

INDUSTRIALISATION: DIFFERENT APPROACHES AND CASE STUDIES*

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Abstract:

This paper enquires whether an industrialisation policy designed by the state might be successful in achieving industrialisation and development in the third world. Three common approaches to industrialisation are analysed in terms of their structural features and consequences: import substitution, capital goods sector promotion, and manufacturing export promotion. Associating these strategies to Brazil, India and South Korea, respectively, a detailed comparison of their characteristics and achievements is carried out. The paper concludes by ranking these country experiences, arguing that their relative achievements might be independent from their political regimes.

Introduction

It is a common observation that rich countries tend to be industrialised. Colin Clark noted nearly half a century ago that as aggregate growth proceeds the share of output and employment in agriculture falls while the share of output and employment in industry (and in services) rises¹. A quarter of a century later Simon Kuznets refined this observation by detecting broad regularities in the sectoral composition of output and employment and the level of per capita income.² Using data from the developed countries Kuznets claimed that as income per head rose, the contribution of agriculture to total output declined in a predictable way, while the contribution of services remained roughly constant and the contribution of manufacturing rose. Looked at in terms of employment, Kuznets' data indicated that as per capita income rose, the proportion of

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the labour force engaged in agriculture fell while the proportions engaged in services and manufacturing increased, although the rise in manufacturing was not as pronounced as in services.

These generalisations about patterns of development in rich countries stimulated a great deal of research to see if similar patterns were evident in poor countries. Using the national income data that gradually were becoming available in the third world, Hollis Chenery and his associates conducted numerous cross-country studies which did indeed appear to indicate that the size and composition of the industrial sector was related to the level of per capita income.³ That being so,⁴ discussion then concentrated on the explanation for the apparent uniformity in the pattern of growth.

An obvious explanation is that changes in the composition of output reflect changes in the composition of demand. As average incomes rise, the demand for some goods will increase more rapidly than others, and in the case of "inferior" goods, demand may contract absolutely. It is well established that the income elasticity of demand for food is less than one and it is highly plausible that the income elasticity of demand for manufactured consumer goods is greater than one. It thus follows that when average incomes rise, the demand for food (and by extension, the demand for agricultural products as a whole) will grow less than proportionately while the demand for the products of industry will grow more than proportionately. In a closed economy these changes in the composition of demand normally would lead to corresponding changes in the composition of production and if demand elasticities are broadly similar in all countries, the regularities noted by Clark, Kuznets and Chenery would readily be explained. Of course the correspondence between demand and output would be weakened in an open economy, particularly in small countries where foreign trade accounts for a high proportion of national income, but even so, the effects on the composition of domestic output of a gradual evolution in the pattern of demand could be expected to be considerable.

An implication of this view is that industrialisation occurs more or less automatically as average incomes rise. That is, industrialisation is a consequence of growth rather than a cause of it. Manufacturing simply responds passively to incremental demand.

A second explanation puts the emphasis on supply-side factors. Industry tends to be more capital intensive than agriculture. Thus high savings and investment rates, by reducing the relative scarcity of capital, will favour the expansion of the manufacturing sector and associated industrial activities. Similarly, industry has a greater need for skilled labour than agriculture. If public policy or private initiative results in an expansion of training and educational facilities, the increased supply of skilled labour will help to promote industry. Again, some industrial processes, e.g., chemicals, steel, cement, power generation, are characterised by economies of scale. An increase in output in these activities could result in lower costs, lower prices and a larger quantity demanded. More generally, quite often in industry, because of complementarities and externalities, the whole is larger than the sum of its parts. For example, it may not pay to invest in the manufacture of consumer durables because cheap electric power is not available to households, and it may not pay to invest in a large electric generating plant producing cheap power because of a lack of demand. Both projects viewed in isolation appear to be unprofitable. Viewed together, however, they may be highly profitable because of the close complementarity between them. Particularly in countries with small domestic markets, investment projects frequently will be "lumpy" and a combination of economies of scale and ignorance of investment plans in other industries may inhibit entrepreneurs from undertaking projects with high social rates of return.⁵

Implicit in this second explanation of the observed patterns of growth is the presumption that government policy — by accelerating investment, increasing the supply of skilled labour, exploiting economies of scale where they exist and by designing investment programmes that take complementarities between projects into account — can increase the speed of industrialisation, systematically raise the productivity of labour and thereby raise the rates of growth of aggregate output and income. In other words, a coherent policy for industrialisation could constitute a strategy of overall economic development. Governments acting directly and indirectly by creating favourable conditions for the private sector can promote industrial expansion. Industry, far from merely responding passively to the evolution of demand, could be used by government as the leading sector in sustained, rapid growth.

Support for this approach can be found in the historical experience of the now industrialised countries. Alexander Gerschenkron, in his studies of nineteenth century European industrialisation, stressed the role of the banks and the state and argued that the greater the relative economic backwardness of a country, the more centralised was the development effort.⁶ The agents of industrialisation shifted from private entrepreneurs during the first industrial revolution in England, to investment banks in Germany and then to the state in Tsarist Russia. The later the date at which a country began to industrialise, the more modern and large-scale was the technology employed. Gerschenkron's analysis was greatly enriched by a detailed study of the continental European experience by Dieter Senghaas.⁷ He shows that all the European countries, except of course Great Britain, developed behind protective barriers of one sort or another. Indeed, the European countries went beyond mere tariff protection and selectively delinked from the international economy. During a period of "dissociation" the internal economy was restructured: the production of primary commodities was integrated into processing industries, a capital goods industry was started and mass production of basic consumer goods was developed. Only after major institutional and structural changes were well underway did the countries allow themselves to become reintegrated into the competitive world economy. Free trade was not followed until after the domestic market was developed and conquered.

Warwick Armstrong, summarising the findings of a study of Germany, Japan, Sweden and the United States, comes to "one inescapable conclusion": successful implementation in those four countries of a national strategy of industrialisation depended upon "the ability of the sovereign state, in collaboration with a powerful industrial class, to control and promote the conditions of growth. Institutional support provided by investment banks, a directed technical education system, labour control, selective protection policies, and the borrowing and adaptation of new technology for further domestic innovation, where all part of the larger project to achieve national industrial development".⁸ If this is the way development was brought about in the past, it is reasonable for the third world to enquire whether a similar approach might not be successful in future.

Three approaches to industrialisation

One can distinguish three approaches to industrialisation in the third world. The first and most commonly adopted approach is to concentrate on replacing imports of manufactured consumer goods by domestic manufactures. This is the well-known strategy of import substituting industrialisation. The strategy has been implemented within the context of a mixed economy and although direct state investment in industrial enterprises is not uncommon, most investment in manufacturing has been undertaken by the private

sector. The role of the state has been to create a set of incentives that guides private initiative in the desired direction. In practice governments have tended to provide indiscriminate protection to manufacturing rather than to attempt to be selective or to identify individual "infant industries" for specific encouragement. Governments have often behaved as if they regarded the entire manufacturing sector as an "infant" deserving of protection and hence there was no need to be discriminating. The lack of discrimination in providing support does not imply, however, that the policies have been unbiased. Indeed, as we shall see, the incentives created by policies designed to promote import substituting industrialisation have introduced many biases into the economy, some of them unintended and unanticipated.

The most frequently adopted measures have centred on trade policy. High tariffs, sometimes supplemented by quotas and other non-tariff barriers to trade, have been universal. In addition, multiple exchange rates have been used both to encourage "non-traditional" exports (usually manufactured goods) and to discourage imports of consumer goods. Occasionally, above all in Africa, export taxes and the pricing policies of monopoly state marketing boards have been used to generate government revenues, which in turn have been used among other things to cover the losses of state industrial enterprises.

Protection against imports usually has been accompanied by preferential access of industrialists to finance capital. In some countries monetary policy has been used to keep interest rates low, sometimes negative in real terms. In other countries special development banks or development corporations have been established for the specific purpose of providing capital to new industries. And in yet other countries a large part and perhaps all of the commercial banking system has been brought into public ownership and the government has been able to channel funds directly to those firms it wished to help. Whatever the mechanism, the provision of relatively inexpensive credit has been a conspicuous feature of import substituting industrialisation.

