terms of trade in primary products, the chief exports of the developing countries to be declining despite the policies of developing countries[3]. His view was that left to themselves they would have responded to the price shift by industrialising.

The export pessimism of Nurkse (1959) was based on the course of natural forces. His view was that a shift from natural to synthetic materials by developed countries would have a dampening effect on the exports of the developing countries. The persistent decline in the world market prices of primary products due to technological progress had severely affected the Latin American countries. After the First World War, synthetic nitrates displaced Chilean nitrates and later synthetic fibres and synthetic rubber displaced Brazilian rubber. The price inelasticity of primary products led Nurkse to advocate 'Balanced growth'.

However, after the 1950s, ISI was resorted to by deliberate economic policies. Balance of payment crisis was another factor which forced the country to restrict its imports, thus bringing about industrialization. The political argument for adoption of this strategy was that it was essential to be economically self- reliant and independent. The economic argument was that a temporary isolation would bring about rapid development (Schmitz, 1984)

1.3 Approach and Instruments

At the beginning of the import substitution process, it is the consumer goods that are sealed off from foreign imports. The reason for choosing consumer goods sector is that the cost disadvantage is comparatively less in this sector as compared to either capital goods or intermediate goods. Moreover, consumer goods are considered inessential for development and an increase in their cost will not affect other production units as would the capital goods and intermediate goods. The demand for consumer goods is assured, due to the growing population, whereas the demand for capital goods and intermediate goods would take place only as the development process is set in motion.

2. *A decrease in the import co-efficients and an increase in the industrialization co-efficients for Latin American countries after the great depression of 1929-30, has been depicted by Celso Furtado (1976) in "Economic development of Latin America".*

3. *Empirical evidence regarding the fact, that the capacity to import was severely curtailed not so much as a result of decline in quantum of exports but due to the adverse terms of trade is pointed out in Economic Survey of Latin America (ECLA), 1949.*

The policy of import substitution is achieved through discrimination of capital goods against consumer goods by tariffs, quotas, exchange control barriers, exchange rate policies and fiscal and credit policies. Some of the instruments implemented by different countries that adopted[4] are briefly enumerated below:

In Argentina[5], import substitution of the 50s was mainly in oil, steel, chemicals and motor vehicles, special incentives were designed to encourage particular industries or regions. Credit incentives which included subsidies were given through the manipulation of the reserve requirement, which allowed the banking system to finance import substitution industries at low interest rates. In Columbia[6], multiple exchange rates were adopted, and exporters of non-traditional products were allowed to sell their foreign exchange at the floating free rate. In Pakistan[7] tariffs were relatively high on consumer items. Moreover, the duties of raw materials and capital goods were relatively low than if the total value of foreign exchange had been auctioned freely. In Korea[8] and Taiwan, multiple tariff rates existed during the 50s. Tariffs were high on finished consumer goods for which close substitutes were domestically produced, lower on products for which there were no substitutes.

1.4 Critiques of ISI Strategy

(a) Neo-Classical critique

According to neo-classical economists, in the sequential process of IS, the first stage, in which IS in consumer goods industries take place, is considered the 'easy' stage[9] (Balassa, 1982). It is the second stage where IS

4. *In the World Bank Research Publication by Balassa, B and associates (1982), a detailed account of the development strategies adopted by a number of developing countries is given.*

5. *For further details regarding the development strategy as adopted by Argentina, see Berlinski and Schydlowsky in Balassa, op.cit.*

6. *For the details regarding development strategy in Columbia see Hutcheson and Schydlowsky in Balassa op.cit.*

7. *Power and Khan (1963) have shown that Pakistan's tariff structure resulted in greater demand for importation of spare parts and raw materials, which effected the savings rate. For details regarding implicit rates of protection for 48 manufacturing industries refer to Soligo and Stern (1965).*

8. *For development strategy of Korea see Westphal and Kwang Suk Kim in Balassa op.cit.*

9. *The first stage does not entail economic costs, since unskilled and semi-skilled labour are involved, sophisticated technology is not employed and market size is not a limiting factor. Whereas in the second stage, higher technology and skill are required.*

in capital and intermediate goods are required to be replaced by domestic production that difficulties arise. So the countries that adopt IS strategy extend the first stage to the maximum extent. Felix (1964) termed this as a 'premature widening'[10] of the productive sector.

