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STUDIES IN INDIAN ECONOMICS

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C. N. VAKIL

UNIVERSITY PROFESSOR OF ECONOMICS, BOMBAY.

STUDIES IN INDIAN ECONOMICS

A series of volumes dealing with the economic history and problems of Modern India

EDITED BY

C. N. VAKIL

UNIVERSITY PROFESSOR OF ECONOMICS, BOMBAY

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GROWTH OF TRADE AND INDUSTRY IN MODERN INDIA

AN INTRODUCTORY SURVEY

BY

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EDITOR'S PREFACE

As the title of the book indicates and as explained in the Introduction, this volume is meant to give a historical and analytical survey of Trade and Industry in Modern India. In Industry we do not include Agriculture, which requires a separate study by itself. The word Trade is used mostly in the sense of Foreign Trade. The survey is not exhaustive; hence it is called introductory. It is planned, however, to cover sufficient ground for understanding the main tendencies in Indian Trade and Industry, on the basis of which the future industrial policy of the country can be worked out—a problem which will be dealt with in the next volume in this series.

In studies of this character, the difficulties of presenting the most recent facts are great. In the first place, the statistical and other Government publications are available at such intervals that the most recent facts cannot be easily embodied in a work like this. Apart from this, the inherent nature of the subject is such that by the time a book like this goes through the press and is in the hands of readers, important changes may take place in this or that branch of trade or industry making certain statements in the text somewhat out of date. In view of the economic crisis through which the world is passing at the present moment, the uncertainties in the matter of trade and industry are greater than ever. In several cases, political factors add to this tendency. In spite of these difficulties, efforts have been made to give the latest information on each subject as far as possible, and if the reader finds any inadequacy in this connection, he will, it is expected, keep in mind the considerations pointed out above.

It is difficult to give an exact idea of the division of work among the authors. Messrs. Bose and Deolalkar worked as research students under my guidance during 1926-28. The former

wrote a thesis on the Foreign Trade of India, and the latter on Textile Industries in India. The material of both these works has been freely used by me and partially embodied in the present volume. Additional material had to be collected specially in connection with certain other industries; and the work had to be brought up-to-date in each case. Wherever it has been thought proper to give a historical treatment, we have begun with the year 1860.

In writing on a subject of practical importance, academic men suffer from a handicap due to want of adequate contact with all the problems concerned. Proper co-operation between economists and men in business is essential for establishing the truth in many problems of economic life; it must be pointed out that such co-operation is still in its infancy in our country. It is hoped, however, that in the New India which is being created the value of such co-operation will be better appreciated. I may be permitted to make an appeal to those who know better in this or that branch of the subject to be so good as to let me have their suggestions which will be gratefully acknowledged in a future edition of the work.

Thanks are due to Mr. D. N. Marshall, M.A. who rendered valuable assistance in preparing the work for the press.

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University of Bombay,
1st September 1931.

C. N. Vakil.

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INTRODUCTION

We hear of international events and problems more frequently in recent times than ever before. The League of Nations focusses attention on such events and problems. This is so because the ties of any one country with others have grown and are growing with increasing complexity. Certain kinds of events in any one important country will have a world effect, and people in other countries must perforce think of such effects from their point of view. Though political considerations sometimes seem to have the upper hand in these events, it may be said that normally the ties are essentially economic. The problems of reconstruction in Europe after the war ; of inter-allied debts and reparations ; of payments to America ; of tariff barriers ; of economic unity in Europe on the one hand and in the British Empire on the other :—all these are obviously economic problems, on the solution of which the normal economic life of nations depends.

In India, though the immediate problem seems to be political, the real problem is economic, namely, that of ensuring to the millions of inhabitants of this country a decent existence ; in other words, of allowing them a chance to rise above the margin of subsistence which is the level to which they have fallen. Whatever the future outcome of the great struggle through which this country is passing at the moment, we may assume that it is not going to be an isolated country detached from the rest of the world, but that it will have a better place among the nations of the world, by means of more healthy economic relations. What is desired by India, as by most countries, is that in furthering the cause of what is known as world economy the national economy of a country should not be sacrificed. The stronger nations of the world do act on

this principle, but they forget the necessity of applying it in the case of the weaker or the backward nations ; the more powerful nations which so often speak in terms of international ideals must realise that these ideals must remain on paper so long as the economic status of the so-called backward countries does not improve.

One of the principal ways in which international economic relations are maintained is trade ; trade between the different countries of the world leads to many problems of industry and finance ; of transport and tariffs and the like. The study of the foreign trade of a country is, therefore, an essential preliminary to a proper understanding of its economic life, and its place in world economy. The export or import trade in any particular article is closely related to the production of that article or its absence in the country concerned ; and therefore, the study of the foreign trade of a country will be barren without a corresponding study of its industries.

In view of the fact that the foreign trade of a country is so closely connected with its economic life and organisation, figures of foreign trade are frequently used as indices of the economic condition of a country.[1] The data regarding the production in a country are not easily available ; for this a special census of production, or some other suitable machinery becomes necessary. The data regarding the foreign trade are however available with ease. The records of shipping companies and other transport agencies would furnish the information. But even this is very often not necessary, because the Customs Houses at each port make it their business to record the movements of trade while collecting the Customs duties on different articles, which happen to be one of the principal sources of revenue to Modern Governments.

[1] The following argument on trade up to p. 13 has been based on an article on "the Economics of foreign trade of India" by S. C. Bose published in the "Indian Journal of Economics," October 1930.

The mere fact that the figures of the foreign trade of a country have grown is, however, not in itself a proof of a corresponding growth of prosperity. Exports and Imports of a country may be determined by a variety of factors, which may not be indicative of sound economic life. [1] It is necessary, therefore, to go behind the figures and trace the real causes which have given rise to them, in order to appreciate fully the economic significance of trade figures. [2]

Foreign trade will play a far more important part in the case of a small country with a dense population and scanty agricultural resources, but industrially very developed, than in that of a vast but thinly-populated country with ample agricultural resources for industrial progress. Among the former class may be mentioned European countries like the United Kingdom and Germany, while the U. S. A. may be said to belong to the latter group. Besides, the general poverty of a country may also restrict the progress of her foreign trade. In this class may be included the backward countries of Africa and Asia.

India may be said to belong partly to the second and partly to the third group. On the one hand she is a vast

[1] Cf. "Mere volume of trade shows nothing.....A country's foreign trade is likely to be increased by a rapid advance in those industries which are already ahead of similar industries in other countries, because such an advance increases her power of exporting at a profit. But her foreign trade is likely to be lessened or at all events its growth is likely to be checked by an advance in those industries in which she is relatively weak; because such an advance will tend to diminish her need of exports". Marshall, Industry and Trade, pp. 14-15.

[2] Cf. "Conclusions as to what a large per capita trade means for a country can be reached only after a careful investigation of all the factors involved in each particular case. Larger per capita exports and imports may denote that a nation is prosperous, that it enjoys all the comforts and luxuries which accrue from a participation in an international exchange of commodities, or it may signify that the people live in an unproductive territory and are obliged to give services and to export whatever they are able to wrest from the soil in order to import bare necessities, articles of simple food and clothing, fuel and building materials, sometimes even drinking water, as in the case of Aden, in South Arabia". Litman, Essentials of International Trade, p. 42.

country possessing abundant natural resources. On the other hand she has got a dense population which is povery-stricken. The standard of life is very low, and we find that the per capita amount of trade is consequently very small. This means that foreign trade plays a much less important part in the economic life of the Indian people than it does in that of the advanced nations of Europe. Nevertheless, it must be admitted that foreign trade has been playing an increasingly important part in the economics of this country since the establishment of British rule. This can be seen from the rapid growth of our total foreign trade, which is the most outstanding feature of the economic changes that India has undergone in modern times.[1] Whatever might have been the nature and extent of our foreign trade in the past, it can be said that it played a subordinate part in the economic life of the people till the middle of the last century. The same is not true to-day. Since the beginning of British rule, along with the growth of transport facilities and world commerce, the foreign trade of India has also grown in volume. The nature of this growing trade has profoundly affected our agriculture and industry. India is an important factor in the world market. This has also its reaction on the economic life of other countries, with whom India has established trade relations. The principal question is, how far has this growth of foreign trade been beneficial to the people of India?

The modern theory of International Trade is based on the idea that such trade is advantageous to both the sides. Though this is generally true, we cannot agree with Bastable that "a consideration of what is our proportion of

[1]

	In lakhs of Rs.	
	Exports.	Imports.
1860-61	32,97	23,49
1900-01	107,72	80,89
1913-14	249,01	191,31
1920-21	267,77	397,57
1929-30	263,00	189,00

gain is after all more a question of scientific curiosity than of practical importance".[1] If, for example, by developing her industries, India can increase her national dividend, there is no reason why she should remain content with only a slice which may come to her by exporting raw materials. The nature of the commodities exchanged must, therefore, be carefully examined before arriving at a conclusion regarding the real advantages of a country's participation in foreign trade.[2] Besides, it is also necessary to consider the parties who carry on the trade ; they need not necessarily represent the interest of two different countries. Owing to political subordination or other causes, it may be possible that the so-called exchange of goods between two countries may really mean a transaction between people of the same nationality, some of whom may have settled in the other country. For example, the exports to England of the products of a plantation owned and managed by Britishers and the import of machinery in exchange for use in the same plantation, would mean that the mutual gains arising out of the transaction really go to the nationals of the same country. The investment of foreign capital in a country and the exploitation of her agriculture and industry by foreign entrepreneurs and the consequent international exchange of goods, do not contribute to the prosperity of her people, though

[1] Cf. Bastable "The Commerce of Nations", pp. 20-21.

[2] Cf. "It is not a matter of indifference whether the articles concerned in imports and exports are destined for final consumption or for use in further production, i. e. whether they are consumer's or producer's goods. Thus the national economy of a country is certainly more favourably affected when one hundred million marks are used to purchase raw cotton which will be increased in value many fold in succeeding transactions by the industry, than if the hundred millions had been expended for coffee to be consumed at the same value. So when machinery, electric apparatus, railway material, etc. are purchased, which find enduring application in the productive process of the country, a different judgment must be passed of such transaction than that which is applicable to the importation of fashionable articles of women's apparel which is merely consumed and do not survive a single season". Joseph Grunzel: Economic Protectionism, p. 64.

there may be a few incidental gains ; in some cases it may involve definite loss. In order to evaluate the real benefits of foreign trade to a country, due allowance should be made for such factors.

Let us consider the growth of foreign trade in India from this point of view. In the first place the two remarkable features that are observable in the trend of our foreign trade since the middle of the last century are : (1) the preponderance of raw materials in export and of manufactured goods in import, and (2) a steadily rising excess of exports over imports.[1] The significance of these two points must be closely studied before we are in a position to ascertain the advantages accruing to India by her foreign trade. It is not possible to assess the advantages statistically ; but a general examination of the commodities of trade, of their influence on agriculture and industry, and of the extent and causes of the excess of exports over imports will indicate the general effects of foreign trade on the economic condition of the people.

The development of foreign trade has greatly affected our agriculture. The demand for a large number of Indian agricultural products has, to a great extent, stimulated their cultivation. For example, the rise in the output of such agricultural crops as oil seeds, cotton, jute, and tea, has been very largely due to a flourishing export trade. This has, however, not been an unmixed good. The production of commercial crops for export has often retarded the production of food grains which has not

[1] The first feature is a matter of common knowledge and does not require further proof. As regards the second the following figures are relevant :—

Period.	Net excess of Exports over imports. lakhs of Rs.	Annual average lakhs of Rs.
1860-61 to 1893-94	4,88,73	1437
1894-95 to 1913-14	5,11,30	2521
1914-15 to 1929-30	5,18,86	3243

kept pace with the rise in population and the progress of exports.[1]

On the other hand, the import of machinery has helped the establishment of modern industries in India, such as the cotton, jute and steel industries. But the growth of imports in most other articles has been other than beneficial to Indian industries. The imports of sugar have seriously affected the home industry. The imports of cotton and woollen manufacture, though they have not actually caused a decline in the home industries, have certainly retarded their progress. To put briefly, the growth of our export trade has, on the whole, done some good to agriculture; but the growing import trade has been mostly injurious to our industries.

The study of the growth of our foreign trade is therefore complicated. The net addition to the wealth of the people in consequence of the greater participation in international commerce is impossible to calculate. While this is so with reference to India, it may be pointed out that foreign countries have very materially gained by participating in Indian trade. Whereas the net advantage of the growth of our foreign trade is doubtful, so far as we are concerned, its effects on other countries have been beneficial.

The exports which have added to the agricultural activities of India have led to the industrial development of the importing countries, as these consist mainly of raw materials and food grains. For example, the existence and prosperity of the Dundee Jute manufacturing industry

[1] The population of British India rose from 29 crores in 1891 to 32 crores in 1921, thus showing an increase of 11 per cent. The total area under food crops rose from 18.7 crores of acres in 1892-93 to 20.8 crores of acres in 1923-24, showing also an increase of just 11 per cent. During the same period, the exports rose from 20.56 crores of rupees to 50.87 crores, showing an income of 147 per cent., while prices rose by only 74 per cent. during the same period. See K. L. Data: Prices in India, Vol. I, Chapter IV; and "Currency and Prices in India" by Vakil and Muranjan in this series.

depend solely on the imports of the Indian raw material. The exports of tea and wheat from India satisfy the elementary needs of Englishmen ; those of hides and skins have added to the prosperity of the leather-manufacturing industry in the United Kingdom, the U. S. A. and Germany ; those of seeds have helped the growth of the oil-mill industry in France and elsewhere ; those of raw cotton have led to the progress of the cotton industry in Japan ; and so on.

As regards the effects of the imports which consist mostly of manufactured goods, the industries of foreign countries have prospered in some cases at the cost of India. Thus, the prosperity of the Lancashire cotton industry depends greatly on a flourishing trade with India. Java owes the prosperous condition of her sugar industry to a large trade with India. The rising imports of cotton and silk manufactures from Japan have led to the expansion of those industries in that country. But such progress in other countries has had injurious effects on corresponding industries in India. A fuller discussion of these effects will be found in appropriate places in the body of the work.

On the whole, it may be said that the share of India in the gains arising out of foreign trade must have been small ; but the other countries have gained substantially by trading with India. This has been, as will be evident from the above, due to the undesirable nature of our trade, namely, the export of raw materials in return for the import of manufactured goods, which has been detrimental to the interests of our industries.

Even supposing that India has gained to some extent by her foreign trade, a deduction must be made from the gain, for the share taken away by outsiders. Most of the profits arising out of the extension of tea and coffee cultivation ultimately go to the British capitalists who are the owners of the majority of the plantations. A part of the

profits of the jute industry is also taken away by Britishers who control the mills. Besides, the gains of foreign commercial houses, of foreign shipping, banking, and insurance companies mostly go to foreigners. It will thus be seen that a large portion of the apparent gain to India is really enjoyed by non-Indians.

We have already remarked about the growing excess of exports over imports. During the 70 years, 1860-61 to 1929-30, the net excess of exports amounted to 1519 crores of rupees. In other words, merchandise worth 21.70 crores of rupees has, on an average, been annually exported from India in these 70 years for which no returns were received in kind. This is partly accounted for by English charges[1] most of which are of a political nature. It may be added that foreign loans incurred by India have the effect of reducing the excess of exports for the years in question.

In this connection, it may be argued that the interest charges paid on foreign capital do not mean a permanent loss to the country. A poor country like India must depend on foreign capital to develop her industries, and, in the long run, the profits derived from the growth of industries more than pay for the interest charges. If the foreign capital be had at a reasonable rate of interest, and is judiciously employed in developing industries, the effects of foreign investment, being far from harmful, are positively beneficial. But when foreign investment takes the form of companies (incorporated outside India), which are owned and managed by foreigners, it results in an exploitation of the resources of a country to enrich the foreigner without adequate benefit to the people of the land.[2] Part of the excess of exports is due to the profits of such foreign companies.

[1] This is popularly but incorrectly known as 'Home Charges' cf. C. N. Vakil, Financial Developments in Modern India.

[2] Such forms of exploitation are most objectionable in the case of mineral industries; for, while in the case of an agricultural industry like tea

To summarise, the development of our foreign trade has, on the whole, been beneficial to some extent to the growth of our agriculture, but detrimental to that of industries. It has been wholly beneficial to the countries trading with India. A portion of the gains arising out of the growth of agriculture and some of the industries is appropriated by non-Indians, as some of the agricultural and manufacturing industries are owned and managed by foreigners. An additional portion goes to meet the foreign liabilities of India for trade purposes such as charges for shipping, banking, insurance etc. When allowance is made for all these factors, it may be doubted whether the aggregate effects of the growth of our foreign trade have been for the good of the people of the country.

Without going into the details of the theory of international trade, we may say that foreign trade is not an end itself ; it is only a means to an end which is the growth of national welfare and an addition to the material comforts of a people. Under the present political structure of the world, based on independent and isolated states, which necessitates, so far as possible, the self-sufficiency and autonomy of the individual nationalities, the play of the law of comparative costs must be so restricted as to ensure a diversity in production and the development of as many "key" industries as possible. The idealistic condition visualised by the classical theorists of a comity of nations, each concentrating on the production of a commodity most suited to it, leading to a mutual free exchange of goods so produced, thus carrying the division of labour to its furthest end, ignores the political organisation of the world, and hence the clash of interests between one country and another. What may be good for

or a manufacturing industry like jute, there is a possibility of the people of the land enjoying the full profits of the industries by ultimately taking them over from foreigners, the exploitation of mines means a permanent loss of mineral resources which cannot be replaced and which must sooner or later be exhausted.

humanity at large may not be to the best interests of any particular nation. This conflict of interests between world economy and national economy, in which the latter must prevail, makes the general adoption of free trade utopian. At the same time, it is ridiculous to think of the other extreme of having a country fully self-sufficient in every branch of agriculture and industry, and of thus shutting out all exchange of goods beyond its frontiers. A happy state of circumstances will lie in first preserving the interests of a country, and then working for the welfare of humanity at large; and not in the sacrifice of national interests for an intangible commonweal.

From this point of view, we may say that a policy of developing the industries of India by judiciously restricting the imports of manufactured goods, and the exports of raw materials, would have substantially added to the prosperity of the country. Countries with a scanty population and vast agricultural resources may find it profitable to export their raw produce and import manufactured goods in return, in order to satisfy their immediate needs and to help the development of their industry and agriculture. The increase in the foreign trade of such countries, though a considerable portion of their exports consists of raw materials, means increased prosperity as it involves the disposal of surplus products which could not with advantage be consumed within the country. But even these countries will find it more profitable after a time to retain the raw materials within the country, and turn them into manufactured goods. Such has been the case with the U. S. A., Canada and Australia.[1]

On the other hand, countries like England, Germany

[1] Cf. "With countries like Canada and Australia, foreign trade is the source of economic life, and prosperity or adversity varies almost in direct ratio to the surplus and price of their products available for export, which is the best means they possess of obtaining the resources necessary for the development of their territories". J. W. Root: The Trade Relations of the British Empire, p. 119.

or Japan, with their deficient agricultural resources and insufficient food supplies, may find foreign trade an absolute necessity on the growth of which the prosperity and well-being of these countries must depend to a very great extent. The imports of food-grains supply their vital needs, while the maintenance and growth of their industries will depend on imported raw materials. Besides, a flourishing export trade in the goods manufactured by them is essential to their prosperity. In the case of such countries, therefore, foreign trade is the very breath of their economic life.

The case is, however, different with India. It is not similar to that of Australia or Canada, nor can it be compared with that of England or Germany. India is a densely populated country, the agricultural resources of which can with better advantage, be utilised within the country instead of being exported. Like England, India does not require imports of food-grains to feed her people, nor does she require imports of raw materials to develop her industries. This shows that whereas with some countries foreign trade may be an absolute necessity on the maintenance and growth of which their economic prosperity will depend, it is not so with India. The conclusion is therefore obvious that the one-sided growth of agriculture to the detriment of the progress of industry, which has been caused by the developments in our foreign trade, has not been to the best interests of the country, and has involved a sacrifice of national economy for the promotion of other interests. The absence of a diversity of industries has forced the population to rely more and more on agriculture, and this is largely responsible for the extreme poverty of the people.

We, therefore, arrive at the conclusion that though the growth of our foreign trade has to some extent helped Indian agriculture, a policy of developing the industries of the country by restricting the free progress of foreign

trade would have been much more beneficial. We may, therefore, unhesitatingly assert here that the so-called free trade policy of the Government of India, which led to the unhampered growth of our foreign trade to the disadvantage of the industrial progress of the country was a fatal blunder. The true interests of the country were sacrificed to the pursuit of an unsound economic theory. A right policy would be a system of protection which will guarantee the growth of various industries in the country, and at the same time aim at obtaining the maximum amount of gain by participation in the international exchange of goods.

The task has been made difficult by the negligence of more than a hundred and fifty years. But it is no good crying over spilt milk ; nor will anything come out of perorating over conditions which prevailed in our country a century back. Things must be taken as they are. Though the task is difficult, its ultimate success is guaranteed by the existence of an abundant supply of raw materials, an internal market of large dimensions, and other requirements for industrial progress.[1]

The stern realities of the War opened the eyes of the authorities ; it was realised that a stronger Industrial India would be a greater asset to the Empire. The old policy of laissez faire was abandoned ; development of industries came to be recognised as one of the legitimate functions of Government. After prolonged discussions, the policy of Discriminating Protection was adopted in 1924, and under this policy a few industries have received a limited amount of protection. Though this policy is halting in many respects, and cannot help the industrial advance-

[1] Cf. "India has an abundant supply of raw materials, a plentiful supply of labour, adequate capital and a large home market. All these requisites for industrial growth and development are thus present much more so than in many countries which have, without such advantages, attained a commanding position in the industrial world". Fiscal Commission Report (Minute of Dissent) p. 176.

ment of India against world competition, it may be taken as the first step towards a more comprehensive national policy. Before such a policy can be formulated, we must, however, take stock of the industries in the country as they are ; the future must be built on the present.

In trying to understand the industrial position of the country, we are faced with difficulties similar to those which we considered, when we discussed the validity of trade figures as an index of national prosperity. We have seen that the figures of the foreign trade of a country are by themselves not a true indication of the prosperity or otherwise of that country. It is the real nature of the trade, the circumstances under which it is carried on, the employment which it gives to the people of the country, and the adequate material returns which it brings, these are some of the important factors which have to be taken into account. The same remarks generally hold true regarding the industrial progress of a country. A country may have nominally a large number of factories, and may in consequence show a certain amount of industrial production every year ; but the nature of the production, the circumstances under which it is produced, the employment which it gives to the people of the country, must be considered before we can have a true grasp of the industrial position in the country. If for example, we find that the advantages of a particular industrial development are enjoyed not by the people of the country but by others, then from the national point of view that particular development cannot be considered satisfactory. The test of a real industrial development is the working up of the raw materials and other natural resources of the country, in such a way that it may add to its national dividend, and enable it to increase the standard of living of its own people. In a country like ours, this consideration is bound to be of paramount importance. The growth of industries in this country is naturally view-

ed as a means of relieving the pressure of population on agriculture, so that there may be a balanced division of labour between different sections of the people, in order to exploit the resources of the country for the ultimate good of the people themselves. As we have seen, India presents a peculiar phenomenon of a vast country with abundant raw materials and a large home market, yet dependent for some of the ordinary requirements of life on imported manufactured goods. Instead of working up many of her valuable raw materials into consumable form, either for her own people or for export, India has preferred to export raw materials and to import most of her manufactured requirements. This uneven development has aggravated some of her economic evils, and has made her progress in industrial matters more difficult than ever. It is because of the regular supply of raw materials from India that powerful industries have grown up in several other countries, and they are not likely to yield easily to any development in India which will come in their way. Conversely, it is the hold on the Indian market that has enabled several well-organised industries in different countries to carry on their work successfully, and the loss of that market is not going to be viewed by them with favour. When it is realised that the restoration of a proper equilibrium in the economic organisation of this country is likely to dislocate the economic work of several other countries, who are in a more advantageous situation, we shall realise the difficulties which are ahead of us.

In order to appreciate some of the difficulties mentioned above, we may classify the existing industries in India as shown below. The suggested classification is by no means exclusive, in fact it is overlapping in some respects ; the object, however, is to consider the industries from different points of view in order that the facts before us may be in their true perspective.

1. Industries for the home market or for export.
2. Industries, financed by Indian capital or by foreign capital.
3. Industries managed by Indians or by foreigners.
4. Industries owned by the State or by private people.
5. Industries receiving protection or other form of State assistance or unprotected industries.

1. INDUSTRIES FOR THE HOME MARKET OR FOR EXPORT

When we talk of the industrial development of India, we generally assume that the industries in question are meant for supplying local requirements. In other words, we are industrially so backward that it is considered to be a good ideal for us to aim in the first instance, at supplying the home requirements without thinking of export. By itself, it is a good ideal suggesting a state of self-sufficiency. It has, however, not been practised by most countries, and the richer countries in the world are at present those which have developed export industries, for example, the United Kingdom, U. S. A., Japan and so on. Though the home market is bound to be the immediate consideration for any industry that makes a start, no country has planned its industrial organisation with a view to such a self-sufficiency, and every country has in fact tried to produce that for which it is best suited without reference to the home market alone, because it has invariably succeeded in getting the necessary market in other parts of the world. In view of this, it is necessary that we do not woo the wrong ideal, and think merely in terms of the home market while we are thinking of the industrial progress of the country. Our backward state is perhaps responsible in engendering this wrong ideal in our mind, and it is curious to see that we are ignoring facts relating to our own country while we think on these lines. Two of the most flourishing industries in the country,

namely, jute and tea, are primarily export industries. In the case of the former we have a monopoly, in the case of the latter, we have a very strong position. Even in the case of an industry like that of cotton, we used to export large quantities of yarn to China in the earlier years, and that was the source of strength of the Bombay mill industry ; and we are aware of the efforts now being made to develop the export trade in Indian cotton piecegoods in the countries bordering on the Indian Ocean. Even a protected industry like steel, which has come into importance in this country only recently, depends to a certain extent on export ; large quantities of pig iron manufactured at Jamshedpur are taken by Japan every year. These illustrations should be sufficient to arrive at the conclusion that though we should certainly think of the home market first, we should not therefore shut our eyes to the possibility of expansion of those industries which we may be in a position to develop, but for which we may have to depend on outside markets. Given an effective demand in any part of the world, if we are in a position to supply the required goods, of good quality at reasonable price, there is no reason why we should not supply them merely because the home market in that commodity is either limited or does not exist. In our efforts to bring about a proper equilibrium in the economic organisation of this country by means of industrial advancement, this point of view should be borne in mind.

2. INDUSTRIES FINANCED BY INDIAN CAPITAL OR BY FOREIGN CAPITAL

The classification of the existing industries from the point of view of their ownership is bound to be of great value. Those industries which are financed by foreign capital, have remained more or less exclusive ; in spite of the fact that they have enjoyed valuable privileges in this country for so many years, they have somehow pre-

served their non-Indian character. In consequence, not only have the profits in these industries gone to foreigners, but the valuable experience, enterprise, knowledge of technique, etc. have also been lost to us. All this equipment, if available to Indians, would have prepared us by now for easy adjustment to new conditions, and the kind of industrial development that we look forward to, would not have been so difficult. The most important illustrations of industries financed by foreign capital are those of jute, tea and coal. It happens that the majority of jute shares are now in the hands of Indians, but the control of jute mills is still in the hands of Europeans, with a few exceptions. It is true that a few of the coal mining companies are financed and owned by Indians, but to a greater extent, the industry as a whole is controlled by Europeans. The same is true of the tea industry. It is remarkable to find that all these three industries are centred in Calcutta or in its neighbourhood.

3. INDUSTRIES MANAGED BY INDIANS OR BY FOREIGNERS

This is closely connected with the former, because industries financed by foreigners are invariably managed by foreigners. Besides this, there are a few industries which though financed and owned by Indians, are managed to a certain extent by foreigners; for example, the steel industry. For certain skilled work qualified Indians are not available, and hence the appointment of foreigners in positions of responsibility in certain concerns. This principle may be justified in the case of an industry which makes a beginning, and is faced with a situation where it is not able to find qualified Indians to take up certain kinds of work. It should, however, be its duty, and the State should enforce this, to see that as early as possible, Indians are trained by it for the purpose; so that the handicap with which it is started may not be perma-

nent. It is obvious that those industries which have not adopted this wise policy have not got a national outlook, and must be taught one as soon as possible. In the case of those industries which have received protection, this condition should be rigidly enforced.

4, INDUSTRIES OWNED BY THE STATE OR BY PRIVATE PEOPLE

In the capitalistic organization of society under which we live, the question of State ownership of industries does not ordinarily arise. It is a fashion nowadays to point to the illustration of Russia, as the one country where the principle of state ownership of industries is practised. The situation in our country presents certain peculiarities ; the biggest single industry in the country, namely, the railways is state property, and in course of time, will be entirely under state management. Because of the initial difficulties in developing other industries, it is usual to look upon the State in this country as the party which must take upon itself the pioneer work. This has been done in some cases ; of late, the state has joined hands with private enterprise in conducting an industry ; for example, a sugar factory in the Punjab is run by a company in which the Government of the Punjab have taken large shares, and are also represented on the Board of Directors. This illustrates one of the methods of approaching the industrial problem in this country, which may be developed with advantage to all parties concerned. It need not be added that with such exceptions, industries are left to private enterprise.

5. INDUSTRIES RECEIVING PROTECTION OR OTHER FORM OF STATE ASSISTANCE AND UNPROTECTED INDUSTRIES

This classification has naturally achieved importance in recent years. Among the industries which have already

received protection may be mentioned steel, paper, matches and cotton. If the question of the industrial advancement of the country is viewed from the point of view we have emphasized, namely, restoration of equilibrium in the economic life of the country, the policy of discriminating protection now in force will need early revision in favour of a more aggressive policy, which will enable us to develop at a much faster rate.

A consideration of the industries of India, according to the classification suggested above, is bound to be useful from the point of view of the question of the future industrial policy which the country may adopt, in order to bring about that equilibrium in the economic life of the country which is desirable. The consideration of policy, [1] however, presupposes acquaintance with the main facts regarding each important branch of trade and industry on the basis of which alone a systematic policy can be worked out. For the purposes of such a survey, the above classification will be somewhat confusing because it is overlapping. While bearing in mind, the points of view emphasised in the above classification, it may be simpler, therefore, to classify the articles of trade and industry into convenient natural groups for the purposes of such a survey. Articles of food, textiles or articles of clothing and allied materials, mineral industries, and so on, are likely to be more convenient groups for the purposes of such a preliminary study. An attempt to survey the position of each article of trade and industry under these groups, would be an enormous task, which can perhaps best be performed by a Government committee which would have the necessary powers and facilities to collect information. In the absence of such an organised machinery to make a survey, our purpose may be served if we take the more important articles in each group and study their position generally, and this is what has been attempted in this

[1] This will be the subject matter of the next volume in the series.

volume. It is obvious, therefore, that the list of articles discussed is not exhaustive and for one reason or another, some articles have been omitted. In spite of this, the selection has not been entirely arbitrary, because it has been made as far as possible with reference to the importance of the articles, the availability of information and so on. It has been thought desirable to combine the study of trade and industry relating to each article instead of treating those aspects separately. There are some articles in which only the commercial aspect is important ; there are other articles in which the industrial position has greater importance ; but in a majority of cases, the reaction of one aspect on the other is very great, and a review of the position from the combined point of view is therefore bound to be useful.

In making such a survey, our object has been to present the growth of trade and industries in the country as far as possible. This has necessitated a historical treatment ; this treatment has, however, not been followed uniformly in all cases. In the case of some industries the growth is so recent, that early history has very little significance. In the case of others, the nature of the development at the present moment demands greater emphasis. In the case of an industry like Cotton, however, the history has its own interest and significance and at the same time has valuable lessons for the present. Without going into further details, we may say that the reader need not expect a uniform treatment of the commodities, surveyed in this volume, because the treatment has been adapted to suit the peculiarities of each commodity.

PART I

ARTICLES OF FOOD AND DRINK

CHAPTER I

FOOD GRAINS

RICE

INDIA'S POSITION IN WORLD-PRODUCTION AND EXPORTS

India occupies the most important position among the countries of the world both as a producer and an exporter of rice. This statement is borne out by the fact that India produces fifty per cent. of the world output of rice, and is responsible for nearly 40 per cent. of the total world exports of this article. The following figures will be of interest in this connection.

WORLD'S PRODUCTION[1] AND EXPORTS OF RICE IN 1926

(Quantity in lakhs of quintals, quintal=220·46 lbs.)

	Production	Export
India	46,12	2,38
Japan	10,05	0,00·6
Indo-China	6,08	1,25
Siam	5,50	1,20 (1925)
Total (including other countries) ...	84,56	6,46
Percentage share of India on total ...	54·5	36·9

Rice is the staple food of a great majority of population in this country. In view of this we should expect that the export of rice would be large only when there was a good harvest leaving a substantial surplus. A failure of crops should therefore lead to a reduction of export. But this

[1] International Year Book of Agricultural statistics.

is not always true, for, we find that in spite of famines in the country, the export of rice was not small. This is accounted for by the high price which foreigners are willing to pay for Burma rice, which is mostly exported.

The export of rice rose from 7 lakhs of tons in 1862 to 10 lakhs of tons in 1875. Notwithstanding widespread famines in the following years, the export remained at 9.75 and 9.1 lakhs of tons in 1876 and 1877 respectively. The strength of the foreign demand is indicated by the fact that the value realised in the latter years in spite of somewhat reduced quantity was larger than that realised in 1875.[1]

The export once again continued to rise till in 1890 the figure rose to 17.75 lakhs of tons. This was due to a heavy demand from Japan, where the crops had failed. With the cessation of the Japanese demand, there was a fall; the famines and other calamities at the end of the century affected the export in the same direction; but the strength of the foreign demand soon brought it to 16.85 lakhs of tons in 1901, and to 24.75 lakhs in 1904. Local famines in Bengal led to some fluctuations for some time, but by 1912-13, the record export of 27.6 lakhs of tons valued at 32.5 crores of rupees was reached.

During the war period, the export of rice was considerably restricted by the Government; the Indian Food Stuffs Commission regulated the exports of rice as of other food products. But leaving this abnormal period out of consideration, we find that with the removal of these restrictions, the former tendencies appear once again; the exports in 1925 were 25.5 lakhs of tons; in 1929-30 they were 23.3 lakhs.

We have referred to the strength of the foreign demand for rice. This is further indicated by the great increase in

[1]

	Export of rice in crores of Rs.
1875-76	5.24
1876-77	5.74
1877-78	6.80

the price of the article. If we compare the figures of 1862 with those of 1925, we find that whereas the quantity exported increased by 261 per cent., the value showed a rise of 1082 per cent. ; in other words, the price rose by 414 per cent. in the interval. Though the export of rice from India is generally regulated by variations in output, the strength of the demand from foreign countries is also an important factor.

EXTENT AND MAIN DIRECTIONS OF INDIAN RICE EXPORTS

Indian rice is taken mainly by certain Asiatic and European countries. The former use it as food, while the latter mainly for non-food purposes.

Among the chief consumers of Indian rice, we may mention Ceylon, Japan, the Straits Settlements, Java and China on the one hand, and Germany, the United Kingdom, Holland and Austria-Hungary on the other. This distinction is important because the Asiatic countries, as has been said above, import our rice as a food grain for purposes of consumption ; whereas, the European countries use it more as a substance for distillation and manufacture of starch. During the War, the exports to Europe were naturally restricted. But it is interesting to note that though before the War, the exports to both the continents were almost equal, in recent years the exports to Asiatic countries are much larger,[1] due to the fact that

[1]

Year	Exports of Rice in lakhs of Rs. Principal Asiatic countries.	Principal European countries.
1904	918	624
1909	678	735
1913	1057	992
1920	902	350
1922	1698	753
1923	1888	725
1925	2092	884
1928	1131	446

Asiatic countries like Japan and Ceylon are importing Indian rice in greater quantities.

This increasing dependence of Japan and Ceylon on Indian rice is a consequence of their industrial progress as will be presently proved. Japan is a rice-producing country, and at one time produced enough for her own requirements. She imported Indian rice in some quantity in 1890, when there was a failure of crops in that country, and since then, has taken it in various quantities. But the great industrial developments which took place in Japan during and after the War, resulted in a diversion of large numbers of people from the fields to the manufacturing industries. In consequence, the food-production of the country fell, and she found it necessary to take increasing quantities of Indian rice in recent years, particularly during 1921-25. In more recent years Japan took smaller quantities of our rice.[1]

In spite of this great progress, Japan has not overtaken Ceylon. The exports of Indian rice to Ceylon have been as a rule, the largest. In 1890-91 they amounted to 1.73 crores of rupees; in 1925-26, they rose to 7.94 crores, in 1926-27 and 1927-28 to 7.6 and 8.2 crores respectively, and touched 7.4 crores in 1928-29. Ceylon has devoted such a large portion of her cultivated area to the two commercial crops, tea and rubber, that she is unable to produce sufficient quantities of food grains for her population. We find, therefore, that with the extension of cultivation of these two crops, she has been compelled to take more and more Indian rice.[2]

[1] Exports of Indian Rice to Japan in lakhs of Rs.

1919-20	0	1924-25	363
1920-21	15	1925-26	418
1921-22	70	1926-27	180
1922-23	126	1927-28	226
1923-24	212	1928-29	10

[2] It may be interesting to point out that if Burma is separated from British India, the exports of rice will tell a different tale, as the major portion of the exports is from Burma. Again under natural geographi-

FUTURE PROSPECTS

As for the future, it may seem that the exports of Indian rice are likely to increase because India occupies the most leading position as a producer and exporter of rice, and the most important of our customers require the product for purposes of food. But there are natural limits to such an increase, because rice is the staple food of large masses of people in this country, and with increasing population we are likely to require a larger quantity for home consumption.[1] Again, it must be carefully borne in mind that though India occupies a strong position in the world market, most of the importing countries are themselves producers of rice, and, as such, the agricultural activities of these countries will have an important influence on the export of rice from India. If paddy cultivation, which due to particular circumstances like tendency towards industrialisation, has been at present not actively followed in some of these countries consuming Indian rice, it does not mean that their potentialities for locally supplying and thus replacing the imported rice have been permanently exhausted. They can at any time turn to it and thus block the Indian exports.

Recently, this very thing happened and the Indian rice exports declined from 21.5 lakhs of tons in 1927-28 to 17.6 lakhs in 1928-29.[2] In 1928-29, Indo-China and Siam produced bumper crops of rice, and Japan also had two good crops in the years 1927-28 and 1928-29, thus providing sufficiently large supplies and reducing the need for imports. This shows that the foreign demand for Indian rice is not quite strong and there are grounds to suspect that this weakening is not a passing

cal conditions, if Ceylon were included in India, the situation would be entirely different from the point of view of foreign trade.

[1] The present export is not more than 10 per cent. of our total production.

[2] In 1929-30, the export rose to 23 lakhs of tons.

phase. Ever since the war, U. S. A., Spain and Italy have taken to rice production and every year witnesses an increasing output. The total which was 6 lakhs of tons before the war has recently reached 18 lakhs, and exports from these countries have adversely affected the imports of Indian rice in the European markets. In 1928-29, Indian exports to European markets decreased by 1.5 lakhs of tons as compared with the previous years, and this loss of substantial trade can be definitely accounted for, as is officially done "to the competition of better graded and better marked rice supplied from America, Spain and Italy."[1]

This European competition is of a more permanent nature than the check of Indian exports to Indo-China, Siam or Japan, because in these Asiatic countries the local output is sure to vary, as favourable seasons and heavy crops cannot be repeated every year. So the Indian rice export trade has this counter-tendency to fight against. To add to the difficulties, of late the price of rice has fallen considerably and this world-wide fall has hit hard the poor cultivator.

In view of these tendencies, the export duty of three annas per maund (first levied in 1860), being a specific one, was felt to have some adverse effects. Its burden became heavier along with the fall in prices, and the combination of all the circumstances outlined above induced the Government to reduce it to 2 as. 3 ps.[2] This has removed the disparity which previously existed between our export duty on rice and that imposed by Siam which country as already seen, is a principal competitor in the rice trade. But the reduction of export duty alone cannot influence the European competition and counteract the disadvantages to the Indian trade. In this case it is more the quality that affects us than the price, and so the me-

[1] Review of Trade, 1928-29, p. 86.

[2] From March, 1930.

thods followed in these competing countries regarding gradation and marking of the produce need to be studied with a view to their adoption in this country. The position of the rice trade is not intrinsically weak, but any external attack before it develops effectively, needs to be scotched in its very beginning, and hence the suggestion for this essential measure to supplement the reduction in export duty.