These trade and credit policies have altered the structure of the economy in a number of ways. First and most obviously, they have encouraged the growth of manufacturing industry and by implication have introduced disincentives to the expansion of other sectors, notably agriculture. The bias against agriculture takes several forms: a redirecting of public investment away from activities which support agriculture (irrigation, rural electrification, farm-to-market roads) in favour of activities which support industry; a rise in the price of manufactured consumer goods purchased by the farming population relative to the price of agricultural goods; and a rise in the price of material inputs used in agriculture, e.g., fertilizers and mechanical equipment, relative to the price of agricultural products. Thus from the point of view of production, the profitability of farming is reduced and from the point of view of consumption, the incentive to farmers to increase output in exchange for manufactured consumer goods also is diminished.

Second, import substituting industrialisation has altered (deliberately) not only the inter-sectoral composition of output but also (usually unintentionally) the intra-industry composition of output. One reason for this is that nominal tariff rates seldom are uniform and hence some industries receive a much higher nominal or apparent degree of protection than others. Tariff rates proliferate through historical time in response to particular political pressures or economic circumstances, but when one examines the structure of protection at any given moment it often appears to be arbitrary and irrational without rhyme or reason. A further complication arises from the fact that many manufactured goods are used as inputs in the production of other manufactured goods.

Steel is used in the production of consumer durables, cloth is used in the production of clothing, etc. If both steel and consumer durables are given protection from imports, say, with an identical nominal tariff rate, the real or effective rate of protection to value added in the consumer durables industry will be much less than that in the steel industry – because the former will have to purchase high cost inputs from the latter.² Indeed in extreme cases some industries have negative effective protection, presumably contrary to what the policymakers intended when the tariffs were imposed.

Third, tariff protection provides only partial assistance to an industry. It protects what the policymakers intended when the tariffs were imposed. It protects local industry from foreign competition in the domestic market but provides no assistance in foreign markets. Unlike a general subsidy to production, tariffs introduce a strong bias in the manufacturing sector in favour of sales in the domestic market and against sales in the international market.³ In other words, import substituting industrialisation is biased not only in favour of the manufacturing sector but also against exports, including exports from the manufacturing sector. While one can adduce good arguments for wishing to promote industrial output and to encourage industrial expansion, it is not easy to think of good reasons why one should wish to discourage industrial output from being sold abroad and encourage it instead to be sold at home. Yet that is what tariffs do.

Fourth, the strategy has also affected factor proportions in manufacturing and indeed throughout the economy. By lowering the relative cost of finance capital, incentives have been created in industry to use more mechanised techniques of production than would otherwise be profitable, to invest in plant with a larger capacity than the domestic economy can support and to economise on the employment of labour. These tendencies toward high capital-labour ratios, low capacity utilisation and low employment creation are reinforced if an overvalued exchange rate also is present, as is often the case. That is, if there is an excess demand for foreign exchange at the ruling exchange rate, import licenses or permits will have to be used to allocate foreign exchange among the competing users. Unless the licenses are sold by auction, those who obtain the right to purchase foreign exchange at the official rate will be able to import capital goods relatively cheaply and this will give them an incentive not only to adopt capital intensive methods of production but also foreign exchange intensive methods of production.

Fifth, import substituting industrialisation has altered the distribution of income among the various factors of production. It has increased the share of industrial profits in national income, lowered rents in export oriented agriculture and in mining and reduced the share of wages. Often in fact protection has been excessive (or partially redundant) in the sense that it has been higher than necessary to encourage an industry to become established. Particularly in countries where the domestic market is small and the number of firms needed to satisfy demand for a particular commodity consequently is few, competition has been absent and monopoly profits have been high. This has accentuated the tendency for import substituting industrialisation to shift the distribution of income towards profits. This change in factor shares sometimes is welcomed on the grounds that the propensity to save out of profits is higher than the savings propensity out of rent and wages. Thus there is thought to be an added bonus to the strategy in the form of higher savings, investment and aggregate growth.⁴

A sixth effect of the strategy has been to increase inequality in the distribution of income and wealth among households. The poor in the rural areas and in the informal urban sector have lost ground relative to the upper income groups in the cities. Moreover, where the initial distribution of income was unequal, the process of import substituting

consumer goods has led to a composition of manufacturing output which tends to strengthen the initial inequalities. The concentration of income at the top end of the distribution results in a relatively large demand for luxury goods, i.e., for goods with high income elasticities of demand. These goods originally were imported but thanks to tariff protection are replaced by domestic production and in consequence the capital structure of industry and the composition of manufacturing output come increasingly to rely on income inequality as the source of effective demand. Any reduction in inequality threatens the commercial viability of large parts of the manufacturing consumer goods sector and consequently is resisted. That is, import substituting industrialisation creates vested interests among producers in favour of income inequality among consumers.

Lastly, the trade and credit policies have affected settlement patterns and the spatial distribution of the population. They have encouraged rural to urban migration and in some cases an explosive expansion of large metropolitan agglomerations. Rapid urbanisation, in turn, has imposed heavy costs and forced some diversion of scarce investment funds toward social infrastructure—urban housing, urban water and sewage works, roads, street lighting, etc. Inevitably, however, the provision of social overhead capital has lagged behind demand and as a result slum conditions have proliferated and many millions of people have been forced to live in urban squalor.¹²

Not all of these effects or biases have been present in all countries pursuing import substituting strategies of industrialisation and of course the strength of the various biases has not been the same every where even when they are present. Nonetheless, they have been sufficiently common and sufficiently strong to create disenchantment among supporters and strong criticism from the champions of an open economy.¹³ There is no doubt that cases can be found of a gross misallocation of resources in particular industries, as in the notorious Chilean automobile industry¹⁴, and in some instances inefficiency has been so great that when inputs and outputs are valued at world prices, the value of material inputs has exceeded that of outputs, i.e., the industry has been characterised by negative value added.¹⁵ These are exceptional cases, however, not typical ones.

As we have seen, investment in industry has been quite high and the growth of manufacturing output per head has been rapid. It certainly is not correct to imagine that average income per head would increase if manufacturing plants in the third world were closed down—as the findings of negative value added imply! A more serious criticism is that import substituting industrialisation far from easing balance of payments problems actually makes them worse. Once luxury or non-essential consumer goods have been eliminated from the import bill and replaced by domestic production, only essential consumer goods and capital and intermediate goods are imported. Imports of essential consumer goods cannot be reduced almost by definition and imports of capital and intermediate goods are likely also to be essential to maintain production and investment. In such circumstances, the argument goes, the balance of payments constraint on growth is likely to be very tight and the country in effect will be more dependent on external trade than before import substituting industrialisation began.

The force of the argument depends however on an assumption that once a country has embarked on import substitution it is unable subsequently to switch to exporting manufactured goods. This assumption, at least for some countries, has proved to be false. Indeed the natural sequence for most capitalist economies is to start the process of industrialisation by substituting imports and later, when costs have fallen as a result of learning by doing, to produce for foreign markets. As Arthur Lewis has said "...it is hard to begin industrialisation by exporting manufactures. Usually one begins by selling in a

familiar and protected home market and moves on to exporting only after one has learnt to make one's costs competitive".¹⁶

There is however a second approach to industrialisation in the third world that merits mention. This approach was devised to enable a country to industrialise under conditions of stagnant or slowly growing exports. Under such conditions the foreign exchange needed to import capital goods to sustain a high rate of investment is not available and consequently the country must either reduce its growth ambitions to the rate permitted by export earnings or it must develop its own capital goods sector. The Indian statistician and planner, P.C. Mahalanobis, clearly influenced by the Soviet experience, designed a development strategy for India that was spearheaded by the development and expansion of the capital goods industries.¹⁷

Unlike import substituting industrialisation which proceeds by supplying already established markets for consumer goods, a strategy based on promoting the capital goods sector does not enjoy the advantage of a domestic market ready to absorb the output of the new industries. Consequently capacity has to be built ahead of demand in the expectation or hope that demand will materialise as growth occurs. In a large country such an expectation is perhaps reasonable, but in a small country there will be a danger of widespread excess capacity in the capital goods sector. This in turn will make it impossible to exploit economies of scale; average costs will tend to be high and firms might be forced to operate at a loss for long periods of time.

