CHAPTER THREE

AN ANALYSIS ON THE STRUCTURE OF THE ECONOMIES OF INDIA AND JAPAN

3.1 Introduction

The traditional theory of international trade explains that the trade flow between the two countries is determined by the difference in comparative advantage structure of their domestic economies. However, in practice, factors other than comparative advantage influence the trade flow. For example, according to the model designed by I. Yamazawa, based on the empirical data, the trade flow between the two countries, precisely, between an importing country and an exporting country is a function of gravity of the two economies and trade intensity between them.

Firstly, the trade flow between the two countries is an increasing function of their income, viz., the gravity of their economies. The income of the exporting country represents the size of its supply capacity and that of an importing country its total demand. The gravity also implies the economic distance between them, usually measured in terms of transport cost on which the trade flow depends decreasingly.

Secondly, the trade flow between the two countries also depends on the intensity of trade, which is influenced by the complementarity of the two economies as well as by the special country bias between them. The complementarity, in this case means the matchness of specialization in trade and implies that in case of the economies similar in structure, the trade flow is low, while on the contrary case, the flow is high. The special country bias includes political and social factors peculiar between the economies such as trade policies and agreements, geographical and psychological distance etc.

In this chapter, the structure of the economies of India and Japan is examined and the complementarity existing between them is assessed. The overview on the structure of the economies focuses on the trend in general as well as that of the basic sectors in the economies such as agriculture, manufacturing and foreign trade.

3.2 The Growth Pattern of the Indian Economy 1951-73
3.2.1 National Income

India's objective of economic development has been based on the goal of self-reliant and welfare society. To attain this goal, the government has pursued its

2. Self-reliance does not mean self-sufficiency in all sectors. See Planning Commission, Government of India, Sixth Five Year Plan (New Delhi), 1981, p.84.
economic policies through a series of Five Year Plans.
In the Plans, emphasis has been laid on the increase in agricultural production, while building up a sound industrial base. During the study period, four Five Year Plans were implemented.

The economic growth brought by the Plans may be partly observed by the growth in Gross National Product (GNP) achieved during the Plan periods. During the First Plan (1951-52 to 1956-57), owing largely to the increase in agricultural production, the national income increased by 18 per cent as against the target of 12 per cent at 3.7 per cent per annum in terms of the annual average growth rate.

The Second Plan (1956-57 to 1961-62) laid special stress on industrialisation such as expansion in production of iron and steel, heavy chemicals and development of heavy engineering and machine building industry. The main aims of the Plan were: (1) an increase of 25 per cent in the national income; (2) rapid industrialisation with particular emphasis on the development of basic and heavy industries; (3) large expansion of employment opportunities; and (4) reduction of inequalities in income and wealth and a

3. National income here is defined as the sum of incomes accruing to the factors of production supplied by normal residents of the country before deduction of direct tax. It is identically equal to net national product at factor cost. Planning Commission, Government of India, Sixth Five-Year Plan (New Delhi), 1981, p.54.

more even distribution of economic power.\textsuperscript{5} The result was the increase in national income by 20 per cent against the targeted 25 per cent at the annual average growth rate of 40 per cent.\textsuperscript{6}

The Third Plan (1961-62 to 1965-66) attempted to secure an advance towards self-sustaining growth. Its immediate objectives were: (1) an increase in the national income of over 5 per cent per annum, and at the same time, to ensure a pattern of investment which could sustain a rate of growth during subsequent plan periods; (2) an increase in agricultural production to achieve self-sufficiency in food grains as well as to meet the requirements of industry and exports; (3) expansion in basic industries like steel, chemicals, fuel and power and to establish machine building capacity so that the requirement of further industrialisation could be met within a period of ten years or so mainly from the country's own resources; (4) full utilisation of the manpower resources of the country to ensure substantial expansion in employment opportunities; and (5) establishment of progressively greater equality of opportunity to bring about reduction


\textsuperscript{6} Planning Commission, Government of India, \textit{Third Five Year Plan} (New Delhi), 1961, p.34.
in disparities of income and wealth and a more even distribution of economic power.\(^7\) The increase in the national income achieved during the period was 13.1 per cent against the targeted 31.3 per cent, and the annual average growth rate was 2.6 per cent.\(^8\)

The delay in the finalisation of the Fourth Plan was caused by the India-Pakistan war in 1965, the two successive years of severe drought, the devaluation of the currency and the erosion of resources available for Plan purposes because of inflation. Considering the shortage in financial resources available for Plan purposes under such circumstances, the size of development programme outlay was kept down during the Annual Plans period between 1966 and 1969.

The Fourth Plan (1969-70 to 1974-75) emphasised to intensify the pursuit of the goal of 'self-reliance' by stabilising the increase in domestic production to reduce the degree of dependency on foreign assistance. The aim which was as important as the above was to enhance the standard of living of the people through programmes promoting equality and social justice.\(^9\) Against the targeted

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9. In this context, the importance of panchayati raj, organisation of cooperatives and nationalisation of banks was pointed out. *Ibid.*, pp. 13-29.
31.8 per cent increase in national income, the Plan achieved about 20 per cent increase and 4.6 per cent annual rate of growth. 10

According to the projection made by the Planning Commission for the Sixth Five Year Plan (1980-81 to 1985-86), India's annual average rate of growth in national income at factor cost would be 5.2 per cent during the Sixth Plan and 5.5 per cent over the perspective period up to 1994-95. 11