WHEAT

INDIA'S POSITION IN WORLD EXPORTS AND PRODUCTION

India occupies a comparatively minor position among the countries of the world both as producer and exporter of wheat. The following table bears out the above statement :—

WORLD'S PRODUCTION AND EXPORTS IN 1926[1]

(Quintal=220½ lbs; figures in lakhs)

	Production	Exports	
		Wheat	Wheat flour
U. S. A.	22,65	3,76	1,05
Russia	22,03	1,03	1
France	6,30	2	8
Canada	11,32	6,80	93
Australia.	4,40	1,43	42.7
Argentine	6,01	2,03	14,2
India	8,84	18	6.2
Total (including other conntries)	91,82	16,28	3,28.0
Percentage share of India on total	9·5	1·2	1·9

Though the level of production in the country affects the exportable surplus, the exports of wheat are deter-

[1] International Year Book of Agricultural Statistics.

mined more by external factors like foreign demand and price. The export market is naturally dominated by countries like the U. S. A. and Canada, and of late Australia which are in a position to send large quantities of wheat to Europe and elsewhere. The price is usually determined by the U. S. A. which is the largest producer, and by the strength of the demand in European countries, which import wheat in large quantities. It is, therefore, when the foreign demand is very great, and the supply from other countries not adequate that India gets an opportunity ; sometimes the price offered by the foreigner is so great that the Indian producer is tempted to export a larger quantity than local conditions would justify. One important feature[1] which gives India some importance in the wheat market is that her crop is harvested during the months of March and May. At this time, it happens that most of the other exporters have usually exhausted their stocks and new wheat is not yet available to them. In consequence, during the summer months, importers have to depend on the Indian supply. It has, however, to be remembered that though wheat is not so universally consumed in India as rice, it forms an important part of the diet in certain provinces, and of certain classes ; and when there is a large failure of crops, India is not in a position to export wheat in large quantities. The combined effect of all these factors is that the export trade in wheat is liable to great fluctuations.

GROWTH OF INDIAN WHEAT EXPORT TRADE

The export trade in wheat owes its existence to the steps taken by the British Government to supply the requirements of Great Britain,[2] and is more or less recent in origin. Till the opening of the Suez Canal in 1869 the

[1] Cf. "India as a producer and exporter of Wheat", Wheat Studies, Stanford University, California, 1927, p. 319.

[2] Cf. *Ibid.*

export of Indian wheat was small, and it received an impetus only from this time. In January 1873, the export duty of 3 annas per maund was removed and the trade got a further impetus. By this time it was realised in Great Britain that India could be the principal source of supply for her increasing requirements of wheat; and that such an arrangement would give additional strength to the export of manufactured goods from England to India, which would be sent to pay for the wheat. Two important steps were taken to carry out this policy. On the one hand expert enquiries[1] were made into the different varieties of wheat produced in India, with a view to ascertain those that were best for the British market, so that the cultivation and improvement of the same be encouraged in India. On the other hand, the development of the railway system was so arranged that the different producing areas were connected with the ports, the railway rates on such export articles being reduced at the same time.[2] It may be added that ocean freights were also reduced during the same period.

In this way, the position of India as an exporter of wheat grew in importance since 1881, and till before the War, she was one of the principal sources of supply to Great Britain. From small dimensions, the export of Indian wheat first exceeded 10 lakhs of cwts. in 1873-74, and reached 64 lakhs of cwts. in 1877-78. The famine years of 1878-79 greatly reduced the exports, but from 1881 to 1892, they gradually increased. In 1891-92, because of famine in Russia, the Indian export amounted to 303 lakhs of cwts. Most of these exports went to the United Kingdom, and it seemed that India had a secure place in the British market.

[1] In 1877, Dr. Forbes Watson was employed at the India office for this purpose. In 1882, the services of Messrs. McDougall Brothers were also employed for the same purpose.

[2] Report of the Royal Commission on Gold and Silver, Vol. II, p. 252. Also cf. Review on the Trade of India, 1876-77, p. 43.

But this was followed by a period, which was characterised by a low level of world prices of wheat on the one hand, and by a series of famines in the country on the other. The fall in the world price was chiefly due to increased exports from Argentine, Russia, Roumania, and other countries. In consequence, the exports fell during the years 1893 to 1902, and were only 5000 cwts. in 1900-01.

These counteracting forces having gone, the exports again rose after 1903. The stabilisation of the rupee in 1898, and improvements in transportation gave additional stimulus to this tendency. The world price level was also favourable, and the exports from the U. S. A. were falling. The acreage under wheat increased and a series of good harvests enabled India to send larger quantities of wheat to foreign markets. During the eleven years before the War, the annual exports had an alternate swing, and the average for the five pre-war years was about 262 lakhs of cwts. The record figure was reached in 1904-05 when the export amounted to 430 lakhs of cwts. It may be pointed out that in 1904 and again in 1912, India was the largest supplier of wheat to Great Britain. Though the exports of Indian wheat were high in this period, India's position in the world market was comparatively less important than in the eighties. This was chiefly due to the advent of Canada, Australia and other countries in the export market.

During the War period, and for a few years after the War, the export trade in wheat was under Government control, and was guided by abnormal circumstances. The wheat crop in 1914-15 in most of the principal countries was poor, and the price of wheat was bound to rise. Again the outbreak of the War, which led to reduction of harvests on the one hand, and larger demand on the other from European countries, gave an additional stimulus to the price. In consequence of this sudden increase

in price, there was the possibility of a heavy export. But this would have come in the way of local consumption, and at the same time, the British Government wanted to conserve the food resources of the Empire for herself and the allies. In view of this exports were restricted by Government order from December 1914. In February 1915 the Government took charge of marketing the crop of that year which was large. The Wheat Commissioner in India, and the Indian Wheat Committee in London, directed the purchase and sale of wheat through certain firms which were already engaged in the trade. The system of control was changed in 1916, and the Wheat Commissioner having decided the amount to be exported, the export was done by private traders under license from the Chief Customs Officer.

In the meanwhile, the British Government appointed a Royal Commission on Wheat supplies to control wheat purchases for Great Britain and the allies. Wheat was purchased from importing firms in London by this body up to November 1916. After that it began purchasing in India directly ; and from February 1917, the purchases for the Commission in India were made by the Wheat Commissioner. This arrangement continued till February 1921, when Government withdrew from the market, though the restriction on the amount to be exported was not removed till September 1922.

SOME RECENT TENDENCIES AND FUTURE PROSPECTS

As for the future of the Indian wheat export, some recent tendencies distinctly show that India will have to face increasing competition, and therefore she is not likely to be a great exporter of wheat in the future. Her exports which averaged 1,308 thousand tons in the pre-war period reduced themselves to 807 during the War, came

down further during the post-war period to 237, and in 1928-29 amounted only to 115. More than 60 per cent. of the annual exports were consigned to the United Kingdom ; while the pre-war average of exports to the U. K. was 985, in 1928-29, it was no more than 76. It is possible that the production of wheat in India may increase in the future, thanks to improved agricultural methods or extension of cultivation in the Punjab and Sind where comprehensive irrigational schemes like the Sukkur Barrage are in hand. But, against this, we have to take into account the possible increase in consumption. Improvement in the standard of life in India is the general aim of all thinking men, and with the political advance of the country, which is foreshadowed by recent events, one of the steps likely to be taken towards this goal is the conservation of India's food supplies for her own people. Add to this the foreign competition, which, as can be seen from the following table, is decidedly serious.

IMPORTS OF WHEAT INTO U. K., 1923 TO 1927[1]

From	1923	1924	1925	1926	1927
	(In thousands of cwts.)				
British India ...	1,25,22	98,15	73,24	26,94	50,14
Russia	1,51	7,53	12,65	22,67	24,59
Canada	2,84,86	3,87,69	2,96,77	3,56,69	3,21,81
Australia	46,54	1,08,71	1,63,05	91,86	1,48,38
U. S. A.	3,14,61	3,03,20	2,65,09	3,11,82	3,56,19

It is obvious from the table that while other countries have increased their share in the trade of the United Kingdom, Indian wheat movements have been continuously on the decline. Indeed the advent of Canada, Australia and Russia as great exporters of wheat will surely restrict the Indian produce from the U. K. and other world markets.

1 Annual Statement of the Trade of the U. K., 1927, Vol. II.

These remarks are strengthened by recent events. The export of wheat from India during 1929-30 was unusually low, being 13,000 tons only, of which the U. K. took 7,000 tons. Besides, on account of the great fall in the world price of wheat, foreign wheat could be landed in India at a cheap price. This tendency grew so strong during 1930-31 that Indian wheat found it difficult to secure even its local market, particularly at the ports. On the one hand, it became impossible for Indian wheat to find an outlet in foreign markets ; on the other, it began to lose its hold even in the home market. In view of this, a duty of two rupees per cwt. which is equivalent to Rs. 1-8-0 per maund has been levied on imported wheat for one year from March 1931. The Executive has got the power to reduce or remove the duty within the period if circumstances change.

FOOD GRAINS: GENERAL REMARKS

SOME ECONOMIC ASPECTS OF EXPORTS OF FOOD GRAINS

We have not examined the exports of other food grains such as bajri, jowar and the pulses, because they are quite insignificant compared with those of rice and wheat. We may, however, consider the general question, which is frequently raised, whether the export of food grains should be restricted or prohibited in the interests of the home consumer. This question owes its existence to the well-known fact that large masses of people in the country are known to be living on the margin of subsistence, unable to get adequate food even in normal times. It is not wise, therefore, from the point of view of the nation as a whole that food grains should be allowed to go out of the country when they can be consumed by the people themselves. This anomalous situation arises because the purchasing power of the people is so low, that they cannot

afford to have the more costly food grains. When we see that large quantities of rice and wheat are exported from India, we have to realise the fact that the export is not due to a real surplus, in the sense of an excess above the required quantity for consumption in the country, but that it is an exportable surplus in the sense of that quantity which does not fetch the required price in the country, or for which an effective demand from the people themselves does not exist. In view of this the problem of restriction or prohibition of exports of food grains raises delicate issues.

INFLUENCE OF EXPORTS ON PRODUCTION

It must be remembered that the exports of wheat and rice constitute on an average not more than ten per cent. of the total production. When ninety per cent. of the production is consumed in the country, we cannot say that the level of production is determined by external factors. It is chiefly the home requirements modified by effective demand that determines the production, and seasonal variations, which are so frequent in this country, have also considerable influence.

Though this is generally true, it must be pointed out that the high price which the producer gets is due in a great measure to the foreign demand. The home consumer has to offer a price which must be as near the export price as possible, because if this were not done, there would be a strong impetus to export more. This is borne out by the fact that the index number of prices[1] of food

[1] Cf. "Currency and Prices", Vakil and Muranjan, pp. 308-309. Also cf. the following figures taken from "Index Numbers of Indian Prices":—

	Index number of prices with 1875 as the base.	
	1926	1927
All articles	216	202
Export Articles	225	209
Import articles	195	185
Food grains	303	299
Rice	359	368
Wheat	281	267

grains is generally on a much higher level than that of the general index number. If the stimulus of high prices thus brought about were removed it is possible that the production may fall.

EXPORTS AND HOME SUPPLY

The production of food grains has not kept pace with the growth of internal requirements, and external demand; and in consequence the food-supply for the country has fallen. If we take the increase in population, as an indication of the growth of internal requirements, we find that the population rose from 28.73 crores in 1891 to 31.89 crores in 1921, thus showing an increase of 11 per cent. If we take the area under food-crops as indicating the supply, we find that it increases in the same proportion, rising from 18.7 crores to about 20.8 crores of acres during the same period. But the whole of this supply was not available to the people, because the exports of food grains rose from 20.56 crores of rupees to 50.87 crores of rupees, showing an increase of 147 per cent. during the same period. In other words, the rising exports have resulted in a fall in the available supply of food grains for the consumption of the people themselves.

This unfortunate tendency is also borne out if we take the more important articles of food, and estimate the available supply per head of population at different periods. [1] A calculation made on these lines with reference to rice shows the following results :—

PER CAPITA CONSUMPTION OF RICE IN INDIA, 1891 TO 1920.

Years	Per capita consumption of rice in maunds. Annual average	Percentage decrease over preceding decade
1891-1900	3·44	
1901-1910	3·31	3·7
1911-1920	3·04	8·1

[1] See "Currency and Prices in India" in this series, p. 150.

PROHIBITION OR RESTRICTION OF FOOD GRAIN EXPORTS AS A MEANS TO INCREASE THE FOOD SUPPLY

Prohibition or restriction of exports of food grains will probably result in lower production, and will not serve the purpose of increasing the food supply within the country. Because with reference to any scheme advocating prohibition or restriction of food grains, like rice and wheat, we have to bear in mind the consequent economic forces which will be brought into existence. With the removal of the foreign demand, the one important factor which has kept the price of food grains at a high level, will disappear. With the disappearance of this stimulus, the production of food grains will inevitably fall. The assumption in any such scheme is, that what is now exported[1] will be available for consumption at home. But the fall in production may be so great that the total supply may be less than what is left under present conditions, because the high price due to the foreign demand applies not only to the quantity exported, but also to the quantity consumed locally.

This danger will be realised when we remember another tendency which will be definitely stimulated by a scheme of restricted or prohibited exports of food grains. In spite of the stimulus of high prices, we find that the area under non-food crop is increasing, whereas that under food crops shows a fall in recent years. This tendency was noted by Mr. Datta in his Enquiry into the rise of prices in India for the 15 years before the war ; if we take the figures for the years after the peace, we find that the same tendency is still in operation.[2]

[1] The exports of rice and wheat do not amount to more than ten per cent. of the total production, and in recent years, the percentage has been still less.

[2] Commercial crops have ousted food grains from the best lands. Decrease in the average yield is also due to the displacement of food grains from the best lands by commercial crops. Datta, pp. 65-66.

RELATIVE AREA UNDER FOOD AND NON-FOOD CROPS IN INDIA, 1906 TO 1926

	Area under food crops	Area under non-food crops
	(in lakhs of acres)	
1906	20,50	4,10
1911	20,50	4,30
1913	20,20	4,40
1920	19,70	4,20
1925	20,60	5,00
1926	20,70	4,70

This is due to the fact that profits from such commercial crops as cotton or jute are large, because of their great importance in the international market. We may be quite sure that this tendency to replace food crops by non-food crops will be stimulated as soon as the profits from food crops go down from a reduced price, which must come about under any scheme of restriction or prohibition of exports. We are thus faced with a dilemma ; on the one hand, the higher prices of food grains restricts consumption ; on the other, a lower level of price will tend to reduce production of food grains and stimulate that of non-food crops.

We therefore come to the conclusion that the restriction and even prohibition of exports of food grains must be resorted to only in times of emergency, like a famine ; but under normal conditions, the production and consumption of food grains should be encouraged by other means. It does not require any elaborate argument to prove that when there is a widespread famine or other adverse conditions in the country, it is not wise to allow a certain section of the people to export food grains and make profits, because at the time, large numbers of the people within the country are in distress due to want of food. Government should always be in a state of preparedness to take

adequate steps without delay by a policy of restriction or even prohibition of exports as circumstances may demand.

But in normal times, any such policy will lead to undesirable results. The Government can, however, encourage the production of food grains by a variety of means. The improvement of agricultural methods with a view to increase the yield or improve the quality of the food grains will go a long way, if the methods are simple and cheap and therefore, within the reach of the farmers. The internal distribution may be encouraged by improving the transport system and reducing the freight. Such a step would be more in the interests of the people than the former policy by which exports were stimulated. The introduction of the co-operative principle both in the marketing and the purchase of food grains will also be useful.

CHAPTER II

TEA AND COFFEE

SOME HISTORICAL ASPECTS OF THE INDIAN TEA INDUSTRY

The cultivation and export of tea in India are mainly due to the requirements of the British market, and the steps taken by the Government to meet them. England had become a tea-consuming country as early as the seventeenth century ; and fairly large quantities of Chinese tea were being imported into England by the East India Company, which had the monopoly of Chinese trade till 1833. The imports of Chinese tea into England were considerable by the end of the eighteenth century ; in 1787, the East India Company shipped 200 lakhs of lbs. of tea to England.[1] Difficulties having, however, arisen with China in the beginning of the nineteenth century, the British Government interested the East India Company in an effort to produce tea in India "so that in the event of trouble with the Chinese authorities an alternative source of supply might be available."[2] In the first place, the Company's Government sent missions to China to study the process of cultivation, and subsequently appointed the Indian Tea Commission to carry out the desired work in India. Experimental plantations were started by the Government at their own cost, and in due course when the industry was established, they were sold to private companies. British Companies with sterling capital were induced to take up the work. Special concessions were granted to the planters, particularly for the

[1] Cotton, Handbook of Commercial Information for India, p. 203.

[2] Cotton, *Ibid.*, and Watt, "Commercial Products of India", p. 215.

employment of labourers, which have to a great extent contributed to the success of the industry.

GOVERNMENT'S ATTITUDE TOWARDS THE TEA INDUSTRY

The policy of the Government towards the tea industry has been not that of laissez faire, but that of active support. We have seen the help rendered by the Government to the tea industry, so far as production is concerned. Similar help was also given in the matter of the sale of tea to foreign countries. At the same time the industry was exempted from taxation for a long time.

In 1879, a syndicate was formed for the purpose of pushing the Indian tea trade in Australia, which was given a grant of Rs. 10,000 by the Government. In 1903 a cess of $\frac{1}{4}$ pie per lb. of tea exported was levied at the request of the tea planters; the cess is collected by the Customs Department, and handed over to the Tea Cess Committee, which utilises the amount for furthering the sale of Indian tea in foreign markets.

The Indian tea industry was exempted from income-tax in 1886, when that tax was first imposed,[1] on the ground that it was an agricultural industry.[2] This exemption was enjoyed by the industry till recently. A reference was made to the Calcutta High Court on the subject in 1920, when it was decided that parts of the processes involved in the production of tea were agricultural, and parts non-agricultural. In view of this, the industry was required to pay income-tax on that part of its profits which was due to non-agricultural work. As it was impossible to ascertain this in practice, it was agreed that 25 per cent. of the profits should be assessed to income-tax.

On account of the necessities of war, taxation was

[1] The modern income-tax system in India dates from 1886, though there were some experiments in earlier years.

[2] Income-tax in India is levied on non-agricultural income only.

increased in various ways. One of them was the imposition of an export duty of Rs. 1-8-0 per 100 lbs. of tea. This was strenuously opposed by the tea-planters from the very beginning, as it made Indian tea dear in foreign markets, in which India did not have a monopoly.[1] With the imposition of the income-tax in the above manner, this grievance became louder, particularly because the exports fell in 1925-26. Government were, however, not in a position to give up the revenue, and they were aware that the industry was treated leniently in the assessment to income-tax. In 1927, the export duty was abolished, but at the same time, the profits to be assessed to income-tax were raised to 40 per cent.[2] It was believed that the loss in revenue due to the former would be made good by the gain due to the latter.

GROWTH IN INDIAN TEA PRODUCTION AND EXPORT

The production and export of tea from India show a steady increase as can be seen from the following figures :—

[1] "Our attitude in regard to the export duty on tea has been defined on numerous occasions.....We have repeatedly protested against the payment of an export duty, which we consider an unjust imposition as tea is not a monopoly of India, and an export tax places us at a disadvantage in certain markets with some producing countries". Report of the Indian Tea Association, 1925.

[2] See, Report, Indian Tea Association, 1927.

VOLUME OF PRODUCTION AND EXPORTS OF INDIAN TEA, 1885 TO 1928

Year	Production (in lakhs of lbs.)	Export (in lakhs of lbs.)
Average 1885-89	910	870
,, 1890-94	1250	1190
,, 1895-99	1580	1540
,, 1900-04	2010	1940
1908	2470	2340
1914	3070	3010
1918	3800	3240
1925	3690	3260
1926	3930	3500
1927	3910	3620
1928	4040	3600
1929	4326	3761

It may be noted that most of this tea is produced in Assam and Bengal, as shown by the following figures relating to 1925.

PROVINCIAL DISTRIBUTION OF ACREAGE AND VOLUME OF PRODUCTION OF INDIAN TEA

	Acreage under tea in thousands	Production in lakhs of lbs.
Assam	416·6	22,53
Bengal	187·7	8,47
Madras	50·4	2,12
Total India	727·7	36,35

FOREIGN COMPETITION WITH INDIAN TEA: PRE-WAR HISTORY

The exports of tea have shown a steady progress ever since the first consignment of tea was sent from India to England in 1841. In 1860, the exports were valued at more than 15 lakhs of Rs., but by the end of the last cen-

tury they had risen to more than 9 crores, and in 1915, they stood at 20 crores. This progress in the export trade of Indian tea has meant the gradual exclusion of Chinese tea from the British market. As we have already seen, China was the sole supplier of tea to the United Kingdom at one time. In addition to the special measures to develop the Indian tea industry mentioned above, there were other advantages in its favour. The virgin soil of the Assam hills yielded larger crops than in China; at the same time the quality of Indian tea was superior. The industry in India was organised on a large scale basis, with all the advantages of modern machinery, European capital and management; while in China tea was cultivated on small pieces of land by primitive methods. Besides, so far as the British market was concerned, the British producers in India had a natural advantage.

The competition between Indian and Chinese tea in the British market resulted in a gradual decline in the price of tea. This was disastrous to the Chinese trade, because the cost of production in India was lower, and India could export tea at the reduced price, whereas China could not do so. The following figures will show the results of this competition :

EXPORTS OF TEA INTO THE U. K. IN LAKHS OF LBS.

	From China	From India
1861-62	9,21	19
1871-72	15,05	1,51
1878-79	16,56	3,34
1886-87	11,88	9,77
1889-90	8,55	9,53
1893-94	5,62	11,50
1895-97	3,33	12,77

Thus the imports of Chinese tea into U. K. declined substantially. In spite of such exclusion of Chinese tea

from U. K., India was not destined to have a monopoly, because other countries began to produce tea about the same time, the most important being Ceylon and Java. The coffee plantations of Ceylon suffered from a severe pestilence during the eighties of the last century, and the planters therefore tried to replace coffee by tea. It was soon discovered that the soil and climatic conditions of Ceylon were quite favourable to the production of tea. The consequence was that the industry progressed most rapidly, followed by an equally growing export trade. The export rose from 23 lakhs of lbs. in 1884-85, to 1296 lakhs of lbs. in 1899-1900. Thus, beginning her exports at a much later date than India, Ceylon showed quicker progress than India in the expansion of her tea industry. But the fear of Ceylon taking a predominant place at the cost of India was removed as soon as it was known that the production of tea in Ceylon was limited by the available area. It must be admitted, however, that the rise of Ceylon has greatly restricted the progress of the Indian tea industry.

The fall in the price of tea to which we have already referred was partly due to the competition of Ceylon tea. By the end of the last century, the price had gone down so low that a further reduction was not possible, but by this time the world consumption of tea had increased considerably, and the demand was growing. The industries of India and Ceylon which had shown rapid developments in the nineteenth century could not show an equal progress now. The industries had reached a fair limit of growth, after which further progress was bound to be both slow and more expensive. The better soils had been taken up, and further supplies could be had only at an additional cost of production. The price of tea, therefore, takes an upward turn from the beginning of this century.

One of the consequences of the rise of the price was the advent of Java as a tea-producing country. The soil and

climate of Java are not very favourable to the cultivation of the tea plant. But the enhanced price made it profitable to grow tea in that island, and the industry has shown rapid developments since then. Java exported 250 lakhs of lbs. of tea in 1905 ; in 1919, the figure rose to about 1110 lakhs of lbs.

In spite of the great progress of Ceylon and Java, the Indian tea industry did not suffer. In the first place there are natural limits to the growth of the industry in these two islands because of their small size ; besides, Java can produce tea only so long as the price is favourable. The other important factor is that the world demand has increased considerably. We have seen that most of our tea used to go to the United Kingdom. With the competition of these other countries, the Indian tea industry began to develop other markets. It was, therefore, that the Indian Tea Cess Committee was formed and the Tea Cess levied in 1903.

INDIAN TEA EXPORTS DURING AND AFTER THE WAR

We have noted that the production and export of tea from India shows a steady growth, but the first interruption in this growth worth mentioning took place in 1916-17. Our chief customer being England, exports of tea to that country continued, in spite of the obstacles created by the War. Russia was the second best customer for Indian tea ; the revolution in that country, however, led to a complete stoppage of trade relations. At the same time, the customs duty on tea was raised to 1 sh. per lb. in September 1915 in England on the one hand, and an export duty of Rs. 1-8-0 per 100 lbs. was levied in India on the other in March 1916. These causes resulted in a restriction of trade ; the exports of 1916-17 fell to 2910 lakhs of lbs. from 3380 lakhs of the preceding year. With the accumu-

lation of stocks in India, the price declined, which in its turn had a stimulating effect on the trade. The exports of 1917-18 rose to 3590 lakhs of lbs., chiefly because Canada and the U. S. A. took advantage of the reduced price and imported record quantities ; each of them having taken 210 lakhs of lbs.

The close of the war removed the disturbing causes, and the trade began to recover itself. Indian tea got a special stimulus in the British market in the form of the preferential duty on Empire tea introduced in the United Kingdom in July 1919, giving a rebate of 2 d. per lb. The exports rose to 3790 lakhs of lbs. in 1919-20. It may be added that the preference is also enjoyed by Ceylon, though not by Java. Currency fluctuations seriously came in the way of the trade in the following year, but the exports are now on a normal level ; and they amounted in 1928-29 to 3600 lakhs of lbs. valued at 27 crores of rupees. The exports rose to 3766 lakhs of lbs. in 1929-30, but amounted to 26 crores in value, because of a fall in prices.

SOME FUTURE PROSPECTS IN THE EXPORT MARKETS

The tea industry is likely to prosper in the future because tea has become an article of daily consumption to large classes of people in many parts of the world, and the tendency is on the increase. In spite of the competition of Ceylon and Java, India has been able to retain her hold on certain markets, and will continue to find adequate markets for her product, as there are natural limits to the growth of the industry in the other two countries. A brief survey of the nature of the export markets for Indian tea will show the truth of this remark.

As we have seen, the principal market for Indian tea is the U. K. where about 90 per cent. of our exports of tea

are sent.[1] With the advent of Ceylon and Java, the percentage share of India in the British market has fallen, but it is still a little over 56 per cent.[2] The preference granted to the Empire goods until very lately was a favourable factor, and though the preference to Empire tea has since been removed, the position of the Indian tea exports to U. K. has not been materially affected.[3] Java shows a slight progress in the U. K. market of late but this has not been at the expense of the Indian product, and therefore we may conclude that Indian tea is sure to retain her due share of the British market in the future.

Among the other parts of the Empire which can take Indian tea in larger quantities may be mentioned, Australia and Canada. We find that the position of India is not satisfactory with reference to Australia, though it is quite strong with reference to Canada, as can be seen from the following figures :—

IMPORTS OF TEA INTO AUSTRALIA IN LAKHS OF LBS.

	Pre-war average	War average	1925	1929
From India	87	84	60	59
From Ceylon	200	234	151	252
From Java	37	77	243	193

IMPORTS OF TEA INTO CANADA IN LAKHS OF LBS.

	Pre-war average	War average	1925	1929
From India	13·8	13·0	21·8	23·8
From Ceylon	15·5	10·1	10·4	10·6
From Java	..	4·4	..	..

It may be observed that whereas the geographical position of Java and Ceylon give them an advantage over

[1] 85 per cent. in 1927-28 and 83 per cent. in 1928-29.

[2] 56.5 per cent. in 1927 and 56.6 per cent. in 1928.

[3] See Review of Trade of India, 1928-29, p. 262.

India in the Australian market, Canada seems to offer a good market for the future. In fact, Canada consumes more Indian tea than the above figures show, because part of her imports of tea are made through the U. K.

Among other old customers of importance are Russia and China. For several years before the War Russia was the second best customer for Indian tea; exports to that country amounted to 366 lakhs of lbs. in 1915-16. This market was completely lost after the Russian Revolution; the exports which have been resumed of late amounted to 21 lakhs of lbs. in 1925-26, 63 lakhs in 1927-28, and 53 lakhs in 1929-30.

The Russian market has some intimate connection with our exports to China, and that explains the seeming paradox, that China, the home of tea production, should import our tea. The fact is that China took such of our tea as was specially fitted to be turned into brick tea and this was then sent to Russia. With the collapse of the Russian market these exports to China ceased; though we sent 110 lakhs of lbs. to China in 1913-14, in 1927-28 and 1928-29 they amounted to 35 and 61 lakhs of lbs. respectively. There seems to be a slight recovery after a long period of slackness, but whether it is accidental or permanent, it is too early to judge, particularly as there was a sharp fall to 13 lakhs of lbs. in 1929-30.

One market of importance which may be further developed is the U. S. A. The exports to America have been on the whole small, and they amounted to about 50 lakhs of lbs. only in 1925-26, 88 lakhs in 1927-28, and 78 lakhs in 1928-29. Including the re-exports of Indian tea from the U. K. the figures are :—

	Lakhs of lbs.
1926	109
1927	135
1928	155
1929	147

The exports of 1928 represent a little more than 1/6 of the total imports of the U. S. A. which are 898 lakhs of lbs. and mostly come from Japan and Ceylon. There is no doubt that India's share can be substantially increased by suitable propaganda.

THE HOME MARKET

Some people in India are against the consumption of tea altogether on the ground that it has harmful effects on the human body. A hot drink may be good in a cold climate ; it may not serve the same purpose in a hot climate. Besides, the method of preparation and use has something to do with the prejudice. We know that in many parts of the country tea of low quality is decocted and used for drinking ; besides, the custom is to drink the beverage alone, unaccompanied by any food ; the drink has in consequence undesirable effects in some cases, particularly when it is taken in excess.

In spite of this, the consumption of tea in India is growing and is likely to grow further. The temperance movement will give an impetus to it by replacing the use of liquor by that of tea. At the same time, we find in recent years special efforts made by the tea industry to appeal to the Indian consumer by propaganda.

It is interesting to note that this consideration for the home market has come rather late, only after the tea industry began to feel the competition of other countries in foreign markets. In fact, it may be surprising to find that we are still importing some tea from China and Ceylon. It must be remembered that the early exports of tea from China to the United Kingdom were made through India, and since then the use of tea became common in this country. The Chinese word "Tcha" seems to be the origin of the Indian word "cha" for tea. The tea plant was indigenous to India but its use in the modern form was

due to the above-mentioned fact. The import of tea into India from China which had begun in this way continued even after the Indian tea industry came into existence. Part of it was due to the demand from Burma, where there is a special preference for Chinese tea. Some imports also come from Ceylon because of the proximity of that island to the south of India, and they amounted to 80 lakhs of lbs. in 1927-28 and 95 lakhs in 1928-29.

It is but appropriate that the tea industry should become alive to the importance of the home market as it has of late, because the home market is likely to grow and prove very useful to the industry in future.

INTERNAL ECONOMICS OF INDIAN TEA INDUSTRY

The Law of Diminishing Returns is in operation in the cultivation of tea, and the price of tea in future may therefore increase. An agricultural industry is peculiarly subject to the law of diminishing returns. In the case of a commodity the production of which is limited to certain regions only, the operation of the law would be noticeable. We have seen that almost all good lands capable of tea cultivation have been already taken up, and an increased output will be possible only by bringing inferior lands under the plough. Indications of this character are already visible ; for, while in former years, the output of tea showed proportionately greater rise than the area under cultivation, in recent years the output is falling behind the acreage in its relative growth. The following figures will illustrate the point :—

INDEX NUMBERS SHOWING VARIATIONS IN AREA AND PRODUCTION OF TEA; AVERAGE OF 1901-1910 BEING THE BASE[1]

	Area	Production
1910	105	115
1915	118	163
1917	124	163
1920	131	151
1922	132	136
1923	133	164
1924	134	164
1925	136	159
1926	138	172
1927	141	171
1928	144	174
1929	146	186

From the above figures it is apparent that since 1923 the index of production is stationary compared to the steady increase in the area. During the quinquennium 1923-1927, the index number of area increased by 8 while that of production only by 7. The tendency is shown more clearly by the following table :—

AREA UNDER TEA IN THOUSANDS OF ACRES AND ESTIMATED YIELD IN LAKHS OF LBS.

	Area Thousands of acres	Yield lakhs of lbs.
1918-19	688	38,05
1919-20	701	37,71
1923-24	713	37,54
1924-25	716	37,53
1925-26	728	36,35
1926-27	739	39,89
1927-28	754	39,09
1928-29	771	40,36
1929-30	788	43,25

[1] Report, Indian Tea Association, 1928, p. 376.

From the above table it is seen that in the decade 1918 to 1928 the percentage increase in area was 12, whereas the increase in the yield was only 6. This clearly proves that the output is falling behind the acreage when their relative growth is compared. There is no doubt this tendency has some effect on exports, too, as can be seen from the following table :—

INDIAN TEA EXPORTS

	Lakhs of lbs.
Post-war average	32,10
1924-25	34,00
1925-26	32,60
1926-27	34,90
1927-28	36,20
1928-29	35,90
1929-30	37,60

Instead of a progressive rise there is a fluctuating tendency in the figures of exports, and this is quite unlike the latest export figures of Ceylon and Java given below :—

EXPORTS OF TEA IN LAKHS OF LBS.

	India	Ceylon	Java
1919-20	38,20	20,86	11,08
1922-23	29,47	17,18	8,09
1924-25	34,00	20,49	10,51
1926-27	34,90	21,70	11,90
1927-28	36,20	22,70	12,70
1928-29	35,90	23,70	13,40
1929-30	37,60	Not available	

An analysis of the above table conclusively points to the fact that whereas exports from Ceylon and Java have been progressively growing, those of India have only a

fluctuating trend. This may be due either to external competition or to the fact that the maximum point of expansion has perhaps been reached in the case of India. If it is the latter, then we may conclude that there will not be a great increase in exports in the future, but at present there are not sufficient grounds for any definite conclusion. It may be that the prevailing depression in the price level of this commodity[1] or the increased internal consumption, or both, are responsible for the fluctuations in the export figures. In view of this uncertainty, it behoves the industry to do its best to improve the internal organisation as well as external agencies for propaganda in world markets, so that economies both internal as well as external may be secured to the best possible advantage.

THE INDIAN COFFEE INDUSTRY

The coffee industry in its modern form was started by European planters in India about 1830. Part of the production has been in Indian hands; this is carried on by crude methods and therefore the yield is small. The centres of production are the Madras Presidency, Mysore, Cochin, Travancore and Coorg. Mysore produces more than half of the total Indian output. Most of the coffee is exported to European countries like France and Norway. It may be added that whereas tea is consumed mostly in the U. K. and her Dominions, coffee is consumed mostly in European countries other than the U. K. and in America.

The exports of coffee from India were earlier in origin than those of tea, and had greater importance for some time, but with the growth of the tea industry, coffee got a lower position. The pestilence which affected the coffee plantations in Ceylon after 1879, also overtook the industry in India. But whereas tea took the place

[1] The average price of Indian tea per lb. was 15.11 annas in 1924-25, but declined to 14 annas 10 pies in 1927-28, and 11 as. 4 ps. in 1928-29.

of coffee in Ceylon, the Indian industry revived. By this time, however, Brazil entered the field ; her competition was too powerful for the Indian industry, whose progress was checked in consequence. It may be added that Brazil now produces about 80 per cent. of the world output of coffee.

The following table shows the exports of coffee from India, its importance in the last century, and its relative decline in recent years :—

INDIAN COFFEE EXPORTS

Year	Cwts. in thousands	Value in lakhs of Rs.
1860-61	...	33·7
1862-63	188	51·3
1870-71	302	80·9
1880-81	371	160·0
1890-91	235	146·0
1900-01	246	123·0
1910-11	272	133·0
1920-21	233	143·0
1926-27	150	132·0
1927-28	277	232·0
1928-29	198	169·0
1929-30	184	145·0

In view of the fact that Brazil has almost a monopoly of the production of coffee, there is little scope for the development of the industry in India. We may, however, be able to continue the present level of production and trade which is valued at more than a crore of rupees.

CHAPTER III

SUGAR

INDIAN SUGAR PRODUCTION

India produced about half the world supply of sugar-cane not many years ago, but she does not produce more than 20 per cent. now, though the acreage under cane in India is about half the world-acreage. The following figures will bear out the truth of this remark :—

WORLD'S OUTPUT OF SUGAR-CANE IN LAKHS OF TONS.[1]

Years (average)	India	Cuba	Java	U.S.A.[2]	Mauritius	TOTAL[3]
1895-1899	28	3	6	5	1·5	57
1900-1904	26	9	8	8	1·7	68
1905-1909	24	14	11	10	2·0	78
1913-1914	20	26	14	11	2·4	99
1914-1915	23	30	13	11	2·1	105
1917-1918	30	34	18	11	2·2	122
1919-1920	26	37	13	10	2·3	116

The figures of India by themselves do not reveal the true nature of the industry. We have to compare the position of India in the rapidly growing output of sugarcane in the world as a whole. We find that whereas during the period 1895-99, the output of Indian sugarcane amounted to about 50 per cent. of the world production, in 1919-20, it bore the small proportion of 20 per cent. The contrast is all the greater when we remember the fact that the area under cane sugar in India,

[1] This table has been compiled from the Report of the Indian Sugar Committee.

[2] U. S. A. includes Hawaii, Louisiana, Porto Rico and Texas.

[3] Total includes other countries.

which was 30 lakhs of acres in 1926-27, is about half the world-acreage.[1]

This means that the yield in India is very low and consequently the cost of production must necessarily be very high. It has been estimated that "in actual sugar India's production per acre is less than one-third that of Cuba, one-sixth that of Java, and one-seventh that of Hawaii".[2] This clearly shows that there is considerable room for an all-round improvement, and by a better system of cultivation we should be in a position to get a larger average yield.[3] Again, according to the calculations of the Sugar Committee, the deficient method of manufacture means a loss of about 11 lakhs of sucrose.[4] In other words, "the modern method of attacking the sugar problem would in India, without the addition of a single acre of cane lands and without any improvements in the methods of cultivation, continue to give the present supply of gur, and add 7,00,000 tons of white sugar to the production of the country".[5]

[1] The following figures show the fluctuations in the acreage under sugarcane in India:—

Year.	Acres (in lakhs).
1913-14	27
1914-15	24
1915-16	26
1916-17	26
1917-18	30
1918-19	30
1919-20	28
1920-21	27
1921-22	25
1922-23	29
1923-24	30
1924-25	26
1925-26	28
1926-27	30
1927-28	29
1928-29	25 (provisional).

[2] Report of the Indian Sugar Committee, p. 6.

[3] Note on Sugar Industry by G. N. Sahasrabudhe.

[4] Report of the Sugar Committee, p. 212.

[5] Supplementary Note by Mr. B. J. Padshah to the Report of the Indian Sugar Committee, p. 322.

PRE-WAR EXPORTS AND IMPORTS OF SUGAR FROM AND TO INDIA

This miserable condition of the Indian sugar industry is mainly due to the competition of other countries, which are sending large quantities of sugar to India. Among these have been Mauritius, Austria and Germany in the past, and Java at present. Indeed the history of the sugar trade has one similarity to that of cotton goods. India happened to be an exporter at one time of large quantities of both these articles, but they now form the principal articles of import.[1] The early imports came chiefly from Mauritius, where the cane sugar industry was developed by British planters with the help of Indian labour. The imports of sugar into India amounted to 23 lakhs of rupees in 1860-61 ; the exports were still larger, and were valued at 103 lakhs of rupees in this year. In 1863-64, the imports exceeded exports for the first time, and gradually increased to 115 lakhs in 1883-84. By this time, the beet-root industry was developed in Central Europe by state assistance in the form of bounties. The supply of sugar grew so large in consequence that the price of sugar fell considerably. Cane sugar from India and Mauritius ceased to have a market in Europe, and India was found to be a convenient dumping ground by the Mauritius industry. Imports of sugar rose in consequence, exports falling at the same time, as shown below :—

QUANTITY IN THOUSANDS OF CWTS.

Years (average)	Imports	Exports
1874-79	550	577
1880-84	998	1,106
1886-90	1,840	1,058

[1] Cf. Watt, The Commercial Products of India, p. 959, and also G. N. Sahasrabudhe, "Note on Indian Sugar Industry".

Imports, however, suddenly rose to 46 lakhs of cwts. valued at 4.76 crores of rupees in 1897-98. This was due to the very large import of Austrian and German sugar, which was sent to India under a system of bounty on exports. In 1899, an additional duty of 5 per cent. was levied on beet sugar. This restricted the imports for a year, but they increased again and rose to 60 lakhs of cwts. in 1901. There was a great hue and cry in the country at the disastrous effects on the home industry of this unfair competition. In 1902, the Government of India imposed special countervailing duties on sugar produced in Germany and Austria ; the duty was to be equal to the bounty which the sugar in question received ; the imports of beet sugar fell heavily in consequence.

The sugar question had assumed international importance in view of the above-mentioned facts, and was discussed at the Brussels Conference of 1901-02. As a result of this, the continental countries gave up the bounties on production or export, and the Government of India abolished the countervailing import duties in 1904. It must be pointed out, however, that the Indian Industry was suffering from the competition of beet-root sugar on the one hand, and of cane sugar from Mauritius on the other. The competition from the latter was not great during the years when the beet-root sugar of Europe could dump the Indian market even against Mauritius. The removal of the duty in India, therefore, put the beet-root sugar from Europe, and the cane sugar from Mauritius on a footing of equality. This was advantageous to Mauritius, as the beet-root sugar from Europe lost its export bounty by the same arrangement. This meant that the Indian market was once again open to the imports from Mauritius, because of its proximity to India. The point of importance is that in these arrangements, the interests of the Indian Sugar Industry were not considered ; India figured as a good market in these discussions

and the determining factor was whether this market should be reserved for the British planters of Mauritius or allowed to go into the hands of Germany and Austria.[1]

By this time, however, Java entered the field of sugar production with success. The Dutch planters in this island had already taken to this industry, but they had hitherto concentrated their attention on Japan and the U. S. A. to sell their product. The American market was, however, closed to Java by this time, because of the preference granted to Cuban sugar by that country under the Reciprocity Convention of February 1904. At the same time sugar from the Philippines was allowed free entry into the U. S. A. The Japanese developed the sugar industry in Formosa, and this resulted in the loss of the Japanese market to Java. From this time, therefore, Java began to send increasing supplies of sugar to India, which was found to be in every way a convenient market. Not only was India nearer to Java than any other market, or any other source of supply, but there was also no restriction to the import of sugar in India except a small revenue duty. We find in consequence that in spite of the measures of 1902-1904 against the beet-root sugar of Europe, the imports of sugar into India went on increasing. In 1903-04, they rose to 63 lakhs of cwts. valued at 5.93 crores of rupees ; the nature of the progress in the subsequent years will be realised when we note that in 1913-14, the imports were 180 lakhs of cwts. valued at 14.95 crores of rupees, of which 10.6 crores came from Java.