Private industrialists are unlikely to be willing to bear the risks of building far in advance of demand or of carrying large losses for long periods. The strategy therefore implies that the state will have to play a leading role in establishing and running the capital goods enterprises. Small scale, light manufacturing of consumer goods can be left to the private sector, which can be granted protection as under an import substituting strategy, but the main thrust of industrialisation under this strategy would come from a publicly financed investment in state enterprises. The country would of course still have a mixed economy, but compared to a pure import substituting strategy, the mix would be tilted toward the public sector.

The losses of state enterprises would have to be covered out of general government revenue. If tax receipts were insufficient to do this, the public sector as a whole would be in deficit. That is, the public sector's contribution to national savings would be negative. The danger would then arise that unless private sector savings were buoyant or taxes could readily be raised, an industrialisation strategy designed to increase the supply of investment goods would falter because of an inadequate supply of savings. In a centrally planned economy where all resources are allocated in physical terms, this problem in principle should not occur since material balances would ensure that consumption does not absorb resources needed for planned investment. But in a mixed economy the policymakers have to ensure not only that the physical resources necessary for investment are in principle available (either from domestic production or imports) but also that consumption does not reduce savings below the level needed to finance the desired investment. Unless policy is skilfully implemented there is a danger that a strategy designed to alleviate a foreign exchange constraint on development will end up by creating a savings constraint.

The most direct way to alleviate a foreign exchange constraint is of course by increasing exports. The third approach to industrialisation in the third world attempts to do precisely that, namely, to design the strategy of development around exports of manufactured goods. This is undoubtedly the hard way to industrialise, but in some cases, e.g., Hong Kong and Singapore, there was little choice. In other cases, e.g., South Korea

and Taiwan, the import substituting phase of industrialisation was relatively short and policy soon switched to an emphasis on exporting. The results were spectacularly successful. It has been argued that the import substituting phases were vital for the success of the subsequent exporting phases, but this is difficult to demonstrate conclusively.

Many of the biases inherent in a strategy of import substitution are absent or at least less strong in a strategy of industrial export promotion. The greater openness of the economy means that comparative advantages can more readily be exploited. This in turn will help to increase overall efficiency in the use of resources and to raise average incomes. Manufacturing production in an export oriented strategy is likely to be labour intensive because only in that way will costs be low enough to be internationally competitive. As a result the growth of employment in manufacturing is likely to be higher than in an import substitution strategy.

Wage cost typically are kept low by restrictions on trade union activity or by their outright prohibition. Hours of work (including overtime) and the intensity of work are great. Two and three shifts are usual. Considerable reliance in some industries is put on female labour. Some analysts regard these practices as evidence of "wage repression" and believe them to be an integral part of the strategy. It is of course true that wages are repressed in the sense that organised labour is not free to push earnings much above the opportunity cost of labour. It is also true that in labour disputes the government, if it intervenes, usually does so on the side of management rather than in support of the workers. On the other hand, average wages in countries pursuing export-led industrialisation tend to be relatively high and to increase much more rapidly than countries otherwise comparable. And of course the employment of labour in manufacturing tends to rise much more quickly.

Relatively low capital-labour ratios and high rates of growth of employment are likely to be associated with a higher wage share in value added and a more equal distribution of income among households. Moreover, if factor price distortions can be kept to a minimum and if monopolistic concentrations of industry can be avoided, the personal distribution of income could remain relatively equal in the course of development and inequality could possibly even decline. If for example the growth of manufacturing is associated with constant real wages and diminishing unemployment in the early stages and rising real wages and full employment in the later stages, the degree of inequality probably would fall, except in the unlikely event that the elasticity of substitution between labour and capital is greater than unity. Thus for all these reasons the hard way to industrialise, if it is feasible, is in principle the best way.

Actual practice, however, seldom conforms fully to theory and it is instructive to examine the experience of countries that have followed the three different approaches that have been identified. In the sections that follow we shall consider Brazil as a case of successful import substituting industrialisation, India as an example of a country which has consciously developed a domestic capital goods sector and South Korea as a country which has concentrated on exporting manufactured goods to the rest of the world.

Brazil: from import substitution to exports of manufactures

Brazil is by far the largest country in Latin America and its history of import substituting industrialisation contains many features to be found in other Latin American countries. In Brazil as elsewhere import substitution did not begin as a deliberate strategy

of economic development, rather it was a more or less spontaneous reaction to a series of external shocks that began with the disappearance of the market for Brazilian rubber in the late nineteenth century and was followed in rapid succession by the disruption of international trade in the First World War, the collapse of the country's terms of trade during the Great Depression of the 1930s and the disruption of international commerce yet again during the Second World War. Each of these shocks provoked a wave of import substituting industrialisation which led to a step-by-step rise in the share of manufacturing in gross domestic product.

The Great Depression probably was the point of no return for Brazil. In just two years, between 1929 and 1931, the country's terms of trade declined by 46.4 per cent and then fell again sharply in 1938, so that the terms of trade in 1938 were 57 per cent lower than they had been at the time of the stock market crash on Wall Street.¹⁸ The volume of imports fell precipitously. Indeed at the low point in 1932 they were 63.8 per cent below the 1929 level.¹⁹ It is hardly surprising that Brazilians (and other Latin Americans) began to doubt the advantages of an open economy.

In fact there was a sharp break from the liberal international economic order and the gold standard rules. Brazil devalued the currency, imposed exchange controls, increased tariff protection, suspended payments of interest and capital on the foreign debt in 1931 and then again in 1937 suspended all public debt payments for three years. "In the end, the foreign debts were written down to less than a quarter of their nominal value."²⁰ The measures evidently worked. The fall in GDP between 1929 and 1931 was limited to 5.3 per cent; thereafter output began to increase at a rapid rate and between 1931 and 1938 real GDP rose by 56.4 per cent.²¹

The decline in world coffee prices was partially offset by internal price supports and this helped to maintain high incomes for the wealthy plantation owners in the state of Sao Paulo. The plantation owners, then and later when coffee prices recovered, reinvested their capital in manufacturing industries. As a result, to this day over half of Brazil's manufacturing output originates in Sao Paulo. In the 1930s the role of the central government under Getulio Vargas was greatly strengthened relative to local power holders and the traditional large landowner linked to the export sector. In some cases (as in coffee) part of the landowning class was converted into an industrial class and in other cases new industrial groups allied with the state emerged. In either event the final outcome was impressive. Industrial output over the entire period 1929-1938 increased 6.1 per cent a year. Import substituting industrialisation had demonstrated what it could do.

The Second World War gave a further stimulus to industry, as in many other parts of Latin America. In Brazil, by 1945, industrial production probably accounted for 20 per cent of gross domestic product.²² In response to greater international competition after the war, Brazil in 1947 reintroduced exchange controls, imposed a system of multiple exchange rates and increased tariff protection, particularly favouring the domestic production of consumer goods.

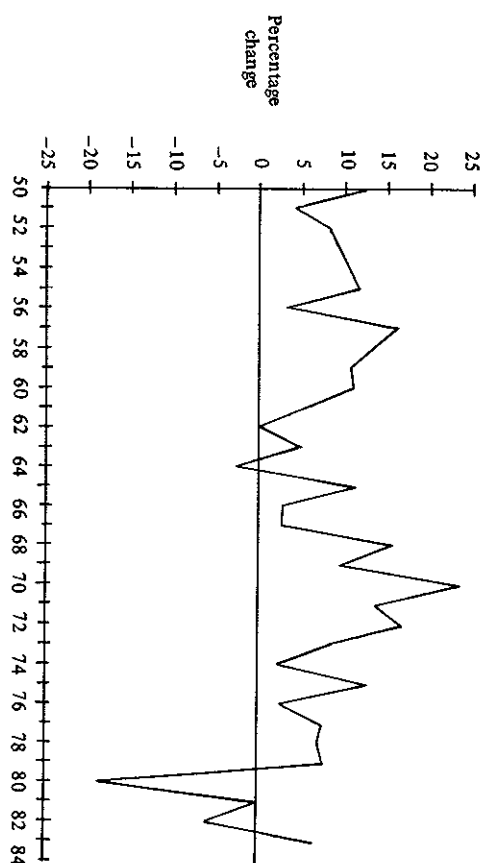
Again, in 1956-61, this time under Juscelino Kubitschek, there was a new surge of industrialisation.²³ There was massive state investment in electric power and transport and in the capital and intermediate goods industries. The private sector was given high protection in the consumer goods industries but low or negative effective protection in capital goods (which was partly compensated by direct government subsidies). Multiple exchange rates were also used. Liberal policies toward foreign capital were adopted and in response direct foreign investment in manufacturing rose very rapidly. Motor vehicles, shipbuilding, steel, engineering and heavy electrical equipment were especially favoured by foreign investors.