The neo-classical critique[11] was directed at the following factors, namely, that excessive regulations gave rise to bureaucratisation and corruption and this discouraged private initiative, the existence of import restrictions led to higher exchang rate thus reducing the relative gains from exporting[12] and the bias against agriculture, vis-a-vis manufactured goods undermined the IS strategy. The other factors against IS strategy were that there was excess of imports of capital goods, since there was no restriction on its imports, resulting in under- utilisation of capacity. Though consumer goods imports were restricted, the intermediate goods necessary for manufacture of consumer goods increased, resulting in increased import intensity.According to the neo-classical economists, though industry grew at a quicker pace in the initial stages of development, it was apt to get 'stuck' after its first success due to exhaustion of easy import substitution opportunities (Hirschman, 1968). They advocate free play of market forces and 'getting the factor prices right' (World Bank)[13]. They base their analysis on the modern theory of comparative advantage. (Hecksher - Ohlin - Samuelson). They advocate export oriented industrialisation based on what occured in the newly industrialised countries (NICs)[14].

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10. *An expansion into a large number of relatively small scale activities rather than concentrating on a few.*

11. *The chief neo-classical critics are Little, Scott & Scitovsky (1970), .*

12. *The empirical evidence in support of their argument is available in the World Development Report (1987) box table 5.3. It shows that the effective rates of protection has been high for countries adopting ISI. The structure of protection shows that there was bias against exports and bias against agriculture, in the case of Chile and Nigeria, whereas in the case of Korea, there is not much difference between protection rates for domestic market and export market sales, though there is a bias in favour of agriculture as compared to the manufacturing sector.*

13. *This meant reducing the price of labour, raising the price of the capital, reducing the price of domestic currency vis-a-vis foreign currency.*

14. *Ranis (a representative of the neo-classical thought) takes the East Asian NICs South Korea and Taiwan as paradigm cases, and analyses their shift from primary import substitution (PIS) to primary export substitution (PES) on the basis of a comparative advantage trade model. In the PIS phase, there was a comparative advantage of land/ resources or aid and foreign capital whereas in PES phase, the comparative advantage was on skilled labour.*

(b) Structuralists critique

Prebisch (1964) an advocate of ISI in 1950s realised its shortcomings and has succinctly described its failure as due to "the proliferation of industries of every kind in a closed market depriving the Latin American countries of the advantages of specialisation and economies of scale, and owing to the protection afforded by excessive tariff duties and restrictions, a healthy form of internal competition has failed to develop, to the detriment of efficient production"[15].

(c) Neo-Marxists critique

The neo-marxists[16] and the structuralists saw the inefficient productive structure as a result of the colonial heritage, the social class formation and the economic control measures that were adopted in the neo-colonial period.

According to them, the main reason for the failure of IS, was that it was based on the existing pattern of demand and distribution of income, foreign penetration of subsidiaries under tariff barriers led to the elimination of domestic producers (Hirschman 1968) and the industrial structure tended to be monopolistic. Adoption of inappropriate technology led to the outflow of capital via transfer pricing, ISI protected the indigenous bourgeoisie in alliance with the international capital leading to transnational integration and national disintegration (Schmitz, 1984).

Bagchi (1988) has analysed the ISI process taking into account the class relationships and the tendency of an economy with the pre-capitalist structure and unequal distribution of income, to attract importable consumer durables requiring import of technology and thus extending the "easy" phase of import substitution[17].

The policy recommendations according to them was not greater reliance on the market forces as advocated by the neo-classical writers[18] but

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15. *Towards a new Trade Policy for Development: Report by the Secretary General of UNCTAD.*

16. *The views of the dependency school analysis are in accordance with that of the neo-marxists.*

17. *Bagchi (1988) stresses on the problem of effective demand as crucial to the analysis of India's ISI strategy.*

18. *Evans and Alizadeh (1984), feel that because of the incomplete specification of the internal and external factors, the economic, social and political conditions of East Asian NICs, in the neo-classical approach, the choice of policy instruments become questionable.*

greater control of foreign enterprises[19] and scrutiny over imports and redistribution of income (Schmitz, 1984).