HISTORY OF SUGAR TRADE AND INDUSTRY IN INDIA SINCE THE WAR

The history of the trade and industry of sugar since the war is characterised by fluctuations in world production and consequent changes in price. The output of

[1] N. J. Shah—"History of Indian Tariffs", p. 312.

beet sugar in Europe was very much affected by the War, and the world's total production of sugar fell much short of the demand. The supply of sugar was rationed in many belligerent countries. Prices rose tremendously, for example, in 1917-18, when imports of sugar into India went down to 100 lakhs of cwts., in value they rose to 15.32 crores. The imports reached the lowest point in 1920-21 when they were only about 69 lakhs of cwts. This was partly due to the failure of the sugarcane crop in Java. The rise in price was, however, so great that the low imports of 1920-21 were valued at 18.5 crores. In the following year the imports rose to 157 lakhs of cwts. valued at 27.5 crores but there was again a fall in the next two years.

Of late, the world production of cane and beet sugar has been growing progressively, with the result that the effective consumption demand cannot take up the available supply. This is clearly shown in the following table :—

WORLD PRODUCTION AND CONSUMPTION OF SUGAR[1]

(In thousands of tons)

	Production	Consumption
1920-21	1,42,92	1,33,30
1921-22	1,49,62	1,60,59
1922-23	1,49,44	1,53,19
1923-24	1,61,96	1,60,65
1924-25	2,12,83	1,93,40
1925-26	2,15,01	2,05,72
1926-27	2,07,43	2,11,80
1927-28	2,25,54	2,20,84
1928-29	2,40,00	2,30,00

[1] These figures were submitted by Dr. Geerligs to the League of Nations (Economic Section) and printed in Review of Trade of India, 1928-29, p. 42.

This excess of world supply over the demand has led to a substantial fall in the price of sugar since 1924[1] and the decline is so marked that "the problem before the sugar industry in recent times has been the finding of a market for the increasing output at rates remunerative to the producer". Naturally, therefore, we find that these attempts have meant increasing imports of sugar into India during recent years as is borne out by the following figures :—

IMPORTS OF SUGAR INTO INDIA[2]

	Tons ('000)	Value (Rs. Lakhs)
1923-24	4,11	14,78
1924-25	6,71	20,37
1925-26	7,33	15,20
1926-27	8,27	18,37
1927-28	7,26	14,50
1928-29	8,69	15,86
1929-30	9,40	15,50

The fall in prices can be very well appreciated from the fact that though between 1923-24 and 1928-29 the quantity imported more than doubled itself, the value shows a rise of 14 per cent. only.

The fluctuations in imports mentioned above were also due partly to the changes in import duty which came about during the War period and after. Along with the general tariff, sugar was subjected to a 5 per cent. duty since 1894. The imposition of countervailing duties on beet sugar, to which we have already referred, was a tempo-

[1] The index numbers, taking 1914 : 100 are :
1920 407 ; 1924 239 ; 1926 178 ; 1928 165
1921 270 ; 1925 179 ; 1927 171 ; 1929 163

[2] Figures taken from the Official Review of the Sugar Trade in India during the year 1928-29 (Supplement to Indian Trade Journal of April 3, 1930)

rary affair. In 1916, when war taxation was imposed for the first time, the duty on sugar was raised to 10 per cent. The general tariff was increased to $7\frac{1}{2}$ per cent. in this year, and sugar was thus treated separately for the first time. The duty was further raised to 15 per cent. in 1921, and to 25 per cent. in 1922. In 1925, a specific duty of Rs. 4-8-0 per cwt. was levied on sugar of superior quality ; this was supposed to be equal to 30 per cent. *ad valorem ;* the duty on sugar of inferior quality was retained at 25 per cent.[1] It may be of interest to compare the effects of the changing duty on the imports as shown below :—

IMPORTS OF SUGAR INTO INDIA[2]

	Quantity tons ('000)	Value (crores of Rs.)	Import duty
1913-14	8,96	14·95	5 p. c.
1917-18	5,10	15·32	10 p. c.
1919-20	4,82	22·99	,,
1920-21	3,44	18·50	,,
1921-22	7,83	27·50	15 p. c.
1922-23	5,04	15·49	25 p. c.
1923-24	4,76	15·45	,,
1924-25	7,28	20·67	,,
1925-26	8,03	15·58	Rs. 4/8 per cwt.
1926-27	9,23	18·89	and 25%
1927-28	8,23	14·91	,,
1928-29[3]	8,69	15·86	,,
1929-30	9,40	15·50	,,

This shows that for a few years from 1916 to 1920, the imports were restricted ; we have seen, however, that

[1] The increase in the duty in 1930 will be referred to later.

[2] Taken from the Annual Statements of the Sea-borne Trade of British India of respective years.

[3] Review of the Sugar Trade in India, 1928-29.

the most important cause of this was the shortage in world production. The import duty of 10 per cent. during this period does not seem to have contributed much to this result. In spite of the increased duty in 1921, and also again in 1922, we find that the imports are rising, and they have exceeded the pre-war level in quantity. The restrictive effect of the import duty seems to have been nullified by the great reduction in the world price of sugar, which is reflected in the value of imports. This means that the Indian industry did get a stimulus during 1916-20, when the imports were so low that local demand must have required increased local supply ; but that since 1921, in spite of the high duties, the competition of foreign sugar seems to be stronger than ever.

INTERNAL ECONOMICS OF INDIAN SUGAR INDUSTRY

The sugar industry in countries like Java has been developed on modern methods of large scale production. The sugarcane crop is grown on large plantations with the help of machinery ; the factories for turning the cane into sugar are near the plantations, and the processes of manufacturing sugar are so developed that there is no loss of sucrose ; attention is also paid to the production of bye-products, like rum and methylated spirit. It is obvious that the agricultural and manufacturing processes are under one control. Besides, marketing of Java sugar is controlled by an association of producers.

In this country, these two processes are carried out entirely independent of one another. Like most other crops, sugarcane is cultivated on small holdings and large plantations are an exception. The sugar factories have therefore to depend on such producers for their supply of the raw material, which must, therefore, prove costly to them.

The modern sugar factories in India are still in their infancy, and they consume about $2\frac{1}{2}$ per cent. of the Indian

crop. Sugar is also produced in India by refining gur, a form in which most of the sugarcane crop is locally manufactured in each producing centre, by crude methods. A large amount of sucrose is lost in this process, but this can be avoided by manufacturing direct from the cane. The following figures show the comparative position of these two processes of manufacture of sugar in India.

PRODUCTION OF SUGAR IN INDIA [1]

Year	Direct from Cane	Refined from Gur	Total
	in thousands of maunds		
1919-20	6,29	12,11	18,40
1920-21	6,69	13,24	19,94
1921-22	7,54	13,03	20,57
1922-23	6,51	13,68	20,19
1923-24	10,45	15,38	25,83
1924-25	9,22	9,16	18,38
1925-26	14,45	10,47	24,92
1926-27	17,16	15,92	33,08
1927-28	18,46	14,17	32,63
1928-29	18,52	8,45	26,97
1929-30	24,43	5,76	30,19

It will be seen that production direct from cane is increasing, while that refined from Gur shows, in recent years, a marked decrease. Again, when we remember that in recent years we have been importing very nearly 10 lakhs of tons of sugar, it will be obvious that the local production is barely one-ninth of the total imports. [2] This shows the wide scope for the expansion of the indigenous

[1] The table is taken from the Indian Trade Journal of May 15th, 1930, p. 368.

[2] The actual figures for 1928-29 are: Imports 8,69,000 tons; local Indian production 99,088 tons.

industry. Unfortunately, the competition of foreign sugar, particularly that of Java, is substantially telling in its effects despite the fact that the few sugar factories in India are located in North India, which area is difficult for Java to approach, due to its great distance from the ports.

The advantage that other countries—more especially, Java—have over us, due to their increasing use of modern methods, and the efficient organization of their industries, can be effectively realised when we take account of the prices at which these countries are able to put their product on the market. The following figures, taken from the Report of the Indian Sugar Committee, refer to the pre-war position, when the import duty was 5 per cent.

VALUE IN ANNAS OF A MAUND OF SUGAR

Country	Cost of cane	Cost of manufacture	Freight	Duty	Total
Porto Rico	85·5	24·9	8·8	..	119·2
Hawaii	77·4	14·0	19·4	..	110·8
Cuba	42·4	18·5	11·4	41·4	113·7
Java	34·5	34·5	6·0[1]	6·0	81·0
U. P.	93·1	48·0	..	..	141·1
Behar	58·8	48·0	..	..	160·8

From the above the advantageous position of Java[2] is obvious, and it is no wonder that the imports from Java showed extraordinary developments as proved by the following figures :—

[1] Duty in India which sugar from Java had to pay before the War.

[2] That the cost of production of Java sugar is the lowest in the world is proved in detail by Mr. J. W. F. Rowe in his memorandum on sugar, issued by the Royal Economic Society, October 1930.

SUGAR IMPORTS INTO INDIA FROM JAVA[1]

	Thouasnd Tons	Percentage of total Indian Sugar imports
1913-14	5,83	72
1923-24	3,68	89
1924-25	4,80	71
1925-26	6,57	90
1926-27[2]	6,12	74
1927-28	6,92	95
1928-29	8,51	98
1929-30	7,81	83

Java has almost a monopoly as a sugar supplier to India leaving quite a negligible amount in favour of other countries, and this rapid progress has been made in spite of progressively rising import duties. This indicates the great intrinsic strength of the Java industry and its advantageous position, because heavier import duties have absolutely failed to restrict the imports which have more than doubled themselves since 1923-24. The Indian sugar industry had an artificial stimulus during the War when foreign imports were checked and prices rose high, but this was only temporary and a comparison of foreign imports and home production, as we have seen, clearly reveals the weakness of the indigenous industry and the strength of the foreign competition.

While considering the question of the Indian sugar industry one cannot overlook the favourite commodity of the Indian market called Gur or Jaggery. For every ton of white sugar India requires three tons of gur,[3] and

[1] Figures taken from the Review of the Sugar Trade in India during 1928-29.

[2] The previous year was one of drought in Java.

[3] See Note on "Gur and Its Prices in India" by H. D. Naik, Secretary, Sugar Bureau, in-charge, issued as a supplement to the Indian Trade Journal of March 1, 1928 upon which this paragraph is based.

therefore the major portion of the sugarcane crop is used up in gur manufacture by crude methods. But an interesting observation suggested by statistics is that while the population of India has increased from 28.7 to 31.8 crores during the last 30 years, the area ministering to the gur requirements of the country shows a very negligible rise, as can be seen from the following figures :—

AREA UNDER SUGARCANE IN INDIA[1]

Average of	Acres (Thousand)
1890-91 to 1894-1895	28,63
1895-96 to 1899-1900	27,35
1900-01 to 1904-1905	23,76
1905-06 to 1909-1910	23,85
1910-11 to 1914-1915	25,11
1915-16 to 1919-1920	27,04
1920-21 to 1927-1928	29,50

In the last forty years, there has been only a small rise, and that too in recent years, thanks to the activities of the Agricultural Department. All throughout there was no increase in the yield per acre which can in any way compensate for the steadiness of these figures. On the other hand, imports of foreign sugar have during the same period increased six-fold from 1,37,000 tons in 1891 to 8,26,900 tons (through British Indian ports only) in 1926-27. This suggests, and there are other indications too, that the market for refined sugar is extending in India. Particularly in the cities and among the richer classes, the taste for white sugar is growing apace, and in their budgets, gur figures only as a minor item of expenditure. Undoubtedly, with the spread of modern influence, in course of time the consumption of white sugar is bound to

[1] *Ibid.*

increase, but at the same time it need not be forgotten that in villages and in the households of poor people gur will continue to occupy a substantially important place. Thus, it is obvious that there is urgent need of not only improving the indigenous industry of refined sugar but the production of gur as well.

FUTURE POSSIBILITIES OF THE INDIAN SUGAR INDUSTRY

The present weakness of the Indian sugar industry essentially lies in the high cost of production, and it is because of this that the protective effect of the increasingly heavier import duties (till recently purely revenue measures) is lost upon the industry. We have already seen the comparative costs of marketing sugar in India from various countries in which the Indian product is at a disadvantage. When prices are declining rapidly this is sure to affect the local industry adversely, and in practice it has already been so, as the increasing foreign imports clearly prove. Thus, in spite of such a substantial scope for expansion and the enjoyment of direct and indirect protective advantages in relation to her competitors, in the shape of ocean and railway freights as well as the heavy import duty, the Indian sugar industry is in a bad way.

The future aim of the industry must be to reach the standard of those in other sugar producing countries, notably Java, and for this purpose their excellent organization needs special study. The Indian industry must be rationalised and reorganised on an all-India basis so that an effective control and a common policy can be secured. An essential step towards this goal lies in efficient co-ordination of the agricultural and manufacturing sides of the production. Concentration of cultivation around a central factory is the order of the day in sugar producing countries like Java, Cuba and Japan, but in India the small and scattered nature of the agricultural holdings makes it very

difficult to organise such co-ordination, and establish large factories which can be fed by a large and regular supply of sugarcane. But if large-scale cultivation is difficult, it does not mean that the problem is insoluble. A good deal can be done to improve the very low average yield of sugar, which, as the Sugar Committee pointed out, was per acre "less than one-third that of Cuba, one-sixth that of Java and one-seventh that of Hawaii".[1] It is this very poor yield that goes to increase the cost of production because, as we have already seen, while the acreage under cane in India is about half the cane area of the world, her produce is barely 20 per cent. of the world's output of cane sugar. The underlying cause of this low yield lies in the wasteful methods of manufacture which involves a loss of about 11 lakhs of tons of sucrose.[2] Improvements are therefore required not only on the agricultural side but also on the mechanical, and an organization which, besides rendering all the general aid to the industry in the way of scientific and statistical help, co-ordinates the two aspects needs to be created.

The Sugar Committee made such a recommendation for better organization and proposed the enlargement of the existing Sugar Bureau at Pusa. They suggested the creation of an Indian Sugar Board, consisting partly of officials and non-officials to control an Imperial Sugar Research Institute to be located in the U. P. This institute was to work in three divisions—agricultural, chemical and engineering—in co-operation with the Provincial Departments of Agriculture and the Indian States, and attention was to be paid among other things to (1) the needs of the gur manufacture, (2) the possibilities of beet sugar and (3) palm sugar. The institute was to start a sugar school to train a staff of chemical, engineering and agricultural assistants for the industry. Practical field and factory

[1] Report of the Sugar Committee, p. 6.

[2] *Ibid.*, p. 212.

work was to be the principal feature of the School, which was to be gradually worked up to a collegiate standard, preparing for a University degree.

Though the recommendations were made in 1920, and though the industry is suffering from greater competition nothing has been done so far on these elaborate lines. There is a Sugarcane Breeding station at Coimbatore with a Government sugarcane expert as its head. More recently the question has been taken up by the Imperial Council of Agricultural Research, which has appointed a special committee on Sugar.

PROTECTION OF SUGAR INDUSTRY

The import duty on sugar was further raised by Re. 1/8 per cwt. in 1930. Though this was purely a financial measure, it gave protection of about 50 per cent. to the Industry. The effect was, however, nullified by the great fall in prices of sugar. The highest price of sugar was Rs. 40 per cwt. in 1921 ; it fell to Rs. 7/15 in 1930. This depression in the industry is common to sugar industries all over the world, and is partly due to an excess of production over consumption, and the consequent holding of stocks by manufacturers. Tariff restrictions have been imposed in various countries with the consequence that the market for sugar has become narrow. The sugar interests are trying to work out a scheme by which the price of sugar can be stabilised. The scheme will, however, be subject to the influence of Russia which is not likely to join the arrangement. The Industry in Russia is in the hands of the State, and the production in that country is estimated at about two million tons of sugar.

In India the area under sugarcane has remained steady for the last 20 years, the average being more than 28 lakhs of acres. The principal product is gur which is mainly consumed locally. We have 29 factories manufac-

turing white sugar from cane, and 14 refineries manufacturing white sugar from gur. The combined output is estimated at about one lakh of tons per year. The indigenous process known as the Bell method is responsible for an additional output of 2 lakhs of tons. As against this we notice that the imports of white sugar are about 10 lakhs of tons. Compared with the pre-war years, this shows an increase of 3.7 lakhs of tons. These figures indicate that the available market at home for the Indian industry is large and that if other conditions are fulfilled, it is desirable that the industry should receive the necessary protection. The Tariff Board has found that whereas the prices of gur are not likely to be affected by an imposition of additional duty on sugar, the gur market and the agricultural classes interested in the production of cane and gur will be adversely affected if steps are not taken to develop the white sugar industry. Such a development will provide an outlet for cane and will enable the maintenance of the existing acreage under sugarcane.

Having established the proposition that the conditions laid down by the Fiscal Commission are fulfilled by this industry, the Tariff Board recommended a scheme of protection for the industry for a period of 15 years. The scheme involves levying of additional import duties as the grant of bounties has been found impracticable. The basis of the scheme is a fair selling price of Rs. 8-13-1 per maund for the local industry ; and an estimated normal price of Rs. 4 per maund on imported sugar at Calcutta without duty The Tariff Board has recommended that the existing duty of Rs. 6 per cwt. should be increased to Rs. 7/4 for the first seven years of the period of protection, and that it should be Rs. 6/4 for the remaining period. It has further recommended that in case the market price in Calcutta of imported sugar falls below Rs. 4 per maund the Government of India should have power to increase the duty by 8 annas per cwt., and legislative

sanction may be obtained for it in due course. The Tariff Board has recommended adequate grants for research in sugar to the Imperial Council of Agricultural Research. In order to safeguard the interest of the farmer, it has been suggested that the price of cane should be regulated with reference to the price of sugar manufactured from it. The price for the raw material should be half the price of sugar subject to a minimum of 6 as. per maund ; it may be increased by one anna in the early years of the protective period.

The Tariff Board does not favour the active participation of Government in the industry by taking shares in sugar companies ; it does not object, however, to the grant of loans by Government if this is considered desirable in any case. It has also emphasised the necessity of seeing that in case sugar industry is protected it should maintain its Indian character, as suggested by the Fiscal Commission. This would mean proper representation of Indian interests on the Board of Directors, opportunities for Indians to invest in the share capital, and so on.

In his budget proposals for 1931-32, the Finance Member increased the duty on sugar to Rs. 7/4, the figure suggested by the Tariff Board for purposes of protection. If the recommendations of the Tariff Board are accepted by the Legislature, the revenue duty will be transferred to the protective category, and the manufacturers will have the satisfaction that the duty will not be lowered but will be maintained at the level suggested by the Tariff Board for a period of 15 years.

CHAPTER IV

SALT

The production and trade in salt have not attracted public attention until recently, because these have been dominated by the requirements of Government revenue. The duty on salt has been found to be a powerful means of raising a large amount of revenue from all classes of people, and the arrangements to raise the revenue have determined production and trade. More recently salt has assumed importance in the public eye because of the fact that the breach of the salt laws was one of the items in the Civil Disobedience Movement. The production and trade in salt have also assumed some importance of late because of the series of Government inquiries into the problem of making India self-sufficient in the matter of her salt requirements.

EARLY HISTORY[1]

In Bengal, the Salt Revenue was derived mostly in the form of customs[2] on imported salt; but the importation of salt which began in 1818 was not considerable till 1835. Before 1818, the entire supply was obtained from local manufacture by boiling or by evaporation along the sea coast, from Chittagong to Puri in Orissa. Under Mahommedan rule, there were nominal duties on Salt. In 1766, after having acquired the grant of the Diwani, Clive established, for a time, a monopoly of salt through the

[1] In order to appreciate the growth of trade and industry in salt, the history of salt Revenue must be briefly considered in view of the dominance of revenue considerations over the trade and industry. The part relating to Salt Revenue is based on Chapter XV, "Financial Developments in Modern India," C. N. Vakil.

[2] The import duty on Salt is credited to "Salt" and not to "Customs."

agency of a company. He wanted to find a fresh source of income to pay adequate salaries to the Civil Service, but his scheme was not approved by the Court of Directors, and from 1772 farming leases were given. In 1780 Warren Hastings introduced a system of government monopoly. Manufacturers were given advances of money on the condition that all their produce should be delivered to the Government. The Salt was then sold by the State, the difference between the cost and the price realised being the Government duty which was Rs. $2\frac{1}{2}$ a maund (82 lbs.) in 1856. This system was abolished in 1862, leaving the supply of Salt, whether by importation or excise manufacture to private enterprise. Partly on account of local difficulties and partly on account of increasing competition of imported salt, the local industry in Bengal did not thrive, and gradually disappeared when the duty on Salt manufactured locally and on that imported by sea was equalised a few years after. Local manufacture was entirely prohibited in 1898.

To Madras and Bombay the source of supply is the sea. In Madras there was a monopoly system similar to that established in Bengal by Hastings. In Bombay the duty was chiefly levied as an excise. In the Punjab, which possesses inexhaustible supplies of rock-salt, the duty was included in the selling price of the article, which was dug and removed from the mines and sold by the Government. Since 1843, Salt coming from the Indian States in Rajputana paid an import duty while entering British territory. Similarly, Madras and Bombay salt entering the Central Provinces also paid a duty.

Among the measures which were adopted to increase the revenue after the Mutiny, was the enhancement of the salt duty in all the provinces. Considerable additions were made to the duty in 1859 and 1860, and also in 1861 in two of the provinces. In 1862 when these changes came into full operation the gross revenue was 5.2 crores

as against 2.6 crores in 1856, or exactly twice as much. The finances were not found in a position which could afford relief to the agriculturist from the payment of a duty of 666 to 1733 per cent.[1] on the cost of an article, which was necessary for the efficiency of both himself and his cattle. Instead of making a reduction in the duties, they were raised in those provinces where they were lower, on the ground of equalising the duties in different provinces, so that another crore was added to the revenue by 1874.

INLAND CUSTOMS LINE

The inconvenience of the different rates was not felt so long as the means of communication were imperfect. But to collect the duty on salt imported from the Indian states, and to stop the passing of salt from one province to another, there came into existence a sort of Inland Customs Line, described as "a monstrous system to which it would be almost impossible to find a parallel in any tolerably civilised country".[2] It stretched across the whole of India and in 1869 covered a distance 2,300 miles, guarded by nearly 12,000 men at an annual cost of £162,000. "The line", the commissioner of inland customs wrote in his report for 1869, "is divided into 110 beats, each presided over by a patrol, and watched from 1,727 guard-posts. A very perfect system of patrolling exists, and, except in some wild portions of the Central Provinces (where tigers bar the way alike to smuggler and customs officer after dark), goes on with unabated vigilance night and day".[3]

Sir John Strachey referring to the Customs Line when it was reduced gave the following description[4]:—

"If put down in Europe, it would have stretched from London to Constantinople. Along the greater part of its extent it con-

[1] In 1861 the duty varied from Re. 1-4, to Rs. 3-4 the cost being 3 as. per maund.

[2] Strachey, Finances and Public Works in India, p. 219.

[3] F. S. 1877.

[4] Strachey, *Ibid.* pp. 219-220.

sisted of a huge material barrier, which Mr. Grant Duff, speaking from personal observation, said could be compared to nothing else in the world except the great wall of China; it consisted principally of an immense impenetrable hedge of thorny trees and bushes, supplemented by stone walls and ditches, across which no human being or beast of burden or vehicle could pass without being subjected to detention and search."

It is easy to imagine the great obstruction to trade that resulted from this system. Instances of interference with and annoyance to individuals, of gross abuses and oppression, were not wanting. To put an end to this great evil, two things were necessary ; to equalise the duties in different provinces and to control the manufacture and taxation of salt produced in the Indian States. Nothing was done in this direction till 1869, when as a first step towards the equalisation of the duties, they were raised by 5 annas in Bombay and Madras. The desired end could also have been achieved by lowering the duties where they were higher, but this was not thought of because an increase in the revenue was also a motive that guided the action. In the same year, arrangements were made with the States of Jaipur and Jodhpur by which the British Government acquired the lease of the Sambhar Salt Lake, the chief source of salt in Rajputana. As a result, about 800 miles of the Customs Line were abolished in 1874.

It took some time before final arrangements could be made with the other Indian States by which the British Government were given the leases of all the important Salt sources in Central India. When this was accomplished in 1878, the chief sources of salt in that part of the country came under the control of the Government of India. Generally speaking, an excise duty of Rs. 2-8-0 was imposed on salt manufacture at these places. The manufacture of local salt throughout the Indian States, with whom agreements were made, came to an end, with some minor exceptions. The agreements provided either a certain free supply of salt to the Indian States or certain

annual payments.[1] The local manufacturers were given some compensation. Agreements for the supply and manufacture of salt were also made with the French and Portuguese Governments, regarding their possessions in India.

At the same time (1878), important changes were made in the salt duties with the ostensible reason of equalising them in the different provinces. The duties in Bombay and Madras had been raised to Rs. 1-13 in 1869; they were now further raised to Rs. 2-8. In Bengal the duty was reduced from Rs. 3-4 to Rs. 3, and afterwards to Rs. 2-14; and in Northern India from Rs. 3 to Rs. 2-12, and afterwards to Rs. 2-8. The duties were thus very nearly equalised all over India.

With the equalisation of the duties, and with the control of the sources of supply in the hands of the Government, it was possible to abolish the Customs Line, which came to an end in 1879.[2] A saving of about ten lakhs of rupees was caused by the abolition of the preventive establishments.

It was pointed out that the increase in salt duties in some provinces affected a smaller population, and that the decrease in others affected a larger population. But the increase in duty from Rs. 1-13 to Rs. 2-8, was greater than the decrease in duty from Rs. 3-4 to Rs. 2-14 and from Rs. 3 to Rs. 2-8; and the general result was that the net revenue from salt increased in 1873 and 1879 by more than half a crore.

[1] These payments were included in the item "Allowances and Assignments". Cf. F. S. 1880, p. 606.

[2] In the Trans-Indus Districts of the Punjab, Salt is consumed which is produced at the Kohat mines. On this a duty varying from 2½ annas to 4 annas was levied. When the General Customs Line was abolished, a small preventive line along the Indus had to be maintained. In 1883 the duty was raised to 8 annas per Lahori maund of 102 lbs. In 1896, it was increased to Rs. 2 and the preventive line was withdrawn. In British Burma Salt was taxed at a nominal rate of 3 annas a maund; no change could be made there at this time, because of certain treaty arrangements.

In 1882, the financial situation was prosperous, and it was found possible to abolish the General Customs Duties, and to reduce the Salt Duty to Rs. 2 per maund. In January 1888, however, the Government of India found that it was necessary to increase their resources by 1.4 crores. The weak financial position of the Government throughout the remaining portion of the last century accounts for the retention of the duty at this rate. In the early years of this century, one of the insistent demands of the public, led by Mr. Gokhale, was to reduce the salt duty. In view of the series of surpluses during these years, the duty was reduced to Rs. 2 in 1903, to Rs. 1-8 in 1905, and to Re. 1 in 1907. As we shall see later, these reductions stimulated the consumption of salt even during famine years.

RECENT EVENTS

From this time, the salt tax has been looked upon by the Government as a financial reserve, because without any material increase in the cost of collection, it is easy to raise a large revenue by raising the duty on salt. This is possible because it is a necessity of life, and therefore the object of the increased duty would not be defeated by any sudden effect on consumption.

It was in accordance with these ideas that in the War taxation of 1916, the salt duty was raised to Re. 1-4. The duty on salt locally produced in Burma, which was till then less than that prevailing in India, was also increased to Re. 1-4 in January 1917. Even this apparently small increase in the duty was considered objectionable, and resolutions were moved in the Imperial Council against the increase, which were however defeated by the official majority.

Since then, the revenue resources of the Government have been increased in various directions to meet the war expenditure, and the heavy deficits beginning from 1918.

In spite of these increased resources, the deficits went beyond control, and the Government of India proposed to the Reformed Legislature in March 1922, an increase in the salt duty from Re. 1-4 to 2-8. This was rejected by the Assembly. In spite of the reductions proposed by the Inchcape Committee, the existing sources of revenue were not sufficient for the year 1923-24, and the proposal to double the salt duty was again made. As was natural, the Assembly rejected the proposal a second time. The Government of India, who had to their credit a succession of deficits from 1918 amounting to more than a hundred crores in the aggregate, were neither willing to reduce expenditure to the necessary extent nor to budget for a deficit, as in their opinion a deficit budget would endanger the credit of India. The Council of State, however, came to the help of the Government, and accepted the proposal to double the salt duty. According to the new constitutional practice, the bill as passed by the Council of State was referred back to the Assembly to be rejected a third time. The Viceroy thereafter exercised his extraordinary power of certification under section 67 B of the Act of 1919. The duty was reduced to Re. 1-4 in 1924.

THE THEORY OF SALT DUTY

The principles on which Salt is regarded as a legitimate object of taxation were laid down by the Duke of Argyle (Secretary of State) in 1869 in the following terms[1]:—

"It is impossible, in any country, to reach the masses of the population by direct taxes. If they are to contribute at all to the expenditure of the state, it must be through taxes levied upon some articles of universal consumption. If such taxes are fairly adjusted, a large revenue can be thus raised, not only with less consciousness on the part of the people, but with less real hardship upon them than in any other way whatever. There is no other article in India answering this description upon which any tax is

[1] F. S. 1877, p. 158.

levied. It appears to be the only one which at present, in that country, can occupy the place which is held in our own financial system by the great articles of consumption from which a large part of the imperial revenue is derived. I am of opinion, therefore, that the Salt tax in India must continue to be regarded as a legitimate and important branch of the public revenue. It is the duty, however, of the Government to see that such taxes are not so heavy as to bear unjustly upon the poor, by amounting to a very large percentage upon their necessary expenditure. The best test whether an indirect tax is open to this objection is to be found in its effect upon consumption."

The assumption that the masses of the people contribute nothing to the State is due to the misguided belief that land revenue is not a tax. The capacity of the average Englishman to pay taxes on several articles of consumption has never been denied. Investigation into the capacity of the Indian farmer to pay a tax on such a necessity of life as salt has always been ignored. The wise caution laid down in the above extract that it is the duty of the Government to see that such taxes do not form a large percentage of the necessary expenditure of the poor remained only on paper. The income of the average Indian is too low for the barest necessities of life, and a tax of even a few annas per head on an article like salt could not but be a source of incalculable mischief to him. Certainly the Indian peasant was unconscious that he was paying a duty to the Government when he bought salt, but his hardship on that account was not less real; he felt it but was at a loss to explain it.

Of course, the only test whether the tax was open to this objection could be found in its effect upon consumption. Accurate figures about the consumption of salt for the early years are not available, but roughly speaking the figures show that consumption remained more or less stationary from 1861 to 1871. Evidence exists about the fact that the tax operated to check consumption of salt to some extent by human beings and to a very large extent

by cattle, so that a great deal of sickness among the population, the mortality caused by the epidemics, and the extension of the cattle plague, were all attributed to the insufficient amount of salt allowed to the people.[1]

Sir John Strachey in his Financial Statement for 1877 said :—

"I have a strong belief that more than a hundred millions of people fail now to obtain a full supply of salt; I do not for a moment assert, nor do I believe, that the actual supply is insufficient for the preservation of health; nor do I at all agree with those who maintain that the salt tax presses with extreme severity on the poorest classes; but, however this may be, it is a great evil that the supply of this necessary of life should be restricted; and the restriction is not only mischievous in respect of human consumption, but in this way also, that there is little salt for the cattle, and little for any of the manufacturing processes in which it would be useful."[2]

The policy of the equalisation of duties in the different provinces led to some increase in consumption, but it was not fully effective, because it was carried out partly by an increase in duty in some provinces.

In 1882, Major Baring, (afterwards Lord Cromer) showed that the annual average consumption of salt per head in the different provinces[3] in 1881 was as under :—

Madras	12 lbs.	Punjab	7·5 lbs.
Bombay	10 lbs.	U. P.	6 lbs.
Bengal	9·1 lbs.	Sind	5 lbs.

Though he assigned a few causes for this great difference from province to province, he came to the conclusion that "if the rate of duty were lowered, the consumption

[1] S. C. 1871, Q. 5413.

[2] In his book on the "Finances and Public Works of India", 1882, he points out the following:—"In Madras and Bombay Presidencies, where the duties were lowest, and salt was cheap and abundant, the average consumption of salt by the people per head was double that of the people in Northern India, where salt was dear, where the duty was high, and the supply limited; and financially, the results in the former were more satisfactory than in the latter."

[3] Figures for C. P. are not available.

of salt in Northern India might be considerably increased".[1]

That the reduction of duty in 1882 did lead to some increase in consumption is evident from the figures of salt consumption. With the increase in the duty in 1888, however, the consumption received a great check for a time and did not show an increase proportionate to the increase in population till in the early years of this century, a policy of reducing the salt duty was put into force. It is well-known that the reduction in the duty during the years 1903, 1905 and 1907 had a marked effect on the consumption of salt. The increase of 1916 and 1923 gave a set-back to consumption, which was removed in 1924.

SOURCES OF SALT SUPPLY[2]

We have seen the circumstances under which the Bengal market came to depend on foreign salt. The principal quality imported in Calcutta for many years was Liverpool salt, to which the Bengal consumer thus became accustomed. This salt is known for its whiteness, evenness of grain and absence of moisture. Though in more recent times salt has been imported in Calcutta from several other sources, it is judged by the standard of Liverpool salt.

The imported salt amounts to about one-fourth of the total Indian requirement. The remaining supply is met from Indian production, which is estimated to be about 14 lakhs of tons per year. Only a lakh of tons out of this are produced from the mines of the Punjab Salt Range; most of the salt being made by solar evaporation of sea water or brine. Bombay, Madras and Northern India each accounts for about one-third of the production. The production at any of these centres, however, does not reach the standard of Liverpool salt, and is therefore

[1] F. S. 1882, p. 42.

[2] This and the following sections are based on the Report of the Tariff Board.

considered unsuitable for the Bengal market. This explains the continuance of the import of salt in Calcutta. The following table gives the imports of salt in India during recent years :—

	1926-27 Tons	1927-28 Tons	1928-29 Tons	1929-30 Tons
Bengal	4,62,406	4,96,789	5,33,434	5,49,000
Bombay	267	250	252	
Sind	106	82	69	
Madras	29	61	106	
Burma	78,962	99,068	80,966	94,000
Total	5,41,770	5,96,250	6,14,827	6,44,000

It is obvious that the principal market for foreign salt is Bengal, whose average requirement may be put at 5,00,000 tons a year. The different sources from which Bengal derives its imports are given below :—

IMPORTS OF SALT IN THOUSANDS OF MAUNDS

	1926-27		1927-28		1928-29	
	Calcutta	Chittagong	Calcutta	Chittagong	Calcutta	Chittagong
Liverpool	1273	..	2035 ¾	..	1779	..
Hamburg	1202	..	714	..	607	..
Spain	988	181	1811	278	1324	322
Port Said	2626	405	2225	328	1901	430
Massowah	1477	..	1297	..	1305	..
Aden	3565	723	3711	1046	4377	936
D'Jibouti	183	..	196		292	
Bombay	602	..	878	..	492	..
Karachi	..	..	..	..	205	..
Tunis	..	..	..	..	662	..
Okha	..	..	..	..	60	117
Roumania	..	..	..	..	191	..
	11920	1310	12870	1653	13201	1836
	1,32,31,122 maunds =486,438 tons		1,45,24,776 maunds =534,000 tons		1,50,37,366 maunds =552,844 tons	

FLUCTUATIONS IN PRICE

It has been found that the price of imported salt in Bengal fluctuates considerably. Three causes have been assigned for this fluctuation, namely, (1) freight charges ; (2) influence of combines of manufacturers ; and (3) speculation. Freight charges account for about half the landed price in the case of most of the imports. Any variation in freight charges is therefore bound to be reflected in the price. During and after the War, and also because of the coal strike in England in 1926, we have witnessed various fluctuations in freight charges.

The second cause of variation in prices is the attempt of the manufacturers catering for the Calcutta market to retain their hold on the same and prevent competition. The advent of newcomers has been followed by price wars. Sometimes the manufacturers or the importers form combines with a view to stabilise the price of salt at a high level. The latest combine of this kind was formed in 1927, and was known as the Salt Importers' Association of Bengal. This body was dissolved in the beginning of 1930, but during the three years of its existence, it succeeded in maintaining the price of salt at a high level. It has been estimated that the Calcutta market was made to pay about a crore of rupees more than what may be considered to be the normal price of salt during this period.

Several varieties of foreign salt are imported in Calcutta, and they are distinguished in the market according to their place of manufacture. The arrival of salt shipments of different varieties is not regular, and this leads to speculation among the dealers and consequent fluctuations in price.

PRODUCTION OF SALT IN INDIA

Madras :—The production of salt in Madras is in the hands of private individuals, but under the control of the

Government. Both the quality and the quantity are determined by the Salt Department. There are about sixty factories along the coast. Competition among them keeps the price at a reasonable level.

Bombay :—Salt factories abound along the sea coast of Bombay and work under the control of the Government. The works at Dharasna are under the direct charge of the Salt Department. Large quantities of salt are manufactured by Government agency at Kharaghoda. There is an agreement by which Government purchases every year five lakhs of maunds of salt made by the Dharangadhra State.

Karachi is the centre of manufacture in Sind. Government had their own works till recently, but these have now been given over to private companies which work under an excise system.

Northern India :—The salt mines at Khewra and Warcha in the Punjab Salt range, and the salt works at Sambhar, Pachbadra and Didwana in Rajaputana are among the principal sources of production in North India. With small exceptions, salt mining in these areas is done directly by the Government. In view of the monopoly of manufacture, the Government is in a position to regulate the price of salt in this area.

QUALITY OF INDIAN SALT

We have seen that the reason which makes it possible for foreign salt to enter the Calcutta market is the fact that the Bengal consumer has been accustomed for many years to the Liverpool quality or something approaching it. Salt produced in India is usually inferior in appearance. Careful investigations have shown that under proper supervision it is possible to manufacture superior quality of salt in India. The problem, however, is whether it can be manufactured on a commercial scale, and sold at a competitive price. The works best situated in

this respect are those at Okha, Karachi, Khewra, Pachbadra and Sambhar. The Tariff Board[1] has estimated that within a few years salt of superior quality could be produced in adequate quantity in these works to replace the imported salt. In this connection, the principal recommendation of the Tariff Board is "that Government should undertake a thorough survey of the possible sources with a view to determining the extent to which the Bengal market may be supplied by rail with fine white crushed salt". This refers to the salt works in North India which are in the hands of Government. Salt from Okha and Karachi has to be transported by sea to Calcutta, and is not included in this recommendation. The Government of India appointed a Committee to make the necessary survey.

Besides this, the Government have been advised by the Tariff Board to take certain other measures which will be necessary in any case. The object of these measures is to bring about a stability of the price of salt by removing all those causes which lead to violent fluctuations in price at present. In order to achieve this end, some sort of control on the supply, import and sale of salt is necessary. This may be done either by the Government directly or by means of a suitable agency.

The best agency for this purpose, according to the Tariff Board, is the creation of a Marketing Board, which should work like a public utility company. If the formation of such a Board takes time, it has been suggested that the Government should assume control of imported salt as a temporary measure. This is necessary to safeguard the interests of the salt works at Karachi and Okha, and also those at Aden, whose existence is threatened by foreign competition.

[1] Report, p. 29.

PROTECTION OF SALT INDUSTRY

Unlike other reports of the Tariff Board that on salt was referred to a committee of the Assembly during the budget session of 1931. This committee expresses general agreement with the recommendations of the Tariff Board. In view of the necessity for studying more carefully the question of instituting a Marketing Board as recommended by the Tariff Board, and in view of the necessity of taking immediate steps, the committee suggested a scheme for immediate action. The urgency for the introduction of such a scheme was due to the fact that the price of Red Sea salt, which was about Rs. 53 per 100 maunds ex-ship Calcutta at the time when the Tariff Board wrote, had fallen to about Rs. 36 by March 1931. This was a real danger to certain Indian producers and immediate action was therefore necessary if the Indian industry was to be helped. It may be pointed out that Indian salt includes Aden salt for the purposes of this scheme. The recommendations of the Assembly committee may be thus summarised :—

(1) That an additional duty of $4\frac{1}{2}$ as. per maund on salt imported by sea into British India should be imposed without delay.

(2) In order to ensure to the Indian producer a fair selling price recommended by the Tariff Board, the executive should be empowered to increase this duty by one anna per maund if the price of foreign salt falls below its present level.

(3) That imported Indian salt should get a rebate equal to the additional duty if the producer undertook to sell to the Government quantities of salt up to a fixed maximum at the fair selling price recommended by the Tariff Board.

(4) The fair selling price recommended by the Tariff Board was Rs. 63-11 per 100 maunds ex-ship. Taking the

present price of imported salt at Rs. 36 per 100 mds. duty of 4½ as. per md. would mean a duty of Rs. 28-2 pe 100 mds. and the price would therefore be Rs. 64-2 pe 100 mds. ex-ship, which is very near the figure suggeste by the Tariff Board.