In 1969 the most recent surge of industrial expansion began. This period, which ended effectively in 1976, was marked by extraordinarily rapid growth and in fact is known as the Brazilian miracle. The "miracle", however, is part of the Brazilian pattern of boom and bust, as can clearly be seen in Figure 1. The long term trend rate of growth of industrial output over nearly three and a half decades (1950-1984) was 7.7 per cent per annum. In contrast the average of the annual rates of growth in the major sub-periods was as follows:

Kubitschek expansion (1955-61)	10.9
Crisis of the 1960s (1962-68)	3.5
Economic miracle (1969-76)	12.7
Debt crisis (1977-84)	0.7

FIGURE 1

BRAZIL: ANNUAL CHANGE IN INDUSTRIAL OUTPUT



Superimposed on the cyclical pattern of expansion was a long run change in the structure of manufacturing output. Although the origin of the industrialisation strategy was in import substitution of consumer goods, the development of intermediate and capital goods was not neglected. In fact by 1967 intermediate and capital goods accounted for nearly 56 per cent of value added in manufacturing and basic consumption goods for less than a third. Sixteen years later the structure had evolved further: in 1983 the share in manufacturing value added of capital and intermediate goods was 62 per cent and the share of basic consumer goods was just under a quarter. (See Table 1). Brazil thus has created a balanced and well integrated industrial sector and in principle the country should be capable of self-reliant growth. It has completed the transition from specialisation on consumer goods to a diversified composition of manufacturing output.

TABLE 1
THE COMPOSITION OF MANUFACTURING OUTPUT IN BRAZIL, 1967-1983
(percentage of value added)

	1967	1975	1983
Basic consumer goods ^a	32.3	25.9	24.7
Intermediate and capital goods ^b	55.7	60.9	62.0
Other manufactured goods ^c	12.0	13.2	13.3

Notes: a. ISIC 31 (food and tobacco), 32 (textiles and clothing), 37 (basic metals), 38 (machinery and equipment).

b. ISIC 35 (chemicals and plastics), 36 (non-metallic minerals), 39 (other).

c. ISIC 33 (wood and wood products), 34 (paper and printing), 39 (other).
Sources: UNIDO, *Industry and Development Global Report 1986*, Vienna, 1986; IBRD, *World Tables*, Baltimore: Johns Hopkins University Press, 1983.

The level of protection in Brazil was very high by Asian standards and higher than in Colombia and Mexico, although not as high as in Argentina. In 1967, for example, nominal protection of the manufacturing sector (including not only tariffs but also exchange premia and port charges) was 48 per cent and effective protection was 73 per cent.²⁴ This was excessive even from a protectionist point of view in that Brazilian costs of under competitive conditions were not 48-73 per cent higher than c.i.f. prices of imported manufactured goods. The high tariffs, exchange premia and port charges enabled Brazilian industrialists to establish uncompetitive enterprises and to reap large monopoly rents—partly in the form of high incomes and partly in the form of an "easy life" and avoidable high costs.

Joel Bergsman estimates that in 1967 the total cost of protection to Brazil was "perhaps 8-10 per cent of G.N.P."²⁵ But he goes on to say, "Only a small part of this—less than 1 per cent of G.N.P.—was the result of misallocation. The rest consists of monopoly profits plus avoidable higher costs. This implies that moving to free trade in 1967 would have resulted in a saving amounting to only something less than 1 per cent of G.N.P., through substitution of more profitable export activities for less profitable import substituting activities."²⁶

Protection, then did not lead so much to a misallocation of resources and inefficiency as to a concentration of income. Moreover the degree of inequality appears to have increased over time. Regis de Castro Andrade reports that the percentage share in the personal distribution of income among the economically active population aged 10 to 65 evolved as follows:²⁷

	1960	1970	1976
Lowest 50 per cent	17.7	14.9	11.8
Highest 5 per cent	27.7	34.9	39.0
Gini coefficient	0.50	0.56	0.60

The overall distribution of income as measured by the Gini coefficient was very unequal in 1960 and became steadily worse over the next sixteen years. Indeed Brazil must have about the most unequal distribution of income of any country in the world.²⁸

The general deterioration occurred in both the lower half of the distribution and at the very top. The share of the richest 5 per cent of income earners rose dramatically from 27.7 per cent in 1960 to 39 per cent in 1976 while the share of the poorest 50 per cent fell sharply from 17.7 to 11.8 per cent. That is, in 1976, and average person in the upper 5 per cent of the income earning population received 33 times as much as an average person in the bottom half of the population.

The state is of course in alliance with the industrial and property owning classes. It is responsible for more than 40 per cent of total fixed investment. It as a controlling interest (but seldom complete ownership) in mining, steel, chemicals, oil and petrochemicals, the railroads, electric and nuclear power. And during the time of the "economic miracle" the private sector received massive subsidies and tax exemptions to encourage the export of manufactured goods. "As a result, exporters of manufactured goods enjoyed gross subsidies allowing them to place their products abroad at FOB prices from 40 to 60 per cent lower than the domestic prices of the same goods."²⁹

It is hardly surprising therefore that exports of manufactures rose rapidly in the late 1960s. Moreover exports of manufactured goods continued to rise rapidly throughout the 1970s, so that by the end of the decade they accounted for more than 70 per cent of total exports. This occurred, furthermore, in a context in which the Brazilian economy gradually became more open to the world at large. Thus in 1970 exports accounted for 6.5 per cent of GDP, in 1975, for 7.1 per cent; in 1980, for 8.5 per cent, and in 1984, when the country ran a huge trade balance in a struggle to service its foreign debt,³⁰ 14.4 per cent. Thus Brazil successfully completed the transition from import substituting industrialisation to export promotion of manufactured goods.

The transition was the outcome of a partnership between the indigenous industrial class, the state and foreign investors. The contribution of direct foreign investment to Brazil's industrialisation has been enormous, perhaps larger than that of any other country which has made a successful transition from import substitution to export promotion. As early as 1978, for instance, foreign enterprises accounted for 44 per cent of Brazil's manufacturing output and were responsible for 50 per cent of the country's exports of manufactured goods.³¹ Foreign influence is therefore considerable. Indeed, of the three members of the partnership, the Brazilian industrial class is undoubtedly the most junior.

India: the state, capital goods and self-reliance

The Indian experience of industrialisation differs from the Brazilian in a number of ways. First, after independence in 1947 the government took responsibility for the country's economic development. Policy was formulated within the framework of a series of five year plans in which the public sector was expected to play the leading role and the private sector was to be guided in the desired direction by government controls and incentives. Second, beginning with the Second Five Year Plan (1955-60) particular emphasis was placed upon the growth of the capital goods sector. One reason for this emphasis was "export pessimism", a belief that the world market would grow relatively slowly, that the terms of trade were likely to move against India's primary export commodities and that India could not become internationally competitive in manufactured products without an initial and probably rather long period of domestic protection. In addition, third, the country wished to be independent not only in a formal political sense but also economically. It did not want to be dependent on foreign sources for its

basic capital goods nor was it willing to accept foreign direct investment (except as a means of obtaining foreign technology); it was, however, prepared to accept foreign aid, although in practice external assistance seldom was more than 3.5 per cent of GNP and usually was much less. Basically, India wished to be and was self-reliant.