Despite the differences in policy conclusions by the neo-classical economists, the structuralist and the neo-marxist, there has been unanimity in the disillusionment with ISI from both ideological and analytical spectrum (Schmitz, 1984).

1.5 Indian Experience of Import Substitution Industrialization (ISI)

India adopted the strategy of ISI in the fifties. The chief objective was to build a self-reliant economy. From the Second Five Year Plan, there was a determined thrust towards substitution of basic and capital goods industries. The ISI strategy was based on the model of growth as propounded by Mahalonobis. The lopsided growth which was a legacy of the colonial period was sought to be set right by adopting ISI. Deficiencies which were pronounced in the production of capital goods and basic intermediates were to be rectified by the import of machinery and critical intermediates. This was based on the reasoning that lack of industries producing investment goods could restrain high rates of investment and growth.

The Mahalonobis model stressed the significance of 'basic industries' for growth; and long term patterns of growth were to be achieved by utilisation of the products of these industries. Designing of time paths alone was not considered sufficient, but devising measures for achieving rates of saving and consumption patterns corresponding to these time paths, was also considered as an integral part of the strategy

The State was to play an active role in building a self-reliant economy, discriminating structure of protection was evolved to acquire foreign technology and for policies towards foreign investment. Import protection was to apply to new industries to give 'breathing space'. The infant-industry argument for protection was put forth.

In the Second Plan, the planners did not expect any significant increase in export earnings in the short run; during this period, some domestic and trade policies added upto a positive discrimination against exports; but they recognised 'that it is only after industrialisation has proceeded some

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19. *For the importance of State involvement for successful Third world industrialisation, refer White, G (1984).*

way, that increased production will be reflected in larger export earning'.[20]

1.6 Studies on Estimation of Import Substitution in Indian Industry

The sources of output growth in Indian industry have been analysed by Ahmed (1968) using the Chenery framework for the first three five year plans 1950-65. The major conclusions are, IS accounted for 33 per cent of industrial output growth in the First Plan and a major share came from capital goods and intermediates. In the Second Plan, IS accounted for 13 per cent of the output growth and this was contributed by paper, newsprint, petroleum products and electrical machinery. In the Third Plan, IS was 25 per cent of output growth and capital goods accounted for a major share. For the whole period 1950-51 to 1965-66 IS accounted for 23 per cent of output growth and capital goods accounted for half of it[21].

Desai (1970) has analysed the IS pattern and performance in terms of three major groups of industry, consumer goods, intermediates and investment goods, for the period 1951-61 and 1951-63 and two sub-periods 1951-57 and 1957-63. She has used the absolute, relative and Chenery measures and an aggregate measure to determine IS. The data on production and imports were taken at market prices. So the effect of change in prices as well as internal taxes on production and imports are included while measuring IS.

The conclusions arrived at, in the study are:

1. For 1951-57, there was substantial IS in consumer goods followed by investment and intermediates group.

2. For 1957-63, IS in consumer goods group was the lowest and in investment and intermediate group it was higher.

3. For the entire decade 1951-61 or 1951-63, IS in the investment group seems to predominate.

For the First Plan period, her conclusion regarding IS is at variance with that of Ahmed.

Bokil et al (1981) have estimated the extent of IS for the period 1960-75. Their production data relates to the census sector. The import data were obtained from the monthly statistics of Foreign Trade. They have used

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20. *Government of India, Planning Commission, The Second Five Year Plan 1956-61.*

21. *Output and input data are in 1960-61 prices for 1960-61 and 1965-66 but for earlier years they are in current prices.*

comparable data to make computations for industries at the two and three digit level of classification to obtain estimates of output growth due to demand expansion and import substitution for 1960, 1965, 1970 and 1975. They have analysed the results at current prices on the basis that ratios reduce the impact of the price effect.

The conclusion was that IS is prominent in the new non- traditional industries. Even in these industries the share of import substitution in the growth of output is smaller than the share due to domestic and external demand. Demand is less prominent in the non-traditional industries. Since in many of the traditional and non-traditional industries, the import- availability ratios were nearing zero, they concluded that the import substitution as a stimulus to growth has reached a saturation point.