(5) It has been claimed that this scheme would on th one hand give adequate protection to the local industry and on the other, the interest of the consumer will b secured by the power of the Government to buy salt a the standard price. In case the price rose further, it woul be necessary to reduce the additional duty. Besides, th risk to the Government is reduced to a minimum, unlik the scheme of the Tariff Board under which the Govern ment would have been required to buy foreign salt at high price and sell it at a loss on occasions. At the sam time, the interference with the free play of economic law would not exist as the local manufacturers would be free t compete among themselves. The Assembly committe considers these as interim measures and recommend that suitable steps for the development of the India sources of salt supply should be taken, and the schem for a Marketing Board should be studied in greater detail The committee was aware of the fact that the additiona duty recommended by them would involve a sacrifice o the part of the consumer in Bengal and other neighbourin areas, but their considered view was that the advantag of maintaining the existing sources of supply and of pre venting foreign producers from resuming control of price was on the whole greater and therefore in the nationa interest the burden should be faced.

Accordingly, a bill for imposing a temporary additiona duty of 4½ as. per maund on imported salt was introduce during the budget session of 1931, and passed in spite o some opposition. It was, however, definitely arrange by a resolution passed by the Assembly on the motion o the Finance Member that the revenue derived from thi

measure should be utilised for making India self-sufficient in the matter of salt supply. It was laid down that the Government of India may spend one-eighth of the additional revenue for the development of the salt sources in Northern India, and allied purposes. Seven-eighths of the additional revenue is to be distributed among the Governments of the Provinces where the salt liable to the new duty is likely to be consumed, with the suggestion that they should utilise the same for the development of salt production in their own areas.

RELAXATION OF SALT LAWS

In view of the Gandhi-Irwin agreement terminating the political tension in the country, the Government of India have taken steps to relax the Salt Laws, with the breach of which the Civil Disobedience movement began in 1930. People living on the sea coast are now allowed to pick or manufacture salt for their own local consumption without the payment of any duty.

PART II

TEXTILES

CHAPTER V

COTTON

EARLY HISTORY

Though statistics of the production of, and trade in, cotton goods in India from early times are not available, we have sufficient indirect evidence to show that the art of spinning and weaving cotton by hand was well-known, and that the cotton goods of India attracted the attention of foreign travellers, and were the object of trade with foreign countries.[1] At a period when cotton was unknown in Europe, the cotton fabrics of India had a reputation. The Greeks knew the fine muslins of India by the name 'Gangetika', and Egyptian mummies are known to have been wrapt in Indian muslin. Dacca muslin is still associated with the perfection to which Indian artisans had reached in the manufacture of cotton goods.

The Indian industry seems to have received a check during early Mahommedan rule in India, but with the establishment of settled government under the Mughals, the industry was encouraged. The accounts of travellers like Bernier and Tavernier, and modern researches pay an eloquent testimony to the well organised and flourishing condition of the cotton industry in India during the best days of Mughal rule.[2] In spite of the unsettled condition of the country during the eighteenth century, we find that

[1] It is beyond the scope of the present work to go into the details of early history, but those interested will find the indirect evidence referred to above in the following among other works:—(1) Manusmriti or the Laws of Manu; (2) Kautilya's Arthashastra; (3) Arian-History of India, translated by Rooke, London, 1814; (4) Schaff's edition—The Periplus of the Erythrean Sea; (5) A. G. Elliot James—Indian Industries, 1880; (6) Sir George Watt—Commercial Products of India; (7) Imperial Gazetteer of India, Vol. III, Ch. IV.

[2] Cf. Travels of Bernier; Travels of Tavernier; Moreland, India at the Death of Akbar; and Pant, Commercial Policy of the Mughals.

cotton goods of different varieties were one of the principal articles of export from India to England;[1] and in order to push this trade, the East India Company and its servants are known to have taken all possible steps.[2]

THE ENGLISH COTTON INDUSTRY

The growth of the import of Indian goods into England which was brought about by the efforts of the East India Company attracted great attention in England, especially of the rising mill industry in Lancashire. In consequence, Acts were passed by the British Parliament restricting the imports of Indian cotton goods into England.[3] This was a heavy blow to the Indian industry, and at the same time, the cotton industry in England was rapidly progressing. By 1784, America began to supply raw cotton of a superior variety to England, and with the growing application of steam power to the production of cotton goods, the career of England as the leading industrial country of the world began. Though the Indian hand-spinning and hand-weaving industry did not die out, and has had a chequered career since then, it must be admitted that its growth was definitely checked.

THE BEGINNING OF THE IMPORT OF COTTON GOODS IN INDIA

Not only was the growth of the indigenous cotton industry definitely checked, but a fundamental change was brought about in the nature of the foreign trade of India which has had a far reaching effect on the economic life of the people on the one hand, and the industrial policy

[1] and [2]. Balakrishna—"Commercial relations between India and England"; The History, Antiquities, Topography and Statistics of Eastern India—Edited by Montgomery Martin; Dr. Buchanan—Travels from Malabar to Mysore.

[3] N. J. Shah—History of Indian Tariffs.

of the Indian authorities on the other. Whereas in former years the cotton goods of India attracted attention in British and other markets, for their fineness of texture and the variety of colours and designs, we have now the beginning of a period in which India begins to depend in an increasing degree on the cotton goods of England, as the following figures will show :—

FIGURES IN LAKHS OF RUPEES

	Export of cotton goods from India	Import of cotton goods into India
1814-15	84·9	0·45
1819-20	90·3	15·82
1824-25	60·2	52·96
1829-30	1·3	52·16

In order to appreciate the development of the cotton trade and industry that followed, it is convenient to divide the chapter into four sections as under :—

1. Trade in raw cotton.
2. Trade in cotton manufactures.
3. Indian cotton industry up to 1914.
4. Indian cotton industry and trade since 1914.

SECTION I. TRADE IN RAW COTTON

PRODUCTION OF RAW COTTON

The following table[1] shows the relative position of India in the world production of cotton :—

IN THOUSANDS OF BALES OF 500 LBS. EACH

	America	India 400 lb. Bales	Egypt	Total including others
1911-12	16,251	3,288	1,485	25,507
1914-15	16,992	5,209	1,298	28,180
1919-20	12,029	5,796	1,114	22,612
1921-22	8,351	4,485	972	16,439
1923-24	10,808	5,161	1,306	20,979
1925-26	17,219	6,215	1,593	29,686
1927-28	13,972	5,871	1,219	25,966
1928-29	15,678	5,688	1,600	27,866

Though India occupies the second position, she is a poor second, and her share in world production is barely one-fifth. Besides, in point of quality Indian cotton is inferior. Egyptian cotton is of the best quality ; its staple is long and is therefore capable of being spun into yarn of higher count. American cotton is of medium staple, and is largely used by English mills. Indian cotton on the other hand is of short staple and is good for coarse fabrics only.

EXPORTS OF COTTON

With the growth of the cotton industry in the United Kingdom, vigorous efforts were made by the East India Company to stimulate the output of Indian cotton and to

[1] Todd's estimate, taken from the Report of Bombay Millowners' Association, 1930.

export the same to England. Large quantities of cotton were exported from India by the end of the 18th century. With the progress of cotton cultivation in the U. S. A., England began to replace Indian cotton with the superior American material. The demand from England continued for some time ; in the meanwhile other countries began to take our cotton in increasing quantities. In 1860-61, we exported cotton worth 6.34 crores of rupees.

During the next few years, the supply from America was cut off because of the Civil War in that country. Prices rose to phenomenal heights, and the United Kingdom was forced to import large quantities of Indian cotton for her mills. The following figures show the impetus which the Indian trade in cotton received.

EXPORTS OF RAW COTTON FROM INDIA

	Quantity lakhs of Cwts.	Value lakhs of Rs.
1860-61	. .	634
1862-63	42	1878
1863-64	49	3586
1864-65	47	3757
1865-66	72	3559

With the return of normal conditions in the U. S. A. she began once again to export cotton in large quantities. At the same time the price went down considerably. We find in consequence that there are great fluctuations in the exports of cotton from India. In 1878-79, they went as low as 29 lakhs of cwts., but they showed some signs of recovery thereafter ; and in 1899-1900, they rose to 44 lakhs of cwts. valued at 992 lakhs of rupees.

The price of Broach cotton which was Rs. 255 per candy of 784 lbs. in 1873, declined almost continuously till 1899 when it was only Rs. 150-8-0. This decline in

price[1] arrested the growth of cotton cultivation in India to some extent.[2] While the output of cotton was restricted in this way, there was an increased consumption within the country for the rising mill industry. The surplus for export was therefore small, and the trade could not progress in consequence. Cotton, which had come to occupy the foremost position in our export trade went down to the third place, being superseded by rice and jute, the exports of which had greatly risen in the interval.

By the end of the nineteenth century, radical changes took place in the cotton market of the world. The price of cotton which was hitherto on the decline, began to show an upward tendency from 1899. This was due to an increased demand which was not accompanied by an increase in supply. The output of cotton in the U. S. A. which had shown a phenomenal progress since the close of the Civil War, had by now reached a stage from which further progress could be only very slow.[3] At the same time the production in America suffered from the boll weevil. On the other hand, the demand for raw cotton was rising on all hands with the progress of the textile industry all over the world, especially in the East. The rise in price which took place in consequence stimulated

[1] Index numbers of prices of raw cotton.

1861	55
1864	229
1870	118
1873	100
1883	77
1892	75
1899	59

[2] Area under cotton :—

Year	1868	1888	1894	1898	1899
Lakhs of acres	109	104	97	92	83

[3] Output of cotton in U. S. A. in lakhs of bales of 500 lbs. each.

1871	38	1903	103
1876	41	1908	111
1881	60	1913	139
1891	82	1920	113
1899	110		

production in India, and the exports began to grow, particularly to Japan, where the mill industry had begun to develop. The rise in exports and price will be evident from the following figures of export :—

		Lakhs of Cwts.	Lakhs of Rs.
	1899-1900	44	992
(Bad Crops)	1900-1901	36	1013
	1913-1914	106	4104

Trade relations were upset during the War ; the markets of Central Europe were closed ; those of other parts of Europe were also partially closed. This decline was partly made up by increased exports to the U. K. and Japan. The price of cotton as of other things rose still further, so that though the quantity of exports was falling, its value was rising. In 1917-18, the exports fell to 73 lakhs of cwts., but in value they rose to 4266 lakhs of rupees. In 1918-19, there was a sharp decline in exports which amounted to 37 lakhs of cwts. This was due to a combination of causes. This was the year affected by the Influenza epidemic ; and the output in India was small. With the close of the War, the demand from the U. K. was reduced. The demand from Japan was also small and the price had gone down to some extent towards the end of the year.

This was, however, followed by a favourable reaction. With the close of the War, commercial activities with Europe increased. Besides, there was a series of good crops in India, and the price remained high. The exports rose to 85 lakhs of cwts. in 1919-20, and gradually reached 134 lakhs in 1923-24 valued at 9847 lakhs of rupees.

We have seen that the price of cotton was on the increase during the years 1899 to 1924. One of the reasons

was the limit set to increased production in America. But by this time America had managed to check the effects of the boll weevil by increased use of calcium, arsenate and other substances.[1] In consequence American cotton crops of 1924-25 showed an increase of 25 lakhs of bales over those of the preceding year. The production continued to increase rapidly in the following years, though there was a fall in 1927-28. The effect of this has been that the price of cotton is on the decline. It is possible that the price of cotton in recent years is sharing to some extent the general fall in the world price level of all commodities due to monetary causes.

THE CONSUMERS OF INDIAN RAW COTTON

The following table gives an analysis of our exports of raw cotton to different countries :—

EXPORTS OF RAW COTTON IN THOUSANDS OF BALES OF 400 LBS. EACH

Country	Pre-war average	War average	Post-war average	1924-25	1926-27	1928-29	1929-30
Japan	1012	1273	1540	1671	1842	1610	1640
China[2]	31	48	289	284	391	403	566
Italy	233	249	263	485	305	384	393
Belgium	277	44	217	201	159	347	341
Germany	351	69	198	174	145	324	344
France	109	69	91	134	123	204	253
U. K.	122	212	152	162	87	241	270
Spain	50	41	61	96	54	76	..
Austria	167	33	32	8	1	..	..
TOTAL[3]	2407	2190	2917	3326	3188	3712	4070

[1] Sheppersons' Cotton Facts, 1925, p. 65.

[2] China excludes Hongkong.

[3] Total includes other countries.

Japan :—We see that Japan occupies the most dominant position as a consumer of our cotton, taking 50 per cent. or more, of our total exports. This is due to the gradual development of the cotton industry in that country. Japan is not in a position to grow cotton and depends for her supply of the raw material partly on India, and partly on the U. S. A. The phenomenal growth of this trade may be briefly described. The first export of raw cotton to Japan was made in 1887-88 when it amounted to 125 cwts. only. In a few years the exports rose ; in 1891-92 Japan took 10 per cent. of our total exports. A little later, that is, by 1896-97, Japan superseded all other countries as a consumer of Indian cotton, when she took 25 per cent. of our exports. With small fluctuations the figure went on increasing, till the exports were valued at 670 lakhs in 1908-09. In the following year there was a great jump to 1204 lakhs ; in 1913-14 it stood at 1940 lakhs. During the War, there were fluctuations, but on the whole the exports increased as shown in the above table. In value the exports to Japan in 1928-29 and 1929-30 amounted to 29 and 27.3 crores of rupees respectively.

China :—Before the cotton textile industry was established in India, considerable quantities of raw cotton used to be exported to China. For example, even in 1875-76, the exports to that country were 465 thousand cwts. With the growth of the cotton industry in India, we began to export increasing quantities of yarn to China, and our exports of raw cotton to China therefore fell.[1] In 1893, we exported only one lakh worth of cotton to China. But thereafter the cotton mill industry began to be developed in that country, which led to an increased demand for our cotton. The exports were, however, not large up to 1918-19, when they were valued at 51 lakhs of rupees. The exports to China have, however, shown

[1] Cf. Review of Trade, 1885-86, p. 20.

great development since 1919-20 when they rose to 330 lakhs. The progress has been rapid since then; the figure for 1925-26 being 1232 lakhs. China thus occupies the second position as a consumer of Indian cotton and this position has been acquired only in recent years. This is due to the growth of the textile industry in China. We shall see later that the increase in our export of raw cotton has been at the expense of our yarn trade.

Continental Europe:—Among the European countries Germany took large quantities of our cotton before the War. For some years since 1891 she occupied the first position until in 1896 she was superseded by Japan. Till the outbreak of the War, she retained the second place. The exports to Germany have recovered since the War, but have not yet reached the pre-war level. Italy now leads among the European countries as a consumer of our cotton, and occupies the third place on the whole. Austria, which took fairly large quantities before the War, is now no longer a buyer of any importance. Belgium, France and Spain are the other buyers of some importance.

The United Kingdom:—The Lancashire mills abandoned the use of Indian cotton many years ago. They were forced to take our cotton during the American Civil War in the years 1862 to 1865, as already pointed out. Since then the United Kingdom occupies a subordinate position as a consumer of Indian cotton. In 1913-14 we sent 144 lakhs worth of cotton to the U. K. During the War, there was a temporary rise; in 1923-24, they amounted to 857 lakhs. They have once again fallen, and amounted to 431 lakhs in 1929-30.

So far as the European countries are concerned, the imports of cotton from India represent only a fraction of their total imports, because they import a large quantity from the U. S. A. This is due to the inferior quality of Indian cotton. These countries import Indian cotton to

make up for the deficiencies of the American supply. In other words, if America is in a position to supply larger quantities to Europe, Indian cotton will suffer in the European market.

Japan is also importing large quantities of cotton from the U. S. A., but she finds it profitable at the same time to import at least half her requirements from India. Indian cotton is cheaper, and is suitable for coarse goods for several Asiatic markets, which Japan caters for. At the same time, the Japanese mills have specialised in the art of mixing Indian cotton with other superior varieties for the production of certain kinds of cloth.

China depends to a greater extent on Indian cotton and her demand may increase with the growth of her mill industry.

IMPORTS OF COTTON

We have seen that India is a great exporter of raw cotton ; in view of this it may seem strange that we are importing certain quantities of cotton at the same time. Indian cotton is not good for the production of superior or finer variety of yarn, and those Indian mills which specialise in this work have to import foreign cotton. Egyptian, American and, in recent years, African cotton, particularly from Kenya and Uganda, is imported in this way.

Another reason which leads to the import is the disparity between the prices of foreign and local cotton. On account of frequent fluctuations in the world price of cotton on the one hand, and the operation of local factors on the other, there are occasions when the price of our cotton is not in a line with that of foreign cotton. Whenever foreign cotton becomes cheaper, we find that a stimulus is given to imports, which may not have a direct relation to the demand by the mills.

The imports of raw cotton amounted to 40,000 cwts.

valued at 8.4 lakhs of rupees, in 1876-77. They rose gradually and were 1,57,500 cwts., valued at 71 lakhs, in 1907-08. During the years 1911-12 and 1912-13, the imports were very largely due to a divergence in the price level, the figures being 4,83,000 and 5,48,000 cwts. respectively. Since the close of the War, the imports have once again shown a tendency to rise, as shown below :—

IMPORTS OF COTTON

Year	Thousand Cwts.	Lakhs of Rupees
1919-20	66	68
1920-21	180	169
1921-22	480	344
1922-23	220	173
1923-24	260	250
1924-25	400	424
1925-26	360	364
1926-27	920	503
1927-28	1320	647
1928-29	620	391
1929-30	480	342

This indicates the extent to which Indian mills are trying to use superior cotton ; the abnormal imports like those of 1926-27 and 1927-28, however, are due to the disparity in the price level. Though imports of cotton are likely to continue, and may increase on occasions, there are obvious limits because the demand for finer goods is limited, and efforts to improve the staple of Indian cotton are being made at the same time. It may be noted, however, that more recently large quantities of cotton are imported for use in the Indian mills for the production of goods of higher count. This is due to the intense demand for locally made cotton piece-goods of all descriptions created by the Swadeshi movement.

SECTION II. TRADE IN COTTON MANUFACTURES

GROWTH OF TOTAL IMPORTS

We have already referred to the circumstances which led to the import of cotton manufactures from England to India. We shall review in this section these and other imports of cotton manufactures in India since the Mutiny.

By 1860-61, the imports of cotton goods amounted to more than 11 crores of rupees. The American Civil War led to a restriction of imports for some time, but with the advent of normal conditions they grew rapidly and rose to 19 crores in 1870-71. Partly due to adverse economic conditions in India affecting the demand, or to other factors affecting production, there were fluctuations in the years that followed, but this did not arrest the general progress of the trade during the subsequent twenty years. This period was characterised by an agitation in Lancashire against the protective effect of revenue duties on cotton goods, which led to changes in the tariff, and its complete abolition in 1882. This factor was responsible for the growth of the trade among other things, and we find that the imports amounted to 31 crores in 1890-91. For thirteen years after this date, that is, up to 1903-04, the trade did not progress. This was the period of currency difficulties, of the reimposition of import duties on cotton goods accompanied by a countervailing excise duty, and of famines and epidemics. The imports in 1903 remained at the same level as in 1890, that is 31 crores. The progress thereafter was very rapid, the figure of import for the year 1913-14 being 66.3 crores.

During the War, the imports fell considerably ; in 1915-16, they amounted to 43 crores. With the close of the War, they received a great stimulus and in 1920-21, they reached the record figure of 102 crores. There was a sharp decline in 1921-22 to 57 crores. Both these years

saw violent fluctuations in exchange, which rose to great heights in the former year, and fell to a very low level in the latter, and this accounts for the fluctuations in the trade. In recent years, the imports have been quite large, as shown below, but there persists a tendency of gradual decline year by year.

	Crores of Rs.
1924-25	82·3
1925-26	65·7
1926-27	65·0
1927-28	65·1
1928-29	63·2
1929-30	59·5

It may be noted, however, that though the imports of cotton manufactures have shown great developments, their progress has been slower than that of our total import trade. This has resulted in a decline of the share of this item in our total imports from 48 per cent. in 1860 to 25 per cent. in 1928-29, as the following figures indicate :—

	Total Imports Crs. of Rs.	Imports of cotton goods Crs. of Rs.	Percentage
1860-61	23	11	48
1870-71	33	19	57
1880-81	50	27	54
1890-91	69	31	45
1900-01	76	30	39
1910-11	129	45	35
1920-21	335	102	30
1926-27	231	65	29
1928-29	253	63	25
1929-30	241	59	25

IMPORTS OF YARN

The imports of cotton goods may be divided into those of yarn and those of piece-goods. In comparison with the latter, the former are unimportant. This is partly due to the fact that British manufacturers have been sending mainly finished goods to India. But the demand for certain kinds of yarn continued as some of the hand-loom weavers and mills depended on foreign yarn of higher counts for certain class of goods. Before the growth of the Indian mill industry, the imports showed steady progress. In 1862-63, they were 195 lakhs of lbs. valued at 127 lakhs of rupees ; they rose to 400 lakhs of lbs. valued at 336 lakhs in 1875. By this time, the imports came to be affected by the output of Indian mills and we find some decline. In 1879-80, they were 332 lakhs of lbs. The abolition of the import duty on yarn in 1882, and the subsequent levy of the import duty on piece-goods while those of yarn were left free, stimulated the imports, which rose to 583 lakhs of lbs. in 1897-98.

It is of interest to note that during this period India had begun to export yarn in large quantities, and the exports were larger than imports, as shown below :—

LAKHS OF lbs.

	Exports of yarn	Imports of yarn
1872-73	18	317
1882-83	454	449
1892-93	1890	383
1897-98	2000	583

The progress of the imports is explained by the fact that most of these consisted of yarns of finer counts which could not be manufactured in India ; while the Indian manufacturers devoted their attention more to the export trade

than to the supply of the home-market. But the gradual loss of the foreign market since the close of the last century forced the Indian producers to push the sales of their goods in the home market with more vigour, and we find that the imports of yarn fell in subsequent years. In 1903-04 they amounted to only 280 lakhs of lbs. Thereafter came the Swadeshi movement which gave an impetus to the hand-weaving industry; this led to some demand for foreign yarn. The Indian mills also consumed more of foreign yarn to meet the demand for Indian made piece-goods. Japan had by this time entered the field as an exporter of cotton goods to India. We find in consequence that the imports of yarn rose to 500 lakhs of lbs. in 1912-13 valued at 445 lakhs of rupees. With the outbreak of the War, the imports declined. In 1919-20, they were 150 lakhs of lbs. though in value they amounted to 436 lakhs owing to the great rise in prices. In the following years, the imports of yarn were greatly stimulated, particularly from Japan, as shown below, though the latest years show some decline.

	Lakhs of lbs.	Lakhs of Rs.
1920-21	473	1360
1924-25	559	966
1926-27	494	662
1927-28	523	678
1928-29	437	629
1929-30	439	600

Though we find that the imports are now about the same as in the pre-war period in quantity, in value they are higher. The important thing to note is that the exports of yarn have fallen in the meanwhile, as the following figures will show :—

LAKHS OF LBS.

	Exports	Imports
Pre-war average	1930	410
War average	1300	340
Post-war average	820	450
1925-26	320	510
1926-27	410	490
1927-28	250	520
1928-29	240	440
1929-30	246	440

This indicates that we are losing our markets for yarn. If we assume that the production continues on the same level, the surplus yarn will have to be disposed of in some way. But this surplus yarn is not in a position to replace the foreign yarn that we are getting, as the figures of imports show.

IMPORTS OF PIECE-GOODS

In spite of fluctuations, the imports of piece-goods continued to grow during the last century. From 931 lakhs in 1860-61, they rose to 2982 lakhs in 1894-95. The progress of the industry in India did not have the same effect on imports of piece-goods as it had on those of yarn during this period. This was due to the fact that up to now the output of the Indian mills consisted mostly of yarn. The output of piece-goods amounted only to a small fraction of the imports, and could not have a material effect on them. The following figures are of importance in this connection :—

FIGURES IN LAKHS OF YARDS

	Imports of piece-goods	Exports of pieee-goods
1876-77	11,860	155
1884-85	17,340	479
1894-95	22,590	857

Though we were able to supply certain quantities of piece-goods to other countries, we were importing large and increasing quantities of the same for our own consumption. In other words, the local industry was far from supplying the local wants, and did not interfere with the progress of the imports, though it may be argued that the pace of the increase in imports must have suffered to some extent by the growth of the Indian industry.

The import duty on cotton goods, which was abolished in 1882, was reimposed in 1896 ; the imports of yarn were free from this. In spite of the corresponding excise duty on Indian production, the imports received a temporary check for a few years. They fell to 18,620 lakhs of yards in 1897-98. During the following years up to the beginning of the War, we saw that the imports of yarn declined heavily ; but those of piece-goods showed a continuous progress ; in 1913-14 the latter rose to 31,990 lakhs of yards valued at 6213 lakhs of rupees.

The outbreak of the War seriously affected the imports owing to the inability of the United Kingdom to supply the demand from India. The imports fell in consequence to 10,820 lakhs of yards in 1919-20. In value they were high enough because of the phenomenal rise in prices, being 5472 lakhs of rupees. In the subsequent years the imports gradually rose ; in 1926-27 they were 17,580 lakhs of yards, valued at 5843 lakhs of rupees.

We have seen that in recent years the imports of yarn have increased, particularly from Japan. The trade in piece-goods has, however, not reached the pre-war level.

This is due to several causes : (1) a restricted consumption of foreign piece-goods due to the intense revival of the Swadeshi movement and the propaganda in favour of the use of khaddar ; (2) a higher level of prices ; (3) the progress of the Indian weaving industry ; and (4) the increase in the import duty on piece-goods in recent years.

THE SOURCES OF SUPPLY

The United Kingdom :—The United Kingdom has occupied the predominant position as a supplier of cotton goods to India. Her share in our total imports has, however, declined to some extent with the growth of the cotton industry in the continental countries of Europe and in Japan. In 1875-76, the imports from Great Britain amounted to 1870 lakhs of rupees being about 93 per cent. of our total imports. In course of time, other countries began to send cotton goods to India, and therefore, the percentage share of the U. K. shows some decline. Thus in 1913-14, the imports from the U. K. were 5970 lakhs of rupees, but her share had gone down to 90 per cent.

Since the War, the imports from the U. K. have been restricted ; her share in the trade has not yet reached the pre-war level. In view of the changing prices, it is better to compare quantities as shown below :—

IMPORTS FROM THE UNITED KINGDOM COMPARED WITH TOTAL IMPORTS

	Piece-goods from U. K. crs. of yds.	Total piece-goods crs. of yds.	Yarn from U. K. lakhs of lb.	Total yarn lakhs of lb.
Pre-war average .	256	263	370	417
War average . .	170	184	246	340
Post-war average .	119	135	257	446
1927-28	154	197	205	523
1928-29	145	194	230	437
1929-30	125	192	201	439

Other Western Countries:—We have been receiving certain quantities of cotton goods from other countries in Europe and from the U. S. A. Germany had an important place among these before the War; she has, however, not yet recovered her position. The share of the principal countries will be evident from the following figures:—

IMPORTS OF COTTON PIECE-GOODS IN LAKHS OF YARDS

	Holland	Italy	Switzerland	U. S. A.
1913-14	250	230	60	100
1918-19	10	10	10	110
1921-22	120	20	10	230
1927-28	200	260	150	280
1928-29	200	380	110	300
1929-30	220	250	100	330

Japan:—The advent of Japan as a supplier of cotton goods is the most remarkable feature of the trade. At one time Japan used to import our yarn; in course of time she replaced this by cotton. But in a few years she developed her industry to such an extent that she began to export cotton goods to India in large quantities. The first imports of cotton goods from Japan were made in 1898-99, amounting to Rs. 10,000 only. Since then they rose gradually and amounted to 120 lakhs in 1913-14. This was equal to 1.8 per cent. of our total imports of cotton goods. During the War period, when imports from the U. K. and other European countries were restricted, Japan seized the opportunity to get a firm footing in our market. In 1917-18, the imports from Japan rose to 517 lakhs being more than 9 per cent. In the following year, they rose further to 1694 lakhs. Since then there was some fall, because the European suppliers again entered the field; but this has not had a great effect

on Japan. In recent years, though our total imports have not reached the pre-war level, those from Japan have been large. A large portion of the Japanese imports consists of yarn. This has caused on the one hand, a decrease in the imports of yarn from the U. K. and on the other, an increase in the total imports of yarn.

IMPORTS OF YARN, LAKHS OF LBS.

(Percentage shares in brackets)

	U. K.	Japan
1921-22	401 (70)	149 (26)
1922-23	310 (52)	265 (45)
1923-24	218 (59)	204 (46)
1924-25	207 (37)	323 (57)
1925-26	160 (31)	335 (65)
1926-27	201 (41)	266 (54)
1927-28	205 (39)	169 (32)
1928-29	230 (53)	76 (17)
1929-30	201 (46)	109 (25)

The competition from Japan in piece-goods is not so great as far as the U. K. is considered, as is shown below :—

IMPORTS OF PIECE-GOODS IN LAKHS OF YARDS

	U. K.	Japan
1920-21	12920 (85·6)	1700 (11·3)
1921-22	9550 (87·6)	900 (8·3)
1922-23	14530 (91·2)	1080 (6·8)
1923-24	13190 (88·8)	1230 (8·2)
1924-25	16140 (88·5)	1550 (8·5)
1925-26	12870 (82·3)	2170 (13·9)
1926-27	14670 (82·0)	2440 (13·6)
1927-28	15430 (78·2)	3230 (16·4)
1928-29	14560 (75·2)	3570 (18·4)
1929-30	12480 (65·0)	5620 (29·3)

EXPORTS OF COTTON MANUFACTURES

The growth of the cotton industry in India was accompanied by an export trade in cotton goods. In 1872-73, we exported Rs. 41 lakhs worth of cotton goods. The exports showed a steady increase till in 1881-82, they rose to 201 lakhs. During the following years, the growth was much quicker, the figure for 1899-1900 being 827 lakhs. During the next year, several mills were closed in Bombay on account of plague, and exports fell to 570 lakhs. The strength of the trade reasserted itself, because the exports increased to 1086 lakhs in 1901-02, and reached 1443 lakhs in 1905-06. This rapid growth was mostly due to the flourishing trade in yarn with China. As we have already observed our exports declined with the growth of the cotton industry in China. In 1911-12, they amounted to 978 lakhs, but again rose to 1212 lakhs in 1913-14. With the outbreak of the War, the exports fell to 801 lakhs in 1914-15. In the following years, however, came a great demand for cotton goods from another quarter, namely, the Eastern war frontiers in Mesopotamia. Our exports, therefore, increased and rose to 2741 lakhs in 1919-20. This increase in value was also partially due to higher prices. Since then, exports have continuously fallen, being 1075 lakhs in 1926-27. In other words, in spite of higher prices, the exports are much below the point reached in 1905-06. The main cause of this is the gradual loss of the Chinese market for yarn. We shall, therefore, consider the exports of yarn and piece-goods separately.

EXPORTS OF YARN

As we have already seen, Indian mills concentrated on the production of yarn in the earlier years, for which they found a convenient market chiefly in China. The exports amounted to 18 lakhs of lbs. in 1872-73, and rose to 1890

lakhs of lbs. in 1892-93. The closing of the mints in 1893 had an adverse effect on this trade. China, the chief importer of yarn, was a silver-using country. The appreciation of the rupee led to a rise in the price of Indian goods in China, and the exports fell to 1340 lakhs of lbs. in 1893-94.[1] With the stabilisation of the rupee, the trade grew normal and the exports rose to 2410 lakhs of lbs. in 1899-1900, (valued at 690 lakhs of Rs.). The plague and the smaller output of Indian mills led to a decrease in 1900-1901, when they fell to 118 lakhs of lbs. Rising thereafter, the exports reached 2890 lakhs of lbs. in 1905-06. In this year, out of the total exports of cotton goods worth 1443 lakhs of rupees, yarn represented 1239 lakhs.

With the year 1905-06, we come to a turning point. On account of causes already discussed, there is a continuous decline in the exports of yarn from this period ; in 1918-19 they fell to 640 lakhs of lbs. In the boom year 1919-20 they received a temporary stimulus and rose to 1520 lakhs of lbs. The value realized in this year was higher than in 1905, due to high prices—being 1826 lakhs of Rs. The fall, however, continued ; the exports in 1925-26 were 320 lakhs of lbs. valued at 308 lakhs of Rs. In this year, our total exports of cotton goods amounted to 1075 lakhs of Rs., and yarn therefore occupied a much smaller place compared with former years. The tendency in more recent years is towards a further decline in the exports of yarn as explained below.

CONSUMERS OF INDIAN YARN

The following figures show the share of China in our yarn trade :—

[1] *Cf.* "The heavy decline in the trade in 1893-94 was due.....to the dislocation of the exchange between India and China caused by the closure of mints." Review of Trade, 1894-95, p. 51.

EXPORTS OF YARN, LAKHS OF LBS.

	Exports to China	Total Exports
1872- 73	12	18
1878- 79	181	218
1892- 93	1770	1890
1899-1900	2140	2410
1905- 06	2820	2980
1911- 12	1290	1510
1918- 19	490	640
1926- 27	170	415
1927- 28	8	246
1928- 29	20	243
1929- 30	8	246

This almost complete extinction of a once very prosperous trade has been due to the rise of the textile industry in China and Japan. On the one hand, with the growth of the home industry, the total imports of yarn into China have been falling; on the other, with the advent of Japan as an exporter of cotton goods, Indian yarn has been replaced by the Japanese product. These tendencies are evident from the following table :—

IMPORTS OF YARN INTO CHINA, LAKHS OF LBS.

(Percentage in Brackets)

	From India	From Japan	Total
1906	2820 (77)	1000 (23)	382
1911	1590 (66)	990 (34)	257
1916	1400 (42)	1960 (54)	336
1921	630 (41)	920 (59)	155
1923	410 (39)	650 (61)	106
1924	210 (24)	630 (76)	83

It may be added that while the exports of yarn to China have fallen heavily, those of raw cotton have increased as shown below :—

EXPORTS OF RAW COTTON, LAKHS OF RS.

1905-06	52
1920-21	421
1925-26	1212
1928-29	728
1929-30	934

EXPORTS OF PIECE-GOODS

The reason which led to the exports of piece-goods from India are the same as those which brought about the yarn trade, with this difference, that yarn occupied the lion's share in the export trade for many years. We exported 155 lakhs of yards of piece-goods in 1876-77. The exports rose steadily to 92 lakhs of yards in 1895-96. The imposition of the excise duty in 1896 had the effect of diverting the output of piece-goods to that of yarn. The exports, therefore, fell to 606 lakhs of yards in 1898-99. Thereafter the exports show an increase, and amounted to 892 lakhs of yards, valued at 229 lakhs of Rs., in 1913-14. They were still about one-fourth in value of those of yarn. There was a fall at the beginning of the War, but the exports were soon stimulated by war demands in the Eastern frontiers. In 1916-17, the exports were 2640 lakhs of yards, valued at 569 lakhs of Rs. In 1919-20, they were 1970 lakhs of yards, but fetched a higher value, 915 lakhs of Rs. Though there was some fall after the close of the War, the exports have shown a recovery in recent years ; they were 1970 lakhs of yards in 1926-27, valued at 733 lakhs of Rs. This is much larger than the exports of yarn in the same year, which amounted to 380 lakhs of Rs. only.

Unlike yarn, our exports of piece-goods are distributed over a number of countries. There is a great possibility

of developing trade with them, particularly in cotton piece-goods. Countries situated on the boundaries of the Indian ocean and in other neighbouring areas are likely to prove of importance to Indian trade in this way. Persia, Mesopotamia, Aden, Kenya, Uganda, Portuguese East Africa and South Africa, may be mentioned as the more important of such countries. Most of them have been backward hitherto, but they are on the threshold of great improvements. Though each of them may be developed for this or that raw product, the possibilities of manufacture in them are not great. With the impending development, and the consequent increasing trade relations with other countries that must follow, these countries will take more and more of manufactured goods from abroad, among which cotton goods are bound to be the most important. India is peculiarly well situated to supply this requirement. With the shipping facilities already in existence between Bombay and these areas, the question of transport is not difficult. The Bombay Mill Industry can make use of these opportunities if it studies the markets properly, and makes organised efforts to obtain a footing in them. We have already some relations with these countries, and we have a special advantage, inasmuch as Indians have settled in most of these areas for purposes of trade. The following table gives the exports of piece-goods from India to some of these markets in recent years.

EXPORTS OF PIECE-GOODS, LAKHS OF YARDS

	Pre-war average	War average	Post-war average	1926-27	1927-28	1928-29
Persia	73	312	274	377	281	236
Iraq[1]	124	217	380	382	239	186
Sts. Settlements	139	179	211	253	222	193
Aden and Dependencies	102	249	106	64	55	53
Kenya Colony	54	114	111	132	135	117
Ceylon	95	102	167	214	193	176
Portuguese E. Africa	56	59	64	103	437	436
Total including others	898	1549	1637	1958	1667	1477

THE TRADE MISSION

The Cotton Tariff Board of 1927 recommended the appointment of a Trade Mission to certain countries in the "Near East"[2] and in Africa to survey their potentialities for Indian goods, particularly cotton goods. Such a mission was sent in January 1928 and their report published in 1929 contains very useful material. The following table[3] gives the share of India in the imports of cotton piece-goods by these countries.

[1] Figures prior to 1921-22 relate to Asiatic Turkey.

[2] The phrase 'Near East' is used by the Board and the Trade Mission, in the sense in which an Englishman residing in England would use it. From the Indian point of view, the phrase 'Near West' would be correct.

[3] Report of the Trade Mission.

IMPORTS OF COTTON PIECE-GOODS

Country	Imports in thousand £	Imports in thousand yds.	Share of India in thousand yds.	Percentage share of India
Persia	4,062	1,20,600	50,075	42
Iraq	1,506	63,626	23,243	37
Syria	2,528	65,925	2,926	4·4
Turkey	7,600	...	...	...
Egypt	7,513	2,61,115	1,280	0·5
Sudan	871	43,508	1,957	4·5
Aden	217	73,731	6,616	9·0
Kenya and Uganda ...	1,124	37,090	5,578	15·0
Tanganiyaka ...	1,007	37,130	9,455	26·0
Zanzibar... ...	101	5,613	1,551	28·0
Port. E. Africa	636	13,659	10,339	76·0
South Africa ...	4,344			0·6

The following table[1] gives the share of India in the imports of yarn by these countries.

FIGURES IN THOUSANDS OF LBS.

Country	Total imports	India's share	Percentage
Persia	5213	2249	43
Iraq	1034	961	93
Syria	6303	not specified	50
Turkey...	—	—	25/30
Egypt	6807	4418	65
Port Sudan	32	20	62
Aden	3075	2783	91

(other countries consume little or no yarn)

[1] Report of the Trade Mission.

According to the Trade Mission, no serious organised effort has been made so far to study the requirements of these markets. Those countries in which Indians have settled have taken Indian cotton goods owing to similarity in demand. It is high time that some organisation should be set up to co-ordinate the present methods. It has been suggested that the mill-owners should form a powerful export selling organisation, through which cotton goods should be sold abroad. This organisation should have branch offices or agents in areas where there are potentialities of trade. The same organisation might be used for the purchase of raw cotton in some of these countries, as is done by Japanese merchants.

The Mission has also recommended the appointment of three Trade Commissioners to be in charge of different market areas as under :—

(1) at Alexandria for Egypt, the Levant, Iraq and Persia ;
(2) at Mombasa for Kenya, Uganda, Tanganyika and Zanzibar ; and
(3) at Durban for S. Africa, Portuguese E. Africa and Rhodesia.

The officers of the Export Marketing Organization and the Trade Commissioners are expected to work in close co-operation.

SECTION III. INDIAN COTTON INDUSTRY UP TO 1914

EARLY HISTORY

To those who are accustomed to connect the growth of the cotton mill industry in India with Bombay, it may be surprising to learn that the first cotton mill in India was started in Bengal in 1830. But we do not hear of great progress after this until, more than twenty years later,

Cowasji Nanabhoy Dawar erected a spinning mill in Bombay in 1851. The actual working of the mill was delayed up to 1854, but since then the prosperity of Bombay has been closely linked up with that of the cotton industry. The beginning of the modern industrial evolution of India may also be dated from this time.

For the sake of convenience of study, the history of the industry may be divided into four periods each of which is marked by peculiar characteristics. The first period, 1851 to 1878 is one of slow growth, and records the effects of the American Civil War on the Indian Industry. The second period, 1878 to 1900 sees the growth of the industry in the interior of the country, coupled with a powerful agitation in Lancashire against the rapid progress of the Indian industry. The close connection between the fortunes of the trade in cotton and cotton goods and the exchange policy of the Government is also noticed during this period. The outbreak of plague at the end of the last century, and the beginnings of cotton industry on modern lines in the Far East are among the other factors which have to be taken into account during this period. The third period, 1900 to 1914 is characterised by the loss of the yarn trade with China on the one hand, and by the growth of the weaving industry on the other. The fourth period from 1914 up to the present day records the effects of the war and the present depression, which has led to the demand for the protection of the industry against foreign competition. We propose to discuss the developments in the first three periods in this section, those in the fourth period will be considered in the following section.