3.2.2 Population

During the study period, the census was conducted in 1951, 1961 and 1971. Between 1951 and 1961 the population grew at 1.98 per cent per annum, which had risen to 2.25 per cent per annum in the next decade. The total population in 1971 was 547 million. The rapid increase in population is attributed to the fact that birth rate is high as 41.7 per thousand in 1951-60 and 41.1 per thousand in 1961-70, in addition to a fall in death rate and the increase in life expectancy brought about by the improvement in health condition and the effective control

of epidemics and famine.\textsuperscript{12} The projection made by the Planning Commission indicates a further increase in population, totalling to 722 million in 1984-85 and 864 million in 1995-96.\textsuperscript{13}

There is a need for a proper balance between population and development to ensure a reasonable standard of living. The dynamics of population and development is interlinked so that both operate reciprocally and concurrently. In the case of an imbalance, there will be not only a lower standard of living, but also excessive exploitation and shrinkage of natural and other resources.

The GNP per capita at the time of the 1961 census was Rs. 306 which increased to Rs. 637 in the 1971 census. However, in real terms, the increase was meagre and the GNP per capita in 1971 was only Rs. 349 at the 1960-61 prices.\textsuperscript{14} The Planning Commission estimated India's per capita income to be Rs. 1697 in 1984 and to Rs. 2466 in 1994-95 at the 1980-81 prices, assuming the

\textsuperscript{12} The figures above are quoted from Ministry of Information and Broadcasting, Government of India, \textit{India - A Reference Annual 1977 and 1978} (New Delhi), 1978, pp. 6 and 8.


annual average rates of growth in national income and population as indicated earlier. It implies that the population below the poverty line would reduce from 50 per cent of the total population in 1975 to 30 per cent in 1984–85, and to 10 per cent in 1994–95.  

3.2.3 Agriculture

Agriculture and its allied sectors have provided livelihood for about three-fourth of the population and contributed nearly a half of the national income in India. The population engaged in agriculture alone, according to the first agricultural census conducted in 1970 and 1971, was 125.7 million. There were 70.5 million operational holdings in the country spread over an aggregate area of 162 million hectares. The average size of holdings was 2.30 hectares, out of which net area under cultivation was 2.06 hectares. A half of the total holdings were of less than one hectare, whereas 0.28 million holdings were of 10 hectares and above.

The achieved growth of agriculture production in the Plans were 4.1 per cent in the First Plan, 3.1 per cent in the Second Plan, 3.3 per cent in the Third Plan,


and around 3.9 per cent in the Fourth Plan. 18

Agriculture supplies raw materials to some of the major industries in India such as cotton and jute textiles, sugar, etc. Out of the net area sown, only 23.3 per cent was utilised for the cultivation of non-food grain crops. During the study period, emphasis had been laid particularly for the increase in food grain production. Expansion of irrigated area had been one of the important strategies in each plan where financial provisions for the purpose were especially set aside. Net irrigated area increased from 22.7 crores hectares in the first plan, to 24.6 million hectares in the second plan, 26.6 million hectares in the Third plan and 42.2 million hectares in the Fourth Plan. 19 Another important agricultural policy which characterises the study period was the Intensive Agricultural Area Programme. It was initiated in 1960-61 on


19. Only after the Fifth Five Year Plan, the importance to increase production of commercial crops was clearly visualised, to ensure the increased supply of materials to the manufacturing sector and for exports. See, Planning Commission, Government of India, Draft Fifth Five Year Plan - Vol. II, op. cit., pp. 2-3.

a small scale and adopted in a systematic way in the Fourth Plan. It aimed at the promotion of intensive agriculture, employing new technologies mainly based on the new varieties of foodgrains and their dissemination by the extension service.  

3.2.4 Industry

India has attempted to achieve high economic growth through industrialisation, along with its efforts in increasing agricultural production. The steady progress in the industrialisation through Five Year Plans and Annual Plans during the study period can be observed in the growth of industrial production. The index number of industrial production (Table 3.1) shows a compound average annual rate of growth of 5.75 per cent in the First Plan, nearly 7.5 per cent in the Second Plan and close to 8 per cent in the Third Plan, though the performance after 1966 was less satisfactory. The growth rate of the industrial sector exceeded that of the agricultural sector and also was accelerated through the first three Plans.

The Industrial Policy Resolution of 1956 gave the foundation of industrial policies in the subsequent Five Year Plans. The Resolution was framed to reaffirm