While it would be misleading to claim that India's policies for industrial development have remained unchanged since independence, and even more misleading to claim that agricultural policy has remained unchanged, the general thrust of industrial policies was remarkably consistent for thirty years, namely from 1955 to 1985. The Mahalanobis legacy was indeed an enduring one and India remained faithful to his vision of capital goods as the leading sector and the state as the leading actor. Public investment in industry has consistently accounted for 40-55 per cent of the total. Private investment in industry has been regulated (some would say restrained) by a series of measures, of which industrial licenses and import licenses have been the most important. That, is until recently imports were restricted by quotas (supplemented by tariffs) and allocated in physical term by type of product and by type of user.³² To prevent the degree of monopoly in the private sector from being excessive, price controls also have been imposed on products regarded as essential: fertilizer, cement, aluminium, sugar, pharmaceutical products, etc.

If one assumes that the primary objective of economic policy was to develop a capital goods sector so that India's rate of accumulation could be independent of the growth of export earnings, then industrialisation must be judged a success. (See Table 2). The share of the capital goods sector rose steadily from less than 5 per cent of industrial output at the beginning of the Second Five Year Plan to nearly 18 per cent in 1979/80. The share of the so-called basic goods (fertilizer, cement, electric power, etc.) also increased substantially over the twenty-three year period. Basic and capital goods, combined accounted for 48.5 per cent of total industrial output by the beginning of the present decade.

TABLE 2

INDIA: CHANGES IN INDUSTRIAL STRUCTURE, 1956-1979/80

	Percentage Share of Industrial Output					Rate of Growth, 1959/60-1979/80 ^c
	1956	1960/1	1965/6	1970/1	1975/6	1979/80
Basic goods ^a	22.1	27.5	30.6	30.7	31.9	30.8
Intermediate goods	24.6	21.0	19.1	19.0	17.5	16.3
Capital goods	4.7	10.7	15.0	15.2	16.3	17.7
Consumer goods ^b	48.4	40.8	35.4	35.1	34.3	35.3
						4.9

Notes: a. Basic goods comprise salt, fertilizers, cement, basic metals, electricity and mining.
b. Consumer goods include both durables and non-durables.
c. Net value added.

Sources: Ister Judge Ahluwalia, *Industrial Growth in India: Stagnation Since the Mid-Sixties*, Delhi: Oxford University Press, 1985, Table 2.1, p. 9 and Table 2.5, p. 19; Ister Judge Ahluwalia, "The Role of Policy in Industrial Development", paper presented to a conference on Economic Industrial et Stratégies d'Industrialisation dans le Tiers Monde, ORSTROM, Paris, 26-27, February 1987, Table 1, p. 31.

The same picture emerges if one compares relative rates of growth. During the two decades from 1959/60 to 1979/80 net value added in the capital goods industries grew much faster than in any other sub-sector, namely, 8.1 per cent a year as compared to 6.2 in basic goods, 4.9 in consumer goods and only 4.2 in the intermediate goods sub-sector. Thus in relative terms the priority given to capital goods by the policymakers was achieved.

Also achieved in practice was the priority accorded to public sector investment as compared to private. The problem, however, is that the dynamism of public sector investment declined markedly after the mid-1960s. This can clearly be seen by examining the data on annual rates of growth of total fixed investment.³³ During roughly the Second and Third Five Year Plans, i.e., from 1956/7 to 1965/6, public sector fixed investment increased 10 per cent a year and private sector fixed investment 3.2 per cent a year. The average for the two sectors was a respectable 6.1 per cent annual rate of growth. In the following period 1966/7 to 1979/80 the rate of growth of fixed investment in the public sector fell by nearly a half (to 5.2 per cent) while growth in the private sector remained virtually unchanged (at 3.1 per cent). As a result the overall rate of growth of fixed investment fell by a third to 4.1 per cent a year. The public sector locomotive had run out of steam.

Long term rates of growth of output and productivity in India's manufacturing sector have been a little disappointing. In the three decades 1950-80 production increased on average 5.1 per cent a year. (See Table 3). Isha Ahluwalia has shown, however, that there was a sharp slowing down of growth after 1965 and that the momentum achieved in the period 1955-65 has never been regained,³⁴ although it is hoped that the policy reforms that began in 1985 will lead to a revival. She has also shown that for twenty years, namely from 1955 to 1975, total factor productivity in manufacturing actually declined; it has however begun to rise since about 1975.

TABLE 3
INDIA: GROWTH OF OUTPUT AND PRODUCTIVITY IN MANUFACTURING,
1950-1983
(per cent per annum)

	Manufacturing value added	Total factor productivity in manufacturing
1950-80	5.1	n.a.
1955-65	6.2	-0.1
1965-75	3.3	-1.5
1975-80	4.5	0.5
1980-83	5.8	n.a.

Sources: UNIDO, *Industrial Development Review Series: India*, Vienna, 5 July 1985, Table 1, p. 4; Isha Ahluwalia, "The Role of Policy in Industrial Development", *op. cit.*, Table 3, p. 33 and Table 5, p. 36.

The sluggish growth of industry has meant that gross domestic product also has grown rather slowly. Indeed from 1950 to 1980 GDP grew only 3.6 per cent a year and GDP per capita only about 1.3 per cent. Given the slow growth of average incomes one would not expect major changes in the distribution of income and our expectations are supported by the data. The degree of inequality in India is moderate and certainly not as

great as in Brazil, but between 1964 and 1967 the distribution of household income in India as a whole apparently became much more unequal, the Gini coefficient rising from 0.35 to 0.46. But then it fell to 0.42 in 1975 and hence one can infer no trend in inequality in either direction from this fragmentary evidence.³⁵

The industrial reform programme that started in 1985 has three broad objectives: (i) to reduce the emphasis on public sector investment and increase that of the private sector, (ii) to switch policy instruments from a reliance on physical controls to financial incentives and (iii) to shift from import substituting industrialisation towards a more open economy. Measures have been taken to release the energies of private entrepreneur-ship and to promote more competition. The investment licensing system has been simplified and 25 industries have been delicensed altogether. Corporate and personal income taxes have been reduced as have the excise taxes on many manufactured products. Some fiscal incentives have been introduced to encourage investment by small and medium sized enterprises. These incentives presumably were introduced to help correct the imbalance created by the investment licensing system which favoured exceptionally large establishments. Indeed disregarding household manufacturing and workshop enterprises, India is said to be "the country where very large enterprises (over 1 000 workers) dominate manufacturing factory employment to a greater extent than any other country in the world—including the United States".³⁶

The government has reduced subsidies to manufacturing enterprises and has also reduced a number of price controls. Some export incentives have been introduced and export duties have been abolished on three-quarters of the items previously liable to duty. Most important, the import licensing system has been simplified and the number of quantitative trade restrictions has been greatly reduced. Lastly, policy has become slightly more encouraging to direct foreign investment.

India's policies have been out of synchronisation with the world economy. When international trade was expanding swiftly, India's policies were very inward oriented. Now that international trade has slowed down, India has decided to liberalise her trade regimen and become more export oriented. India's ratio of exports to GDP is about the lowest in the world and although manufactures account for about 70 per cent of exports, it should be possible to increase very substantially the country's share of the world market for selected manufactured goods. The change in trade policy is therefore to be welcomed as better late than never. There certainly is no reason actively to discriminate against exports. At the same time one must recognise that in current trading conditions a strategy of export-led growth is unlikely to be as successful as it would have been for India twenty years ago or even as it could be today for a smaller country. Hence expansion of domestic demand probably will continue to be important for the growth of India's industrial sector.

South Korea: planned exports of manufactures

South Korea's experience is in marked contrast with that of India. At the end of the Korean War (1950-53) the economy was in ruins. Fixed investment was less than 6 per cent of gross national product, manufacturing output was less than 9 per cent of GNP and exports accounted for only 2 per cent of GNP. Imports were 2.3 times as large as exports. There was of course a recovery when hostilities ceased and the mining and manufacturing sectors quickly regained momentum. Growth as a whole, however, was relatively slow and at the beginning of the 1960s the economy clearly was in crisis. In 1960, national savings

financed only 7.5 per cent of gross investment, the rest coming from abroad as foreign aid. GNP grew only 1.1 per cent and income per head fell. In 1961, mining and manufacturing output increased only 4.4 per cent and in that same year a new military government took power.