INDIAN COTTON INDUSTRY, 1851-1878

At first the progress of the industry was very slow. By 1860, there were only three mills in Bombay, but during the years that followed, the industry received an impetus

on account of the American Civil War. It is sometimes wrongly supposed that the progress of our industry was checked by the American War. [1] It is true that the parties that immediately benefited from the event were those engaged in the cultivation and export of raw cotton, for which there was a phenomenal demand from Lancashire as the latter's supplies from America were not forthcoming due to the Civil War. But Indian manufacturers of cotton goods were also at an advantage and got a good share of the new wealth that had poured into the country. [2] The money made in the cotton boom was invested in various new concerns ; the floatation of companies even for speculative purposes had become possible. The new cotton industry got a share of this additional capital, and we find that the number of mills had risen to 10 by 1865. But as is usual with all periods of boom this was followed by a severe depression, which though on the one hand proved the strength of the cotton industry, on the other, prevented its growth. The strength was shown by the fact that, whereas many other new concerns met with the inevitable fate, the cotton mills continued to exist. The progress of the industry was however checked, because more capital was not forthcoming, and the number of mills in Bombay remained the same till 1869. After this, the progress was rapid, so that by the end of this period the number of mills was 53, with nearly 13 lakhs of spindles and ten thousand looms. The predominance of spinning over weaving was a characteristic feature of the industry from the beginning, and as we shall see later it was so until 1900.

The other feature of the industry with which we are familiar was also in evidence at this stage, namely, the localisation of the industry in the City and Island of Bombay. Out of 53 mills in 1878, 32 were located in Bombay

[1] Cf. Economic conditions in India by P. Pillai.

[2] Cf. A Chapter in the Financial History of Bombay by Sir D. E. Wacha.

proper. Closely connected with this was the other characteristic of the industry, namely, its dependence on the export of yarn to the Chinese market, to the neglect of the home market. [1]

PROGRESS OF THE INDUSTRY DURING 1878 TO 1900

The progress of the industry during the second period can be seen from the following figures :—

Year	No. of mills	No. of spindles in thousands	No. of looms in thousands
1878	53	1290	11
1882	65	1621	14
1886	95	2262	17
1890	137	3274	23
1895	142	3650	31
1900	193	4696	40

When we remember that the industry suffered from great obstacles during the period, we shall realise the inherent strength of the industry on the one hand, and the possibilities of a much greater progress on the other. If the industry had been allowed to grow unhampered, the industrial advance of India by the end of the last century would have been so great that other competing countries, which entered the field then, would not have progressed in the manner they did. At the same time, with the firm establishment of the cotton textile industry, the industrial development of the country in other branches would have taken place much earlier, and the industrial history of India would have shown a much brighter record. A consideration of the obstacles will reveal the truth of these remarks.

[1] Cf. Review of the Trade of India, 1877 and 1878.

The Alarm of Lancashire :—The industrial leadership of England has been mainly due to the great advance of her cotton textile industry, and the application of the knowledge and the experience gained in the cotton industry to other industries in course of time. With an assured supply of the raw material, and with an unlimited market within the country itself, India is better situated for the development of the cotton industry than England herself. With the decline of the hand-spinning and hand-weaving industry, enterprising Indians in Western India tried to import and make use of the industrial technique of England for the development of the cotton mill industry in India. In spite of the want of adequate knowledge of modern industrial technique and organization, they succeeded because of the great natural factors that were in their favour. But the success of such an industry was bound to be an eyesore to the cotton industry in Lancashire, which depended a great deal on the exports of cotton goods to India and the Far East, and which had ambitions to grow more by capturing the Eastern markets as much as possible. The jealousy thus aroused resulted in an organised campaign against what were supposed to be the undue advantages of the rising industry in India. In consequence, we had the gradual removal of the import duties on cotton goods, and when at a later date such duties had to be reimposed for the purposes of revenue, they had to be accompanied by an excise duty, of equal amount on the production of cotton goods in India.[1] The other effect was the passing of factory legislation in India in 1881, regulating the hours of work and other things in connection with large industrial establishments, so that Indian mills might not have the advantage of longer hours of work. The effect was desirable in itself but the motive that led to it was not healthy.

[1] This will be discussed at greater length in the "Industrial Policy of India", Vol. 7 in this series.

The fall in the price of silver:—On account of the fall in the price of silver, the rupee-sterling exchange rate fell from 1873, and the fall was noticeable after 1878. Falling exchange gives an impetus to the export trade and acts as an handicap to the import trade, so long as the downward tendency continues. To the extent to which it must have acted as an obstacle to the imports of cotton goods from England to India, it was an advantage to the Indian mills. With the stabilisation of the rupee at 1s. 4d. by the currency legislation of 1893, and the subsequent measures that followed, this advantage disappeared.

There was, however, another consequence of the same legislation which had an adverse effect on the industry. We have seen that the industry in India was more concerned with spinning than weaving. The spinning industry, particularly in Bombay, depended a great deal on the export of yarn to China. Yarn was also exported to China by England. China was, however, a silver-using country, and the exchange between the two countries remained stable in terms of silver. But the exchange between England and China became gradually adverse to England, as was the case in her relation with India. In addition to her geographical position, this gave a special advantage to the Indian industry, as can be seen from the fact that in 1891, India exported more than 1700 lakhs of lbs. of yarn mostly to China. With the closing of the mints in 1893, the Indian currency was linked to gold, and her relations with the Chinese currency became unstable in consequence. The exchange rate between China and India which stood at $100 to Rs. 200, suddenly dropped to $100 to Rs. 192 in 1893. This resulted in a sudden and great fall in our exports of yarn by about 550 lakhs of lbs. in that year, and it was some years before the trade could recover.

Other factors:—The latter years of the last century witnessed the occurrence of two large famines and the

outbreak of plague. Apart from their effects on the life of the people, the cotton industry was seriously affected by the plague which drove away large numbers of workers from the mills in Bombay and paralysed the industry for some time. [1]

About the same time we had the beginnings of a cotton industry both in China and Japan, the growth of which was to have such profound effect on the trade and industry in cotton and cotton goods of our country. Instead of importing Indian yarn, the Japanese began to spin their own yarn and to import raw cotton from India for the purpose. [2] This development was to enable Japan in a few years' time to take a leading rank as a cotton manufacturing country, supplying not only her own requirements, but exporting large quantities of cotton goods to other countries including India.

Though the Indian mill-owners were not conscious of some of these new tendencies, which were going to affect them considerably, it must be said that they successfully pushed on their work in spite of the obstacles, which can be seen from the great progress of the industry during this period, as noted above.

THE PROGRESS OF THE INDUSTRY DURING 1900 TO 1914

The effects of the unfortunate events at the end of the last century gradually disappeared and the industry once again entered on its onward march from 1903. The demand for yarn from China was large during the years that followed and the Swadeshi movement gave an impetus to the local demand in 1907 and after. As against this, there were some adverse factors. There was a general depression in the world's cotton trade in 1907, which led

[1] Cf. Report of the Bombay Millowners' Association, 1896 and Administration Report of the Bombay Presidency, 1897.

[2] Cf. Review of the Trade of India, 1895-96.

to a fall in the price of yarn ; the demand for Indian yarn further suffered because of a large famine in China. The increase in the duty on the imports of silver in 1911, was also an obstacle to the trade with silver-using countries like China and Japan. But the same year witnessed a fall in the price of raw cotton and during the subsequent years till the outbreak of the War, the industry was in a prosperous condition. The following figures will give an idea of the state of the industry during this period :—

Year	No. of mills	No. of spindles in thousands	No. of looms in thousands
1902	192	5043	44
1905	217	5280	53
1909	263	6196	83
1913	271	6779	104

The weaving industry :—The foregoing figures show that the relative increase in the number of looms was much greater than in those of spindles. With the growth of the spinning industry in China, the demand for yarn from China was gradually falling and the trade with China had therefore assumed a speculative character. The dependence of the industry on such an unstable market was unfortunate, and an effort in the other direction was long overdue. The alternatives before the Indian mill-owners were either to scrap the number of spindles rendered superfluous by the contraction of the Chinese market or to expand the local demand for yarn. As the first alternative was out of the question, the mill-owners increased the looms and thus enlarged the capacity of the industry to consume the yarn that could no longer find a market in China. There was an additional demand for the Indian product due to the Swadeshi movement, and on the whole, the industry was turning from an unstable market abroad to a stable market at home.

Finer counts of yarn :—The second tendency during this period which arose partly from the first, was the increasing attention to the production of finer counts of yarn. The demand from China was for coarser yarn, the local demand, which got an impetus from the Swadeshi movement, was for comparatively finer goods. The following figures will show the nature of the tendency :—

Counts	Production of yarn in India in lakhs of lbs.	
	1903	1913
1 to 10	1140	970
11 to 20	1900	2040
21 to 30	630	1120
31 to 40	100	160
above 40	4	22

Expansion outside Bombay :—The third tendency was the expansion of the industry in centres other than Bombay, e. g. Ahmedabad and Cawnpore. The number of mills in Bombay was 82 in 1900, it increased to 85 in 1914. The great increase in the total number of mills during this period was, therefore, due to the erection of new mills in other places. The question of the localisation of the industry in Bombay at first, and its subsequent development in other centres needs consideration at this stage. The history of the industry during the war period and after has its own peculiarities, which cannot be appreciated unless the geographical distribution of the industry at the outbreak of the War is borne in mind.

LOCALISATION OF THE INDUSTRY IN BOMBAY

The localisation of an industry is a peculiar phenomenon of modern industrial organisation. The principal factor

which determines the localisation of an industry in a particular area is geographical. Climatic advantages, proximity to the sources of supply of the raw material as well as to coal or other sources of power, and to a large market, and the availability of cheap labour are among the factors that determine the localisation of an industry.

From this point of view, the localisation of the Indian cotton industry in Bombay is difficult to explain. The climatic advantage of Bombay is little. The atmosphere in Bombay has greater humidity, which is favourable to the production of yarn of finer counts ; but as we shall see later, the preponderance of higher counts is a feature of the Ahmedabad industry and not so much of Bombay. So far as the raw material is concerned, the distance of Bombay from the areas in which cotton is grown is in many cases greater than that of Ahmedabad. For coal, Bombay had to depend on supplies from long distances, and the modern electric power was then not known. For labour also Bombay had to depend, as now, on immigrants from other districts and the climate of Bombay is far from good for sustained work. The housing conditions in Bombay have always been an adverse factor from the point of view of the health of the labourer.

In spite of this the industry came to be localised in Bombay for many years, and if Bombay is still the principal centre of the industry there must have been some very powerful determining factors which led to this event. The explanation is to be found in the fact that when the cotton mill industry came into existence, the modern methods of finance and industrial organisation were not known in the country ; only few people in the larger cities were familiar with them. Banking facilities outside cities like Bombay were rare, and the few enterprising men who settled in Bombay, primarily for foreign trade, gradually learnt the way to utilise the funds of others for the promotion of large industrial concerns. The other factor of importance

was the fact that Bombay was an important harbour in the world trade. It was both easy to export and import through Bombay. For the purposes of the export of raw cotton, Bombay had already acquired the leading place, and the position was strengthened during the American Civil War, when Bombay had to export raw cotton worth more than Rs. 360 lakhs a year. Thus the cotton crop of the Province and other neighbouring areas was gravitating in large quantities to Bombay, and a special flow of cotton to Bombay for the purposes of the new mills had not to be created. Besides, the facilities of an important harbour enabled people in Bombay to import machinery and other requirements from England and other countries with ease.

Fortunately for Bombay, labour proved more mobile than capital, and large numbers of workers were gradually attracted to the mill area in Bombay, particularly from the Ratnagiri District and other parts of the Deccan.

The extent of the concentration of the industry in Bombay during the early period of its career on account of these causes will be evident from the following table :—

STATEMENT SHOWING THE DISTRIBUTION OF THE INDUSTRY

Year ending 30th June	Bombay Island			Bombay Presidency excluding Bombay Island			Outside the Presidency		
	Mills	Spindles	Looms	Mills	Spindles	Looms	Mills	Spindles	Looms
1865	10	2·50	3·4	3	0·35	0·20	..	..	..
1870	10	2·91	4·1	4	0·53	0·35	..	..	..
1875	27	7·52	7·8	9	1·33	0·56	..	..	..
1876	29	8·17	8·0	10	1·47	0·64	8	2·19	0·46
1880	32	9·88	10·9	10	1·67	1·54	14	3·07	1·21
1885	49	13·47	12·0	19	3·03	2·57	19	4·96	1·95
1890	70	18·96	13·8	24	4·55	3·95	43	9·23	5·88

N. B. The figures of 'Spindles' are in lakhs and of 'Looms' are in thousands.

THE DISADVANTAGES TO THE INDUSTRY IN BOMBAY

The concentration of an industry in a particular area favourable to it leads to certain permanent advantages which make for healthy progress. The concentration of the English cotton industry in Lancashire has resulted in the specialisation of production and the growth and consequent proximity of allied and subsidiary industries which, in the long run, reduce the cost of production. In England, spinning and weaving are separated from one another, being conducted to a large extent in different centres. A further specialisation is that different mills devote themselves to the production of different ranges of counts. In addition to this, the rise of the Engineering industry has enabled the Lancashire mills to obtain their machinery on the spot at a cheap rate. The growth of a large number of workshops for the repair of machinery and such other work has also contributed to economy and success.

Bombay has not been able to get such solid advantages from the very brilliant start made by her in the early history of the cotton industry in this country. Although in the beginning there was a rapid progress in spinning as opposed to weaving, the mills in Bombay adopted in course of time both the functions under one shed.

Specialisation in the production of a particular range of counts also did not result. Neither do we hear of the rise of the allied industries for the production of machinery or for its repair. The fact of being an important sea-port enabled Bombay to import machinery and other requirements at a cost cheaper than in the case of the up-country mills. The same advantage enabled Bombay to dispose of a good deal of her product by the export of yarn and piece-goods to neighbouring markets, particularly China.

This very advantage of a sea-port was going to come

in the way of further progress in the industry in Bombay proper. The rise of the cotton mill industry in other countries, particularly in China and Japan, at first restricted the exports from Bombay. But in course of time the Japanese industry found it possible to export her goods to Bombay, and to sell them in Bombay at a cheaper rate than the corresponding Bombay product. The mills in the interior of the country have been partially protected from such foreign competition by the additional cost of rail transport from the coast to the internal markets for the sale of such foreign goods.

The force of this tendency was not seriously felt till recently, but its effects were already in operation inasmuch as the growth of mills in Bombay after 1890 was very slow, whereas the growth in other parts of the Presidency, and even outside, was great as can be seen from the following table. [1]

	Bombay Island			Presidency excluding Bombay Island			India other than Bombay Presidency		
	Mills	Spindles	Looms	Mills	Spindles	Looms	Mills	Spindles	Looms
1895	69	21·2	20·2	33	5·82	7·19	46	6·00	7·93
1900	82	25·4	22·2	54	9·10	8·70	57	15·60	11·10
1905	81	25·6	28·0	59	10·75	11·01	57	15·30	11·14
1910	89	28·2	41·9	98	15·45	23·50	76	18·27	17·25
1915	86	29·9	51·8	98	18·09	33·50	88	20·40	22·62
1920	83	29·6	60·6	91	19·09	34·98	79	20·10	23·40
1925	82	34·6	72·2	124	23·69	46·51	131	46·87	35·48

N. B. The figures of spindles are in lakhs, of looms in thousands. The years 1895-1910 end on 30th June, and 1915-1925 end on 31st August.

INDIAN COTTON INDUSTRY OUTSIDE BOMBAY

The chief advantage of the circumstances mentioned above was availed of by Ahmedabad, where the first cot-

[1] The great rise in the number of looms as against spindles is also noticeable. Among other causes which restricted the growth of the industry in Bombay may be mentioned (1) heavy land rents and the consequent scarcity of suitable sites and (2) increase in Municipal taxation.

ton mill was started in 1859. Ahmedabad has great geographical advantages. It is near the large cotton producing tracts, and is able to command a large market in its neighbouring areas of Gujarat on the one side and Kathiawar on the other. With the development of railway communications, it is now in a position to send goods to distant parts of the country with ease, particularly to the inland provinces, namely, the U. P., the Punjab and the C. P. It has in addition been able to command a labour force of its own, which is more steady and less migratory than elsewhere. In spite of the disadvantage due to the great distance from which Ahmedabad has to obtain coal, machinery, mill stores and other things, the advantages were solid and of a permanent nature, and have contributed to a steady growth of the industry in Ahmedabad. At first the progress was slow. Though the first mill was started in 1859, there were only three twenty years later, and by 1881, the number stood at 9. By the end of the last century the number was 20, it rose rapidly thereafter and went to 47 in 1914.

Unlike Bombay, Ahmedabad has specialised in the production of higher counts for a long time. Till recently the bulk of the production in Ahmedabad consisted of counts 21 to 30. The production of lower counts from 11 to 20 advanced only after 1921.

Among other centres of the mill industry in the Bombay Presidency may be mentioned Sholapur, Broach, Baroda, Surat and Hubli. Geographical and other advantages seem to have determined the erection of mills in these centres.

The same factors which led to the spread of the industry in other parts of the Bombay Presidency also brought about the erection of cotton mills in other parts of the country which had some local advantages. Among other forces which gave an impetus to this tendency may be mentioned the growth of railway communications within

the country which facilitated the transport of machinery from the ports to the interior, of raw material and coal from long distances, and of the finished goods to the different markets. We also notice that a large number of mills have been erected in the Indian states. The chief additional reason leading to this event is the rigour of the Factory Acts in British India. The tendency was observable after the Factory Act of 1911 was passed, and the same is true of the Act of 1922 to a still greater degree.

SECTION IV. INDIAN COTTON INDUSTRY AND TRADE SINCE 1914

In view of the important developments that have occurred in recent years, we shall go into somewhat greater details than in the preceding sections, wherever necessary. Though the recent tendencies in the trade in cotton and cotton goods have been discussed in the earlier sections, we shall have to take into account those aspects of the trade in recent years, which are of importance in understanding the real position of the industry.

THE WAR PERIOD

Let us repeat that the main tendencies of the preceding period were : (1) increased attention to weaving and (2) a comparative fall of the predominance of Bombay by the erection of mills in other parts.

To appreciate the effects of the War on the industry, we shall consider its position in the beginning of the War and compare it with that at the end. [1]

[1] The tables and other data in this section have been mainly based on the Report of Cotton Tariff Board, 1927.

POSITION OF THE INDUSTRY IN 1912-13 (YEAR ENDING 30TH JUNE)

	Bombay	Rest of India	Percentage of Bombay to total
Number of mills working ...	77	159	32·6
Number of spindles in thousands	2806	3513	44·4
Number of looms in thousands	45	48	48·4
Number of spindles to looms	63	74	..
Mill production of yarn in lakhs of lbs.	3550	3280	52·0
Mill production of cloth in lakhs of lbs.	1380	1360	50·3
Exports[1] of yarn in lakhs of lbs.	2070		
Percentage of exports of yarn to total production	30·3		
Exports of cloth in lakhs of yards	1300		

POSITION OF THE INDUSTRY IN 1917-18 (ENDING 31ST AUGUST)

	Bombay	Rest of India	Percentage of Bombay to total
Number of mills working	86	163	34·5
Number of spindles in thousands	2882	3680	43·9
Number of looms in thousands	59	57	51·0
Mill production yarn in lakhs of lbs.	3060	3090	49·7
Mill production of cloth in lakhs of lbs.	1770	1720	50·7
Exports[2] of yarn in lakhs of lbs.	730		
Percentage of export yarn to total production	11·7		
Exports of cloth in lakhs of yards	1870		

[1] These figures relate to 1913-14, year ending 31st March.

[2] These figures relate to 1918-19, year ending 31st March.

We notice from these tables that whereas the number of mills and spindles does not show great increase the number of looms increases by 25 per cent. The fall in the exports of yarn and the demand for cloth at home led to this. The total imports of yarn and piece-goods suffered during the War, but those from Japan increased considerably. In 1918-19, the imports of yarn from Japan were 72 per cent. of the total, and those of piece-goods were 21 per cent. The corresponding percentages of the U. K. were 25 and 77.

Prices of raw cotton, yarn and cloth were not seriously affected in 1914 and 1915, but they rose in 1916 and advanced rapidly in 1917 and 1918 to spectacular heights. The year 1917 is considered to be the beginning of the boom period for the cotton industry, particularly in Bombay. Wages were first increased in Bombay by the grant of a war bonus of 10 per cent. in July 1917. This was raised to 15 per cent. in January 1918.

We thus see that the war period did not show great progress in the industry in spite of the impetus provided by the increased demand at home. The chief difficulty in the way of increasing production was that of getting new machinery. The important tendencies that were in operation during the preceding years, however, continued to operate.

THE POST-WAR BOOM

The post-war years 1919-20 are characterised by a spell of prosperity for the industry, in spite of the epidemic of 1918, and the failure of the 1919-20 monsoon. This will be borne out by the following table.

POSITION OF THE INDUSTRY IN 1920-21 (ENDING 31ST AUGUST)

	Bombay	Rest of India	Percentage of Bombay to total
Number of mills working... ...	83	162	33·8
Number of spindles (thousands)	3025	3820	44·1
Number of looms (thousands) ...	63	61	50·7
Number of looms to spindles ...	48	62	
Mill production of yarn in lakhs of lbs.	3490	3440	50·3
Mill production of cloth in lakhs of lbs.	2070	1960	51·3
Export[1] of yarn in lakhs of lbs.	880		
Percentage of exports of yarn to total production	12·6		
Exports of cloth in lakhs of yards	1870		

We do not find any increase in mills, spindles or looms due to the difficulty of getting new machinery. The total production of yarn and cloth, however, shows an increase, thus indicating that the mills were working to their full capacity. The relative position of Bombay remains the same, half the production being done in Bombay. The prosperity of the industry in this period is thus due not to any internal development but to world causes. There was a world boom in many industries, including cotton, soon after the termination of the War. Prices of cotton goods went on increasing, those of raw cotton were at the same time falling. The difference between the two was an advantage to the industry. The imports of yarn and piece-goods fell heavily, and the gap was made good to some extent by the local industry. The fall in imports was due partly to the Swadeshi movement and partly to exchange fluctuations.

[1] These figures relate to 1921-22 (ending 31st March).

Wage earners are the last to share in the prosperity of an industry. The 15 per cent. war bonus was increased to 35 per cent. as a special allowance because of high prices of food-stuffs in January 1919. In January 1920, this was increased to 55 per cent. for operatives on fixed wages and for winders, and to 75 per cent. for piece workers. In November 1920, these were further raised to 70 and 80 per cent. respectively. Hours of labour in cotton mills were reduced from 12 to 10 in January 1920.

So far as the share of the Indian industry in supplying the home market is concerned, it has been estimated that the position in 1921-22 was as under[1]:—

"In 1899-1900, Indian mills supplied 9 per cent. of Indian requirements of cloth against 64 per cent. met by imports and 27 per cent. by the hand loom industry. In 1921-22, the percentages were 42, 26 and 32. This is on the assumption that the exports of Indian piece-goods were all of mill manufacture—an assumption which is not entirely warranted owing to the large export of hand woven goods from Madras, but an allowance for these will only slightly affect the percentages."

THE DEPRESSION DURING 1923-1928

In order to realise the nature and extent of the depression which began in 1923 let us see the position of the industry in 1925.

[1] Report of the Indian Cotton Tariff Board, 1927, p. 12.

THE POSITION OF THE INDUSTRY IN 1925 (ENDING 31ST AUGUST)

	Bombay	Rest of India	Percentage of Bombay to total
Number of mills working	79	196	28·8
Number of spindles (thousands) ...	3378	4715	41·7
Number of looms (thousands) ...	71	78	48·0
Number of spindles to looms ...	48	61	
Mill production of yarn in lakhs of lbs.	2620	4240	38·2
Mill production of cloth in lakhs of lbs.	2000	2650	43·0
Export[1] of yarn in lakhs of lbs. ...	320		
Percentage of exports of yarn to total production	4·7		
Exports of cloth in lakhs of yards...	1650		

These figures are affected by the strikes in Bombay and Ahmedabad which occurred during the period. The figures for 1924-25 would give a more correct idea, but the tendencies are the same, and therefore we shall confine our attention to the above figures only.

The outstanding fact revealed by this table is the great expansion of up-country mills. The number of mills working in Bombay show a decrease of 4, in the up-country centres there is an increase of 34. At the same time, in 1925, 20 mills in up-country centres were idle and 43 were being constructed. In all other items Bombay loses its position ; in yarn the share of Bombay falls from 50.3 per cent. in 1921-22 to 38.2 per cent. in 1925-26.

[1] These figures relate to 1925-26 ending 31st March.

TENDENCIES DURING THE BOOM AND THE DEPRESSION

On the one hand we have seen that in the preceding period of boom, cost of production and wages increased, and new mills were erected. Undue optimism prevailed; for example, an up-country mill was floated in 1921 with an authorized capital of 50 lakhs of which 40 lakhs were subscribed. The mill began to work in January 1923; 95 per cent. of its machinery was second-hand, most of it being 30 to 60 years old. The mill had to be closed in July 1925 and was sold for Rs. 9 lakhs in August. As we have seen, in 1925, 20 mills were lying idle, and 43 were under construction in up-country centres. In Bombay the expansion took place in the form of an increase in spindles and looms. Besides this, there were changes in the managing agencies of mills in Bombay. This was done by floating new companies with increased capital in which an existing concern was absorbed. Certain proprietory concerns were converted into joint stock companies at inflated values. In brief, overcapitalisation was in vogue in one form or another. The extent of the boom and depression will be evident from the following tables :—

THE BOMBAY INDUSTRY

Year	No. of mills	Capital paid up lakhs	Profit or loss lakhs	Dividend lakhs	Percentage of dividend to paid up capital
1917	63	766	302	170	22·2
1918	64	810	228	192	23·7
1919	67	940	616	377	40·1
1920	80	1699	1011	598	35·2
1921	80	1783	846	535	30·0
1922	80	1796	387	294	16·4
1923	81	1919	33	94	4·9
1924	79	1928	-92	61	3·2
1925	79	1921	-134	43	2·2

THE AHMEDABAD INDUSTRY

Year	No. of mills	Capital paid up lakhs	Profit or loss lakhs	Dividend lakhs	Percentage of dividend to paid up capital
1921	50	302	252	183	60·7
1922	49	301	147	117	30·9
1923	47	286	35	35	12·1
1924	50	327	50	42	12·7
1925	48	326	56	47	14·3

UPCOUNTRY MILLS OTHER THAN BOMBAY AND AHMEDABAD

Year	No. of mills	Capital paid up lakhs	Profit or loss lakhs	Dividend lakhs	Percentage of dividend to paid up capital
1924-25	62	1262	125	88	6·9

These figures show that the industry in Bombay was suffering and that in Ahmedabad it was not in a bad position, though it could not hope to make the phenomenal profits of the boom period. The mills in other parts of the country were in a condition more similar to that of Ahmedabad than Bombay.

CAUSES OF DEPRESSION

Among the causes of depression, we shall first consider external competition, and particularly that of Japan, which is alleged to have affected our industry adversely.

Competition in Yarn:—On an examination of the figures, we find that the imports of yarn below 30s. from Japan have declined in recent years, and that those of 30s. to 40s. and 2/42s. have risen, which account for the total increase in the imports from Japan.

IMPORTS OF YARN FROM JAPAN : THOUSAND LBS.

Year	1s-15s		16s-20s	21s-25s		26s-30s
1920-21	..		4,511	10		1,984
1921-22	20		4,843	..		1,311
1922-23	2		12,363	42		1,708
1923-24	..		6,106	104		625
1924-25	15		5,928	49		453
1926		1,605			56	
1927		177			107	
1928		22			131	

IMPORTS OF YARN 31S-40S : THOUSAND LBS.

Year	From U.K.	From Japan	Percentage share of U. K.	Percentage share of Japan
1920-21	4,502	9,337	32·4	67·2
1921-22	12,073	6,888	63·4	36·2
1922-23	10,747	10,241	51·0	48·6
1923-24	3,085	9,838	23·8	76·8
1924-25	2,184	19,183	10·2	89·7
1925-26	1,594	20,053	7·3	92·5
1926	4,100	16,475	19·5	78·7
1927	3,710	11,704	14·8	46·6
1928	2,343	2,053	16·9	14·8
1929	3,190	2,397	20·0	15.0

IMPORTS OF YARN : 2/42S. THOUSAND LBS.

Year	From U.K.	From Japan	Percentage share of U.K.	Percentage share of Japan
1920-21	1,484	1,680	46·6	52·8
1921-22	3,809	1,125	76·6	22·6
1922-23	2,877	1,185	70·8	29·2
1923-24	1,037	2,377	30·2	69·2
1924-25	1,249	3,689	24·8	73·4
1925-26	609	4,570	11·7	87·5

It has been found in practice that the market price of Indian mill cloth is influenced by that of imported cloth, because the latter is cheaper taking quality into account. This is so even when the foreign cloth is not in direct competition with Indian cloth because of difference in quality. This can be explained by the law of substitution. If for a given price, people can get superior quality of foreign cloth, they are likely to prefer it. The Indian cloth must, therefore, be sold at a lower price if it is to find buyers. If this price happens to be below the cost of production, the industry will suffer.

If we consider the prices of yarn in the Bombay market, we find that for counts below 30s. the prices of Indian and Japanese yarn are moving together, the price of the latter being slightly higher to allow for the cost of transportation. This does not show which determines the price; but imports of Japanese yarn over 30s. do influence the price. In 1925-26, they amounted to 200 lakhs of lbs. which was equal to the Indian production of the same counts in the same year. In the absence of full details of prices and costs, it has been found necessary to resort to another method. The quotation for 32s. Japanese yarn on 31st December 1926 was As. 13 per

pound, and that for 32s. Indian on the same date was As. 11. Japanese yarn of this quality is manufactured from American cotton and is superior to Indian yarn, which is made out of Indian cotton. The Tariff Board obtained figures from an efficient Indian mill to find the cost of manufacturing Indian yarn on this date, and this worked out at As. 12.9 per pound. In other words, Japanese yarn of 32s. was being sold in the Indian market at a price which was equal to the cost of production of Indian yarn of 32s. which would be even then inferior in quality ; and this price makes no allowance for freight or depreciation. Because of inferior quality, the Indian product has to be sold at a loss, that is, at As. 11 per pound. There is a definite relation between yarn of different counts, and a decrease in the price of one quality, will be reflected in that of another. This shows that the competition of Japanese yarn, though obviously effective in 30s. to 40s., is having a depressing effect on the entire spinning industry. This is supported by the fact that spinning mills are comparatively in a worse position.

Competition in piece-goods :—India imports perhaps the largest variety of piece-goods, and it is difficult to get exact information regarding each variety, its quality and price, to be able to compare it with the corresponding Indian product. The Millowners' Association was not able to supply this data to the Tariff Board. The Board, however, made special enquiries from different sources and compiled a table of relative prices of certain classes of goods in which Japan competes. The following is an abridged form of this table[1] :—

[1] Cotton Tariff Board, Report, p. 49.

Class of Goods	Counts		Cost per piece	Expected[1] Selling price	Japanese Sale price
	Warp	Weft	Rs. As. Ps.	Rs. As. Ps.	Rs. As. Ps.
Drill	14s	15s	8- 6- 5	9-12- 4	9-13- 7
"	15s	15s	9-10-11	11- 6- 2	12- 8- 0
Shirtings	14s	15s	6- 7- 9	7- 9- 6	6- 8- 4
"	14s	15s	6- 6- 7	7- 8- 4	7-12- 4
"	15s	15s	6- 4- 4	7- 6- 1	7- 7-11
"	24s	22s	10-10- 0	13- 0- 0	13- 0- 0
"	30s	36s	11-13- 6	14-10-10	11- 4- 0
"	36s	40s	10- 0- 2	12- 3-10	10- 0- 0
"	40s	40s	11- 6-11	13-15-11	10-11- 0
"	40s	40s	11- 2- 1	13- 9- 5	10- 8- 0
"	44s	40s	14- 0- 5	17- 0- 8	13-10- 0
"	44s	40s	10-14- 2	13- 6- 1	11- 0- 0
"	40s	44s	11-11- 6	14- 5- 2	10- 4- 0
"	36s	46s	10-15- 8	13- 5- 1	11- 4- 0
Dhoties	36s/2/40s	40s	2- 6-10	2-14- 8	2-14- 0
"	36s/2/24s	40s	3- 6-11	4- 2- 0	3- 8- 0

After considering these figures in detail, the Tariff Board came to the conclusion that "the Japanese manufacturers are supplying long-cloth and shirtings, which are only slightly inferior to Lancashire goods, at prices which are distinctly lower than those of the latter, and differ very little from the cost of manufacture alone of Indian goods, to which their quality is distinctly superior".

NATURE OF JAPANESE COMPETITION

Special advantages :—Among these may be mentioned (a) better climate which has an effect on the efficiency of labour, (b) social conditions which allow the employment

[1] This includes a return of 8 per cent. on capital at existing replacement prices and an allowance of 5 per cent. for depreciation of machinery, and of 2½ per cent. for that of buildings.

of female labour to a much greater extent than in India, (c) organized buying of raw cotton both in America and India, (d) skill in mixing the two cottons, and (e) cheap freight. The total freight on both raw cotton and piece-goods from India to Japan and back is 4.1 pies per pound, which is the same as the freight on piece-goods alone per pound from Bombay to Sholapur, 283 miles away.

Exchange :—There were two ways in which Japan got an advantage from exchange fluctuations. The fall in the value of the yen during 1924-25 gave an impetus to exports from Japan. But by the time the Tariff Board considered the question, things had become normal. The other advantage which Japan got was from the higher gold value of the rupee which occurred during this period ; this advantage has, however, been shared by Japan along with other countries, and may be considered separately.

Labour Conditions in Japan :—The Washington Conference of 1919 passed certain conventions which have been ratified by India, but not by Japan. Hours of labour in industrial establishments were to be limited to eight hours per day and 48 per week, exception being made for Japan where they were to be 57 per week, and for India they were to be 60 per week. Employment of women at night was to be prohibited and the same was to be the case with young persons.

In Japan, most mills have double shifts and they work for about 19 to 22 hours every day. Night work for females and boys under sixteen has been prohibited from July 1929. In spite of this, conditions of labour in Japan will remain inferior to those of India. There is no restriction of hours of labour for adult males ; and the hours for women and young persons can be extended by executive discretion.

The Tariff Board made certain calculations regarding the economies of double shifts in Japan, and arrived at the conclusion that the advantage was greater in the higher

counts, 30s. to 40s., and might be put at not less than 4 per cent.

State Aid :—Among the different forms of State assistance which the industry in Japan receives, we may note the following :—

(a) large shipping subsidies ; the cotton industry gets a good share which cannot be determined.

(b) consumption tax of 10 per cent. on textiles consumed in Japan, with a rebate on all cotton goods exported. This tax was abolished in 1926.

(c) "The Export Guilds Law" by which co-operation among exporters is encouraged. The guilds may take up the following[1]:—

(1) The export of goods handled by members of the guild.
(2) The keeping in custody, sorting, packing etc. of goods for export.
(3) Removal of bad practices in business.
(4) The investigation of foreign markets and the opening up of new ones.

(d) Guilds of Manufacturers of staple export commodities. They are to look after the following[2]:—

(1) The inspection of manufactured articles, and the inspection of materials or of the arrangement for manufacture etc.
(2) The establishment of equipment for the joint use of members and of other co-operative arrangements.
(3) Advice, investigation, research, etc.

Both classes of guilds are exempted from business and income taxes and are allowed special banking facilities.

Among other Government measures in Japan, the following may be mentioned[3]:—

[1] Cotton Tariff Report, p. 65.
[2] *Ibid.*, p. 66.
[3] *Ibid.*

(1) The collection and exhibition of samples of foreign goods which compete with Japanese products in overseas markets.
(2) Research and propaganda in regard to the improvement of the packing of exports.
(3) Subsidies towards the expenses of parties of commercial travellers sent to foreign countries.
(4) Subsidies for the establishment of commercial museums in foreign countries.

The conclusion of the Tariff Board on the question of Japanese competition is that it is responsible for the depression in the Indian cotton industry, chiefly in Bombay. They hold, however, that there is nothing unfair in this competition except the inferior labour conditions in Japan. They do not attach sufficient importance to the unequal nature of the competition due to state aid to industries in Japan, which is absent in India. They ignore this point on the ground that such state aid is universally approved in modern times, and that the aid given in Japan is not special to the cotton industry but is available to all, though the cotton industry is in a favourable position to make the most of this aid. In order to equalise competitive conditions, the Board ought to have suggested measures of state aid to the industry in India of a similar character.

GENERAL CAUSES AFFECTING THE INDIAN INDUSTRY

Currency Changes:—The rise in the gold value of the rupee since 1923 and its subsequent stabilisation at 1s. 6d. gold corresponded with the period of depression in the cotton industry. Rising exchange works as an impetus to imports, and this tendency at a time when the industry was suffering from several adverse factors added considerably to the depression.[1] The currency changes of recent

[1] One of the members of the Tariff Board:—"While, therefore, I agree in the conclusion of my colleagues that stabilisation of the rupee at

years have created a deep sense of distrust in the mind of the people regarding the intentions of the Government, and the want of confidence that has resulted goes a long way in adding to the depression on the one hand, and in preventing early remedies from being taken on the other.

Overcapitalisation :—We have already seen the extent of overcapitalisation which took place in the industry during the boom period. This is true more of Bombay than of other centres, which were not affected to this extent. This need not be considered a direct cause of depression because even if capital be smaller, mills may not be able to pay dividends under depressing conditions. But overcapitalisation did add to the intensity of the depression, because if this had not been done, the industry would have had larger reserves and depreciation funds at its disposal, and would thus have been in a stronger position to meet adverse conditions.

Dividends in the boom period :—The figures given above do not show the extent to which dividends had been increased during the boom period. In 1920, 35 companies which had 42 mills under their control, declared dividends of 40 per cent. and more ; of this, 10 companies with 14 mills declared 100 per cent. and two mills paid 200 per cent. These unduly high profits on the one hand increased optimism and speculation, while on the other it decreased to that extent the possible strength of the reserves.

The Managing Agency System :—This system has its origin in the ability of certain parties to supply financial help to industries. The managing agents supply not only a part of the fixed capital when the company is started,

1s. 6d. coming as it has done at a time of falling prices has rendered the problem presented by the disparity between prices and wages in the industry somewhat more pronounced, I also think that it has had both a direct effect on the condition of the industry and its ability to compete in foreign markets and an indirect effect by reducing, to some extent, the purchasing power of the agriculturist".

but also arrange for the working capital from time to time. This is at once a source of strength and weakness for them. So long as they are able to supply the finance, they will be in a position to dominate the concern, but they will lose their control if they find it difficult to arrange for the finance, which is a peculiarity of times of depression. This task becomes highly difficult and complicated, when several mills are under the control of one managing agency. Two firms of managing agents in Bombay control 23 out of 83 mills in Bombay. They account for half the paid up capital in the Bombay mills. In Ahmedabad, the practice is different. Very few agents have more than one or two mills to manage. Besides, unlike Bombay, the offices of the agents are on the mill premises in Ahmedabad, which conduces to personal supervision by the agents and therefore better management.

The Directors of the mill companies are generally puppets in the hands of managing agents. Most of them have few qualifications to do the work and they usually take no active part in the work. Out of 175 Directors of mills in Bombay, only 11 were found to have received practical training when the Tariff Board investigated the problem. Of these 11, four were directors of only one mill, which happened to be the most successful mill in Bombay. [1]

The hereditary principle by which the managing agency passes from father to son is another cause of weakness in the management. At the same time, complaints regarding malpractices are not rare, though it is difficult to prove them.

Some of the weaknesses are mentioned not as direct causes of the depression, but as those which naturally come to the forefront at such times and make it difficult for the industry to resist the effects of the depression.

Finance :—Mills as well as dealers in piece-goods find it difficult to obtain finance in a period of depression.

[1] Cotton Tariff Report, p. 88.

Short-term deposits for six months or a year are taken by mills, particularly in Ahmedabad, from private individuals. Cash credits are arranged with banks on securities. Both these matters become difficult in times of depression ; depositors take away their money ; banks ask for more security or reduce the credit because of falling prices. The parties are sometimes forced to sell off their stocks at low price, which affects the industry as a whole. Thus this difficulty of obtaining finance adds to the depression.

Export Trade :—We have already seen the effect of the loss of the export trade in yarn on the Bombay Industry. The export trade in piece-goods which has come into existence in recent years has not yet developed sufficiently to compensate for the loss of the former.

Internal Competition :—We have also seen that production in the up-country mills has increased in recent years, and the share of Bombay has gone down considerably. This competition at a time when the Bombay industry is in need of a market at home to make up for the loss of the Chinese market makes its position precarious.

Lack of attention to up-country markets :—(a) *Yarn.* Without reference to the requirements of the market, Bombay mills have continued to turn out yarn of lower counts, mostly up to 20s. They produce some quantity of 20s. to 30s. but very little above 30. Ahmedabad excels in the production of higher counts. There is another important factor, which goes against Bombay. The Bombay mill production of cloth was 76 per cent. of that of yarn in 1925-26, whereas in Ahmedabad it was about 103 per cent. This shows that whereas Ahmedabad imports yarn for manufacture in addition to her own production, Bombay has to depend on the sale of her yarn. The depression in yarn being greater than in cloth, Bombay is hit to that extent.

(b) *Piece-goods* :—A detailed consideration of the production of piece-goods in Bombay shows that, Bombay

has neglected most of the up-country markets, e. g. the dhoti market in Bengal and the market for bleached and coloured goods in the Punjab. The Tariff Board observes in this connection : "We cannot but think that greater attention to diversification of production, more direct contact with the up-country consuming centres and greater alertness on the part of commission agents would have mitigated to some extent the severity of the depression in Bombay".

High Cost of Labour in Bombay :—We saw that wages were increased by 70 per cent. for ordinary workers, and 80 per cent. for piece workers by November 1920. In 1924, the bonus of one month's pay every year, which was a feature of the boom period was discontinued, and this led to a strike in January 1924, which was unsuccessful. In September 1925 the millowners tried to reduce wages by $11\frac{1}{2}$ per cent. This was followed by a strike for $2\frac{1}{2}$ months which came to an end after the removal of the excise duty. If we take the reduction of hours from 12 to 10 into account, the wage increase may be put at 100 per cent. Wages in Ahmedabad did increase, but not in the same proportion. Exact comparison is difficult, because detailed data are not available.