Industries which experienced negative import substitution in 1975 over 1970, were iron and steel (Rs. 122 crores) and petroleum refineries (Rs. 171 crores), non-electrical machinery made substantial contribution of Rs 111 crores to import substitution. Import substitution in many industries were negative. These industries were canning and preservation of fruits and vegetables, sugar factories and refineries, tobacco manufacturing, spinning, weaving and finishing of textiles, and textiles not elsewhere classified (n.e.c.) furniture and fixtures, rubber products, non- ferrous basic metal industries, metal industries, metal products except machinery and transport equipment, electrical machinery, rail road equipment, motor vehicles, aircraft, professional and scientific instruments and manufactures of industries n.e.c.. They point to the fact that Import Substitution cannot be sustained for a long time in these industries.

Ahluwalia (1985) has examined whether IS has slowed down after the mid-sixties and whether its contribution to growth has also declined. She has analysed import availability ratios and import substitution for the manufacturing sector at the two-digit level of classification for three points of time i.e. 1959-60, 1965-66 and 1979-80, based on current prices. There has been no adjustment for devaluation. Her data reveal that there has been a slow down in IS, except for electrical and non-electrical machinery industries. She has analysed import substitution for the years mentioned above on the basis of use-based and input-based classification. She has used the Chenery measure to assess the extent of IS to growth. The results indicate that contribution of IS to the growth of industrial sector declined after the mid-sixties, except in the capital goods and consumer durables. In the capital goods sector, IS was associated with deceleration in growth while for consumer durables, IS accelerated growth. She ascribes the contribution of IS to deceleration of growth due to the inefficient nature of IS.

Sastry (1988) examined import substitution in capital goods and intermediate goods over the twenty year period (1960-80). His analysis of the progress of import substitution has been based on (1) trend growth rates (2) absolute change in import availability ratios (3) relative change in import availability ratio (4) the Chenery measure, and (5) the composite measure.

He has used production data relating to the factory sector of ASI and the import data of the Planning Commission to determine the extent IS for the period 1960-80. He has made adjustments for the 1966 devaluation. Production data relate to ex-factory prices and imports are at c.i.f. prices. The analysis was based on the constant prices.

In a large number of industries, the results at constant prices are at variance with that at current prices. The contribution of import substitution to change in output is 53 per cent in the non-electrical machinery and 43 per cent in transport equipment sector over the period 1960-80. The capital goods sector have shown substantial contribution to IS during the period. Much of the IS has occurred in the sixties, though its tempo slowed down in the seventies. His main conclusion is that price changes in import and domestic output to a large extent matter in analysing IS.

There have been two studies based on the Input-Output model. They are by Nambiar and Panchamukhi. Nambiar (1977) has made use of the Planning Commission Fifth Plan input-output table to estimate inter-industry IS for 45 manufacturing sectors of the Indian economy over the period 1955-74. The sectoral output and input data for 1973-74 were taken from the table, while those for 1963-64, were computed from the Annual Survey of Industries and Monthly Statistics of Foreign Trade of India. They were adjusted to 1971-72 factor prices after deducting the indirect taxes. Similarly, the sectoral output for 1955-56 was generated by using a sector-wise production index and then adjusted to 1971-72 factor prices.

The main conclusion was that during the period 1955-64, 24 sectors comprising of consumer goods attained 50 per cent IS. While 17 sectors mainly of investment goods attained more than 50 per cent IS during 1964-74, IS process was seen to have entered into the stage of producer goods, with the result that, domestic production of these goods expanded rapidly during the 1960s and the early 1970s, relative to the consumer goods industries.

Panchamukhi (1967) designed an 8 x 8 input-output table for the year 1962 to evaluate the direct and indirect effects of IS. He has also split the technical co-efficients into domestic and imported parts and has also made a distinction between the import flow co-efficient and import stock co-efficient.

Pitre's (1979), study is directed at the micro-level. In her study, she assesses the extent of IS in the machinery and transport equipment sector for the period 1960-70. In this study, the value of production are at ex-factory prices and imports are at c.i.f. prices. Her analysis relates to the census sector. She has made use of quantity indices of imports constructed by her and the index of production of the Monthly Statistics of Production of Selected Industries in India.