<table>
<thead>
<tr>
<th>Year</th>
<th>Consumer goods index</th>
<th>Capital goods index</th>
<th>Intermediate goods index</th>
<th>Overall index</th>
</tr>
</thead>
<tbody>
<tr>
<td>1951</td>
<td></td>
<td></td>
<td></td>
<td>58.7</td>
</tr>
<tr>
<td>1952</td>
<td></td>
<td></td>
<td></td>
<td>60.8</td>
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<tr>
<td>1953</td>
<td></td>
<td></td>
<td></td>
<td>62.0</td>
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<tr>
<td>1954</td>
<td></td>
<td></td>
<td></td>
<td>66.3</td>
</tr>
<tr>
<td>1955</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>71.9</td>
</tr>
<tr>
<td>1956</td>
<td></td>
<td></td>
<td></td>
<td>77.9</td>
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<tr>
<td>1957</td>
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<td></td>
<td></td>
<td>80.7</td>
</tr>
<tr>
<td>1958</td>
<td></td>
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<td>82.1</td>
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<tr>
<td>1959</td>
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<td></td>
<td></td>
<td>89.2</td>
</tr>
<tr>
<td>1960</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>1961</td>
<td>106.6</td>
<td>118.0</td>
<td>105.8</td>
<td>109.2</td>
</tr>
<tr>
<td>1962</td>
<td>108.0</td>
<td>153.0</td>
<td>113.6</td>
<td>119.8</td>
</tr>
<tr>
<td>1963</td>
<td>110.4</td>
<td>170.0</td>
<td>122.9</td>
<td>129.7</td>
</tr>
<tr>
<td>1964</td>
<td>118.6</td>
<td>206.1</td>
<td>132.2</td>
<td>140.8</td>
</tr>
<tr>
<td>1965</td>
<td>127.5</td>
<td>244.2</td>
<td>140.1</td>
<td>153.8</td>
</tr>
<tr>
<td>1966</td>
<td>131.3</td>
<td>210.1</td>
<td>136.7</td>
<td>152.6</td>
</tr>
<tr>
<td>1967</td>
<td>125.7</td>
<td>205.3</td>
<td>139.7</td>
<td>151.4</td>
</tr>
<tr>
<td>1968</td>
<td>131.9</td>
<td>210.3</td>
<td>148.2</td>
<td>161.4</td>
</tr>
<tr>
<td>1969</td>
<td>145.3</td>
<td>214.0</td>
<td>154.4</td>
<td>172.5</td>
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<tr>
<td>1970</td>
<td>154.7</td>
<td>224.6</td>
<td>158.8</td>
<td>180.8</td>
</tr>
<tr>
<td>1971</td>
<td>159.7</td>
<td>224.3</td>
<td>160.4</td>
<td>186.1</td>
</tr>
<tr>
<td>1972</td>
<td>168.2</td>
<td>243.5</td>
<td>171.2</td>
<td>194.4</td>
</tr>
</tbody>
</table>

Source: Reserve Bank of India, Reserve Bank of India Bulletin (Bombay), from various issues between 1955 and 1972.
the lines of socialism adopted in 1954 in an amendment to the Constitution and to assume the 'socialist patterns of society'. It further asserts that 'it is essential to accelerate the rate of growth and to speed up industrialization and, in particular, to develop heavy industries and machine making industries...'. In the Resolution, the industries were classified into three categories and heavy industries such as atomic energy, iron and steel, machinery and transport equipment categorised under the schedule A were placed under the 'exclusive responsibility of the state'.

Each Five Year Plan saw diversification of the industrial production as well as expansion. The structure of industrial production has gradually shifted away from consumer goods production to capital goods and intermediates production. The growth of the latter sectors outgrew the former (see also Table 3.1).

The emphasis on industrialisation in Five Year Plans can be seen in the share of investment allocated to the industrial sector as well as to the construction of infrastructure. In the total outlays in the public sector

23. Ibid., p.45.
24. Ibid., p.46.
of the four Five Year Plans during the study period, the manufacturing and mining sector increased its share from 8.4 per cent to 13.5 per cent in the Second Plan, to 24 per cent in the Third Plan and then to 22.8 per cent in the Fourth Plan. The infrastructural sector in the Plans such as power, transport and communications was given the allocation of 30.1 per cent of the total outlay in the First Plan, 25 37.8 per cent in the Second Plan, 26 33 per cent in the Third Plan, 27 and 35.7 per cent in the Fourth Plan. 28

3.2.5 Foreign Trade

India's total imports and exports were 8.0 per cent and 5.3 per cent respectively with respect to GNP in 1960. The respective ratios further declined to 5.6 per cent and 4.4 per cent in 1973. The foreign trade sector in the Indian economy is relatively smaller compared with that in the developing countries which are known as

examples of export-led growth economies (Table 3.2). However, it does not necessarily imply that the export sector will not play a significant role in promoting economic growth. High export growth enlarges the possibility of economic growth, since it enables a country to finance its requirements for development without endangering the balance of payments.

The Industrial Policy Resolution of 1956 had a great impact on the trade policies in the Second Plan. In the import policy, the plan set aside a large quota for the imports of capital goods and vital industrial materials. According to the Plan's estimation, the imports of machinery and transport equipment, metals and metal products would have comprised 34.6 per cent and 18.3 per cent of the total imports during the Plan period respectively. The Plan maintains that 'the large number of imports of machinery and vehicles reflect the emphasis in the plan on development of basic industries'. At the same time, the plan adopted the policy of import saving and import substitution to avoid the balance of payments deficit. The imports of consumer goods such as food, tobacco and textile fibres for light industries such as raw wool, rayon pulp and

### Table 3.2
Growth of the Foreign Trade Sector in Selected Developing Economies

<table>
<thead>
<tr>
<th>Country</th>
<th>Average annual growth rates (%) 1960-73</th>
<th>As % of GDP</th>
<th>Import</th>
<th>Export</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>3.4</td>
<td>2.6</td>
<td>8.0</td>
<td>5.6</td>
</tr>
<tr>
<td>South Korea</td>
<td>9.4</td>
<td>32.0</td>
<td>12.6</td>
<td>35.3</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>8.5</td>
<td>11.8*</td>
<td>18.2</td>
<td>18.4</td>
</tr>
<tr>
<td>Mexico</td>
<td>6.9</td>
<td>5.7</td>
<td>13.4</td>
<td>10.5</td>
</tr>
<tr>
<td>Brazil</td>
<td>6.6</td>
<td>7.4</td>
<td>7.4</td>
<td>11.1</td>
</tr>
</tbody>
</table>

*1960-70
**Re-import and re-export are included.

timber were restricted to about 20 per cent in total imports.