High Local Taxation :—In Bombay, rates and taxes and water charges are high compared with Ahmedabad and other centres. This must have added to the effects of the depression.

THE POSITION OF THE INDUSTRY, 1929

We have so far considered the more important features of the industry. In order that we may have a grasp of the position of the industry in 1929, we give below a few tables, which speak for themselves :—

Table I.

SPINDLES AND LOOMS IN THE PRINCIPAL[1] COUNTRIES OF THE WORLD PRODUCING COTTON GOODS IN 1929

	Spindles (lakhs)	Looms (thousands)
India	88	175
U. S. A.	362	736
Great Britain	591	740
Germany	111	250
Japan	65	81
China	36	30

Table II.

PROVINCIAL AND STATE DISTRIBUTION OF THE INDIAN COTTON TEXTILE INDUSTRY, 1929.

Provinces	No. of Mills	No. of Looms	No. of Spindles
Bombay	180	1,12,813	55,83,131
Madras	24	5,264	6,93,844
U. P.	24	8,564	6,61,824
Punjab and Delhi	9	3,331	1,34,538
Bengal and Assam	15	4,134	3,58,336
C. P. and Berar	12	7,105	3,62,732
Rajputana	5	1,033	57,536
Indian States:— Including Hyderabad, Central India, Southern Mahratta Territory, Mysore, Baroda, Kathiawar, Cochin, Travancore and French Possessions also.	50	17,911	9,63,767

[1] Adapted from statistics given in the report of the Bombay Millowners' Association, 1930.

Table III.

DISTRIBUTION OF THE COTTON TEXTILE INDUSTRY IN BOMBAY PRESIDENCY, 1929

	No. of mills	Looms thousands	Spindles thousands
Bombay City	81	76·0	34,47
Ahmedabad	70	25·7	15,95
Sholapur District	9	6·0	3,20
Broach District	5	1·5	85
Surat District	10	0·896	33
Viramgam District	2	1·1	41
Kaira District	3	1·1	61
Southern Mahratta Country including Dharwar District	7	1·0	1,35·5
Baroda State	12	2·9	1,81·7
Kathiawar	6	1·4	87

Table IV.

PRODUCTION AND CONSUMPTION OF RAW COTTON IN INDIA[1]:-

	Year ending 31st August	
	1929	1928
	(thousand bales, 400 lbs. each.)	
Exports to U. K.	233	215
" " Europe excluding U. K.	1,429	1,277
" " Far East	2,189	1,614
" " other countries . .	82	34
Total	3,933	3,140
Home Consumption:-		
Mills	1,991	1,771
Extra factors or local . . .	750	750
Total	2,741	2,521

[1] *Ibid.*

Table V.

MILL PRODUCTION IN INDIA,[1] 1929.

	Bombay City and Island.	All-India.
Cotton consumed		
Bales of 392 lb. (thousand)	631	2,161
Yarn spun.		
Bales of 400 lbs. (thousand)	384	1,621
Cloth woven, crores of yards	54	189
Average number of hands employed (thousand)	107	347

THE STATE AND COTTON INDUSTRY

We do not propose to discuss the industrial policy of the Government of India under this heading; this important subject will be treated in a separate volume in this series. It will suffice if we note here the more important features of the attitude of the Government towards the industry during the period of its greatest difficulty.

Before the war, there was a revenue duty of $3\frac{1}{2}$ per cent. *ad valorem* on the imports of cotton manufactures in India. On account of the financial needs created by the war, fresh sources had to be found, and this duty was increased to $7\frac{1}{2}$ per cent. in 1917. The cotton excise duty was retained at the original level of $3\frac{1}{2}$ per cent. The war left huge deficits in the finances of the Government of India and efforts were made to fill the gap by additional taxation in 1920, when the import duty on cotton goods was raised to 11 per cent. These increases in the duty coincided with a period of prosperity in the

[1] *Ibid.* There was a strike in the mills in Bombay for four months during 1929.

industry and may have served as an impetus to the boom, which it enjoyed during this period.

When the depression began, it was accompanied by several other factors which increased its intensity. The first response to the agitation of the Millowners was the suspension of the cotton excise duty in December 1925. It was not imposed again thereafter. The situation of the industry was, however, growing from bad to worse and great fears were entertained about the alleged unfair competition of Japan. The Government of India were at last persuaded to make an enquiry ; a special Tariff Board was appointed for the purpose in 1927. The Board was divided in its recommendation and the Government were therefore not in a mood to take any action. After protracted negotiations, however, they imposed a small duty on yarn which was supposed to compete with the Indian product. This was done in September 1927, the import duties on mill-stores and machinery were abolished from 1st October 1927.

As suggested by the Tariff Board, efforts were made to introduce economies by certain mills in Bombay. This led to a prolonged strike in 1928 on the part of the mill workers in Bombay. The Fawcett Enquiry Committee which went into the causes of the trouble suggested several changes which would bring about harmonious relations between capital and labour. Before action could be taken on the report of this Committee in 1929, another strike took place in Bombay on the ground of alleged victimisation of workers in certain mills. The issues were complicated at a later stage. The Government put the machinery of the Trade Disputes Act in operation and the Pearson Court of Enquiry was appointed in 1929 to consider the situation. In the meanwhile, however, most of the labour leaders had been arrested on political grounds, and the organisation of the labourers suffered considerably, so after a time they returned to work.

While the industry in Bombay was passing through these troublesome periods, a Trade Mission [1] to the Near East [2] and Africa was sent in 1928 by the Government of India, as recommended by the Tariff Board. We have already noted the more important recommendations of this Mission; action has, however, not yet been taken on them.

The position of the cotton industry was known to be in such a critical condition, that after repeated appeals, the Government of India had to accept the desirability of taking some bolder action. The only effective way was to give protection to the industry by increasing the import duty. This raised the question whether the increased duty should be *ad valorem* or specific. Once again the action was delayed pending an enquiry into this problem, which was entrusted to Mr. Hardy. The Hardy report favoured *ad valorem* duties, and hence the nature of the increased duties in the Budget of March 1930.

The Finance Member proposed along with the budget that the revenue duty on cotton goods should be increased from 11 to 15 per cent., and that an additional protective duty of 5 per cent. should be imposed on goods of non-British origin. This proposal raised delicate constitutional issues. It was ultimately decided to accept the proposal with the difference that plain grey goods of British origin which competed with Indian production were to pay the protective duty. [3]

[1] Dr. Meek, Director-General of Commercial Intelligence, and Mr. Maloney, Secretary, Bombay Millowners' Association, were the members.

[2] 'Near East' signifies countries in the near east of Europe. From our point of view the phrase 'Near West' would be more correct.

[3] The duties are as under:—

Cotton piece-goods

(a) plain grey, that is, not bleached or dyed in the piece, if imported in pieces containing any length of more than nine yards which is not divided by transverse woven headings,

(1) of British manufacture—15 per cent. or 3½ annas per lb., whichever is higher.

THE INDUSTRY IN 1930-31

Before the new duty could be of any effect, the situation in the country changed because of the civil disobedience movement which began about this time. The dislocation of trade and industry, and the general nervousness in the market which accompanied the early stages of the movement, increased the difficulties of the Bombay section of the cotton industry. The movement in favour of the boycott of foreign cloth and the encouragement of Swadeshi cloth, khaddar or mill-made, was bound to serve as a greater piece of protection than any action of Government. The Ahmedabad industry was in a better position to take advantage of the new situation, and it could capture the new market with ease. The Bombay mills also followed suit in course of time. It is estimated that the production of the Indian mill industry during this year will reach record figures. We are too near the event, however, to judge the full significance of the changes that are likely to come over the industry.

The surcharge of five per cent. added to the existing general duty including that on cotton piece-goods in the budget of 1931-32, will enable the local industry to compete more successfully with imported goods. The combined effect of the protective duty of 1930, of the surcharge of 1931 and of the Swadeshi movement was reflected in the optimistic tone of the proceedings of the Millowners' Associations of Bombay and Ahmedabad at their annual meetings held recently. One important feature of the increased production of piece-goods is that a larger quantity is being made from imported cotton in order to cater for the demand for goods of higher counts.

(2) not of Br. manufacture—20 per cent. or 3½ annas per lb., whichever is higher.

(b) others—

(1) of British manufacture—15 per cent.

(2) not of British manufacture—20 per cent.

HANDLOOM WEAVING INDUSTRY

The growth of the cotton mill industry in India naturally affected adversely the cottage industry which in the past was the glory of this country. This does not, however, mean that the hand-spinning and hand-weaving industries have entirely died out. Statistics to prove the extent and condition of the handloom industry are not easily available ; figures for the years prior to 1896 are non-existent. Some idea of the condition of the handloom industry can be had from the following table :—

HANDLOOM CONSUMPTION OF YARN : (1896 TO 1929)[1]

Average for	Handloom consumption of yarn (lakhs of lbs.)	Mill consumption of yarn (lakhs of lbs.)
1896-1901	21,37	84,64
1901-1906	23,12	92,48
1906-1911	25,88	103,53
1911-1916	27,12	107,68
1916-1921	21,94	87,76
1921-1926	29,60	118,48
1926-1929	30,86	123,46

There has been an increase during the last thirty years, and this increase is likely to continue in view of the Swadeshi movement. The figures of the mill-consumption of yarn give a comparative idea ; the increase in this does not show that the interests of the power-loom and the handloom are antagonistic, and that progress in either of them can only be at the expense of the other. In fact these figures show that in spite of the competition from imported as well as locally manufactured mill products, the handloom weaver has persisted ; in other words, handloom weaving has a special sphere of its own. To a certain extent the development of mechanical spinning has en-

[1] Quoted by Richard Gregg in his Economics of Khaddar, p. 159.

couraged the handlooms by supplying yarn of uniform strength and quality which removes the difficulty of handloom weaving, and assures a uniform standard of production. Even to-day "out of the total consumption of cloth in India of about 5000 million yards, nearly 25 per cent. is still supplied by handlooms, 40 per cent. by the mills and about 35 per cent. by foreign countries."[1]

There can be no doubt therefore about the strength of the handloom industry, and it should be added that it deserves every encouragement in the interests of the large masses of the Indian population. The Department of Industries of the various Provincial Governments are doing their bit, and a non-official agency is also in the field in the shape of the All India Spinners' Association. Indeed, the credit of nursing this industry in recent years and clarifying the popular delusions about it, must go to Mahatma Gandhi and his disciples. They have brought a well organised aid to the industry by opening sales depots, production centres and training schools, by supporting workers and by proclaiming the ethical and national aspects of the handloom production. They do not claim that hand-spinning will satisfy the economics of "getting rich", but in the words of Mahatma Gandhi "that economics is untrue which ignores or disregards moral values".[2] The sole claim they advance on its behalf is that "it alone offers an immediate, practicable and permanent solution of that problem of problems that confronts India, viz., the enforced idleness for nearly six months in the year of an overwhelming majority of Indian population, owing to lack of a suitable supplementary occupation to agriculture and the chronic starvation of the masses that results therefrom".[2] The result of their efforts can be seen in the following figures :—

[1] Quoted by Richard Gregg in his Economics of Khaddar, p. 159.

[2] See two articles by Mahatma Gandhi published in Young India of October 21 and 28, 1926, for illuminating arguments.

PRODUCTION OF KHADDAR[1]

	Rs.
1924	9,49,348
1925	25,12,510
1926	20,87,003
1927	23,45,014
1927-28	24,16,382
1928-29	31,55,487
1929-30	53,00,816

Though the figures are in rupees they give an adequate idea of the growth of the industry. It should be added that the actual production of the handloom must be larger than the figures show, because it is obviously difficult to have figures of production in remote and scattered areas.[2] It will suffice to conclude that these figures conclusively prove that the hand-spinning and hand-weaving industries have earned a definite place in the economic life of India along with the mill industry.

[1] Figures up to 1927 are taken from Gregg's Economics of Khaddar, page 124; the remaining figures are taken from the reports of the All-India Spinners' Association. The year of the Association is 1st October to 30th September.

[2] Cf. the following observation from the report of the All-India Spinners' Association for the year 1929-30:—"It need hardly be pointed out that these figures represent only the working of the Association and its affiliated organisations and have no reference to the large quantities of hand-spun and hand-woven cloth produced by the villagers for their own consumption and which is known to be far in excess of the production effected under the guidance and supervision of the Association."

CHAPTER VI

JUTE

EARLY HISTORY

We do not have sufficient evidence regarding the manufacture and use of jute in Ancient India, as in the case of the other textiles. This is due to the fact that jute is not in general use as apparel, that its production has been confined only to Bengal, and that there could not be any artistic use of jute which would attract attention, as in the case of shawls and carpets.[1] We have, however, ample evidence of the use of jute during the time of the Mughals, particularly Akbar.[2] In those days, bags of jute were required both for trade and for military purposes. Trade in grain, sugar and salt was not possible without such strong packing material as the gunny bag. Its use in the time of the Peshwas in the Deccan,[3] and by the East India Company during their early career has been recorded.[4] Babar is known to have used artillery for the first time in India, and its use was more frequent in later times. Sand bags were required for this purpose, and this stimulated the demand for jute. The extensive use of jute goods from the beginning of the last century is thus beyond doubt.[5]

The organisation of the industry at this time was simple. It was a cottage industry with the household as

[1] Cf. Watt's Dictionary of Commercial Products.

[2] Cf. Economic Annals of Bengal, J. C. Sinha; and India at the death of Akbar, Moreland.

[3] Letters from the Diaries of the Rajas of Satara and the Peshwas, Vol. II.

[4] Letter dated 21st September 1785 of the Court of Directors.

[5] Cf. "Description of Hindusthan", W. Hamilton, 1820, Vol. I, and "The History, Antiquities, Topography and Statistics of Eastern India", M. Martin, 1838, Vol. II.

the unit. Its vitality lay in the increasing demand for gunny bags for trade both internal and external. The following description of the nature of employment which this industry afforded is interesting :—

"This industry (the manufacture of jute) forms the grand domestic manufacture of all the populous eastern districts of Lower Bengal. It pervades all classes and penetrates every household ; men, women and children find occupation therein. Boatmen in their spare moments, husbandmen, palanquin carriers, domestic servants, everyone in fact, being Hindus or Musulmans who spin cotton only, pass their leisure moments, distaff in hand, spinning gunny twist."[1]

INTERNATIONAL TRADE

But a new factor now enters the field which disturbs the silent work of the Indian jute weaver. The development of means of communication enabled certain countries to specialize in manufacturing different kinds of goods and to depend for their food and raw supplies on distant sources. The interdependence of nations in economic matters which is a feature of modern economic life thus developed ; for example the harvests of Australia, China, India and America began to supply food to Europe. The heavy movements of grain and other similar commodities were not possible without a strong and cheap packing material. Jute cloth and bags served the purpose eminently, and during the first quarter of the last century, the Indian jute handloom industry found itself in a prosperous condition. We began to export large quantities of jute cloth and bags which were in great demand in foreign countries.

The export of raw jute from India was very small. In 1795, the first parcel of raw jute was despatched to England. But for a generation thereafter, the trade did not

[1] Fibrous Plants of India, Forbes Royle, 1855.

make progress. The new demand for jute goods, however, led to the rise of the jute manufacturing industry in Dundee from 1833, and we find in consequence that the exports of raw jute increased at a rapid rate. In 1829, we sent only 364 cwts. of raw jute; in the five years ending 1848, we sent on an average 2,34,000 cwts. of the same commodity. This large demand naturally led to an increase in the price of raw jute.[1] The rise was so great that it seriously affected the Indian handloom industry. This work was in the hands of poor men, who could not afford to buy jute at a high price. If the weaver did manage to do so, his cost of production of the finished article rose in proportion. His other cost was higher as he worked in an unorganised manner. He could not, therefore, stand the competition of Dundee goods, which now began to be exported to foreign centres in place of Indian goods. At the same time, the production and export of raw jute became a paying proposition and the attention of many people was diverted to that direction.[2]

Though the Dundee industry curtailed the external demand for Indian jute goods, there was a local demand which kept up the handloom industry for some time. The first jute mill was, however, started on the banks of the Hooghly in 1855, and this was followed by a gradual development of the mill industry. The price of raw jute increased still further, and the handloom weaver disappeared very soon.

It may be of interest to point out that whereas the handloom still persists in the case of cotton and predominates in the case of wool and silk, it disappeared in the case of jute, with the growth of the mill industry. The chief reason is the possibility of turning out goods of special colours and designs of particular artistic value which could be done only by the hand in the case of cot-

[1] Jute in Bengal, N. C. Choudhry, 1908.

[2] Report on the cultivation of jute in Bengal, H. C. Kerr.

ton, silk and wool; whereas in the case of jute no such work is possible. The production of sack cloth and bags admits of little variety or artistic development, and the power-loom could completely displace the handloom in their production. The Swadeshi movement and the khaddar propaganda do not affect the jute industry.

HISTORY OF THE JUTE MILL INDUSTRY IN BENGAL[1]

FIRST PERIOD, 1855-1885

It is convenient to discuss the history of the industry into three periods: (1) from 1855 to 1885; (2) from 1885 to 1914; and (3) from 1914 up to date. Each of these periods is marked by special characteristics.

The first mill was started by one George Auckland—a coffee planter in Ceylon, who, during a visit to Scotland in 1852, realised the possibilities of a jute industry in Bengal. He brought the requisite machinery to Calcutta with trained experts from Dundee and built a mill at Ishra near Serampore. "The Ishra Yarn Mills Co., Ltd." as it was then called is now known as "Wellington Mills". Unlike the cotton mills, the jute mills were started by Europeans, and they are, with a few exceptions, in European hands still to-day.

Because of the absence of trained workers, and the want of experience in a new venture, the pioneers had to face several difficulties. In view of this, the progress was slow in the earlier years. In course of time, with the gradual growth of the industry, an export trade in jute gunnies developed, and markets like Australia and some parts of Asia, where the competition from Dundee could not be strong, were approached with success in the beginning. The rise of the Indian exports soon came in the

[1] 'Romance of Jute' by D. R. Wallace gives an interesting account of the history of jute industry; the above account relating to the first period and partly the second is largely based on this work.

way of the progress of the Dundee industry.[1] The exports of jute goods which were valued at Rs. 20 lakhs in 1874 rose to Rs. 149 lakhs in 1883. The position of the industry at the end of the first period, that is, in 1885 may be shown thus :

No. of mills	24
Capital in lakhs of Rs.	129
No. of operatives	51900
Sacking-looms...	4900
Hessian-looms	1800
Spindles	131740

COMPARISON WITH COTTON INDUSTRY

By 1885, the number of cotton mills had increased to 81, while that of jute was only 24. The average size of the jute mill was, however, larger. The existing mills tried to expand their own work in order to eliminate the competition of possible new comers. The comparative slow growth in jute mills can also be partly explained by the absence of indigenous enterprise. An obvious limitation to the growth of jute mills lies in the fact that stocks of jute goods unlike those of cotton goods are carried over from year to year by the consumers, as they are more durable. The demand for new jute goods is, therefore, limited by the available supply already in use. The competition of Dundee was another factor which limited the progress of the Indian industry.

SECOND PERIOD, 1885-1914

The chief characteristic of this period is the tendency towards greater output of hessian cloth in place of gunny bags. Countries like U. S. A. and Germany began to import Hessian cloth from Dundee or Calcutta, and manufactured gunny bags for themselves. To meet this de-

[1] Cf. Review of the Trade of India, 1875-76; and Decennial Report, Moral and Material Progress of India 1882-83, p. 210.

mand, some change in the machinery was necessary. A greater number of Hessian looms was required. The consequent increase is shown in the following table :—

	Sacking looms	Hessian looms
1885	4900	1800
1901	8730	6600
1915	17750	22603

This abnormal growth was not without its difficulties. The foreign demand did not grow in proportion to the growth in production. The supply was often larger than the demand. The overproduction brought about a depression, which was accentuated by other causes. For example, the rise in the price of raw jute was accompanied by a steady price of gunnies.[1] This was partly due to the accumulation of stocks, and partly to the competition of Dundee ; the latter became keener when during this period the freight for raw jute from Calcutta to Dundee was considerably reduced.

The series of famines and epidemics during the decade 1891 to 1900 was also responsible for increasing the intensity of the depression. The export trade in rice, wheat and seeds was actually on the decline during these years, and this meant a smaller demand for gunnies. The demand for gunnies is thus closely connected with the agricultural production of the world and the nature of international trade. The outbreak of plague affected the labourers, who had to leave Calcutta in large numbers. In view of this, part of the machinery in the jute mills had to be kept idle.

On account of these causes, the growth of the industry was slow during the latter part of the last century. The number of mills which was 24 in 1885 increased to only

[1] Cf. 'Prices and Wages in India,' 1919.

29 in 1895. In course of time, as the causes of depression gradually subsided, the industry began to flourish, as the following figures will show :

Year	No. of mills	Looms '000	Spindles '000	Operatives '000
1901-02	36	16	331	115
1910-11	58	38	682	216
1911-12	59	33	677	201
1913-14	64	36	744	216

As already pointed out this progress was marked by the growth of Hessian looms.

COMPARISON WITH COTTON INDUSTRY

As we have already seen, up to the end of the last century, spinning and weaving were carried on in separate mills in the cotton industry. In jute, both the processes were carried on under one shed. This was due to the fact that whereas there was an export trade in cotton yarn, there was very little in jute yarn. The other point of interest is that the number of workers employed in a jute mill is larger than that employed in a cotton mill, having the same number of looms. The manufacture of jute involves several laborious operations and this explains the difference.

The depression through which the jute industry passed during this period taught the entrepreneurs a lesson in organisation. They found it necessary to adopt the total supply to the fluctuating demand, with a view to keeping the price steady. This resulted in course of time in a strong association of the jute mills and the combined efforts of the Association have gone far in helping the industry. Even in times of depression, no mill had to close down, even though it might have been running at a loss. This feature is absent in the Bombay Cotton Industry.

THIRD PERIOD, 1914-1930

The Crimean War and the American Civil War had given some impetus to the jute industry. This became more true during the last Great War. A heavy and active demand for manufactured jute goods for military and transport purposes came into existence. Sand and grain bags, gunny cloth and canvas were required for the army. Another consequence of the War was that the demand for raw jute from Germany and other continental countries stopped, and this gave a greater control on the raw jute market to the Calcutta industry. As against the enormous work thus created by the war, there were difficulties, which had to be overcome. The trade with the enemy countries was no more. The freight difficulties restricted trade even with neutral countries. The dislocation of the world's commerce had also a disturbing effect on the jute trade. The Indian government had to increase their revenue resources to meet the financial strain due to the war, and among the measures adopted was an export duty on raw and manufactured jute. In spite of these circumstances, we can say that the industry entered on a period of expansion and prosperity from 1914.

Arrangements were also made to meet the requirements of the British Government. The Jute Mills Association, for example, undertook at the request of the Commerce Member, to supply the English demand for Hessian cloth to the fullest extent.[1] Later a Jute Commissioner was appointed in 1916 to effect purchases of raw jute for the Dundee Mills. Next year, this was replaced by a system of making purchases in England from selected firms. Thereafter a Jute Controller was appointed whose duty it was to place contracts in India for the purchase of jute manufactures.[2] In 1917-18, the export of raw jute

[1] Review of trade, 1915-16.

[2] Handbook of Industries, Munitions Board, pp. 396-97.

was controlled. Export was not allowed to any country except the U. K. without the permission of the Chief Customs Officer. In consequence, the exports fell from 540 thousand tons in 1916-17, to 278 thousand tons in 1917-18. This was the lowest figure for the preceding 50 years. It may be observed, however, that the fall was partly due to lower production as well. The control on the exports of raw jute was removed in October 1918.

EXPORT DUTY

As already explained, an export duty on jute was levied from March 1916. The duty on raw jute was Rs. 2-4-0 per bale which was equal to 5 per cent. *ad valorem*. Manufactured jute was divided into hessian and sacking; the duties on them were Rs. 16 and Rs. 10 per ton respectively. Cuttings had to pay As. 10 per bale. In 1917, these duties were doubled and the fall in exports referred to above may partially be ascribed to these duties.

THE GROWTH OF THE INDUSTRY

The growth of the industry, notwithstanding the difficulties mentioned above, was steady, as the following figures will show :—

(FIGURES IN THOUSANDS)

Year	No. of mills	Sacking looms	Hessian looms	Spindles	Operatives
1913-14	66	15·8	22·3	744	212
1914-15	70	15·8	22·6	749	238
1915-16	70	15·9	22·6	812	254
1916-17	74	16·0	23·2	824	262
1917-18	76	16·1	23·4	834	266
1918-19	76	16·1	23·4	840	275

With the close of the war, the demand grew less. The manufacturing capacity of the industry had, however, increased, and there was some trouble in consequence.

As before, the mills agreed to work short time to tide over the difficulty. With the return of normal conditions, however, the demand grew, and the industry began to develop. The number of mills increased from 76 in 1918 to 89 in 1925, but declined to 61 on 1st January 1930.

EXPORTS

We have seen the close relation between the use of jute goods, and the progress of international commerce, which followed the Industrial Revolution in the West. For a time, Russian flax was in competition with Indian jute in Europe, but the supplies of Russian flax were cut off during the Crimean War (1854), and since then jute has obtained a firm footing as a necessary packing material for certain articles of trade. The exports of jute manufactures are thus linked up with the movements of the exportable surplus of the agricultural produce of countries like Australia, Canada, Argentine Republic and Egypt. The rise of the jute industry is in fact the outward visible expression of the rapid developments in international commerce.

EXPORTS OF RAW JUTE

The exports of raw jute owe their development primarily to the growth of the Dundee industry. As we have seen, by the middle of the last century, the handloom industry in India had suffered greatly, and the internal economy of certain parts of Bengal was undergoing a change. People found it profitable to cultivate jute and to export it in the raw condition. The cultivation of this important article was no longer determined by local demand, but by foreign demand. The increasing price offered for raw jute naturally brightened many a home in Bengal, which had engaged in this work. The following table shows the steady growth in the trade up to 1882.

Average of five years ending with	Export
	Cwts. Thousands
1832-33	11·8
1837-38	67·5
1842-43	117·0
1847-48	234·0
1852-53	439·9
1857-58	710·8
1862-63	969·7
1867-68	2628·1
1872-73	4858·2
1877-78	5362·3
1882-83	7274·0

SUEZ CANAL

The effect of the opening of the Suez Canal is obvious in the above figures. The exports of raw jute received a stimulus from the time of the Crimean War. But the stimulus was greater when the Suez Canal was opened in 1869. The effect was twofold. In the first place, it provided cheaper and quicker communication between the East and the West. Freight charges were reduced and this enabled the Dundee industry to expand. Another effect was that international trade by itself was greatly facilitated by the Suez Canal, and the increase in the volume of trade was bound to lead to a greater demand for jute goods. The Dundee industry was already firmly established, and could take advantage of this demand with ease.

LIMITATIONS

It was, however, not realised that there were certain limitations to the growth of the export trade in raw jute. In the first place, raw jute is cultivated only in a few districts of Bengal, and there are natural limits to its further extension. Secondly, the growth of the Indian jute mill

industry curtailed the exportable surplus. Sufficient attention was not paid to these factors, and the gradual development of the industry both in India and Scotland led to an increase to great heights in the price of raw jute. In spite of this, the demand was sufficiently strong and exports went on increasing up to the beginning of the war, though the rate of increase was now somewhat slower, as the following figures will show :—

Average of five years ending with	Exports lakhs of Bales of 400 lbs each
1884-85	22·1
1889-90	26·4
1894-95	29·2
1899-00	32·7
1904-05	36·7
1909-10	42·1

It may be pointed out that whereas manufactured jute had to pay duty in certain countries, particularly in U. S. A. and Germany, raw jute was admitted free. The demand from these other countries was an additional factor particularly since the beginning of this century.

EFFECTS OF THE WAR

The outbreak of the war, disturbed the trade both with the enemy countries and the neutral countries. There was in addition a system of control over exports which also restricted the trade. The exports of raw jute which were 49 lakhs of bales in 1913 went down to 29 lakhs of bales in 1915, and to 17.2 lakhs in 1918. After the close of the war, the exports recovered, but they reached the pre-war level only in 1928-29, because the Indian industry having progressed in the meanwhile, the exportable surplus was naturally restricted. The exports in 1925 were 38.2 lakhs of bales, and in 1928-29 they were 50.28 lakhs.

We have pointed out the limitations to the growth of exports. Though the growth was steady till almost the end of the last century, the limitations were bound to be felt with the development of the Indian mill industry. The needs of the industry in India had to be met first; these were growing; in other words, what was left after the local demand was satisfied could be exported. If the agricultural season was not good, the exportable surplus was bound to fall. Thus a fluctuating tendency was introduced in the export trade, which is visible in the following table :—

LAKHS OF BALES OF 400 LBS. EACH

Average of years	Production	Indian mill consumption	Exports
1896-1900	57·2	19·6	32·7
1901-1905	63·3	27·4	36·8
1906-1910	81·4	36·2	42·1
1911-1915	90·8	42·7	40·5
1916-1920	80·6	53·0	26·4
1921-1925	69·6	49·7	31·6
1925-1929	103·0	57·0	44·7

VALUE OF EXPORTS

Though there have been fluctuations in the exports of raw jute, as shown above, the value of the exports has on the whole shown an increase. This indicates the truth of the remarks already made regarding the great increase in the price of raw jute. The following figures are relevant :—

Average of years	Exports crs. of Rs.
1881-85	4·8
1886-90	6·3
1891-95	8·3
1896-00	9·3
1901-05	11·5
1906-10	19·4
1911-15	21·7
1916-20	15·2
1921-25	20·4
1925-29	31·9
1929-30	27·0

DISTRIBUTION OF THE EXPORTS OF RAW JUTE

The principal buyers of raw jute are those countries which have jute mills. The U. K. stands first, because of the Dundee industry. As we have seen, the export trade started because of the Dundee industry, and was for a long time monopolised by it. In course of time, other countries particularly Germany and the U. S. A. started jute mills, and encouraged the industry by protective duties. The following figures show the relative position of our jute buyers :—

EXPORTS OF RAW JUTE IN THOUSANDS OF BALES TO

Average of years	U. K.	Continental Europe	U. S. A.
1881-85	1550	104	63
1886-90	1715	285	120
1891-95	1620	712	140
1896-00	1630	1005	158
1901-05	1470	1347	260
1906-10	1605	1940	318
1911-15	1530	1641	337
1916-20	942	800	450
1920-25	650	1650	405
1926-28	928	2055	433
1928-29	1130	2721	525
1929-30	923	2374	445

These figures clearly indicate that the Dundee industry has remained stationary for the last 50 years, and that there has been a remarkable expansion in the industry in Continental Europe, since 1891. This demand is mainly due to the rise of a jute industry in Germany, and the use of better qualities of jute for carpets, curtains and rugs in France. The rapid recovery of the trade with Continental Europe after the war, shows the inherent strength of the demand. The trade with the U. S. A. though fluctuating in recent years, was uninterrupted by the war. In

fact, the war gave an impetus to this trade, in spite of the great local demand for jute during the war period. Recent tendencies show that continental Europe takes about half of our raw jute exports ; the U. K. taking only about 20 per cent. In former years the U. K. used to take about 70 per cent. The most important reason of this diversion is the growth of the jute industry in several European countries, and even in Japan as shown by the table below[1] :—

EXPORT OF JUTE MANUFACTURES

The trade in jute manufactures depends on the agricultural production of the world and its movement. The gradual growth of bulk handling of wheat and other grains by means of elevators reduces the demand for jute goods to some extent, but the difficulties of bulk handling have not yet been overcome. The connection between the demand for jute goods and the seasons is proved by the fact that a failure of harvests in the importing countries has always resulted in reducing their demand for gunnies from India. Within India itself, the demand for gunnies has fluctuated with the exports of rice, wheat and oil-seeds. The export of jute manufactures is naturally limited by local requirements, and we shall therefore study these in the first instance.

LOCAL DEMAND FOR JUTE GOODS

Jute bags are required for the internal movement and export of grain and oil-seeds. Jute cloth is required for packing cotton and raw jute in bales. On the whole, how-

[1] Percentage share of the different countries in the exports of raw jute from India :—

	1913-14	1928-29	1929-30
Japan		1.1	1.8
U. K.	38.9	23.4	18.3
U. S. A.	11.9	10.6	8.8
Germany	21.8	27.7	24.0
France	9.9	12.5	11.8
Italy	5.5	7.0	6.1
Belgium	0.5	5.9	5.1

ever, we consume only about one-tenth of the total number of gunny bags that we export, and our consumption of hessian and sacking cloth is smaller still. Exact information regarding the local demand for earlier years is not available; but the following table based on the annual reports of the Jute Mills Association will throw light on the recent position :—

EXPORTS OF JUTE BAGS AND CLOTH TO LOCAL AND UP-COUNTRY MARKETS FROM CALCUTTA

	BAGS		CLOTH	
Year	No. in lakhs	Value in lakhs of Rs.	lakhs yds.	Value in lakhs of Rs.
1919	974	459	34	83
1920	1038	483	53	76
1921	705	272	18	31
1922	577	215	13	26
1923	833	352	39	71
1924	949	419	44	76
1925	817	438	55	108
1926	795	411	54	105
1927	790	337	60	99
1928	711	291	44	81
1929	619	234	29	54

We find from these figures that the demand for cloth is small and that for bags is very fluctuating. An interesting feature of the demand for bags is that it is very active during certain months of the year, say from January to May; whereas the demand for cloth shows some activity during the close of the year. This is explained by the fact that movements of grain, oil-seeds, sugar etc. are great during January to May; similarly, the picking and bailing of cotton begins in the early part of winter in some areas and this leads to a demand for jute cloth during November and December.

FOREIGN DEMAND FOR JUTE GOODS

We have already referred to the trade in jute bags before the advent of the mill industry. We may have

some idea of the extent of the handloom industry from the following figures of export of gunny bags from Bengal in 1850-51.[1]

Country	No. of bags Thousands
U. K.	70
N. America	2290
Coromandal Coast	1955
Mauritius	673
Ceylon	357
Java	32
Peru	242
Malabar	2054
Total including other countries	9036
Total value	Rs. 21,60,000

If we take into account the limitations of handloom production and the difficulties of transport in those days, the above figures must be considered to be of great magnitude. As we have already seen, our exports to foreign countries suffered with the growth of the Dundee industry. The handloom depended on local demand for a time, till it was replaced by the Indian mill industry. Up to 1873, we did not export our mill goods in any appreciable quantity ; and though we began to export some goods by this time, the figure did not assume importance till about 1891. The following table shows the nature of our trade in gunnies since 1891, in quinquennial periods.

[1] Taken from "Romance of Jute" by Wallace.

EXPORT OF GUNNIES IN CRORES

	1891-95	1896-1900	1901-05	1906-10	1911-15	1916-20	1921-25[1]
	9·9	16·8	20·3	23·3	36·0	79·4	53·4
	10·6	16·6	23·0	25·7	29·0	80·5	38·7
	12·4	19·8	22·5	29·3	31·2	75·8	34·4
	13·1	16·8	20·6	30·0	36·9	58·3	41·4
	14·1	16·8	20·1	36·4	39·8	34·3	42·5
Average	12·0	17·6	21·3	28·9	34·6	65·6	42·0

We see from these figures that on an average there has been a steady growth with a sudden jump during the war period. After the war there has been a fall, but the figure is still higher than the pre-war figure. In spite of the growth thus indicated, we also find that from year to year there have been great fluctuations. Among the reasons for these fluctuations, the following may be mentioned. (1) The exportable surplus of bags depends on the local demand. When our exports of grain, oil-seeds and such other products increase there is a larger local demand for bags to pack the same, and this reduces our export of bags. The contrary effect takes place, when our export of other commodities is on a low level. (2) The foreign demand varies with the nature of the agricultural season in foreign countries. The failure of wheat crop, for example, in Australia would mean a reduced demand for Indian gunnies. (3) The competition of other countries which manufacture gunny bags has also some effect on the amount of our trade. The capacity of these countries to compete depends in turn on the export of raw jute from this country. This last factor is connected with the nature of the season, price, and local demand, which are all variable.

DIRECTION OF TRADE IN GUNNY BAGS

Australia happens to be the largest single buyer of our bags. Though our exports to Australia suffered to some

[1] The average for 1925-29 is 45.8 crores.

extent during the war, there has been complete recovery in recent years, as the following figures will show :—

EXPORTS OF GUNNY BAGS IN LAKHS

Year	Total exports	To Australia	Percentage
Pre-war average	3391	628	18·5
War average	6676	737	11·1
1920-21	5339	1011	18·9
1921-22	3867	635	16·4
1922-23	3442	712	20·7
1923-24	4137	899	21·7
1924-25	4251	799	18·8
1925-26	4250	796	18·7
1926-27	4491	965	21·4
1927-28	4631	866	18·7
1928-29	4976	910	20·5
1929-30	5220	730	13·9

The U. K. takes our gunny bags mainly for further export. She used to take 9 per cent. of our export before the war. During the war, she took 34 per cent. This was due of course to war requirements, and the export to U. K. has fallen in recent years. If we look at the figures on a continental basis, we find that our gunny bags are taken in all the continents ; the exports to Europe have fluctuated greatly whereas those to Africa have been very steady. The exports to Asiatic and American markets are neither very fluctuating nor very steady.

EXPORTS OF JUTE CLOTH

Whereas the export of gunny bags has been subject to fluctuations, that of jute cloth has shown a steady progress with only a few obstacles. The export of Hessian cloth which was small till 1895, grew readily thereafter. We have noted the increase in our Hessian looms after this period. The following table shows the growth of the trade :—

Average of years	Export of jute cloth lakhs of yards
1876-80	46
1881-85	64
1886-90	199
1891-95	542
1896-00	2228
1901-05	4811
1906-10	7701
1911-15	9933
1916-20	11997
1921-25	13125
1926-29	15680
1929-30	16510

The remarkable feature of the export is that the impetus which it got during the war has not ceased; the export has in fact increased still further after the war. It may be noted that whereas the export of gunny bags depends partly on local demands, it is not so in the case of cloth, local demand for which is comparatively small. Another important difference between the trade in cloth and bags is that while the latter are sent to several markets, the former is mainly sent to one large market, the U. S. A. This is the reason why the trade in cloth was not affected by the war.

The trade figures did not distinguish between Hessian and sacking cloth till 1911; we shall not observe the distinction, because most of the exports are of Hessian cloth of which the principal customer is the U. S. A. The U. S. A. has been taking about two-thirds of our jute cloth exports.[1]

[1]

Average of years.	Percentage of exports to U. S. A. on total.
1896-1900	67
1916-1920	60
1920-1925	71
1926-1929	66
1929-1930	65

The reason for the steady demand for Hessian cloth from the U. S. A. lies in the fact that the Americans have developed an industry for the manufacture of jute bags, in which they prefer to use our Hessian cloth. The cloth is also required for packing the large quantities of raw cotton produced in the U. S. A.

The Argentine Republic is another important buyer of our jute cloth, which as in the U. S. A. is turned into bags for packing her agricultural produce. Unlike the U. S. A. however, her demand is fluctuating,[1] because it is closely connected with the agricultural season.

The U. K. also takes our jute cloth but mainly for re-export. Her demand is therefore not steady. During the war, she took a much larger quantity. Her percentage share given below shows the tendency.[2]

Besides these three important markets for our jute cloth, there are a few others. Some of them show a decline in their demand, e. g. China, Australia and New Zealand. At the same time, Canada has begun to take increasing quantities in recent years.

EXPORTS OF GUNNIES AND CLOTH COMPARED

From the above review of the tendencies in the export of jute gunnies and cloth, we find that there is an interest-

[1]

Average of years	Percentage of exports to Argentine Republic on total
1896-1900	13.4
1901-1905	17.3
1906-1910	23.0
1911-1915	19.0
1916-1920	15.7
1921-1925	13.8
1926-1929	19.8

[2]

Average of years	Percentage of exports to U. K. on total
1896-1900	11.6
1901-1905	8.0
1906-1910	5.9
1911-1915	5.6
1916-1920	11.2
1921-1925	5.1
1926-1929	2.9

ing contrast in them. Whereas the export of gunnies has shown a slow growth, that of cloth had a rapid growth. In the case of the former, we have a scattered market; the latter is taken mainly by the U. S. A. In consequence, the exports of gunnies show violent fluctuations and those of cloth are steady in their growth. In the former case, there was a temporary stimulus given by the war; the latter was not affected by the war. The exports of gunnies fall or rise with the growth or otherwise of international trade, and vary inversely with the volume of the exports of food-grains and seed from India. With the exception of the principal market, namely, the U. S. A. the other old markets for cloth are giving place to new ones.

EFFECT ON AGRICULTURE

The growing demand for Indian jute either raw or manufactured which we have discussed so far, has brought about one of the most interesting adjustments in the economic life of certain parts of Bengal. At first raw jute was produced only for the handloom weaver, and the demand was limited. But the impetus of the Crimean War, and later that of the Dundee and Calcutta industries changed the nature of the demand. Just as the tendency for commercial crops is growing in other parts of the country, similarly the extension of jute cultivation was the inevitable result in Bengal.[1]

The economics of the production of jute are quite different from that of cotton. The sources of supply are very limited because jute is produced only in certain parts of Bengal and other adjoining areas. The demand, being closely bound up with the progress of international trade, is almost unlimited. Under the circumstances, the demand affects the price and consequently the area under jute to a material degree. Of course, the character of the

[1] cf. Report on the cultivation and trade in jute in Bengal, H. C. Kerr.

season has its share in determining the price. In view of this, prices of jute are bound to fluctuate and with it the area. When prices are low, there is a tendency to take to other crops ; when prices rise, more land is put under jute.