She has identified industries showing IS on the basis of the fulfilment of two conditions (i) total supply (i.e. domestic production and imports) does not decrease over the years and (ii) the proportion of imports to supply, registers a fall during the same period. In cases where a decrease in the proportion of imports to supply is accompanied by a corresponding decrease in supply, it is a case of fall in demand. In cases where the proportion of import to supply increases, it is a case of increase in import dependence. In cases where the proportion of import to supply decreases, provided the supply increases, it is a case of IS.

Her conclusion is that during the period 1960 to 1970, IS has taken place in the machinery and transport equipment. When this decade is split into two five year period, the period 1960 to 1965 shows IS but 1965-70 shows import dependence. This trend is found in non-electrical and transport equipment industry. However, in the electrical industry, IS has taken place during the entire decade.

Bharat Ram's (1982) study is at the unit level. He makes use of the micro level concept of IS. IS is defined as the ratio of foreign exchange value of items deleted from the import list to the total foreign exchange value of a wholly imported product. The use of this definition is to highlight the point that IS takes place in stages and the manufacture of simpler components precedes the manufacture of complex ones. This definition applies to industries which manufacture by stages. His objectives are (i) to examine whether capital stock goes up as IS goes up, (ii) whether IS responds to a change in the foreign exchange value of the domestic currency.

His findings are that for 80 per cent of the industrial sectors, the intermediate import content is negatively correlated with the capital output ratio as well as the capital value added ratio at 90 per cent level of significance. In 47 out of 53 sectors, the import content in the post devaluation period is significantly lower than in the pre-devaluation period at 95 per cent level of significance. The three case studies that he examines are integral circuits, transistor logic integral circuits and tractors.

1.7 Studies on effects of ISI Strategy in Industry

(i) Supply side analysis:

The chief critics of India's strategy of Industrialisation -Bhagwati, Desai, Srinivasan and Ahluwalia have highlighted the supply side constraints to be the cause for low long run growth of the Indian economy. Ahluwalia (1987) has summed up its main defects as under:

(a) Indiscriminate and indefinite protection given to domestic industry from foreign competition[22].

(b) Administrative burdens in a system of physical controls.

(c) The adverse effect on enterpreneurship by providing incentives for rent seeking rather than long term corporate planning[23].

(d) Little or no incentive for technological upgradation[24].

(e) High cost inefficient industries[25].

In the view of the critics, there is a precise link between the industrial strategy and deceleration in industrial growth, which is demonstrated by increase in the capital-output ratio and reduction in the growth rates of labour

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22. *Bhagwati and Srinivasan (1975) have provided some quantitative estimates of effective rate of protection (ERP) enjoyed by Indian industries. According to them the unweighted average ERP for 61 industries stood at 197 per cent in 1963-65, for 64 industries the unweighted average in 1968 came to 139 per cent and for 30 industries in 1970 it went upto 184 per cent. They argue that such high rates of protection has made Indian goods uncompetitive in the foreign market.*

23. *Economic theorists have termed these as 'directly unproductive profit' seeking (DUP) activities. These activities direct resources from productive use into unproductive but profitable lobbying to change policies or to evade them, or to seek the revenue and rents this generates.*

24. *An UNCTAD study (1983) relating to the period upto 1980, on Indian capital goods sector found that 53 per cent of the designs introduced into the markets were more than 9 years old and only 12 per cent were less than 5 years old.*

25. *Edquist and Jackabsson (1985) study on the manufacture of hydraulic excavation, were India and Korea have obtained technology from Poclain of France, since economies of scale were not realised in India, prices were three times that of the international prices, whereas in South Korea it was just 1.5 times that of the international prices.*

and total factor productivity[26].

Based on this evidence, the official recommendations, viz., the Narasimham Committee argued for 'a structural adjustment process' and a shift from quantitative controls to indirect controls and the Abid Hussain Committee recommended export-led growth strategy to overcome the short-falls of ISI.

A fresh look at the empirical evidence provided by the critics of ISI strategy on the basis of inefficiency reveals a contrary situation[27].

(ii) Demand side analysis:

Economists who have highlighted the demand side constraints of India's industrialisation strategy are Bagchi (1988), Chakravarthy (1979), Patnaik (1987) and Ghosh (1988). In the late sixties, during the period of recession, capacity utilisation was seriously affected and some economists started to talk about the limits of ISI. Since, despite improvements in food production during 1967-71, industrial production did not respond. It was then realised that the ability of the agricultural sector to generate a surplus, though crucial to sustain growth, was not a sufficient condition in a private enterprise economy. It was at this juncture that the problem of demand deficiency was highlighted.