The new government introduced a new economic strategy of export oriented industrialisation. This was not a strategy of *laissez faire*, quite the reverse as we shall see. An important component of the strategy however was to align South Korean prices with international prices in order to exploit the country's comparative advantage and maintain the competitiveness of its exports. The won was devalued early in 1961 and at fairly frequent intervals thereafter; in between devaluations export subsidies were used to make certain that the real exchange rate for exporters remained competitive. On the whole the policy worked reasonably well, although towards the end of the period 1974-80 (during which the nominal exchange rate was held constant) South Korea's exports began to suffer. There is little doubt that the 1980 devaluation should have occurred at least twelve months earlier.³⁷

The financial regime was changed at the same time has the exchange rate regime. In 1961 the government took control of the five major banks and used this control to implement its investment and output plans. Capital was applied to private entrepreneurs at subsidised rates and other government policies (tariffs, price controls, profits tax, depreciation allowances, control of entry into an industry) were used to discriminate between firms, favouring those which complied with the planners' wishes and penalising those who refused to conform.³⁸ In 1965 nominal interest rates were more than doubled and this had two beneficial effects.³⁹ First, by increasing the cost of borrowed capital it encouraged firms to adopt more labour intensive methods of production and thus to increase employment. Second, it encouraged savers to switch their placements from the curb market to the formal capital market, and this in turn made it easier for the government controlled banks to implement central plans.

Government intervention in the capital market helped to create an oligopolistic structure of industry. The firms that benefited from the differential access to credit and from concessionary loans at low real rates of interest grew very rapidly while those firms that were unable to obtain loans or have their loans renewed remained small and often went bankrupt. As a result, the average size of enterprise in South Korea is large and the twenty largest firms account for half of manufacturing output⁴⁰. This high concentration of industry has of course made it easier for the government to become involved in the detailed implementation of its plans.

The Economic Planning Board was established in 1961 and included both planning and budget functions. At the same time a Ministry of Commerce and Industry, based on MITI in Japan, was created to promote industrial exports. Indeed the Ministry maintained constant pressure on industry "through monthly export promotion meetings monitored directly by the President".⁴¹ Planning in South Korea, as John Enos explains, is remarkable for:

...its omnipresence on the economic scene. Through the agency of its ministers and civil servants, employed in the Economic Planning Board, the various departments and ancillary bodies, the government has populated the industrial environment.

Having participated in planning, in negotiation with foreign suppliers, in establishing or directing firms to employ the imported technology, and in procurement of finance, equipment and personnel, having been present during the construction of a plant, during the start-up of equipment, and during its subsequent operation and improvement, the functionaries of government have become quickly aware of

departures from schedules and deficiencies in material and manpower. It has been easier to impose controls, and those controls have been more effective, when the controllers have been always on the spot⁴².

This system of detailed intervention and of close supervision in furtherance of carefully planned exports of manufactures was very successful. As can be seen in Table 4, the share of manufacturing in GNP nearly doubled between 1960 and 1975 and by had risen further to just over 29 per cent of gross national product. During the same period, exports rose from 3.4 per cent of GNP in 1960 to 28.1 per cent in 1975 and then to 41.5 per cent in 1984. In three decades South Korea was transformed from virtually a closed economy to a very open one.

TABLE 4
EXPORTS, MANUFACTURING PRODUCTION AND SAVINGS IN SOUTH KOREA,
1953-1984

	Exports (per cent of GNP)	Manufacturing (per cent of GNP)	National Savings (per cent of gross domestic capital formation)
1953	2.0	8.9	57.3
1955	1.7	11.4	42.4
1960	3.4	13.7	7.5
1965	8.5	17.9	49.1
1970	14.2	20.8	64.7
1975	28.1	26.5	63.3
1980	37.7	28.8	63.2
1984	41.5	29.3	n.a.

Source: Bank of Korea, *National Income in Korea 1982*, Seoul, 1982; Economic Planning Board, *Major Statistics of Korean Economy 1985*, Seoul, 1985.

Foreign capital has been an important source of investment finance throughout the industrialisation drive. Three points however should be noticed. First, the dependence on foreign capital did fall somewhat until about 1970, after which it remained stable. The third column in Table 4 shows that in 1955 national savings financed only 42.4 per cent of total gross investment and foreign savings the rest. By 1970 however national savings were able to finance 64.7 per cent of investment, reducing the share of foreign savings to a little more than a third. Second, direct foreign investment has never played a significant role in the country's development. Most foreign capital imports have been either public or commercial loans and in the period 1975 to 1984, for instance, foreign investment accounted for only 4.6 per cent of the total of foreign loans and investments.⁴³ Third, when foreign direct investment was allowed into the country it was tightly controlled. Usually joint ventures were established (with Koreans having a controlling interest) rather than wholly owned foreign subsidiaries and occasionally the joint venture subsequently became wholly Korean owned. Moreover, "foreign engineers, technicians and managers have been replaced with Koreans, always deliberately and systematically"⁴⁴. Foreign owned industry, in short, has been domesticated.

The performance in terms of rates of growth has been impressive. This is shown in Table 5. The rate of growth of gross domestic product accelerated sharply after the new

TABLE 5
RATES OF GROWTH IN SOUTH KOREA, 1953-1985
(per cent per annum)

	1953-62	1962-85	1953-85
Gross domestic product	4.7	8.7	8.0
Value added in manufacturing	11.7	16.0	15.5
Total exports	15.0	22.8	23.0
Exports of manufactured goods	23.7 ^a	27.3	32.3 ^b

Notes: a. 1957-62

b. 1957-85.

Sources: Bank of Korea, *National Income in Korea 1982*, Seoul, 1982; Economic Planning Board, *Statistical Yearbook 1986*, Seoul, 1986; OECD Development Centre data tapes.

strategy came into effect. During the period 1953-62, GDP in real terms grew about 4.7 per cent per annum whereas in the subsequent period 1962-85 the rate of growth was 8.7 per cent a year. The growth of value added in manufacturing also accelerated but the rate of acceleration was not as dramatic as in the case of GDP because the trend rate of growth in the manufacturing sector already was high prior to the change of government, although as previously noted manufacturing grew very slowly in 1961. Total exports and especially exports of manufactured goods increased very rapidly. There was an initial leap in the level of exports when the new strategy was introduced and then an acceleration in their rate of growth. Over the entire period 1953-85 total exports (in constant won) grew 23 per cent a year; manufactured export over the slightly shorter period from 1957 to 1985 grew 32.3 per cent a year. By the beginning of the 1980s manufactured goods accounted for well over 90 per cent of total exports.

It is sometimes imagined that because of the export orientation of South Korea's manufacturing industries, output must be concentrated on light industry and manufactured consumer goods. This is not correct, however. The share of basic consumer goods in manufacturing value added has fallen steadily and by 1983 accounted for only 36.1 per cent of the total. (See Table 6). Conversely, the share of intermediate and capital goods

TABLE 6
COMPOSITION OF MANUFACTURING OUTPUT IN SOUTH KOREA, 1967-1983
(percentage of value added)

	1967	1975	1983
Basic consumer goods ^a	47.3	40.3	36.1
Intermediate and capital goods ^b	42.0	51.1	55.9
Other manufactured goods ^c	10.7	8.6	8.0

Notes: a. ISIC 31 (food and tobacco), 32 (textiles and clothing).

b. ISIC 35 (chemicals and plastics), 36 (non-metallic minerals), 37 (basic metals), 38 (machinery and equipment).

c. ISIC 33 (wood and products), 34 (paper and printing), 39 (other).