On the contrary, the Plan was indifferent to the export policy, explaining that 'this emphasis (on imports of capital goods), while it strains the balance of payments position in the short run, is calculated in the long run to strengthen the country's external accounts as well as its investment potential'. And as for India's traditional exports such as tea, jute manufactures and cotton piecegoods which had accounted for half of the total export earnings in 1950s, 'these major exports are meeting increasing competition abroad. This limits the scope for any substantial increase in export earning in the short run'. This pessimism was mainly based on two factors. Firstly, the prices of primary products and raw materials tend to be unstable and that there are only limited possibilities in increasing these exports in the future, for these commodities are usually less elastic to the growth in income. Secondly, it was felt that non-traditional manufactures, which constituted a tiny

32. Ibid., p.98.
proportion of the country's exports at that time, had little prospects of securing sizable export markets before industrialisation made greater strides.

However, the trade policy in the Second Plan was proved to be ineffective in the sense that the trade deficit aggravated to the extent that a rigorous system of exchange allocations on a half-yearly basis was adopted and that no significant fresh commitments were made unless they were covered by external assistance. It was explained that the import requirements of the Second Plan period were underestimated and that 'the principal savings anticipated are in respect of commodities such as raw cotton, mild steel, aluminium, various categories of machinery and transport equipment, drugs and chemicals, paper and paper board etc., and that the saving will, however, be offset in part by the larger requirements of imports of certain other categories of goods, notably, special steels, non-ferrous metals other than aluminium, petroleum products, fertilizers, etc.' It was discovered that import substitution did not have an immediate impact to reduce the import bills and that because of an already stringent import policy it was difficult to further 'economize' the imports.

35. Ibid., p.134.
36. Ibid., p.137.
The Third Five Year Plan showed a distinct change in the attitude of planners toward the export policy, who now argued 'one of the main drawbacks in the past has been that the programme for exports has been neglected as an integral part of the country's development effort under the five year plans'. While the system of foreign exchange budgeting and import licensing was continued and improved upon further, the government set out a series of export promotion policies, including fiscal concessions such as income tax rebates and credits, drawback of customs and excise duties and import entitlement schemes.

In spite of the efforts on export promotion, export remained stagnant and the balance of payments difficulties continued. In June 1966, the government announced the drastic devaluation of rupee 'in order to bring domestic prices in line with external prices to restore and enhance the competitive power of exports and to provide a solution to the country's trade and payments problem'. Though the imposition of export duties reduced the de facto devaluation for the most traditional exports to the average of 15-25 per cent, the de jure figure of devaluation was 57.5 per cent.


However, the balance of payments position did not improve much. The efforts in export promotion during the Annual Plans and the Fourth Plan periods were not adequate to attain satisfactory results. Import liberalization policy was announced along with the devaluation of rupee in 1966, but because of the subsequent shortage of foreign exchange, the previous import policies were sustained. For example, import policy for 1967-68 was made need-based and production-oriented and provided for the continuation of the preferential treatment for the 59 priority industries. Again, the policy for 1968-69 was such that imports of 260 items were placed on the banned list, expecting the domestic production to increase to meet the demand.

3.3 The Growth Pattern of the Japanese Economy 1951-1973

3.3.1 National Income

The average annual growth rate of Japan's gross domestic product (GDP) during the period of 1950-60, 1960-65 and 1965-73 was 8.7 per cent, 10.2 per cent and 10.8 per cent respectively. Japan's post-war economic growth was remarkable compared to its growth in the pre-war period when the annual average growth rate of 4.6 per cent was achieved from 1926 to 1936, which was also much

higher than the growth rates of industrial countries where the annual average rates of 4.1 per cent, 5.2 per cent and 4.6 per cent were achieved during the respective periods.

The high rate of growth before the 1960s was mainly due to the post-war recovery and it was widely expected then that the future growth rate would be lower since the economy was passing out of the stage of recession.\(^4^2\) However, the economy continued to expand and within seven years from 1959 to 1966, Japan's GNP in real terms nearly doubled. The economists found that there were factors peculiar to Japan which contributed greatly to achieve the rapid economic growth. S. Okita identifies the four factors in this regard: (1) post-war reforms and policies; (2) semi-backwardness of its economic structure; (3) the attitude of the people and the government in general towards economic problems; and (4) the international environment.\(^4^3\)

The post-war reforms and policies had included the introduction of the democratic system into the economy such as the land reform and the dissolution of the Zaibatsu.


A cut in the military expenditure owing to the disarmament policy was very important in increasing investment in the economic sector. Secondly, the semi-backwardness of Japan's economic structure was taken advantage of in the process of development. Japan's technological catch-up, which was resulted from the wide technological gap existed with respect to the level of the advanced countries, had stimulated investment and improved productivity of the domestic industries in a short time. Relatively abundant labour supply mobilised from the agricultural sector helped in keeping the level of wages lower. The industries in the traditional sector continued to exist owing to the shortage in capital available for modernization in the economy as a whole. They played an important role in Japan's industrialisation as some industries were competent as labour-intensive goods exporters while some were efficient sub-contractors of the large-scale enterprises.