The terms of trade had adversely affected agriculture which has had a bearing on industry. They argue that a squeeze[28] on agriculture erodes the availability of resources for industrial development, leading to an over production of home produced industrial goods (Patnaik, 1987). So, they advocate redistribution of income (Bagchi, 1988) and not export-oriented

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26. *Ahluwalia (1985) provides empirical evidence to show declining factor productivity. For the manufacturing sector as a whole, the estimate of total factor productivity (TFP) is -0.2. TFP declines during the period 1959-60 to 1979-80 except in capital goods and consumer durables.*

27. *Nambiar (1983) has pointed out that the black market premium has been over-estimated by Bhagwati. He has re-estimated it, based on price based rates. ERP exhibit a sharp decline from 1968 to 1973. Another study by the World Bank (1982), an international comparison on the purchasing power of various national currencies in terms of the U.S dollar was estimated. They indicate that India is not an inefficient producer of manufactures.*

28. *Rural employers, faced with adverse terms of trade movement, try to maintain their profits partly by reducing the share of wages in the net value added in agriculture.*

strategy, since for a continental economy like India, the stimulus for industrialization was to come from agriculture rather than from the external sector. Industry was to grow by 'exporting' domestically to the agricultural sector rather than abroad (Kaldor, 1978).

The critics of India's strategy of ISI have highlighted, as already mentioned, the high cost inefficient economy[29] and have advocated competition. This has resulted in liberalization policies.

Ghosh (1987) traces the causes for the high domestic prices in the capital goods industries to deficient demand. Her contention is that international competition should precede liberalization since liberalization leads to import penetration in the capital goods industries, (as has happened in the 80s in India) which affects industrial development[30].

In her view import penetration instead of forcing domestic industries to become efficient, perpetuates a high cost structure in the capital goods industries. This, according to her, is because the problems of shrinking or stagnant demand are linked to the inability of the industries to take advantage of the economies of scale and low levels of capacity utilisation. This would affect output growth and productivity (Verdoorn's law).

An overview of ISI strategy of development and the experience of the Indian economy, which has adopted this strategy has been given. However, the debates have been inconclusive and so a definite view point on this strategy of development is not possible.

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29. *Studies on the capital goods sector (Chandrasekhar, 1987) (Ghosh, 1988) and on non-electrical machinery industry (BICP & WB) reveal that high domestic price could be traced to high raw material costs. In the case of capital goods, the domestic costs of raw materials and components are double or atleast one and a half times the international equivalent. In the case study on non-electrical machinery, they show that the effective rates of protection on the value-added are less than unity, indicating a higher rate of protection on inputs than on output of the industry. Some of the industries were subject to net disincentives, since domestic value added was lower than the value added at international prices. The domestic resource cost too indicate that they are efficient users of resources. Sastry (1967) in his study on Automobile industry showed that for every one rupee worth of domestically produced automobile that is put on road, income generated is 51 paise.*

30. *Ghosh examines the impact of imports of capital goods on production and capacity utilisation. Growth rate in the non-electrical machinery declined from 8.3 per cent in 1971-72 to 1975-76 to 5.9 per cent from 1976-77 to 1984-85. Some machinery producers found that liberalised imports wiped out domestic demand. Rubber machinery manufacture experienced 22 per cent decline in output in 1985-86. Production of machine tools was also hit.*

1.8 Statement of the Study

a) The research problem

Import Substitution, as a strategy for development has been adopted by the developing countries to bring about structural changes in the economy. India adopted this strategy in the 50s to achieve rapid industrialisation. In the late 70s, however, there has been disillusionment with this strategy, and an export -led growth strategy to achieve rapid development has been advocated due to the success of the newly industrialised countries.

The focus of this study is to estimate the extent of import substitution so as to examine the extent of its decline for the period 1970-85. In the existing literature on import substitution in the manufacturing sector, we notice that the effects of the oil price hike and the impact of the liberalization process on the economy have not been fully analysed. In this study, these aspects are highlighted.

b) Objectives

The objectives of this study are:

(i) to provide comparable estimates of imports and domestic production, for the four bench-mark years, 1969-70, 1974-75, 1979-80 and 1984-85;

(ii) to estimate the extent of import substitution that has taken place in India for the four bench-mark years.