For the earlier years figures of production are not available. But we have the indirect evidence of the export trade in raw jute which rose because of the growth of the Dundee industry. The average quantity exported during the five years ending with 1862-63 was 970 thousand cwts.[1] The following figures show the progress of jute cultivation in subsequent years, during which the mill industry in India was developing :—

PROGRESS IN THE PRODUCTION OF RAW JUTE :—

	(Figures in thousands)	
Year	Area under jute acres	Yield in bales 400 lbs. each
1872-73	926	2778
1880-81	910	2730
1886-87	1284	3852
1892-93	2135	2717
1894-95	2264	6144

We have fuller details for more recent years, regarding the progress of cultivation.

Average for five years	Acreage under jute in thousand acres	Production of jute in thousand mds.	Average price[2] of raw jute per md. Rs.	As.	Ps.
1891-1895	2186	27200	33	0	0
1896-1900	2083	29300	31	9	0
1901-1905	2396	36400	35	0	0
1906-1910	3240	42000	46	0	0
1911-1915	2945	44700	67	0	0
1916-1920	2657	38600	73	9	0
1921-1925	2257	25240	96	0	0

[1] cf. Watt's Dictionary of Economic Products, and Jute in Bengal by N. C. Choudhry.

[2] Figures from 1910 onwards are taken from Statistical abstracts; average for 1921-23 is given for the last quinquennium.

The most important fact that emerges from these figures is that although there is a fall in the acreage, the production shows a slight increase till 1915, indicating that the yield per acre has increased.

We also notice that there are fluctuations in the area and production of jute, the former being more subject to such fluctuations than the latter. These are due to the changes in the price of raw jute. We have already seen the interactions of price and production. A rise in the price of raw jute in a particular year is followed by an extension of the area in the next year, which in turn brings down the price.

Another important fact is the tendency towards decline in the figures of acreage since 1910. The figures of production also reflect the tendency to some extent. The fluctuations in the yield per acre which vary according to the season account for the fact that the tendency is not fully in operation. But it is obvious that the law of diminishing returns must bring down the production also, particularly because expansion of the area is possible, only to a limited extent. This will result in a reduced production of jute. We have seen for the earlier years, the relation between prices and acreage ; but since 1910, we have the peculiar phenomenon of a decline in acreage, in spite of a high level of prices. This means that the growing jute industry of the world will have to face in the near future the very serious problem of the scarcity of the raw material. The President of the Indian Jute Mills Association recently referred to this danger in his annual speech, and pointed out that the trade had continuously added to its productivity regardless of the amount of material available or the source of supply. This excessive demand was responsible in keeping the price of jute at a high level for the 4 or 5 years before the recent depression began. The remedy lies in increasing the

supply of the fibre by utilising improved seed which, it is believed, will yield 3 or 4 maunds more per acre.

This brings us to the question of increased production which can be done either by finding other areas in which jute can be profitably cultivated or by increasing the yield on the existing area. As a result of certain investigations it was found that jute could be produced in other parts of the country,[1] e. g. in the Konkan, the wet tracts of the Deccan, the Karnatak near the ghats, the irrigated districts near Poona and in Sind in the Bombay Presidency. In the Madras Presidency, the Cauveri, the Godavari and the Ganjam deltas and the Malabar coast were considered suitable. The same is true of the plains of Chhattisgarh and Nagpur in the C. P.

Though nothing practical has been done in these areas, some extension is reported in the Ganjam district of the Madras Presidency. In 1921, only 90 acres were put under jute in this district ; in 1925, the figure increased to 1800 acres. This is certainly promising, particularly because the yield is reported to be 25 maunds per acre.[2] But it is obvious that this cannot fill the gap, and the improvement of the yield on existing areas must also be resorted to.

IMPROVEMENT OF THE YIELD

The improvement of the yield depends on the preservation and selection of seed. Attention was drawn to this in 1900 when the Bengal Chamber of Commerce approached the Government of Bengal. The work of the Agricultural Department resulted in the advent of the plant "kakya Bombai" which is now cultivated over about 200 thousand acres.

The quality of jute is determined by its length, strength

[1] Extension of Jute cultivation in India, 1926, by R. S. Finlow.

[2] cf. Historical Note on Experiments with jute in Bengal—Agricultural Journal of India, Vol. XVI, Part III, May 1921, p. 271.

and colour, and by the proportion of the length of the fibre which is free from the adherent bark often found at the root of the stem. The fibre produced from Kakya Bombai seed distributed by the Agricultural Department fulfils these conditions. Cultivators are willing to pay the higher price of this seed, because it gives much better results. There are, however, difficulties in the way and progress is not as rapid as one may desire.[1]

DISTRIBUTION OF JUTE CULTIVATION

It is commonly said that jute is a monopoly of Bengal. The phrase, however, includes the jute cultivated in the neighbouring areas. Nepal also produces some jute, but we do not have exact information about it and hence we have not included it in the following figures.

	Distribution of jute crop[2]		
Average for 5 years ending	Bengal	Bihar and Orissa	Assam
1895	2042	103	9
1900	1964	85	34
1905	2367	160	24
1910	3183	249	68
1915	2540	277	94
1920	2274	196	112
1925	2056	193	112
In 1926-27	3124	296	186
In 1927-28	2929	193	171

CONSUMPTION OF RAW JUTE IN INDIA

In 1913, a careful investigation was made by the Indian Jute Mills Association into the raw jute consuming

[1] Cf. Historical Note on Experiments with jute in Bengal-Agricultural Journal of India, Vol. XVI, Part III, May 1921, p. 271.

[2] The figures are taken from Datta's Report on Prices Vol. III, up to 1910. Later figures are taken from Agricultural Statistics of British India.

capacity of the world, and it was found that the jute industry of the world required over 100 lakhs of bales, of which the Indian industry consumed about 40 lakhs. In view of the expansion of the Indian industry since then, the Indian consumption may be put at about 50 lakhs of bales. The manufacturing capacity of the rest of the world has also increased since the war. This means that unless a permanent substantial increase in the production of raw jute is made, the prices will continue to remain at a high level. In other words, the problem before the jute industry is to ensure a regular supply of raw jute at cheap prices.

RECENT DEPRESSION IN JUTE INDUSTRY[1]

The above expectation has, however, been rudely shaken by recent events. As in the case of most other industries, we find that the jute industry is also passing through a severe depression. This is reflected in the exceedingly low level of prices of raw jute, which means a very serious situation for the grower of jute. Two causes seem to have combined to bring about this unusual state of affairs ; on the one hand, the general trade depression throughout the world has resulted in a decline for the demand of jute and jute manufactures ; on the other hand, the prosperity of the preceding years had induced the farmer to grow larger and larger quantities of jute with the consequence that the output for 1930 was abnormally large. Besides, a large and increasing production in the Indian jute mills synchronised with a world-wide depression. This resulted in the accumulation of stocks and the consequent fall in prices of both raw jute and jute manufactures.

For example, during the year 1929-30, the price of raw jute fell from Rs. 66 per bale of 400 lbs. to Rs. 44-8-0.

[1] Part of this section is based on an article on the same subject by Prof. S. C. Bose published in the Indian Review, February 1931.

Since then the price has been continually falling, the quotation on 26th February 1931 being Rs. 26-12-0. The exports of jute, raw and manufactured, amounted to 17.6 lakhs of tons in 1929-30, which was less by 44,000 tons than in the preceding year. In value, the export declined from 89 crores in 1928-29 to 79 crores in 1929-30.

The fluctuations in the price of jute often result in great hardship for the growers. During periods of high prices the farmer naturally gets an impetus ; he tries to take advantage of the high price by growing more jute ; the output for the succeeding years becomes large and if this is not accompanied by a corresponding increase in demand, the price falls with consequent distress to the farmer. The demand for jute, as we have already seen, is dependent upon trade activity in different parts of the world. We have at the same time to note the fact that jute goods have not to be renewed every year because the material is capable of being used several times over for purposes of packing. The farmer is generally ignorant of the conditions which govern the demand and price of his product. The only way to safeguard his interest is to have an organisation which will study the situation from time to time, and arrange to keep the output within the limits of possible requirements.

In countries like America, Australia and Canada, they have organisations known as "pools" for marketing different kinds of agricultural products. Such well organised bodies bring producers in each industry under the control of one central organisation with the help of which they are able to regulate the supply of the raw material effectively. It will obviously take long for us to have an organisation of this kind.

It has been suggested that the surplus stock of jute should be purchased by Government in order to bring about an increase in the price. This process is technically known as valorisation. It has been tried in Brazil in con-

nection with coffee but without success.[1] The resources of the Government of India are not adequate for imitating the Brazilian experiment, and it is doubtful whether it would be the most practicable remedy.

Another remedy is to carry on suitable propaganda among the cultivators of jute with a view to impress upon them the necessity of restricting the area, even during times of temporary prosperity. They must be made to realise the fact that the demand for jute is not likely to be increased in proportion to the increase in production under ordinary circumstances. The natural impetus to increase production in view of higher prices which are available at certain periods should therefore be checked.

In the alternative it is desirable to think of new uses for jute and thus to increase its consumption. This remedy is not likely to yield immediate results; it must take long to ascertain the possible new uses of the jute fibre on a commercial scale.

From a general consideration of these suggested remedies, we come to the conclusion, that the only way to save the farmer from these periodical difficulties due to fluctuating prices, is to have an organisation of producers on a co-operative basis to control the output whenever required.

The effect of the extremely low price of the raw material must be felt by the manufacturing industry in the long run. Though the jute industry has on the whole prospered during the period of the war and several years after the peace, it must be admitted that it is passing through a period of crisis at present. Thanks to the highly organised nature of the industry and the co-operation to which the jute millowners are accustomed, we find that they are trying to meet the difficulty by working the mills for shorter hours and thereby reducing the output.

[1] Cf. "The Artificial Control of Raw Material Supplies" by J. W. F. Rowe, Economic Journal, September 1930.

The early formation of an Indian Jute Committee on the lines of the Indian Central Cotton Committee has been promised by the Government of India. It is expected that this Committee will in future provide some means for mitigating the evils from which jute trade and industry suffer on occasions.

CHAPTER VII

WOOL

PECULIARITIES OF THE WOOLLEN INDUSTRY

Woollen manufactures in India differ from cotton in several respects. The handloom industry plays a greater and more important part in this industry. Besides, the handloom industry is scattered all over the country. We shall, therefore, adopt a different method of study for this industry suited to its peculiarities.

The industry may be divided in two groups : (1) the mill industry, and (2) the handloom industry. The latter may be further subdivided into (i) the manufacture of coarse goods such as blankets, *namdas* and felt, and (ii) the manufacture of artistic goods such as pile carpets and shawls. The first is common to all provinces, and is restricted to the production of common necessaries. The second is localised in a few centres and is confined to the production of articles of luxury and great artistic value.

Besides, these two groups which we have distinguished according to the method of production, we may consider the divisions of the industry from the point of view of organisation. (1) First, there is the shepherd or the blanket-weaver who shears his own wool, spins it under his own roof, and turns it into a coarse blanket, with the help of his wife and children. In the summer when the demand for blankets is slack, he turns to agriculture. In almost all the provinces blanket-weavers are usually shepherds, who combine blanket-weaving with agriculture. (2) The manufacturing of carpets is done under a different form of organisation. The former guilds of carpet-weavers are fast going out of existence ; in certain places, we find that the industry is confined to particular castes. In

this form, there is a master weaver who employs apprentices on certain terms, and supervises their work. (3) Besides these traditional carpet-weavers, there are European firms which employ a certain number of workers who produce carpets under their supervision. Under this system, the compactness and solidarity of the old guild system is lost. The relation between the master and his workman has completely changed. The apprentice under the old system could aspire to be a master weaver himself. Under the modern form, the worker remains in the same position all his life. (4) The various central jails in the country have taken to carpet manufacture. The convicts are taught the art, and the products are sold either locally or exported. This type of manufacture raises complications which shall be discussed later. (5) Lastly, we have the mill industry of the modern type, with its large scale production. Although the first woollen mill was started in India in 1876, the industry has not made much progress. There are natural limits to its expansion. The local supply of suitable raw material is limited, and the climate of the country and the poverty of the masses conspire to keep down the demand.

It is obvious that the products of these different forms of organisation differ widely from one another in quality and excellence.

The demand for woollen goods also comes from widely differing classes. The blankets or kamlis are a necessity with the peasant both in the cold and the wet season; while the demand for the product of the mills comes from the richer classes. The carpets in their turn, whether produced in jails or outside, have very little demand in the country. This branch of the industry subsists on foreign demand, chiefly English and American. In view of the peculiarities of the industry, it will be convenient to give a brief history under the heads: (1) carpets, (2) shawls and (3) blankets.

HISTORY OF THE WOOLLEN INDUSTRY

Like other textile industries, the existence of the woollen manufactures in India may be traced to ancient times.[1] It is true, however, that this industry never reached the dimensions of the cotton industry. During Mahommedan rule, the industry received an impetus, particularly at the hands of Akbar.[2] The fate of the three branches of the industry noted above must therefore be traced in order to understand the present position.

(1) CARPETS

There is some controversy regarding the origin of carpet-weaving in India.[3] Some believe that it is indigenous to India; others that it was imported from Persia or Egypt. There is a general consensus of opinion that the designs commonly used in the manufacture of carpets are Persian. The "Suru" tree, which largely figures in the designs used on textile fabrics is also indicative of Persian origin. Most of the technical words used in the carpet trade are Persian, and the carpet-weavers to this day are mostly Mahommedans. These facts go to show that this industry was imported into India by the Mahommedan rulers.

Whatever the origin, it is true that the industry flourished by the patronage of the Mughal court. The nobility also vied with one another in creating a demand for artistic carpets. This explains the reason why the industry was localised in the principal seats of government like Agra and Jaunpur. We have ample testimony from foreign travellers and observers regarding the excellence of the art reached at this time.[4]

[1] cf. Rigveda, X, 26—6; Mahabharata, Sabha Parva; Periplus of the Erythrean Sea, p. 257; R. C. Dutt's Ancient India.

[2] India at the death of Akbar, Moreland, p. 178.

[3] cf. Monograph on the carpet making of the U. P. by K. J. Prasad, 1907; and Industrial Arts of India, by Birdwood.

[4] cf. Tavernier, Travels, Vol. II; A Voyage to East India by the Rev.

The Mahommedan weavers called "Kalinbefs" evolved a close guild;[1] and having a system of apprenticeship for new comers, the guild did useful work in preserving the industry. It adjusted the supply to the demand, checked internal competition by regulation of prices, settled disputes, and enforced payment of debts.

With the decline of the Mughal rule, the demand for carpets also declined, and the industry was on the verge of extinction. Gradually, however, there arose a foreign demand for Indian carpets. At first this was very limited. It was the Great London Exhibition of 1851 that aroused interest in Indian carpets, and the demand from Europe and America rose quickly thereafter, but this demand was mainly for cheap carpets. The result was a deterioration in the quality of the goods produced. The nature of the demand was also different. Goods were now required at short notice, and there was no time for the leisured production of fine articles. In short, the weavers began to look more to the quantity than to the quality. The organisation also changed. The necessity of increasing the production opened the trade first to different sections of Mahommedans and then to Hindus.[2] A class of middlemen also grew up to help in the commercial organisation of the product.

It was also about the seventies of the last century that the industry was first introduced in the jails.[3] The reasons which led the Government to employ convict labour in the production of articles of such artistic value as the pile carpet is not known, but this introduced a new factor of great importance. The cost of labour in jails is almost nil. It may be argued that the food and clothes given to the convicts may be taken as forming the wages bill,

Edward Terry, Chaplain to Sir Thomas Roe, Ambassador to the Great Mogul (1655, London).

[1] Monograph on carpet making, K. J. Prasad, 1907.

[2] *Ibid.*

[3] *Ibid.*

but it must be remembered that whether the convicts work or not, they have to be given food and clothes. In other words, the manufacture of carpets in jails has not to bear the same amount of labour cost as the carpets made outside. The effect was such that it materially affected the old organisation of the industry. The caste or guild restrictions had no place in the jails. Under the old system, the sons of the weaver or his apprentices had the chance of learning the art, but now the convicts released from jail could take the place of skilled workers, particularly in the factories started by exporting firms. Carpet-weaving in Jails was first started at the Agra Central Jail in 1868, and then it spread to other provinces. The Yeravda jail near Poona also manufactures carpets.

But the jails could not cope with the whole demand which was growing fast since 1851. In order to meet this demand, there came into existence factories in different centres, mostly started by exporting firms. The most important of these is the Agra Carpet Factory started by Otto Weyland & Co. about 50 years ago. [1] They employed weavers on piece work, paid them weekly, and supplied them with raw material and implements, a new form of organisation was thus developed, a class of wage earning weavers grew, the control of the industry went in the hands of exporting firms, which arranged to supply the foreign demand.

Another change was the shifting of the industry from the old centres to new ones. The disappearance of the Mughal courts led to the decay of the centres where the industry flourished at one time. Mirzapur gained importance during the last century, because of its geographical position, pilgrims to Benares, Allahabad and Bindhachal having to pass through Mirzapur which is situated on the Grand Trunk Road. From Mirzapur, the industry

[1] Industrial survey of the Agra District, U. P. 1924.

travelled to Jhansi, Benares, Cawnpore, Almora, and back to Agra. At Benares, the pilgrims support the industry; the other centres chiefly depend on foreign demand.[1]

Yet another factor that told heavily on the artistic value of the Indian carpet was the introduction of aniline dyes in the country. The demand for cheap carpets induced the weavers to use these dyes, which involved a comparatively small cost both in money and labour. The change in fashion due to the influence of western contact was also adverse to the art of carpet-making. Local demand was reduced on the one hand, and the illiterate weavers were required to copy bewildering western designs on the other.

The industry in the south passed through a worse fate. The advantage which some of the centres in the north enjoyed under new conditions did not exist, and therefore it became extinct.[2]

(2) SHAWLS

Some writers believe that the manufacture of shawls existed in Ancient India,[3] but it was not till Akbar extended his patronage to the weaving of shawls that the industry was started at Lahore, Ludhiana and Amritsar.[4] As Pashum, the under hair of a breed of goat known as Ibex, was available in relatively greater quantities in Kashmere, the industry naturally originated there. The manufacture of shawls in Kashmere was carried on according to Bernier on a "prodigious scale, and brought her extensive wealth".[5] Great efforts were made by the Mughals to manufacture similar shawls in Patna, Agra

[1] Monograph on carpet-weaving, U. P. 1907; and Industrial Punjab, Latifi, 1911.

[2] Monograph on Woollen Fabrics, Madras, 1893.

[3] Periplus of the Erythrean Sea, p. 257.

[4] India at the death of Akbar, Moreland.

[5] Travels of Bernier in the Mughal Empire, pp. 402-04.

and Lahore, but the delicate texture and softness of Kashmere shawls was not surpassed.

The shawl, like the carpet, was mainly an article of luxury, very little demand for it, therefore, came from the rural areas or from the poorer classes in cities. It was valued by the aristocracy as an article to be offered as a present to friends and relatives, particularly on festive occasions. The fashion was adopted even by the Peshwas in the Deccan,[1] of course the Peshwas got their supply from Delhi.

In spite of the efforts of the Mughals, Kashmere shawls held the field. It was estimated in 1882 that the total value of shawls manufactured in Kashmere was 33 lakhs of rupees.[2] There was also a flourishing trade in Kashmere shawls across the frontier. A large number of traders from the frontier countries took Kashmere shawls in exchange for "Pashum" the under hair of the Ibex goat.

It was the famine of 1830 which drove the Kashmere weavers to the Punjab,[3] where they settled and helped in developing the manufacture of shawls. Ranjit Singh who was the ruler of the Punjab at the time gave great encouragement to the industry, and Amritsar and other parts of the Punjab became flourishing centres of shawl manufacture.

There was another difficulty from which the industry suffered in Kashmere. Several kinds of taxes were levied on shawls.[4] There were duties on the imports of Pashum into Kashmere which were regulated by the State, the price was fixed by the State and 25 per cent. of the same

[1] Letters from the diaries of the Rajas of Satara and the Peshwas, Vol. I pp. 39, 296 and Vol. II, p. 136.

[2] Travels in the Himalayan Province of Hindusthan and the Punjab etc., William Moorcroft and George Trebeck, 1819-1822 Vol. II, p. 194.

[3] Textile Fabrics of India, Forbes Watson.

[4] Travels in Kashmere, G. T. Vigue, 1842; and Continental India, J. W. Massie, 1840.

was taken as duty. Such taxes left very little to the weavers, who were therefore not able to stand the shock of the famine referred to above.

Another permanent blow to the industry was the decline of the Indian kings who were the chief patrons of the industry.

Then came relief from another quarter, namely, the rise of the export trade to Europe. The first Kashmere shawls that reached Europe were, it is said, brought by Napoleon from Egypt as a present to the Empress Josephine. From that time shawls became a fashion in Europe, and gave an impetus to the Indian industry. The exports estimated at Rs. 18 lakhs in 1842 rose to about 28 lakhs in 1870. The industry, however, passed under the control of French dealers who financed the weavers. The advent of aniline dyes during the sixties of the last century introduced a new factor; their cheapness was a temptation to the weavers, and their use resulted in a deterioration of the quality of the shawls. Thus the result was the same as in the case of carpets, namely, (1) dependence on foreign demand, and (2) deterioration in quality.

The Franco-German War of 1870-71 gave a severe blow to the shawl trade.[1] It cut off the European demand for a time; in the interval the shawl had gone out of fashion and, therefore, the demand did not revive even after the close of the war. The trade declined in consequence.[2]

[1] Sir Richard Temple's Journal.

[2] Visit to the Kashmere Valley, Sir Richard Temple:—

Export of shawls from Kashmere.

	lakhs of Rs.		lakhs of Rs.
1886	12.1	1889	7.0
1887	12.7	1890	1.9
1888	6.0	1891	0.8

(3) BLANKETS

Unlike carpets and shawls, it can be said without doubt that blankets are indigenous to the country. Being coarse fabrics used mostly by the poor, they did not attract the attention of the East India Company and other European traders. Even Mr. Moreland tries to prove that blankets and kamblis were not in common use in the days of Akbar. We have plenty of evidence, however, to show that the blanket was an indispensable part of the equipment of the Maratha soldier in the Deccan.[1] The existence of the industry in other provinces has also been noted by well-known authorities.[2]

There are a few features which distinguish blankets from shawls and carpets. In the first place, the blanket industry was scattered all over the country, and not localised in a few centres as in the case of shawls and carpets. It was a necessity for the rural folk; and therefore, we find that blanket-weaving was taken up as a side industry in many rural areas in addition to agriculture, as people could not live on this industry alone. Another feature is that whereas shawls and carpets were things of art, blankets were ordinary coarse things, cheap enough for the limited means of the farmer. We may also note that whereas the former were made generally by Mahommedans, the latter were mostly made by Hindus. Besides, for obvious reasons, foreign competition or foreign demand had no place in the case of blankets.

RAW WOOL

With the growth of population, and advance of civilization, the demand for land increases. This means

[1] cf. Letters from the Diaries of the Rajas of Satara and the Peshwas. Balaji Baji Rao, Vol. I, p. 197 (Parasnis and Wad).

[2] cf. Dr. Buchanan's travels from Malabar to Mysore and Madras; also cf. History, Antiquity, Topography and Statistics of Eastern India, edited by M. Martin, Vol. III, pp. 277-78, 330, and 332.

that the available land for pasture for sheep must shrink. At the same time, as in other industries, the advent of the capitalist-shepherd who can maintain a large sheep station, will make it difficult for the small shepherd to compete in the market.

Another important consideration is that in many countries sheep are bred more for meat than for wool. The development of transport facilities has made it possible to send meat over large areas in a short time before it becomes unfit for consumption. This enabled sparsely populated countries like Australia and South America to develop the meat industry, and incidentally they also became the largest suppliers of wool to the world market.

In India sheep-breeding is carried on more for meat and manure than for wool. Measured by the number of sheep we find that the industry is in a stationary condition.[1]

QUALITY OF WOOL

The art of sheep-breeding is carried on to perfection in Australia, where stud rams yield 30 lbs. of wool at a clip. Experiments were made in India in the last century to introduce scientific sheep-breeding by crossing foreign types of sheep with indigenous ones, under the auspices of the Provincial Governments; these attempts did not show good results. Recent efforts in the U. P. since 1912 have succeeded, and a better type of sheep has been developed. This has, however, not progressed much and the quality of Indian wool, therefore, is on the whole inferior.

[1] No. of sheep in lakhs.

1910	232
1914	231
1918	228
1922	221
1924	232

Figures before 1910 are not available; compiled from the Agricultural Statistics of British India.

SHEPHERDS

The quality of the wool must also depend on the shepherds and the care they take in improving their material. We find that the sheep-breeding industry is carried on in India by a particular caste, which is known by different names in different provinces.[1] The census of 1921 recorded that there were nearly 52 lakhs of people connected with this industry scattered all over the country. It is generally true to say that the shepherds are gradually taking to agricultural work partly, if not wholly.

In some parts the shepherds live a nomadic life, wandering from village to village, this is due to the fact that they are paid for folding their sheep on the fields by the farmers. The manurial value of sheep folding is appreciated by farmers and hence the system, the payment is made in cash or kind for a certain number of sheep to be folded per night. The payment varies from province to province and also according to the nature of the crop.

Sufficient attention is not paid to the feeding of the sheep, there are no grazing lands set apart for them. During the monsoon, they are fed upon the new grass before it grows fully, during the dry season they are sent to the nearest jungle or are allowed to graze on waste and fallow lands, generally they are not housed. We find that this treatment results sometimes in starvation and death, and the wool is bound to be poor in quality in any case.

The shearing of the sheep for wool is either done by a class of shearers or by the shepherds themselves. The instruments used are crude ; machine shearing is absent. The general practice is to shear twice a year, though some needy shepherds go in for three clips a year, the latter practice is injurious to the health of the sheep. The wool

[1] Some of the names are : Gaderia ; Gaddi ; Rabari ; Bharwad ; Dhangar ; Kurubar ; Hatgar ; Kurumb and Idaiya.

is sorted according to colours and according to length or fineness.

The average yield per fleece in India is 2 lbs., though in many cases it is much less. When we remember that the average yield in Australia and America is 6 or 7 lbs., we can see that there is great room for improvement in the breed of the sheep and the organization of the industry.

Indian wool is classed as carpet wool in the world market, as against the products of other countries, which are known as merinos or crossbreds. This is because Indian wool is not capable of being felted;[1] the heat of the Indian plains and the unscientific breeding of the sheep are largely responsible for this. In other words, Indian wool is not suitable for the manufacture of fine fabrics. Rajputana wool, particularly Bikaner wool is good for woollens though not for worsted goods.[2]

MARKETING OF WOOL

Because of the poverty and ignorance of the unorganised shepherds, the marketing of his product happens to be in a very unscientific condition. A series of middlemen have come into existence, some of whom collect the wool from the shepherds and sell it to an urban merchant or carry it to some neighbouring market. The middlemen often give monetary advances to the shepherds in order to ensure a regular supply.[3] This weakens the position of the shepherd, who does not get the best price for his product.

Among the centres of wool trade may be mentioned, Fazilka, Lahore, Multan and Daryakhan in the Punjab;

[1] Felting, or milling as it is called, is a technical name for a process which is commonly known as shrinking and is that process by which the threads in a fabric are so closely drawn together that they are practically indistinguishable from one another.

[2] In a worsted yarn the fibres are so manipulated as to lie parallel to one another.

[3] Notes on wool in India. A. H. Silver and J. K. Mehta, 1918.

Gharwal, Almora and Naini Tal in the U. P.; Bellary, Kurnool and Coimbatore in Madras. Bombay gets black wool from the Deccan and white wool from Sind, Gujarat, Kathiawar, Marwar and Rajaputana.

TRADE IN RAW WOOL: IMPORTS

Wool is probably the only important article in which a large volume of import trade is going on both by land and sea. Imports of wool across the frontiers must have dated from the time when the carpet and shawl manufacturing industry in India grew in importance. They came particularly from Persia and Tibet. We have, however, no records to show the extent of the trade. Coming to more recent times, we find that the imports by land exceed those by sea by about seven times.[1] Most of the imports are derived from Afghanistan and Tibet, which between them account for about 85 per cent. of the supply. Their relative position has changed recently. In 1914, Afghanistan sent 53 per cent. of the imports and Tibet 30; while in 1923 Afghanistan sent only 35 per cent. against 58 of Tibet. The reason for the growth of Tibetan trade is the gradual extension of transport facilities. The reason for the fall from Afghanistan is not clear, though unsettled conditions since the third Afghan war may account for it to some extent.

It may be added that if we consider the figures of trade during the earlier years, we find that the same tendency was in operation. With the development of transport facilities on the frontier, the trade in wool advanced. An-

[1]

Year.	Imports by land. Thousand cwts.	Imports by sea. Thousand lbs.
1902	93	2756
1906	172	2451
1912	192	3736
1916	250	1361
1921	135	1840
1922	165	4838
1923	179	8218
1929-30	157	6700

other reason which gave an impetus to imports is the establishment of woollen mills at Cawnpore and other centres, which led to increased demand for the better class of wool.

The imports by sea, though smaller than those by land, show great fluctuations. The imports which were 32 lakhs of lbs. in 1864 gradually fell to 15 lakhs in 1875. For twenty years the tendency was in an upward direction, the figure for 1896 being 55 lakhs of lbs. Thereafter there was a sharp fall to 21 lakhs of lbs. in 1904. Since this date there has been a steady increase, which was temporarily interrupted by the war. The imports in 1925 were 88 lakhs of lbs. ; in 1929-30 they were 67 lakhs of lbs. Several factors bring about this result. The demand for wool in the world market, the price offered for it ; the increased supply from Australia and South America, and the demand of the Indian mills may be mentioned as some of the causes of the fluctuations. The imports came mostly from Persia and Australia, though the U. K. is having a share in recent years.[1]

EXPORTS OF RAW WOOL

Export of wool by land is very insignificant, because the countries on the frontier produce wool in large quantities, and send it to us in normal times. Exports by sea, which began in 1834, are more important. They are, however, subject to fluctuations. In 1865, for example, they rose to 240 lakhs of lbs. because the demand increased suddenly due to the cotton famine. The disappearance

[1] Percentage of imports of wool from different countries.

Year	Persia	Australia	U. K.
1911	74	16	
1914	80	9	1
1918	26	50	
1922	33	43	
1924	21	20	26
1927-28	43	21	27
1928-29	40	30	20.8
1929-30	35	36	18.2

of this demand, and the advent of Australia in the wool market came in the way for some time. The exports fell to 160 lakhs of lbs. in 1867. Since then, the exports have shown generally a steady increase, the figure for 1916 being 650 lakhs of lbs. War restrictions due to military requirements curtailed the exports for some time, but since then the trade recovered, the exports in 1924 being 528 lakhs of lbs. ; in 1929-30 they were 503 lakhs of lbs.

The peculiar feature of our trade in wool is that our exports depend on the imports. We are a re-exporting country, and though some of our wool is exported, a good deal of the wool imported from the frontier countries is ultimately meant for export by sea to other countries.[1] It may be added that about 97 per cent of our export is taken by the U. K. The U. S. A. have begun to take some quantity in recent years.

THE WOOLLEN MILL INDUSTRY

As we have already seen, the power-loom has played a subordinate part in woollen manufactures, and that explains the slow growth of the industry. Another reason is that our wool is not good for woollen and worsted goods manufactured on the power-loom. At the same time, the climatic conditions, particularly in the south, are not favourable to a large demand. The price of woollen goods is generally higher than that of cotton goods and the Indian consumer is usually too poor to afford such costly stuff.

[1] The following figures will explain the remark.

Year.	Imports by land lakhs of lbs.	Imports by sea lakhs of lbs.	Exports lakhs of lbs
1900	131	31	320
1913	215	37	534
1918	—	27	426
1922	151	14	323
1924	201	48	366
1929-30	176	67	500

The first woollen mill in India was started at Cawnpore in 1876. Sources of raw material and vicinity of markets, which largely determine the location of industries, justified the selection of Cawnpore for this industry. In 1882, another mill was started at Dhariwal. The original concern went into liquidation in 1889 and passed into the hands of the present management, and came to be known as the New Egerton Woollen Mills, Ltd. of Dhariwal. In 1886, a woollen mill was started in Bangalore and in 1888 in Bombay. Before the war there were only five or six mills ; during the war the industry got an impetus ; in 1920 the number of mills was seven and most of the existing mills had increased their capital, spindles and looms. By 1925 the number of mills had risen to 14, but recently one of them has closed down.

DISTRIBUTION OF THE MILLS

Out of the 14 mills in India, two are in Indian states, one in Bangalore, the other in Baroda, started recently. Out of the remaining 12, three are in Bombay ; the U. P. and the Punjab have one each ; the rest are distributed over other areas. It must be pointed out that the Cawnpore Woollen Mills and the Dhariwal mills are the largest. The reason why there are three mills in Bombay is that a large import and export trade is carried through Bombay. Suitable raw material is thus easily available and has led to the establishment of mills. The same reason, as we have already seen, was largely responsible for the localisation of cotton mills in Bombay.

THE OUTPUT OF THE MILLS

Very few of the mills produce a large variety of goods. About ten of them concentrate on the production of blankets ; the rest on woollen and worsted goods. The demand for the former comes from the poorer classes. This work, of course, is in competition with the indige-

nous blanket weaver. The Cawnpore and Dhariwal mills and a few others produce many varieties of woollen goods. Most of the products are consumed in the country ; the Cawnpore and Dhariwal mills depend on Government contracts to some extent.

THE PRESENT POSITION OF THE HANDLOOM INDUSTRY

(1) CARPETS

The carpet industry is found more in the north than in the south. The U. P. and the Punjab have some important centres.[1] In addition to this the various central jails also produce carpets. There are obvious objections against jail manufacture : (1) the encroachment upon the sphere of honest workers ; (2) the difficulty of acquiring the art and the possibility of deterioration in quality ; and (3) unfair competition. The jails, however, have done useful work. They supplied the demand which arose after 1851, at a time when the industry was in a bad way ; they trained weavers, who in turn helped to maintain the industry in due course. The jails used vegetable dyes and kept up the old colours as far as possible. Besides, the price of jail carpets was usually higher than that of carpets made elsewhere.

Outside the jails, the industry is scattered and unorganised. It is partly rural and partly urban. The weavers, on account of their poverty, accept advances from the dealers and this has destroyed their independence. The industry depends on the foreign demand and has, therefore, a precarious existence. Nearly 90 per cent. of the carpets are exported.

[1] Mirzapur, Agra, Jaunpur, Benares, Amroha and Cawnpore in the U. P., Amritsar in the Punjab ; Ellore, Masulipatam and Walayar in Madras.

(2) BLANKETS

Though the blanket-weaving industry is followed by a large number of people in rural areas, and though it supplies a real need of the farmer, this industry has not received attention either by the Government or by writers on Indian textiles. The reason is that it is very scattered, and is concerned with a cheap material, which does not attract notice. The kambli is, however, a very useful thing. It protects the farmer against rain and cold; it serves as a bed or a covering and sometimes as a packing material. It is, therefore, in general demand, but the price must be low and within the reach of the poor consumer.

If put on an organised footing, the industry would yield fruitful results. There is, therefore, ample scope for work for the Provincial Departments of Industries and co-operation in this matter. Because sufficient attention has not been paid to it, we do not have reliable data regarding the exact condition of the weavers. We made efforts to get some idea regarding this, and we found that the number of woollen looms in different talukas were recorded in some of the revision settlement reports of the Bombay Presidency. From this we find that out of 33 talukas for which figures are available, 28 show a decline in the number of looms. In some cases, the industry has been wiped out. In other words, during the last 30 years, the industry has declined in the Bombay Presidency. It is possible that the fate of the industry in other parts is no better.

This is due to several causes: (1) competition of blankets either imported or manufactured in Indian mills; (2) scarcity of raw material, which is in demand by the mills and the jails; and (3) the rise in the prices of food stuffs and other necessaries, which makes it difficult for the weaver to live on the meagre returns from his blankets.

EFFECTS OF THE WAR

The war created a large demand for woollen goods for military purposes. The Indian Munitions Board made contracts with the mills for the supply.[1] In spite of the best efforts of the mills some quantity had to be imported. Both in the jails and outside, the production of blankets was encouraged in place of carpets, which could not find markets during the war. Thus the work of the mills and of blanket-weavers got a stimulus, though carpet-weaving suffered. Of course, the price of raw wool went up, imports increased and exports went down.

EXPORTS OF WOOLLEN MANUFACTURES

The following table shows the exports of different kinds of woollen goods from India :—

Year	Carpets and rugs	Shawls	Piece-goods	Other sorts	Total	Percentage of carpets and rugs to total
	Figures in thousands of £					
1910-11	163	4	1	12	181	90
1911-12	164	6	2	14	186	88
1912-13	150	4	2	17	173	86
1913-14	153	3	1	10	167	90
1914-15	102	1	0·1	10	113	90
1915-16	145	1	1	13	160	90
1916-17	191	1	1	16	209	91
1917-18	99	...	...	7·2	107	92
1918-19	98	2	0·6	16	117	84
1919-20	626	1	14	32	673	93

(Table continued on next page)

[1] Handbook of Indian Munitions Board, p. 195.

Year	Carpets and rugs	Shawls	Piece-goods	Other sorts	Total	Percentage of carpets and rugs to total
	Figures in lakhs of Rs.					
1920-21	80		1	3	84	95
1921-22	69			1	71	97
1922-23	96			1·5	98	97
1923-24	81			0·5	83	97
1924-25	112			1·5	114	97
1925-26	78			1·2	80	97
1926-27	72			2·5	75	96
1927-28	92			5·1	97	95
1928-29	94			7·9	102	92
1929-30	85			6·3	91	93

It is obvious from these figures that the principal export of woollen goods is that of carpets and rugs. The exports of shawls and piece-goods have become very small in recent years. This does not mean that the other items are not produced in the country ; most of the production in the other items is consumed in the country. Among the countries that take our goods, the U. K. is the chief, taking 70 per cent. of our exports. The U. S. A. comes next in recent years ; Ceylon, Australia and the European countries make up the rest.

IMPORTS OF WOOLLEN GOODS

The total value of our imports is on an average about three times that of exports. Thus, whereas we exported 114 lakhs worth of woollen goods in 1924-25, we imported 356 lakhs worth in the same year. In 1929-30, the export was 91 lakhs ; and the import 233 lakhs. The main items of import are "piece-goods, shawls, braids, carpets, rugs, knit-goods, yarn and knitting wool". The imports of carpets and shawls affect our country to some extent ; we do not produce much of the other articles and hence there is no great effect on the local industry in

them. The trade though fluctuating in character was on the increase till the beginning of the war. The war gave a shock to the trade, from which it has not yet recovered. The following figures show the tendency :—

Average of five years ending	Imports of woollen goods in lakhs of yards
1890	116
1895	131
1900	126
1905	161
1910	180
1915	214
1920	64
1925	65
In 1927-28	188
" 1928-29	160
" 1929-30	126

It may be pointed out that the principal source of supply is the U. K. which accounts for more than 70 per cent. The rest is contributed chiefly by the other European countries.

IMPORTS OF SHAWLS

We have referred to the shawl industry and the shock which it received from the Franco-German War of 1870. Thereafter, shawls began to be manufactured in the U. K. at Paisley and in Germany. These were imported into India and dealt a further blow to the local shawl-weavers. Before the world war, the imports showed a steady increase ; during the war they suffered, but revived thereafter. On the other hand the local shawl-weaving industry got a stimulus, but it suffered thereafter owing partly to the revival of imports and partly to the khaddar movement, which led to an increased demand for khaddar shawls in preference to Amritsar shawls.

CHAPTER VIII

SILK

INTRODUCTION

As in woollen manufactures, the handloom is still predominant in the silk industry. There is, however, a larger variety of goods produced which differ from province to province. The 'lungis' are more common in South India, whereas 'saries, peetambers, dupettas and dhoties' preponderate as we go northwards. Another peculiarity is that silk is mixed with either cotton or wool, and such mixed goods are often turned out. Artificial silk has come into prominence in recent times. Whereas shawls and carpets are manufactured only in a few centres, silk goods are made to a certain extent in most provinces. In the case of raw wool, we found that it is consumed in rural areas for blanket making; in the case of raw silk, the situation is different, it is usually exported to urban areas for manufacture. The silk industry is thus an urban industry.

The principal use of silk goods is, of course, for clothes. More recently, silk has come to be used in surgical operations, electrical installations, manufacture of cartridges and aeroplanes. The use of silk in Europe and America is no more considered a luxury; in India it is still an article of luxury. Like cotton and wool, silk produced in India is generally inferior in quality, colour and touch. Chinese and Japanese silk is superior.

HISTORY

Like other textiles, we have evidence to show that silk goods existed in India in ancient days. They were used

as articles of luxury and were in demand only by the richer classes. The industry grew in importance during the 16th century. The Portuguese took up the silk trade and distributed Indian silk goods in Europe.[1] From the accounts of foreign travellers,[2] and in the writings of contemporary writers,[3] we find that this industry was patronised by kings and the nobility, and was in a flourishing condition. In course of time, as the European demand increased, a new factor entered the field. European trading companies interested in the trade set up factories where they engaged weavers, with a view to ensure a constant supply. In some cases, the weavers were given monetary advances. This resulted in a break-up of the old system in which the worker could preserve his independence. No doubt the trade and industry increased, but the worker was now bound to sell his goods to the factory agent at prices fixed beforehand. The East India Company sent a variety of silk goods as one of their principal exports at one time, and arranged to improve the Indian industry so as to suit the English demand. This trade, however, roused an opposition in England from silk weavers ; the import of raw silk was preferred to silk goods, and the Company thereafter paid attention to the export of the raw material.[4]

The silk industry flourished mostly in Bengal and in some parts of Gujarat. The industry was encouraged by Tippu Sultan in Mysore and from his time, Mysore has also been a centre of production.