Thirdly, the 'economy first' principle and policies of the government and the people's consensus to it were important in the Japanese industrialisation. The

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44. S. Okita suggests that the Japanese-type development in which the semi-backwardness in its economic structure was fully utilised would involve important implications for the economic planners of developing countries. See, ibid., p. 38.
government, in drafting the economic policies and giving

guidance to the industries, has been tactful in the use

of both price mechanism and planning to propagate the

favourable movements of the comparative advantage in the

economy. It has also intervened in the operations of the

commercial banks through monetary policies and promoted

the industrial activities through fiscal policies. The
tendency of thrift among individuals, partly because of

its unsatisfactory social security provided by the govern-

ment, was useful in keeping the saving rate high.

Finally, the international environment was

favourable for Japan's economic growth. For example,
during the Occupation by the Allied Force after the Second

World War and the subsequent Korean War, Japan was the

major supplier of military procurements, which gave an

impetus to the economic growth in the 1960s.

3.3.2 Population

Japan's per capita income in 1952 was US $160,

which was one eleventh of that of the United States and

one fifth of that of West Germany.45 The per capita

income had increased at the pace of 7.3 per cent, 9.1 per

45. Economic Council Board, Japanese Government, Economic

cent and 9.5 per cent per annum during the periods of 1950 to 1960, 1960 to 1965 and 1965 to 1973, to the level of US $3630 in 1973. Rapid growth in per capita income of the post-war Japan is due not only to its remarkable economic expansion but also to the drastic decrease in its population growth.

After the war, the population increased sharply as a result of the influx of people by repatriation from the former overseas colonies and territories and the increase in birth rate which accompanied it. Also, the reduction in death rate had been brought about by the extension of public health measures. It was even felt then that it would be almost impossible to support population in future on the limited land area with scarce resources. However, within a decade between 1947 and 1957, the birth rate and the natural increase rate dropped to half from 34 and 20 per thousand to 17 and 9 per thousand respectively. The drastic reduction in

population growth caused signs of labour supply constraint in times of the rapid economic growth in the early 1960s and made the policymakers feel it 'necessary to allocate labour force properly and efficiently'.

3.3.3 Agriculture

In the pre-war period, Japan was an agricultural economy in which 48 per cent of the employed population was engaged in agriculture and forestry in 1930. The same level of employment in the agricultural sector was maintained until 1950. However, when Japan initiated the industrialisation process, the population in agriculture was gradually mobilised into the manufacturing sector, and by 1965 and 1970 the share of the agricultural population declined to 24 per cent and 17 per cent respectively of the total employed population.

Taking an opportunity of the outflow of agricultural population to the manufacturing industry, the


52. Bureau of Statistics, Office of the Prime Minister, Japanese Government, Japan Statistical Yearbook (Tokyo), from the issues of 1966 and 1971, p.54 and p.66, respectively. Besides the decline in agricultural population, it is worth noting that the number of farmers who have also sources of income from the sectors other than agriculture has increased. In 1970, out of the total farm households 84 per cent were such part-time farmers.
government tried to form a new agricultural structure based on the efficient large-scale farming in order to improve the competitiveness of Japan's agricultural products in preparation for the then proposed trade liberalisation as well as to keep up the level of income in agriculture equivalent to the other sectors. As a result, the agricultural land in operation per household increased from 0.81 hectares in 1950 to 0.39 hectares in 1970.

Besides, it was endeavoured to develop the efficient methods of cultivation by making use of agricultural machinery, productive breeds of plants and fertilisers and to disseminate them among the farmers through agricultural extension services. These programmes for modernisation of agriculture were envisaged in the Basic Law of Agriculture of 1961. The efforts proved to be successful and productivity rose rapidly from US $0.39 thousand in 1960 to US $3.38 thousand per farmer in 1974.


Diversification of agricultural products was also promoted along with improvement of productivity. As a result, the share of Japan's staple food, viz., rice, declined in the total revenue receipts from crops of farm households from 62 per cent in 1955-56 to 52 per cent in 1970-71. However, the self-sufficiency ratio of other essential crops dropped, except rice and oranges (see Table 3.3), partly because farmers had gone for the production of profitable dairy products from foodgrains and pulses and partly because the consumption schedule of food of the people had changed accompanied by a rise in income.

3.3.4 Industry

Textiles and other light manufacturing industries spearheaded economic growth in the pre-war period. By the time Japan restored independence in 1952, the heavy industries were ready to assume a leading role in industrialisation. The annual average growth rate of 14 per cent


57. Since 1941, a certain amount of staple foodgrains like rice, wheat and barley had been purchased by the government under the Food Control Act. As growers of staples are assured of disposing their crops, farmers have tended to stick to the production even after self-sufficiency was attained in the early 1950s, which became a great fiscal burden for the government later.
### Table 3.3