(iii) to modify the existing measure so as to obtain consistency as regards estimates of import substitution at the individual and global levels, and to obtain direct and indirect requirements of imports.

(iv) to study the impact of the oil price hike in the years 1973 and 1979, on the production and imports of the economy.

(v) to examine whether the trends in import dependency have changed in the recent past and to examine its impact on the manufacturing sector.

c) Approach

The Relative and Chenery measures of import substitution have been adopted to estimate the extent of import substitution for the years 1969-70, 1974-75, 1979-80 and 1984-85. The input-output matrix of the Fifth Plan

has been used to estimate the direct and indirect requirements of imports for the years 1973-74 to 1979-80. To examine the impact of oil price hike in 1973, the year prior to the oil price hike was selected, but since no survey was conducted for 1972, the data of 1969-70 has been used. The year 1974-75 was selected to examine the effect after the oil price hike. The year 1979-80 was chosen, as it was the year when the second oil price hike took place. To examine whether trends in imports have changed, 1984-85 was chosen as it was the year for which the latest data on production was available and the liberalization process was well underway.

d) Data base

This study is based on secondary sources and deals with the factory sector as covered by the Annual Survey of Industries (ASI). For the data on the value of production of the Indian manufacturing sector, the Annual Survey of Industries, which provides the summary results for the factory sector have been obtained at three-digit level. For data on imports, the Monthly Statistics of Foreign Trade of India (MSFTI) have been used. To estimate the direct and indirect requirement of imports for the years 1973-74 to 1979-80, the data from the Fifth and Sixth Plan technical documents have been made use of.

As the data regarding the Indian manufacturing sector as covered by ASI and trade data as covered by MSFTI follow different classification[31], a correspondence between the two at the three digit level was established (See Appendix-II). From this, the correspondence at the two digit level was made. Imports have been reclassified according to the categories of the ASI manufacturing sector which covers the group 20 - 38. For the year 1969-70, the industrial classification is that of Standard Industrial Classification (SIC), which is similar to the International Standard Industrial Classification (ISIC). For the year 1974-75, 1979-80 and 1984-85, the national industrial classification (NIC) has been used to classify the industries. The data on the value of production of the ASI factory sector has been used.

Trade Statistics (Imports) for the year 1969-70 and 1974-75 have been classified according to the Revised Indian Trade Classification (RITC). This classification has been in vogue since 1965. From April, 1977, this classification was revised and a new classification called 'Indian Trade Classification Revision-2' (ITC-Rev.2) came into existence. This classification

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31. *The basis of the Industrial classification is on the economic activity adopted, the raw materials used and the finished products whereas the trade-classification is based on the end-use, to which it is applied.*

was evolved on the basis of the Standard Industrial Trade Classification Revision-2 (SITC-Rev-2). So for the year 1979-80 and 1984- 85, trade data on imports classified according to ITC Rev-2 has been made comparable with 1969-70 data (See Appendix-II). Data regarding imports have been collected from the March issues of the MSFTI. Data regarding the value of production are in terms of ex-factory prices net of taxes and margins. Value of imports are c.i.f. net of taxes. Both the production data and import data refer to the financial year.

To obtain the extent of direct and indirect requirements of imports for the year 1973-74 and 1979-80, the data from the technical note on the Fifth and the Sixth Plan have been used. Since our main objective is to estimate the extent of import substitution in the manufacturing sector, a correspondence between the ASI classification at the two digit level was made with the Fifth and the Sixth Plan sectors. The rest, namely agriculture and service sector, were clubbed together as one sector (Refer Table 3.5).

e) Plan of the Study

This study is divided into four chapters. The first chapter is introductory in nature and examines import substitution as a strategy for development and the Indian experience in adopting this strategy. In the second chapter, various measures of import substitution are dealt with and modification of the existing measures to estimate direct and indirect imports has been detailed out. In the third chapter, imports and domestic production trends in the manufacturing sector are examined. The fourth chapter contains the estimates of import substitution for the period 1969-70 to 1984-85.