Sources: UNIDO, *Industry and Development Global Report 1986*, Vienna, 1986; IBRD, *World Tables*, Baltimore: Johns Hopkins University Press, 1983.

has risen steadily from 42 per cent of manufacturing value added in 1967 to nearly 56 per cent in 1983. The structure of the manufacturing sector in South Korea thus is not fundamentally different from that in Brazil or India, two countries with a much larger domestic market⁴⁵. It certainly is not the case that South Korea's strategy of planned exports of manufactures has implied neglect of capital and intermediate goods. It should be added, however, that some of the capital goods industries are not competitive, or not yet competitive, on world markets and have required substantial protection to be commercially viable.

Another misconception about South Korea's development strategy is that it has been based on sweated labour, low wages and government regulation of the labour market. The truth of the matter is that during the drive for industrialisation the labour market was broadly competitive and restrictive practices and monopolistic pricing of labour were avoided. Moreover, the supply price of labour in urban areas was relatively high, not low. The main reason for this is that South Korea had two radical land reforms, the first in 1947 which reduced full-time tenancy from 70 to 33 per cent and the second in 1950 which virtually eliminated the remaining tenancy arrangements and created a small peasant farming system based on owner-operated holdings. The land reforms created a very equal distribution of income in the rural areas and raised the opportunity cost of peasant labour. As a result the manufacturing sector had no alternative to paying higher real wages than would have been necessary in the absence of redistributive reforms in the countryside.

In 1963 employment in the manufacturing sector accounted for only 8 per cent of total employment. Unemployment among non-farm households at that time was 16.4 per cent. During the following years however manufacturing employment rose rapidly and unemployment declined as follows:⁴⁶

	Manufacturing employment (per cent of total)	Unemployment of non-farm households (per cent)
1963	8.0	16.4
1968	12.8	8.9
1973	15.9	6.8
1978	22.4	4.7
1983	22.6	5.4

The high unemployment kept wages low during the early period of export oriented industrialisation and real wages in manufacturing actually declined 0.5 per cent a year during 1960-65. However real wages rose very quickly thereafter in response to lower unemployment and increased pressure of demand in the labour market. In 1965-70 real wages increased 7.4 per cent a year and in 1970-83 they increased by 7.7 per cent a year⁴⁷. These are much faster rates of increase than can be observed in most other third world countries.

The degree of inequality in the distribution of income in South Korea is low. The land reforms created favourable initial conditions and the competitive labour market in a context of rapid growth helped to ensure that industrialisation would be accompanied by an expansion of employment and a rise in the share of wages in national income. The oligopolistic structure of industry has of course pushed up the share of non-wage income

in manufacturing value added and it is this probably that accounts for the fact that the distribution of income in South Korea is not as equal as in, say, Taiwan⁸.

The official data suggest there is no clear trend in the distribution of household income in either direction. (See Table 7.) The Gini coefficient increased significantly between 1965 and 1976 but then fell between 1980 and 1982, so that at the end of the period it was only a little higher than at the beginning. A similar pattern occurred in the share in total income of the richest quintile. The share of the top 20 per cent of households rose from 41.8 per cent of total income in 1965 to 45.4 per cent in 1980 and then declined to 43 per cent in 1982. The share the poorest 40 per cent of households was nearly the mirror image of this, falling from a peak of 19.6 per cent in 1970 to a trough of 16.1 per cent in 1980 but then rising sharply to 18.8 per cent in 1982.

TABLE 7
THE DISTRIBUTION OF HOUSEHOLD INCOME IN SOUTH KOREA, 1965-82

	Gini coefficient	Richest 20 per cent	Poorest 40 per cent
1965	0.34	41.8	19.3
1970	0.33	41.6	19.6
1976	0.39	45.3	18.9
1980	0.39	45.4	16.1
1982	0.36	43.0	18.8

Source: Jangho Kim, *Wages, Employment and Income Distribution in South Korea, 1960-83*. New Delhi: IL-O-ARTDP, March 1986, Table 21, p. 75.

The worst year from the point of view of the distribution of income evidently was 1980 and one might be tempted to argue that this points in the direction of things to come. Such an argument however is premature and possibly wrong. The reason is that 1980 was the only year since the new development strategy was introduced in 1961 in which GNP failed to rise substantially. In that year in fact real GNP fell sharply by 5.2 per cent and per capita GNP by 6.8 per cent. The increase in inequality in 1980 probably therefore reflects a cyclical downturn in the economy rather than a secular trend. If so, it means that South Korea is one of the very few third world countries which has managed to combine rapid industrialisation, profound structural change and a relatively egalitarian distribution of income.

Conclusions

We have seen that industrialisation can be a successful strategy of economic development in the third world. Three distinct approaches have been identified which have different characteristics and consequences. One approach is based on import substituting consumer goods, although there is no reason in principle or in historical experience why a country that embarks upon such an approach cannot in a later phase develop a substantial capital goods industry and also begin to export manufactured goods.

Let us call this approach the Brazilian model. A second approach starts by concentrating on establishing capital and intermediate goods industries within a semi-closed economy. Again, there is nothing in principle to prevent such a country in a later stage from becoming more open and producing manufactured goods for export. This we shall call the Indian model. The third approach—the South Korean model—is based on planned exports of consumer foods within a policy environment that ensures that domestic and international prices remain broadly aligned.

Each model has its strengths and weaknesses and one's overall assessment inevitably depends on the relative weight given to each. In what follows we shall use eight criteria of evaluation and subjectively rank the three models by the eight criteria. The first criterion is the long run rate of growth of industrial output. By this criterion the South Korean model seems to be best and the Indian model the least successful. One's judgement might have been different however, if world trade had expanded less rapidly than it did in the 1950s and 1960s. Second, there is the question of the stability of growth. Here the Indian model can claim to be the most successful and the Brazilian model the least. The South Korean model, vulnerable to perturbations in international commerce, occupies an intermediate position. When it comes, third, to the growth of industrial exports, the South Korean model as one would expect is far superior to the others while the Indian model appears to be the least successful.

TABLE 8
AN EVALUATION OF THREE APPROACHES TO INDUSTRIALISATION

	South Korean model	Brazilian model	Indian model
1. Growth of industrial output	1	2	3
2. Stability of growth	2	3	1
3. Growth of industrial exports	1	2	3
4. Development of the capital goods industries	3	=1	=1
5. Efficiency of industrial production	1	2	3
6. Creation of employment	1	3	2
7. Degree of equality	1	3	2
8. Growth of per capita income	1	2	3

It sometimes is claimed that large countries such as India and Pakistan do not have the option of basing their industrialisation on the export of manufactured goods, or more generally of following an export oriented strategy of development. This is a path, it is claimed, that only small countries such as South Korea and Singapore can follow. This view, however, clearly is mistaken. The striking fact is that South Korea and Singapore export several times as much as India and Pakistan. The two small countries have of course a higher ratio of exports to GNP and a higher value of exports per capita, but they also have a much higher value of total exports. In 1985, for example, merchandise exports from South Korea were \$26,442 million and from Singapore, \$21,500 million. Pakistan in that year exported only \$2,648 million worth of goods and India (in 1983) only \$9,770 million. That is, Singapore exported more than twice as much as India and South Korea exported nearly ten times more than Pakistan.

Returning to the evaluation of the three models, the Indian and Brazilian models appear to be more or less equally good in promoting the development of the capital goods industries, and by this fourth criterion the South Korean model ranks, last, although it is not far behind the other two. However, fifth, the rankings are different when one considers efficiency in the allocation of resources. Here the South Korean model is superior with the Brazilian and Indian models following some distance behind. The same ranking holds when the sixth criterion is considered, the growth of employment. This is hardly surprising since an efficient allocation of resources implies utilising all factors of production fully and in the case of third world countries, adopting relatively labour intensive methods of production.

Seventh, there is the question of the degree of equality. Much depends upon the distribution of income and wealth before a particular approach to industrialisation is adopted. In third world countries where a majority of the population lives in rural areas and a large part obtains a livelihood from agriculture, land reform obviously is the key issue. However given the "initial conditions" for good or ill, it does seem that the South Korean model of industrialisation, because of its employment intensity, is likely to be associated with a relatively more equal distribution of income. At the other extreme, the Brazilian model, because of the large subsidies it implies for private entrepreneurs, is likely to lead to a high degree of inequality. The Indian model probably falls somewhere in between.