**Production-Consumption Ratios of Japan's Agricultural Products**

<table>
<thead>
<tr>
<th></th>
<th>Rice</th>
<th>Mandarin Orange</th>
<th>Wheat</th>
<th>Coarse Grains</th>
<th>Soybeans</th>
<th>Beef</th>
<th>Eggs</th>
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<tbody>
<tr>
<td><strong>Production</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>(thousand tonnes)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1955</td>
<td>12385</td>
<td>1034*</td>
<td>1468</td>
<td>2837</td>
<td>507</td>
<td>135</td>
<td>356</td>
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<tr>
<td>1965</td>
<td>12409</td>
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<td>1287</td>
<td>1512</td>
<td>230</td>
<td>196</td>
<td>1330</td>
</tr>
<tr>
<td>1975</td>
<td>13165</td>
<td>3665</td>
<td>241</td>
<td>287</td>
<td>126</td>
<td>335</td>
<td>1807</td>
</tr>
<tr>
<td><strong>Consumption</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(thousand tonnes)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1955</td>
<td>10238</td>
<td>933*</td>
<td>3618</td>
<td>4183</td>
<td>1235</td>
<td>136</td>
<td>355</td>
</tr>
<tr>
<td>1965</td>
<td>12993</td>
<td>1221</td>
<td>4631</td>
<td>7058</td>
<td>2030</td>
<td>207</td>
<td>1332</td>
</tr>
<tr>
<td>1975</td>
<td>11964</td>
<td>3587</td>
<td>5578</td>
<td>14024</td>
<td>3582</td>
<td>415</td>
<td>1862</td>
</tr>
<tr>
<td><strong>Production/ Consumption (%)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1955</td>
<td>121.0</td>
<td>110.8*</td>
<td>40.6</td>
<td>67.8</td>
<td>41.0</td>
<td>99.3</td>
<td>100.3</td>
</tr>
<tr>
<td>1965</td>
<td>95.5</td>
<td>109.0</td>
<td>27.8</td>
<td>21.4</td>
<td>11.3</td>
<td>94.7</td>
<td>99.8</td>
</tr>
<tr>
<td>1975</td>
<td>110.0</td>
<td>102.2</td>
<td>4.3</td>
<td>2.0</td>
<td>3.6</td>
<td>80.7</td>
<td>97.0</td>
</tr>
</tbody>
</table>

*1960

Source: Mitsugi Kamiya, 'Japanese Agriculture Today', a lecture delivered at the Institute of Developing Economies, Tokyo, on September 1, 1978.
in the manufacturing output during 1953 to 1971 surpassed the rate of national income growth of 8.8 per cent during the same period.58

One of the factors which have enabled Japan to achieve rapid growth in the manufacturing industry is that the government has taken lead in guiding enterprises through various economic plans,59 even though Japanese economy is in principle based on the private enterprise economy. It does not necessarily mean that the government introduced strong planning elements into the private sector. Targets and lines of policy set out in the plans have been considered as guideposts for the decisions of the enterprises. However, in the public sector, the government has taken direct responsibility for implementation.60

The characteristic feature in the process of Japan's industrialisation in the early 1960s was the gap that existed between the rise in productivity and that


in wages. The former created a margin for reducing the cost of production, while the latter relatively kept stable. Japan's high savings rate was partly attributed to the above factor. Japan's savings rates in 1960, 1965 and 1970 were 34.7 per cent, 33.5 per cent and 40.0 per cent respectively, which were much higher than the average rates of industrial countries in the respective years, 23.3 per cent, 24.3 per cent and 25.0 per cent, respectively. It enabled enterprises to earn a higher profit margin and to plough back larger investments into the industry, which in turn resulted in rapid expansion of the industrial output.

The productivity-wage gap in the Japanese industries strengthened the competitiveness of Japanese products in the world markets, while most countries exporting manufactured goods experienced a steeper rise in wages than productivity (see Table 3.4). The moderate change in the consumption pattern compared to the increase in production has also contributed to a high rate of saving. The semi-backward factors in the Japanese economy, such as relatively abundant supply of labour and existence of the traditional sector in the

### Table 3.4
International Comparison of Productivity and Export Trend in Manufacturing Industry

<table>
<thead>
<tr>
<th>Country</th>
<th>Annual average rate of increase 1958-65 (%)</th>
<th>1965 (1958=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Production productivity</td>
<td>Labour productivity</td>
</tr>
<tr>
<td>Japan</td>
<td>15.1</td>
<td>9.4</td>
</tr>
<tr>
<td>Italy</td>
<td>8.9</td>
<td>7.3</td>
</tr>
<tr>
<td>West Germany</td>
<td>7.1</td>
<td>5.8</td>
</tr>
<tr>
<td>U.S.A.</td>
<td>7.6</td>
<td>4.0</td>
</tr>
<tr>
<td>U.K.</td>
<td>4.3</td>
<td>3.9</td>
</tr>
</tbody>
</table>

industry, were also useful in keeping the level of wages lower over the period.

The post-war industrialisation in Japan aimed at expansion of the chemical and heavy industry, especially the machinery industry for two reasons. One was that since the world demand for machinery was expected to increase rapidly in future, it was favourable for its export growth to expand the production of machinery and prepare for exporting it on a large scale. The other was that among the various sectors of the manufacturing industry, the scale of employment which can be created with a per unit of extra investment is the largest in machinery industry.

Out of the total gross capital formation in the manufacturing sector in 1958, 63 per cent was attributed to the chemical and heavy industry and 23 per cent particularly to the machinery industry, which rose further by 1970 to 71 per cent and 28 per cent respectively. As a result, the growth rates of output during 1953 to 1971 in such sectors of the chemical and heavy industry as machinery (19.6 per cent), petroleum and coal products


(17.9 per cent), chemicals (14.8 per cent) were more than the average growth rate of all manufacturing sectors (14.0 per cent), whereas the light industrial sectors like paper and pulp (11.1 per cent) and textiles (8.9 per cent) could only achieve growth below the average.64

3.3.5 Foreign Trade

The relationship between Japan's economic growth and its international trade sector has been an important aspect of the Japanese economy. In purely descriptive terms, Japan's economic growth during the post-war period is an example of export-led growth, as exports grew faster than national income, particularly in the 1960s when exports of goods and services increased at 15.4 per cent on average per annum against 10.9 per cent of the GDP growth rate at market prices.65 However, in analytical terms, although foreign demand in times of cyclical recoveries or of special procurements played an important role, Japan's economic growth has been stimulated mostly by domestic demand.66 The steady development in domestic demand is attributed to the factors such as high


growth in domestic investment, which grew at 14.6 per cent per annum in the 1960s,\(^6\) evolution in consumption habits of the people owing to the increased income.\(^8\) Foreign trade has been important for the Japanese economy in the sense that in a country like Japan which greatly depends on the supply of industrial inputs and goods from abroad, economic growth could not have been carried out without an increase in imports, while exports were needed to pay for them.

L.E. Krause and S. Sekiguchi attributed the increase in Japan's exports during the post-war period to the following four factors: (i) the growth of world incomes and international trade; (ii) the prices of Japan's exports relative to those of other industrial countries; (iii) structural changes in Japan's manufactured output; and (iv) foreign commercial policies.\(^6\)

The post-war growth of world incomes and trade which had a great impact on the Japanese economy can be separated into two elements. One relates to the normal growth of incomes, while the other relates to the Korean and the Vietnam wars. The dynamic force in the world

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economy was the growth of money incomes which necessarily involves the growth of world trade. The Korean and the Vietnam Wars also had an effect upon the Japanese exports, because all the countries involved which happen to be located near Japan became important consumers for the Japanese products. The second factor is the increase of Japan's manufactured exports relative to those of other industrial countries because of substantial improvement in price competitiveness. In the early 1960s, the improvement came from the absolute decline in Japan's export prices, while the export prices of other countries were slowly rising. The improvement later in the decade was due to the fact that Japanese prices rose less rapidly than those of other producers.

The third factor explaining the increase in Japan's exports relates to structural changes in its manufacturing output. The direction of Japan's post-war industrialisation towards the expansion of the chemical and heavy industry has been kept in line with the direction of the export promotion. Back in the early 1950s, it was already realised that as Japan might face severe competition in the labour-intensive export markets in Southeast Asian countries owing to the development of their domestic industries in the area, the emphasis in the export composition was to be shifted, for example,
from low-quality to high-quality textiles, or from textiles to metals and machinery so that Japan could maintain complementarity with these economies and continued to expand exports.\textsuperscript{70}

In addition, the prospects of exporting the chemical and heavy industrial products had been widened in the late 1960s when the domestic industries in these areas in advanced countries like the U.S.A. marked a decline in productivity and international competitiveness.\textsuperscript{71}

Through a combination of imported technology which started on a large scale since 1966, the efforts in research and development and heavy investment, the supply capabilities and productivity of the chemical and heavy industry were greatly enhanced which made possible to secure markets in advanced countries as well as developing countries. The expansion of exports of the chemical and heavy industrial items was remarkable in Japan's export composition.\textsuperscript{72}


\textsuperscript{72} The \textit{Economic Survey of Japan 1970-71} reviewed Japan's trade during the post-war period of 25 years and suggested that it was high time for Japan to consider a further change in structure. It was noted then that the domestic economy of the U.S.A. underwent a structural change shifting its emphasis from the chemical and heavy industrial sector to the 'research-
The final factor is the Japanese export growth relating to the developments in the commercial policy.
During the 1960s, the Kennedy Round of trade negotiations under the GATT was gradually implemented. The Kennedy Round was particularly successful in reducing tariffs on manufactured products exported from developed countries. Since these were the products Japan exported to the world markets, Japan's trade reaped substantial benefits.

Japan's economic and export growth has been made possible only with the supply of resources from abroad. Japan's import of goods and services increased annually at the rate of 11.5 per cent on average in the 1960s.73

intensive type' sector and had increased considerably exports of the latter sector in the late 1960s. By the time the textile exports, which had been already suffering from a decline in competitiveness in the world markets, showed a distinct export constraint in the early 1970s, steel products and colour television sets were in turn the major export items of Japan. When these commodities faced a constraint in the late 1970s, automobiles were already the major exports. Expecting a decline and constraint in automobile exports in the early 1980s, Japan started exporting high-technology products in the late 1970s, which was accompanied by the structural change in the industry in favour of this sector. According to the study made by the Nomura Research Institute, Tokyo, exports of high technology products are to be the major exports by the middle of the 1980s, of a value nearing US $40 billion. See, Economic Planning Agency, Japanese Government, Economic Survey of Japan 1970-71 (Tokyo), pp.90-92; "Tomorrow's Leaders - A Survey of Japanese Technology," The Economist (London), 10-25 June, 1982, p.5.

Also, the import structure has undergone transformation accompanying the changes in the import requirements generated by the following four factors: (1) the growth of income of Japan; (2) changes in the prices of imports; (3) structural shifts in Japanese manufacturing; and (4) Japanese commercial policies and their changes.\textsuperscript{74}

The main factor determining the behaviour of Japan's imports has been the rise of its incomes. In this connection, the three categories of imports responded to different components of national income, viz., industrial supplies to changes in industrial output, consumer goods to changes in consumption expenditures, and capital equipment to changes in gross domestic fixed capital expenditures.

The second factor concerns the developments in the import prices. Japan's commercial policy did not permit in practice entry of competitive imports until it initiated the effective trade liberalization measures in the late 1960s. For simplicity, it can be almost assumed, therefore, that during the 1960s Japan's import demand was perfectly inelastic with respect to prices. This implies that the value of imports rises and falls in

\textsuperscript{74} L.B. Krause and S. Sekiguchi, "Japan and the World Economy," op.cit., pp.423-27. The following analysis owes to this article.
direct proportion to import price changes. The overall price of imports rose during 1961-71 by 6.2 per cent, with food and consumer items rising up 15.6 per cent, capital equipment by 6.4 per cent, and industrial materials only by 5.5 per cent.