Lastly, there is the growth of per capita income. This depends not only on the rate of growth of manufacturing output but also on such things as the rate of capital formation, the efficiency of investment and the linkages between the industrial sector and the rest of the economy. Taking everything into consideration it seems probable that by this criterion the South Korean model ranks first and the Indian third. What, then, of an overall ranking?

The South Korean model ranks first on six out of the eight criteria; it ranks second in terms of stability of growth and third in terms of the capital goods sector. Unless one gives extraordinarily high weight to the development of the capital goods sector and to the avoidance of fluctuations in output and income, the South Korean model of industrialisation clearly deserves to be placed first. At the other extreme is the Indian model. It ranks third on five out of the eight criteria, including the growth of per capita income, industrial output, manufactured exports and employment. It also ranks third in terms of industrial efficiency. It is hard to avoid the conclusion therefore that the Indian model of industrialisation is the least successful of the three. We thus end with the models ranked in the following order: South Korea as the most successful, followed by Brazil with the Indian model as the least successful.

This ranking raises questions about possible connections between the political regime and the strategy of development. It is sometimes claimed, for example, that the success of export-led industrialisation in some of the newly industrialising countries of Asia (the so-called NICs) has depended upon the repression of labour in order to keep wage costs low and prices internationally competitive²⁹. In Latin America it has been argued that import substituting industrialisation has required an authoritarian political system, i.e., a regime capable both of maintaining order and a very unequal distribution of income³⁰. Moving away from the stylised models to the country experiences that lie behind the models, it is undeniable that India is a democratic country, that Brazil has had extended periods of dictatorship punctuated by short periods of qualified democracy and that South Korean politics are highly authoritarian and undemocratic. There is thus a temptation to suggest that there may be a trade-off between democratic politics and

efficient industrial development. It would be hasty however to draw such a conclusion since so many other interpretations are consistent with the facts.

Authoritarianism in South Korea, for instance, probably has little to do with the approach to industrialisation that was adopted and a great deal more to do with the political tensions created by the decision of external powers to divide the country in two³¹. Similarly, repression in Brazil almost certainly has more to do with the very unequal distribution of income and wealth in the country than with import substituting industrialisation. Conversely, it is unlikely that if India were to change its pattern of industrialisation—as indeed it appears to be doing—it would for that reason run a risk of becoming less democratic. Certainly politics and economics ultimately are inseparable, and there may be a link of the type postulated between the degree of democracy and the strategy of industrialisation, but until more evidence is available the Scottish verdict of not proven appears to be justified.

NOTES

- 1 See Clark (1940).
- 2 See Kuznets (1965, 1966).
- 3 See: Chenery (1960); Chenery and Taylor (1968); Chenery and Syrquin (1975); Chenery, Robinson and Syrquin (1986).
- 4 Some authors did challenge the proposition that there are uniform patterns of industrialisation. See for example Sutcliffe (1971) Ch. 2. Also see Kirkpatrick, L. and Nixon (1984).
- 5 See Sutcliffe (1971), op. cit., Ch. 6.
- 6 See Gerschenkron (1962).
- 7 See Senghaas (1985).
- 8 See Armstrong (1987) p. 12.
- 9 See Corden (1966).
- 10 This is a major theme of Little, Sotirovsky and Scott (1970).
- 11 See Mahbub (1963). Also relevant is Sen (1968).
- 12 For a human and moving picture of life in an urban slum in Calcutta see Lapierre (1985).
- 13 See Little, Sotirovsky and Scott, op. cit.; Hirschman (1968); Power (1966, 1972).
- 14 See Johnson (1967).
- 15 See for example Soligo and Stern (1965).
- 16 See Lewis (1978).
- 17 See Mahalanobis (1963). Also see Raj and Sen (1961).
- 18 See Maddison (1985) Table A-7, p. 87.
- 19 See Maddison (1985) Table A-6, p. 87.
- 20 See Maddison (1985) p. 27.
- 21 See Maddison (1985) Table A-1, p. 84.
- 22 See Bergman (1970).
- 23 See Regis de Castro Andrade (1982). Also see Bergman (1970) op. cit.
- 24 See Bergman (1970), Table 3.3, p. 42. The estimate for the average rate of effective protection excludes perfumes and soaps where the rate was 3670 per cent!
- 25 See Vergman (1970), p. 178.
- 26 See Bergman (1970), p. 178-9.
- 27 See Regis de Castro Andrade (1982), op. cit., Table 2, p. 172.
- 28 Compare the data in Table 24, pp. 226-7 of the IBRD (1986). The distribution of land in Brazil probably is also the most unequal in the world. At one extreme 342 big landowners own 47.5 million hectares, an area considerably larger than Japan. Their average holding is 138 889 ha. At the other extreme 2.5 million peasant farmers have an average two ha. each. (See The Economist Development Report, November 1985, pp. 1-2).
- 29 See Regis de Castro Andrade (1982), op. cit., p. 180.
- 30 In 1984, Brazil's surplus on the trade balance was US\$ 13.1 billion, equivalent to 48.5 per cent of its merchandise exports. In 1985, the trade balance surplus was US\$ 12.5 billion.
- 31 See Jenkins (1987), Table 7, p. 31. Also see Evans (1979).

- 32 The best study of industrial policy in India from independence to the late 1960s is Bhagwati and Desai (1970). Also see Bhagwati and Srinivasan (1975).
- 33 See Ahluwalia (1985), Table 5.1, p. 75.
- 34 See Ahluwalia (1985), Table 4.1, p. 58.
- 35 See Ahluwalia (1985), Table 4.1, p. 58.
- 36 See Little (1987), p. 225.
- 37 See Park (1986).
- 38 See Enos (1986).
- 39 See Mitchell (1982).
- 40 See Scitovsky (1986).
- 41 See Mitchell (1982), op. cit., p. 196.
- 42 See Enos (1986), op. cit., p. 245.
- 43 See Economic Planning Board (1985), Table 10-21, p. 246.
- 44 See Enos (1986), op. cit., p. 251.
- 45 South Korea's population in 1984 was 40.1 million or 30.2 per cent of the size of Brazil and 5.4 per cent of the size of India.
- 46 See Kim (1986), Table 2, p. 56, and Table 4, p. 58.
- 47 See Kim (1986), Table 10, p. 64.
- 48 See Scitovsky (1986), op. cit., p. 139. Scitovsky stresses the fact that firms on average are much smaller in Taiwan than South Korea and also that Taiwan followed a high interest rate policy compared to South Korea.
- 49 See Kirkpatrick (1987). More orthodox views can be found in Fields (1984) and Little (1981).
- 50 See Hirschman (1979), Stepan (1973), O'Donnell (1973), Foxley (1983), Ch. 2; Cardoso and Faletto (1979), Ch. 5; Sheahan (1980).
- 51 An analogous explanation could apply to Taiwan.

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NOTAS TECNICAS Y ARTICULOS DE OPINION

UN INDICE DE LA ESCALA UNICA DE REMUNERACIONES DEL SECTOR PUBLICO CHILENO: 1974-1986

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Abstract:

This paper's main goal is the development of a wage index for the Chilean public sector for the period 1974-86. By using information from Santiago's Treasury, the index is constructed based on wages paid to public employees in different categories. The behavior of the index contrasts significantly with the only alternative, the index of wages in "communal and social services", published by Instituto Nacional de Estadísticas.

A. Introducción

El objetivo central de este trabajo es construir un Índice de Remuneraciones para el Sector Público (IRSP) para el período 1974-86. En Chile el indicador que más se aproxima a la evolución de los sueldos y salarios en este sector es el índice de "servicios comunales y sociales" que calcula el Instituto Nacional de Estadísticas (INE), el cual utilizamos como referente para comparar nuestros resultados.

El IRSP tiene un mérito especial, ya que fue posible desagregar la información para tres categorías de ocupados: directivos superiores y profesionales, administrativos y auxiliares, y directivos no profesionales.

Consideramos que el esfuerzo realizado en la construcción del IRSP permitirá despejar dudas respecto de lo que ha ocurrido en el sector público en materia de remuneraciones durante un período en el cual se han producido transformaciones

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