The third factor affecting Japan's imports relates to the structural shift in its manufacturing sector. It is true that though the tendency of high import requirements for foodstuffs, raw materials and fuels has not basically changed, the imports of industrial products, especially those of light industrial products have gradually expanded the share in Japan's import composition. It was mostly due to the import liberalisation policies initiated since the late 1960s, but without restrictions, the imports of such commodities would have increased more rapidly.

The final factor lies in the changes in Japanese commercial policy. Japan began to liberalise its import quota system in 1969. In recognition of its economic strength and improving international competitiveness, Japan accepted Article 11 of the GATT in 1963 and Article 8 of the IMF in 1964. It also joined the Organization for Economic Cooperation and Development (OECD) in that year. But it was not until 1968 that a political decision was made clearly to open the economy to
foreign competition. It was in practice effective in bringing down tariff and non-tariff barriers which had been limiting the imports in place of quota restrictions.  

75. L.B. Krause and S.Sekiguchi estimated the extent of contribution of these factors to the growth of Japan's exports and imports during the period 1961-71 as in the table below:

<table>
<thead>
<tr>
<th>Factors relating to the growth in Japan's trade</th>
<th>Contribution of factors to the growth of Japan's trade (US $ billion)</th>
</tr>
</thead>
</table>

### Exports

- Foreign economic growth and expansion of world trade: 9.0
  - Usual: 7.8
  - Vietnam connected: 1.2
- Improved price competitiveness from domestic factors: 2.4
  - from domestic factors: 1.1
  - from foreign inflation: 1.3
- Structural changes: 6.8
- Liberalisation of commercial policies of other countries: 1.3

**TOTAL** 19.5

### Imports

- Growth of Japanese economy: 9.0
- Structural changes: 1.0
  - import-saving: 2.5
  - import-raising: 3.5
- Import price increases: 1.0
- Liberalisation of Japanese commercial policies: 0.8
- Less double counting: -0.4

**TOTAL** 11.1

See, ibid., p. 429.
3.4 Conclusion

Japan's rapid economic growth in the post-war period expanded its supply capacity for exports to the world markets as well as its demand for resources from the world. Though in 1953 total exports and imports comprised only 1.5 per cent and 2.9 per cent in the total exports and imports of the world, Japan increased the shares to 6.4 per cent in case of exports and 6.5 per cent in case of imports and became the third largest exporter and fourth largest importer in the world in 1973. 76

Japan's post-war economic growth was accompanied by the structural change in the economy. Since the process of industrialisation was initiated on a large scale in the late 1950s, resources were intensively allocated in the manufacturing sector and the sector started to assume a key role in the economy. In 1973, about 29 per cent of the net domestic product was turned out by the sector which increased from 22 per cent in 1955. The manufacturing sector itself underwent a structural change in the course of industrialisation, by which the chemical and heavy industry increased its weightage against the light industry (see Table 3.5).

### Table 3.5
Comparison of India's and Japan's Economies - Selected Economic Development Indicators

<table>
<thead>
<tr>
<th>Year</th>
<th>Gross Domestic Product (GDP)</th>
<th>GDP per Capita</th>
<th>Average Annual Growth Rates* (%)</th>
<th>Gross Production</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>India</td>
<td>Japan</td>
<td>India</td>
<td>Japan</td>
</tr>
<tr>
<td>1950-60</td>
<td>4.2</td>
<td>8.7</td>
<td>2.3</td>
<td>7.3</td>
</tr>
<tr>
<td>1960-65</td>
<td>4.0</td>
<td>10.2</td>
<td>1.7</td>
<td>9.1</td>
</tr>
<tr>
<td>1965-73</td>
<td>3.5</td>
<td>10.8</td>
<td>1.2</td>
<td>9.5</td>
</tr>
</tbody>
</table>

### Selected Economic Structure Indicators

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage of GDP**</th>
<th>Year</th>
<th>Percentage of Total Labour Force</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Agriculture</td>
<td>Manufacturing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>India</td>
<td>Japan</td>
<td>India</td>
</tr>
<tr>
<td>1955</td>
<td>n.a.</td>
<td>23.1</td>
<td>n.a.</td>
</tr>
<tr>
<td>1965</td>
<td>47.9</td>
<td>11.2</td>
<td>14.7</td>
</tr>
<tr>
<td>1973</td>
<td>47.8</td>
<td>6.6</td>
<td>13.4</td>
</tr>
</tbody>
</table>

*In real terms.

**At current factor cost.

On the other hand, India is basically an agricultural economy. More than 47 per cent of the gross domestic product was attributed to the agricultural and mining sectors during the study period (see also Table 3.5). Although it is one of the important industrial powers in the world, it is in the stage of the expansion of the light industry, where food products and textiles alone comprised 41 per cent of the total gross output by the entire manufacturing sector in 1973. 77

Earlier in this chapter it has been discussed that the trade flow between the economies is greatly influenced by the gravity of the economies and trade intensity which exists among them. The features of Indian and Japanese economies described so far reveal that there had existed a great deal of complementarity between them during the study period, which gave an opportunity for them to expand the trade flow between them. In the next chapter, the trade pattern between India and Japan during the period is analysed to identify the factors contributing to the slow growth in the India-Japan trade over the study period.