In course of time, the competition of China and Japan increased. Some of the European countries also developed silk manufacture on modern lines ; the export trade in silk goods suffered in consequence ; the home demand had

[1] Silk Industry and Trade, R. C. Rawlley.

[2] e. g. Travels of Ludovico di Varthema and Bernier.

[3] e. g. Tarikh-i-Rashidi and Aini-Akbari.

[4] cf. East India Trade in the XVII century by Khan, and Trade Relations between India and England by Bal Krishna.

already suffered with the break-up of the old court-aristocracy and we find that the recent history of the silk industry is, therefore, one of decline and decay.

RAW SILK[1]

Production of raw silk or sericulture is a complex process. Climatic conditions and quality of the soil are important for planting the mulberry trees. The production of eggs or seeds and then the cocoons are the subsequent stages. The reeling of the silk thread comes next. This corresponds to the spinning stage in cotton industry. Reeling is done in foreign countries on large filatures. This reduces the cost per unit, and brings out uniform thread, which is essential for successful weaving.

So far as climate is concerned, the rearing of silk worms requires suitable temperature and moisture. The success of sericulture in Kashmere, Bengal and Mysore is due to this. The notable place of silk industry in India is Bengal, though at present it is carried on as a cottage industry in that area. The decay of sericulture in Bengal attracted the attention of the authorities rather late. The development of the same has been undertaken recently by the Agricultural Department of Bengal. Nurseries were established in 1921, and the Department distributed a good quantity of seed. Later, seed production by private parties was encouraged by subsidising "selected rearers" of the seed. The Department has also started sericulture schools and carried on demonstration and propaganda for improved methods.

Sericulture in Mysore is confined to the districts of Mysore, Bangalore, Kolar and Tumkur. The peculiarity of Mysore is that the division of labour and consequent specialisation is greater. The Mysore State started a Department of Sericulture, which has introduced modern filatures for reeling, in addition to improvements in seed

[1]Report on Silk Industry and Trade by Maxwell-Lefroy, 1916.

supply. The exports of raw silk and waste by rail from Mysore which amounted to 8428 mds., valued at 28 lakhs, in 1915 rose to 12814 mds. valued at 90 lakhs in 1922. The Kollegal Taluk of the Coimbatore District in Madras also produces silk. Geographically it forms part of the Mysore plateau.

Kashmir is the most important producer of silk in India at present. The special feature of production in Kashmir is that it is a State monopoly. The distribution of seed is regulated by the State ; the mulberry trees belong to the State ; the Kashmere valley has an abundance of these trees ; the reeling is organised by the State by the filature system. The silk produced in Kashmir is mostly exported to Europe.

Till 1869, the Industry in Kashmir was in an unorganised form, when Maharaja Ranbir Singh declared it as a State monopoly and took steps to develop it as such. In 1878, the work was spoiled by disease of the mulberry plant and till 1888 the State did not take active interest. In this year, the Sericulture Department was started and since then the industry has shown steady progress. The exact nature and position of the industry is not known, because the Department considers information on these points to be confidential.

EXPORTS OF RAW SILK

We have seen that the exports of silk goods from India to England suffered during the time of the East India Company. But our raw silk was in demand for the factories of Europe. In course of time, however, Japan grew in importance as a producer and exporter of raw silk. Falling prices and the decay of sericulture resulted in a fall of Indian exports. India is able to send some exports in spite of Japanese competition because of the special varieties produced here and because the exports consist mainly of chassm or silk waste. It can be said that the

Indian exports now make up the deficiency of the Japanese supply, because the world demand has increased.

The exports amounted to 12 lakhs of lbs. in 1862 valued at 82.3 lakhs of rupees. After a gradual rise to 26 lakhs of lbs. in 1869, the exports fell to 15 lakhs in 1885, when they were valued at 36.6 lakhs of rupees only. The fall in value compared with 1862 was due to the fact that the exports consisted more of silk waste and cocoons than of raw silk. This tendency has continued thereafter, though the exports have varied from 40 to 60 lakhs of rupees. U. K. and France, and Italy to a small extent take our raw silk.

IMPORTS OF RAW SILK

With the growth of the manufacture of silk goods in Japan and Europe, we are having large imports of silk goods, which compete with the local handloom production. We are still importing raw silk in certain quantities which mainly comes from China. The imported silk is of superior quality compared with our export which is of low quality. The imports which amounted to about 31 lakhs of rupees in 1860, gradually increased to about 107 lakhs in 1889. The Japanese industry had not developed till then. In subsequent years, with increased imports of silk goods from Japan, those of raw silk were reduced. The import duty on raw silk was raised to 11 per cent. in 1921 and to 15 in 1922. The duty on silk goods is higher. In 1921 it was raised to 20 per cent. and in 1922 to 30. This has not diverted the import trade from manufactured goods to raw silk, because the 15 per cent. duty on raw silk is a sufficient obstacle to the imports of raw silk. The steps taken in India by the Government and the States to improve sericulture, combined with this duty, have helped the production of raw silk. The import duty on silk goods

has restricted the trade, but we have not been able to develop the manufacturing industry thereby.

MANUFACTURE OF SILK

The manufacture of silk is mostly carried on by the handloom. There are a few silk-weaving mills in India. In 1926-27, there were only 12, distributed as under [1] :—

Madras	1
Bombay	2
Bengal	1
U. P.	1
Hyderabad, Mysore, Kashmere	7
	12

In view of the fact that India is a fairly large producer of raw silk, as well as a consumer of silk goods, it seems surprising that the power-loom has not spread in this industry. Among the causes the following may be mentioned : (1) Silk is a delicate fibre which cannot stand rough handling. (2) Mill spinning in cotton was possible, whereas in silk, raw silk itself corresponds to cotton yarn. (3) Being an article of luxury, it is in demand by the rich and not the poor. Attention has, therefore, been paid more to the artistic side of the manufacture, which admits of variety and is not capable of standardised work that can be done by machines. The modern silk industry in Europe, organised to produce a variety of silk goods, has required delicate machines, and skilled labour which is not available in India. (4) The interlacing of silk goods with gold and silver threads, which is a special feature of Benares, is not possible on the machines. (5) The demand in different provinces is varied because of differences in fashion and traditional use.

[1] Large Industrial Establishments in India, 1928.

Another feature of the silk industry is that it is mostly an urban industry. Cotton and woollen goods are used by rural folks and we find in consequence that the handloom industry in cotton and woollen goods is rural. But as silk goods were in use by the richer classes, and particularly by the court aristocracy, the silk industry has been an urban industry. Murshidabad, the old capital of Bengal, has been a centre of production, while Benares owes its silk industry to the patronage of the pilgrims.

THE POSITION OF THE INDUSTRY IN THE PROVINCES

United Provinces:—We shall now survey briefly the position of the industry according to provinces. In the U. P., the industry is found in varying conditions in Agra, Azamgarh, Shahjanpur and Benares, of which the last is the most important. The raw silk used in Benares is imported from Italy, China and Japan, though Bengal silk is also used to some extent.[1] The most striking feature of the Benares industry is the production of silk fabrics woven into with gold and silver threads. It has been estimated that about 5000 persons are engaged in the industry in Benares, which imported about 3540 mds. of silk yarn worth Rs. 42 lakhs, and exported silk cloth worth Rs. 91 lakhs in a recent year.[2] Thus the Benares industry is on the whole in a prosperous condition.

Bengal:—The tale is different so far as Bengal is concerned. This former home of the silk industry is now backward. The following figures of the number of people supported by the industry will show the tendency.

[1] Industrial survey of the Benares District.

[2] "The Silk Industry of Benares", H. B. Shroff in the Indian Textile Journal, February, 1926.

NUMBER OF PERSONS SUPPORTED BY SILK SPINNING AND WEAVING IN BENGAL[1]

District	1901	1911	1921
Birbhum	2101	3089	957
Bankura	3022	4800	3240
Murshidabad	28961	27338	2912
Malda	6915	7950	4558
Rajashahi	7409	3127	261
Total including other centres	50393	48783	13587

At the close of the last century, the silk-weaving industry in Bengal was of greater magnitude than that of raw silk.[2] But in this century, the decline in silk-weaving is greater than that in the production of raw silk. Murshidabad which was the most important centre of production has gone down to a comparatively inferior position.

Bihar and Orissa :—Patna and Bhagalpur are the two important centres of silk-weaving industry in this province. It is difficult to get exact information, because both cotton and silk are woven on the same looms, and mixed goods are produced in many cases. According to the census of 1921, 6315 persons were returned as supported by silk-weaving, more than half being in Bhagalpur. Though we do not have adequate statistical information regarding the condition of the industry, we may say that the large amount of Bhagalpur silk sold in Calcutta shows that the industry is doing well in this area. There is a silk institute in Bhagalpur, which was started recently ; this institute helps in training men for the industry and in making improvements.

Bombay :—The chief centres of production in the Bombay Presidency are Surat, Ahmedabad, Poona, and

[1] This table has been compiled from census reports.

[2] Monograph on the silk fabrics of Bengal, N. G. Mukerjee.

Yeola in the Nasik District. The number of persons supported went down from 44,137 in 1911 to 22,699 in 1921. The raw silk is mostly imported from China. There are two silk mills in Bombay, though no exact information of their working is available.[1]

The handloom industry in Nasik and Poona, which flourished during the ascendancy of Maratha rule, is declining. In Gujarat, the industry at Surat is flourishing, whereas that of Ahmedabad is going down. The prosperous condition of the Surat industry is partly due to skilled labourers, who have migrated to that place from Benares and Lahore, and partly to the variety of output and the absence of a local cotton industry as in Ahmedabad.

Madras :—Unlike other provinces, the industry shows a progress in this Presidency. The number of persons supported increased from 55 thousand in 1901 to about 75 thousand in 1911, and again to more than 80 thousand in 1921. Part of the progress is due to the presence of an export trade to Ceylon, Straits-Settlements, Malay and Natal. The raw material is largely imported from China and Japan.

Conclusion :—The main conclusion from this rapid survey is that with few exceptions, the silk industry is on the decline and that wherever it flourishes, it depends on foreign raw silk.

EXPORT OF SILK GOODS

Without going into early history, we may trace the exports since 1859-60, when they were valued at 19.2 lakhs of rupees. In 1865, they came down to about 9 lakhs. A rise in the price of silk goods increased the value of exports which gradually rose to 26 lakhs in 1875, and with some fluctuations to about 43 lakhs in 1887. This was

[1] Maxwell-Lefroy—Report on Silk Industry and Trade in India. From figures supplied to Maxwell-Lefroy by Chhoi Mills Co., Ltd., it appears that production is on the decline.

the high water mark of our exports, because from this date there has been a steady fall, the figure for 1928-29 being about 4.36 lakhs.

The chief customers of our silk goods have been the U. K. and France.

IMPORTS OF SILK GOODS

Before 1859, the exports were larger than imports ; in 1859 the imports exceeded the exports in value. Thereafter the imports steadily increased, whereas the exports were falling. The following figures show the progress of imports :—

Year	lakhs of yds.	Year	lakhs of yds.
1867-68	17	1895-96	183
1870-71	39	1900-01	207
1873-74	34	1903-04	223
1875-76	81	1907-08	245
1880-81	136	1913-14	355
1887-88	157	1915-16	302

IMPORT DUTIES

From the year 1916, we have a new factor in the imports of silk manufactures, due to the successive increases in the duty on them. With the general increase in the duty from 5 to $7\frac{1}{2}$ per cent. this year, the duty on silk was also increased. In 1921, the import duty on silk piece-goods was raised to 20 per cent. and in 1922 to 30. The effect of these duties on the imports is evident from the following figures :—

Year	Imports lakhs of Rs.	lakhs of yds.
1916-17	284	243
1917-18	285	203
1918-19	371	188
1919-20	592	302
1920-21	559	243
1921-22	298	149
1922-23	316	155
1923-24	340	141
1924-25	371	161
1925-26	280	163
1926-27	243	190
1927-28	258	213
1928-29	244	219
1929-30	223	229

The rise in prices in the earlier years is obvious ; though the quantity of imports goes down, its value goes up. The effect of the increased duty since 1921 is appreciable ; in recent years there has been a fall in prices which takes away the effect of the duty to some extent. If the prices continue to fall further, imports will increase.

The duty was imposed for revenue purposes, but it must have had some protective effect. We do not have exact information on the point, because the industry is not organised. The 1931 census may reveal the true situation. The Swadeshi movement is another factor which may help the industry. The use of silk in Bengal has increased of late, and the industry in Murshidabad and Bhagalpur is probably doing well at present.

The imports of silk goods come mostly from the U. K., France, Italy, China and Japan.[1]

[1] Figures in Lakhs of Rupees.

Year	U. K.	France	China	Japan
1901	23.7	23.9	44.9	29.2
1913	27.9	24.6	33.1	144.8
1921	10.5	6.5	112.9	141.0
1925	9.8	8.3	130.4	129.0
1927-28	8.3	13.4	117.0	157.6
1928-29	3.5	6.1	88.0	138.6
1929-30	1.1	4.6	80.7	126.2

PART III

MINERALS

CHAPTER IX

COAL[1]

SOURCES

Coal is to be found in large quantities in certain areas in Bengal and in Bihar and Orissa. The two well-known coalfields are the Raniganj Coal Fields and the Jharia Coal Fields. The former were started in 1820, the latter in 1893. In view of the difference in the dates of starting, the work at present is harder in the Raniganj fields, because coal has to be mined at a deeper level. The total production in 1923 was 196 lakhs of tons of which 132 came from the Jharia fields in Bihar and Orissa and 46 from the Raniganj fields in Bengal. These two together constitute about 91 per cent. of the total production in India. There are some coal mines in other provinces and in some of the states which make up for the remainder. Taken in the aggregate we find that the figure of production is rising particularly since the beginning of this century. The production in 1929 was 234 lakhs of tons.

OVERPRODUCTION

In the case of this industry, we are faced with a peculiar situation, namely, that there is a surplus of production over the requirements of the country, in other words, we are not able to consume the whole of the production. We have some large industries, and railways and steamers which consume coal in varying quantities ; but in spite of this, if we are not able to consume the quantity produced, it shows the backward industrial condition on the one hand, and indicates the necessity of exporting coal on the

[1] This chapter is mainly based on the Report of the Indian Coal Committee, 1925, and the Report of the Tariff Board on coal.

other, if the coal mining companies are to flourish. In view of the possibilities of the development of industries which will require power resources in this country, it will not be considered wise for us to export coal. Unlike agricultural commodities, coal once mined and consumed, either locally or by export, cannot be replaced. The question is, therefore, whether we should conserve our coal resources for our future industrial purposes. If we are to do so, we should restrict production to the level of the existing demand. In view of the fact that State intervention in this connection would interfere seriously with private enterprise, no action has yet been thought of in this direction. It may be that the surplus of production is very small and therefore the question has not been taken seriously by the State. The coal mining companies could, if they chose, restrict production by joint efforts, but they have not been able to do so. It happens, therefore, that the industry itself depends to a certain extent on export.

Before the War, we exported about 40 lakhs of tons of coal per year ; in view of the geographical position of the coal fields, Calcutta is the port of export and the figure of 40 lakhs of tons shows a nominal export from Calcutta to other centres. This does not necessarily mean the export to foreign countries, because coal nominally exported from Calcutta may be treated in three different ways. Part of it is exported to foreign countries ; in 1913-14, the foreign countries took 7 lakhs of tons of our coal. Part of the coal going out of Calcutta is sent coastwise to other Indian ports ; this accounted for 23 lakhs of tons in 1913-14. The remainder is used as bunker coal. Steamers passing through the port of Calcutta take up coal in the harbour sufficient to last them for the voyage. The coal thus taken up is known as bunker coal ; from the point of view of the port of Calcutta, it is nominally an export.

During and since the War, the export of coal to foreign countries has suffered considerably, there have been difficulties in sending coal coastwise to Indian ports and the figure in this connection has been reduced; besides, bunker coal has also been taken in smaller quantities. The combined export made up of these three items in 1923 was 17 lakhs of tons as against 40 lakhs in 1913.

At the same time we are having some imports of coal. Before the War we imported on an average about five lakhs of tons of coal. The countries from which we receive coal are the United Kingdom, S. Africa, Japan, Portuguese East Africa, Australia and others. The countries mentioned above are given in the order of importance from the point of view of the quantity they supply us. During the war period, the import naturally dwindled to a very small figure, but from 1921, the imports grew and reached a very high level in the following year. The total imports in 1921-22 were more than 10 lakhs of tons, and the countries contributing to this were the United Kingdom and South Africa. The import went down in 1923 to 6 lakhs; the share of the United Kingdom having suffered, while South Africa maintained her position with a slight improvement.

We have seen above that there is a small surplus of production over local requirement which we have got to dispose of by export. This surplus naturally becomes larger to the extent to which we import foreign coal, as pointed out above. Before we can consider the combined effect of this situation, it is better to survey the recent history of the coal trade which has materially affected the present position.

RECENT HISTORY OF THE TRADE

There was a sudden demand for coal within the country immediately after the War. This was probably due to increased industrial activity which came along with the

War. This demand for coal imposed a heavy strain on the railways in 1919 and 1920; a large proportion of the waggon supply was taken up by coal traffic, and trade in general suffered. Similarly, several industries also suffered because of the difficulty of obtaining adequate and timely supplies of coal. In order to remove these difficulties, the Government of India adopted measures similar to those taken in the United Kingdom and in South Africa. In July 1920, export of coal from India was prohibited, except under license; at the same time the preference given by railways to bunker coal meant for Indian ports was withdrawn. This was done with a view to economise waggons by diverting bunker coal to the sea route from Calcutta to the different Indian ports. The prohibition of export was meant to prevent India from being depleted of coal and to see that the supply of Indian coal to Indian ports was maintained. Exports were permitted to certain of our former buyers on the following scale :—

RAILWAY COAL

	Tons per mensem
Ceylon Government Railways	10,000

BUNKER COAL

	Tons per mensem
Colombo	50,000
Aden	10,000
Sabang	5,000
Singapore	15,000

The difficulties increased because the output in 1920 was small and the railway facilities were not adequate. Further restrictions were imposed and exports to Sabang and Singapore were prohibited, and later also to Aden. Exports to Colombo were allowed on a diminished scale, and at the same time bunkering in Indian ports was restricted to a few days supply sufficient to enable steamers to reach the next port where further supplies of coal could be obtained. By April 1922, the restrictions on

export of coal were gradually removed; the final removal having taken place in the beginning of 1923.

The effect of these restrictions was that for the time being Indian coal disappeared from overseas markets. During the interval, African coal was successfully introduced in most of the markets which took Indian coal before. South African coal happens to be both better and cheaper for these markets, and once other business relations have been established, it is difficult to re-introduce Indian coal in these markets. The Government of South Africa and the coal trade are working in co-operation, by a system of grading and pooling, to supply the best coal to these markets in a satisfactory condition in order to retain their hold on them.

As against this, it may be noted that even before the War there were complaints about the quality and price of Indian coal from foreign countries. The most important centres which took our coal were Penang, Singapore, Colombo, Sabang and Aden. With few exceptions, most of the coal taken in these centres is for bunkering purposes. Enquiries in these areas have established the fact that the opinion is that Indian coal is poor and the price also is considered high. It is not true to say that India does not produce good coal required by these ports, but the fact is that the condition in which Indian coal was delivered to them led to this prejudice; the unsatisfactory condition was due mostly to inefficient handling of the coal at each stage.

THE BOMBAY MARKET

The low imports of foreign coal into Indian ports are also partly due to similar complaints. The restrictions on the export of coal were not in favour of its export to Indian ports; besides, the quality of the coal was an important factor. In addition to these, there was a rise in pithead price in Bengal and there were transport difficulties at a

time when there was a reduction in price in the United Kingdom after the settlement of the coal strike in 1921. About this time there was also a slump in trade due to which coal was supplied to steamers at low rates. Leaving aside the consumption of foreign coal in the various ports, because of its small quantity, we shall consider briefly the consumption of coal in Bombay. Before the War, the largest consumer of Bengal coal was Bombay, which took about 772 thousand tons on an average ; but even then, Bombay consumed 338 thousand tons of foreign coal. Ignoring the war period, we find that soon after the war, there was a large import of foreign coal in 1921 amounting to more than 10 lakhs of tons. This was so because the freight rates from Calcutta to Bombay were high and the rates available to foreign coal were cheap. Besides, under a misapprehension that stocks would be short in this country, the Railway Board placed large orders in foreign centres.

In spite of the recent improvements, Indian coal has not yet recovered its dominant position in its natural market, namely, Bombay ; the reason is the fact that the quality of coal supplied immediately after the war was inferior, and there were bitter complaints in Bombay against Bengal coal. Besides, South African coal is being imported in larger quantities, and this happens to be both cheaper and better in quality. In addition to these, there is another factor of importance which reduced the demand of Bombay for coal. Unlike other Indian ports, the Bombay market differs inasmuch as the coal taken is not used so much for bunkering as for local consumption by the industries. The industrial demand has diminished of late because of the competition of oil and electricity. Coal has been superseded by electricity in about 50 per cent. of the cotton mills in Bombay, and by oil in 25 per cent. of the remainder. Both the railways, namely the G. I. P. and the B. B. & C. I. have now electrified

their suburban traffic,[1] which has also reduced considerably the demand for coal as the power is produced by hydraulic means. The present demand for coal in India is estimated to be about 600 thousand tons, three-fifths of which is supplied by Indian mines and two-fifths by foreign. This means that the extent to which the Indian coal industry can extend its market in Bombay is 250 thousand tons. If we take into account other small buyers, we shall find that the total new market for Indian coal cannot be more than 300 thousand tons within the country.

In addition to this, so far as foreign markets are concerned, we may be able to recover them if the best coal is exported. It may be pointed out that exports, even when they were at a high level before the war, bore a small percentage to the total production. The pre-war export of about ten lakhs of tons to foreign countries was not a very large drain, and if we could reach such a figure again, it would be a great help to the collieries.

IMPROVEMENTS IN QUALITY OF EXPORTS

It has been found that the best Indian coal can compete in any market in the East, but if this competition is to be effective and markets secured, it is necessary to see that only the best quality coal is exported, and that it is always of uniform quality. Certain improvements in raising and distribution must be made to lower the price, in which case Indian coal need fear no foreign competition in Eastern markets. So far as the comparative price is concerned, the Indian coal has to pay the following charges :—

1. Cost of raising coal.
2. Railway freight to Calcutta.
3. Calcutta port charges.

[1] The G. I. P. has also electrified the line up to Poona.

4. Steamer freight to destination.
5. Insurance, finance and wastage.

COST OF RAISING COAL

So far as the cost of raising is concerned, the labour charges both in Jharia and Raniganj fields are high with reference to the output. It has been estimated that the output per head of worker in some of the countries is as follows :—

	Tons
Natal	193
Orange Free State	316
Transval	328
India	100

It is impossible to reduce wages, and therefore the other methods of reducing cost are (1) the use of machines to increase output, and (2) the avoidance of stacking. If the coal raised from a mine could be lodged directly into waggons, instead of the present practice of stacking in open spaces, the saving thus effected would be appreciable. It would mean less pilferage, less wastage, less labour and better condition of the coal when delivered. It has been estimated that the total saving in this way would be about Re. 1-4-0 per ton.

RAILWAY FACILITIES AND FREIGHT

It is obvious that this estimate depends on increased railway facilities. The East Indian Railway is the most important in this connection ; the Bengal Nagpur Railway comes next in importance ; the Eastern Bengal Railway and the port authorities at Calcutta can also help. It has been estimated that about two-thirds of the entire traffic of the E. I. R. is that of coal. In the case of the B. N. R. it is a little less than half ; these railways have to cater for 700 collieries in all.

One peculiar seasonal difficulty may be mentioned in this connection. In the areas under the coalfields, a large number of labourers is available when agricultural

operations are over; having nothing to do, they offer themselves for work at a cheap rate and the collieries find it convenient to utilise their services. In consequence, they are able to obtain increased production from February to May, and this additional supply of coal has got to be removed with the help of the railways. This is the very period when other traffic is also heavy, because it is the export season for all agricultural products of the country. The problem of adequate waggon supply to meet such demand is therefore really difficult. It may be pointed out in this connection that during the war period, on account of military and industrial requirements, waggon supply was controlled. There was a Coal Controller, and later, a Coal Transportation Officer. The function of these officers was to arrange the waggon supply for coal and other commodities in co-operation with Indian railways. There were naturally the usual official delays, but no such control is now necessary, though it has been suggested that if an officer responsible to the railways is appointed to carry out the details of waggon supplies, it would facilitate matters.

The railways can also help by giving other facilities, namely, erecting sidings alongside collieries where the loading of waggons may be done without loss of time and material. But the most important help can be in the matter of railway freights. The existing freights are on the whole considered reasonable, so far as the export of coal is concerned, because a rebate of 25 per cent. is given. South African Railways give a rebate on the export coal, and it is desirable that a rebate should also be given on the export of Indian coal, as it would bring additional revenue to the railways by stimulating export. Besides, a large part of the nominal export goes to Indian ports, and anything which can be done to strengthen the position of coal in these markets will tend to strengthen the whole industrial organization of the country. In view

of this, the Coal Committee of 1925 recommended an increase of 50 per cent. in the rebate, that is, the freights should be in fact reduced by $37\frac{1}{2}$ per cent. instead of 25 per cent. as before. This has been accepted, and in consequence the cost of transporting coal to Bombay and Karachi has been reduced by 11 as. per ton.

Calcutta Port facilities :—Improved facilities are also in progress at the Calcutta docks, and it is expected that they will be adequate for the coal trade in the near future. The prosperity of the coal trade would be in the interest of the Calcutta port, and on this ground it is desirable that the port charges should be reduced. The methods of handling coal at the port and the want of up-to-date facilities are handicaps which may be lessened by reduced charges.

The Grading Board :—In order to assist the export of coal from Calcutta the Coal Committee also recommended a Grading Board. The function of this Board is to grade collieries which produce coal for export and to issue certificates for each consignment of coal exported. These would show from which colliery the coal came and describe the quality of the coal, at the time of shipment at the Calcutta docks. This recommendation has been accepted and a Grading Board has been appointed. It is hoped that the prejudice against the Indian coal in some of the foreign markets will be removed by this step. It is necessary, however, that the coal industry should itself arrange for suitable propaganda by sending representatives to foreign centres from time to time.

Steamer freights :—One important consideration which affects the export of Indian coal and facilitates the imports of foreign coal is that of steamer freights. We find that the freight from South Africa and the United Kingdom to Bombay and Karachi is less than that from Calcutta to Bombay. It seems at first sight that the freights are either artificially lowered in one case or in-

creased in the other. The real reason, however, seems to be this. A steamer cannot cross the seas if it is empty ; it must carry sufficient weight, or ballast, to secure stability. In cases where no such weight is available, the steamer will have to load ballast for the voyage which means that it will have to carry weight on its own account, for example, sand bags which would involve expense to the steamer itself. The alternative to such expense is to accept cargo, to make up the necessary weight, even at less than the economic rate of freight. There is a class of steamers known as tramp steamers which go from port to port in the hope of picking up freight. Cargo at an economic rate is available to such steamers only at certain ports, and in order to reach such ports the tramp steamer has to travel across the seas, and would thus be willing to take up a cargo such as coal even at an uneconomic rate. The profit and loss of the owner is calculated on the whole round voyage, and such a procedure helps him to get a profit, though the particular transaction by itself may seem to be a losing proposition. It is this circumstance that enables tramp steamers to take up coal from the United Kingdom or South Africa at cheap rates and not so much from Calcutta. Heavy and more remunerative cargo than coal is available at Calcutta under ordinary circumstances and, therefore, the impetus to take coal as mentioned above from Calcutta is not great. But tramp steamers which come to the East from the West in the hope of taking good freight on their return journey find it convenient to bring a commodity like coal at an uneconomic rate. This explains the apparent paradox that South African and British coal come to Bombay and Karachi at a cheaper sea freight than Bengal coal.

PROTECTION TO THE COAL INDUSTRY

To sum up the situation of the coal industry, we find the following are the peculiar features. Imports have

gone down considerably in recent years, and in 1928-29 they amounted to 1,91,000 tons. Exports have slightly increased since the war but they are much below the pre-war level. The output of Indian mines in 1928 amounted to 2,25,43,000 tons which is 2.1 per cent. more than in 1927. There is a net consumption in India of 220 lakhs of tons of which nearly 20 lakhs of tons are imported. This means that we have to arrange for an export of 20 to 30 lakhs of tons every year. Before the War, our imports came chiefly from the United Kingdom ; in recent years, the imports come mainly from South Africa. Considering the quality of imports in the Bombay and other markets, we have seen that the total additional market which the Indian industry can obtain is about 2,50,000 tons. In brief, therefore, the problem is on the one hand that of overproduction, and on the other of competition from a comparatively small quantity of imports in one important market. The question is whether the industry which supplies 97½ per cent. of the home market deserves protection ; whether even if protection is given, the problem can be solved ; and whether the state of overproduction is a good case for protection. It is alleged in this connection that the loss of export trade is due to Government restrictions, and therefore the Government should help the industry. If the restrictions were imposed in the national interest, it may justify assistance or compensation to the industry in another form, but it does not make out a good case for protection.

PROTECTION AGAINST UNFAIR COMPETITION

So far as the export of Indian coal is concerned, we have seen that steps in the right direction have been taken by an increase of the railway rebates on exports, and by the institution of the Grading Board. The failure, however, is alleged to be due to the unfair competition of South African coal. South African coal competes not

only in the Bombay market, but has practically ousted Indian coal from its foreign markets. It has been alleged that the success of the South African coal is due to state bounties ; and that the bounty is given in the form of reduced railway rates. The railways in South Africa are owned by the State, and therefore the South African Government is in a position to help the coal industry by indirect methods. There are three railway tariffs on coal in South Africa ; (1) for coal for internal consumption, (2) for bunker coal and (3) for export coal. The tariff on coal for internal consumption is the highest ; that for bunkering is lower ; on export coal it is the lowest. The difference between the highest and lowest rate is 7sh. 6d. a ton which is equal to Rs. 5/- a ton. The Government of South Africa sacrifices a revenue of about half a million pounds per year in this way. In other words, this is a measure of assistance which the South African coal industry receives from the state by means of an indirect bounty in the form of a specially reduced rate on export. It has been ascertained that though the concession amounts to as much as Rs. 5/- per ton, the advantage which the South African coal has in the Bombay market is not more than Re. 1/8 per ton. It has been suggested, therefore, that if a countervailing duty of Re. 1/8 per ton, in addition to the existing revenue duty of As. 8, is imposed, it would enable the Indian coal to compete successfully in the Bombay market. In most other countries there is legislation which provides for action against unfair competition. The action is usually in the form of a duty or an additional duty equal to the undue advantage derived by the foreign commodity. If the fact of unfair competition accompanied by actual or probable injury to domestic industry is proved, action is taken. Even in the United Kingdom which professes free trade, such defensive measures are taken under the Safeguarding of Industries Act of 1921. In view of the divergent

political opinion in that country, an elaborate procedure is laid down which has to be followed before the necessary action is taken.[1] The idea is that the departure from the principle of free trade should be as small as possible. The majority of the Tariff Board took their stand on the procedure of the United Kingdom, and came to the conclusion that no action was necessary against South African coal. The Government of India, however, are committed to a policy of discriminating protection, and it is proper, therefore, that if we are to follow the practice of other countries, it should be that of protectionist countries. In such cases it is not the total amount of benefit that may accrue, but the fact of unfair competition, which is of greater importance. Other countries have expressed their condemnation of exports from states which stimulate them by bounties, and have taken steps against such exports by countervailing duties. The Indian Tariff Act of 1894 was amended in 1899, and section 8A of this Act gives power to the Governor-General in Council to levy countervailing duties. The exercise of this power is therefore called for under the present circumstances, as pointed out by Sir P. Ginwala in his minority report to the Tariff Board.

SOME RECENT FACTS ABOUT THE COAL INDUSTRY

The Indian Coal Committee of 1925 and the Tariff Board analysed the position of the industry almost exclusively from the view-point of international competition and aimed at the recovery of overseas markets. The success that attended the steps taken upon their recommendations is seen in the recent decline in our coal imports and a slight recovery in our coal exports. India's imports of coal and coke declined from 6,30,000 tons, the average of the quinquennium 1919-24, to 1,91,000 in 1928-29, and exports which had the post-war average of

[1] The Labour Government is allowing the Safeguarding duties to lapse.

4,34,000 tons rose to 6,41,000 in 1928-29.[1] But while externally the industry has been able to increase the demand, internally its market has narrowed down, because the Indian Railways consuming the highest percentage of the total demand have now their own collieries to supply most of their needs. Moreover, they have successfully tried oil and electricity and are busy with an organised campaign to economise fuel consumption per unit. All this naturally affects the industry by reducing the most effective demand. In 1919-20 the output of Railway collieries was a little over 16 lakhs of tons; it is now estimated at 46 lakhs.

The Railways have not been indifferent to the interests of the industry; in 1929 not only did they decide to limit the output of railway collieries but also gave concessions on coal and coke. Analysing the coal traffic on the E.I.R. it was found that railway earnings on tonnage carried over 400 miles are progressively increasing, due to the fact that the average distance coal was hauled was going up substantially; so the new rates made no change for the first 200 miles of haulage, but from 201 to 400 and upwards they showed appreciable reductions. Besides, the railways have of late been making considerable improvements in their carrying capacity and economic handling of traffic. The coal area has received due attention in the construction of new lines and greater and more efficient siding arrangements. All this, no doubt, has been welcome a aid to the industry.

But leaving aside market conditions and the quantitative aspect of the industry, thanks to the good work done by the Coal Grading Board, a great improvement in the quality of Indian coal cargoes has taken place. Even the second class coal has received due attention, and with a view to extend its market by increasing its use

[1] In 1929-30, the import was 2,24,000 tons; the export was 6,85,000 tons.

for general domestic consumption, an organisation known as the Indian Soft Coke Cess Committee has been set up. But before soft coke can be made popular not only must it be cheap and readily available at many centres but it also needs to be smokeless. Thus, it presents a problem demanding scientific investigation and research. A similar problem arises as to the future supplies of metallurgical coke, because the existing estimate reveals it to be quite inadequate for the future requirements of the iron and steel industry. Experiments in coking mixture have already proved promising but a sustained scientific effort is necessary to secure permanent improvements.

The above facts reveal the potentiality of scientific research, and in this connection the manifold problems of underground work in collieries suggest themselves naturally. A suggestion for the creation of a Coal Industries Research Board was recently put forward and is worth consideration. Besides technical improvements, the coal industry is badly in need of a marketing organisation, because the marketing is now badly done owing to competitive selling agencies. A centralised selling organisation, or in its absence, some common understanding between the collieries will go a long way to ensure proper action to the benefit of the industry as a whole.

CHAPTER X

METALS

THE IMPORT TRADE

INTRODUCTORY

The importance of metals and metal manufactures can hardly be exaggerated. They form the backbone of modern civilization, and their increased use denotes a country's industrial prosperity. Machinery, railway plant, vehicles, instruments, buildings materials, hardware, cutlery and even the domestic utensils of everyday use are all made of metals. Almost every form of economic activity requires the help of some metal goods. Consequently, we have been importing metals and metal goods in increasing quantities, especially as the metal manufacturing industry was till recently in a very backward condition in India.

The accumulated value of all the articles coming under the metal group now represents a great amount—almost as large as that of the imports of cotton manufactures. For example, in 1925-26, the metal group represented a value of 60 crores of rupees against 66 crores of cotton goods. In 1929-30, the figures were 54 and 59 crores respectively.

The imports coming under the general metal group can be divided into two broad sections : metals and manufactured metal goods. Of the metals, iron and steel are by far the most important, the other metals of minor importance being copper, brass, tin, aluminium, lead and zinc. The principal items separately classified under the section of manufactured metal goods are railway plant and rolling stock, machinery of all kinds, hardware and motor vehicles. In order to study the growth of our trade in

metals and metal manufactures, we shall consider each of these main classes of goods separately.

METALS

The total value of all the metals imported in 1860-61 amounted to 211 lakhs of rupees. Showing slight fluctuations here and there, the imports grew steadily in value, amounting to 2207 lakhs in 1913-14. During the War period they were naturally restricted, but with the close of the War they rose to 2277 lakhs in 1919-20 and in the next year jumped to 4075 lakhs of rupees. In 1921-22, however, they fell to 2620 lakhs. The position in recent years is shown below :—

Year	Lakhs of Rs.
1926-27	2381
1927-28	2839
1928-29	2700
1929-30	2360

On the whole it will be seen that, considered over the entire period, the imports of metals have shown great progress. These great developments in the imports have been due almost entirely to the growing trade in iron and steel, as we shall presently see. Before considering the imports of iron and steel, we shall dispose of the less important metals.

(i) TIN

The imports of tin are quite small and come mostly from the Straits Settlements which is a semi-monopolistic producer of the metal. In 1860-61, the imports of tin amounted to 12 lakhs of rupees. In 1868-69 they were valued at 14.6 lakhs of rupees and represented a quantity of 34,000 cwts. With the growing use of the metal, especially in tin-plating, the imports have been steadily on the increase, amounting in 1928-29 to 79.13 lakhs of

rupees, the quantity imported being 50,000 cwts.[1] The share of the Straits Settlements was 74.93 lakhs, the rest coming from the United Kingdom. The imports are likely to be maintained at the present level and show some further progress with the increased use of the metal, especially as the import duty on tin has since 1926 been reduced from 15 per cent. *ad valorem* (which amounted to about Rs. 555 per ton) to Rs. 250 per ton ; and the tin-plate industry in India, which has since 1924 been granted a certain amount of protection, is showing progress. But in view of its limited output and the narrow range of use, there is no chance of the imports rising much in quantity.

(ii) COPPER AND BRASS

The imports of copper and brass have represented a much greater value and have also a greater amount of progress than tin. This is, of course, due to the more general consumption of these two metals, they being extensively used for domestic utensils. In 1860-61, the imports of copper and brass were valued at 108 lakhs of rupees ; in 1926-27, they amounted to 446 lakhs. In 1929-30 they stood at 316 lakhs.

It is interesting to note that, in the earlier days, copper was the most important metal of import. Right down to 1879-80 it occupied the foremost place among the metals imported ; in that year out of the total imports of 341 lakhs of metals, copper alone represented 162 lakhs. In the next year, the imports of iron and steel equalled those of copper in value and since then the latter have shown but a small amount of progress ; so that at present, the imports of copper bear a small proportion to the total imports of metals, the bulk being made up of iron and steel.

[1] In 1929-30, the imports increased to 58000 cwts. valued at 80.5 lakhs of rupees.

Besides, the imports of copper have shown great fluctuations from time to time. This is due to the fact that as the metal is largely used by the common masses for their domestic utensils, a year of good harvest and general prosperity stimulates its imports while a year of famine and distress restricts them. Thus, for example, the imports, which had amounted to 4,70,000 cwts. in 1895-96 dropped to 2,40,000 in 1896-97 (a year of famine), and were as low as 9,000 and 16,000 cwts. in 1899-1900 and 1900-01 (years of extreme distress). With the return of better conditions they rose once again to 4,00,000 cwts. in 1902-03. The largest imports were made in 1913-14 when they represented a value of 412 lakhs of rupees, being 7,46,870 cwts. in quantity. During the War period, owing to the stoppage of the imports from Germany and to the very small consignments from the United Kingdom, where the metal was utilised for the manufacture of munitions, the imports were very much curtailed. The smallest quantity imported during these years was 23,000 cwts. valued at 25 lakhs of rupees in 1916-17. After the close of the War, some developments took place, and in 1925-26 the imports amounted to 3,34,500 cwts. representing a value of 183 lakhs of rupees, but in 1928-29 these were 2,70,000 cwts. valued at Rs. 142 lakhs. In 1929-30 imports declined to 1,47,000 cwts. valued at Rs. 93 lakhs.

From the above, it may appear that the imports of copper are as yet far below the level reached in 1913-14. This is, however, not the fact. The smaller imports of recent years are due to a change in classification by which the mixed or yellow metal for sheathing, so long included in copper, was transferred to brass since 1915-16. As a result, the imports of brass which were quite small until 1914-15, have shown great progress in recent years. In 1913-14, the imports of brass amounted to only 17 lakhs of rupees. In 1925-26, they stood at 263 lakhs of rupees.

It is therefore necessary to take the total amount of copper and brass together to find out the true conditions, for the change in classification since 1915-16, makes separate comparison impossible. When taken together, it will be seen that in 1913-14, the imports amounted to 429 lakhs of rupees ; while in 1925-26, they stood at 446 lakhs. In 1929-30 the imports were 316 lakhs. It can therefore be said that the imports have really reached the pre-war level and, though, owing to their universal use, the imports are liable to fluctuations with changes in the economic condition of the people, they must grow with the increasing population and its gradual progress.

In this connection it is worth notice that while in the pre-war days the bulk of our imports came from the United Kingdom, the imports from Germany have in recent years been fast replacing those from the former, as the following figures will show :—

IMPORTS OF COPPER AND BRASS: VALUE IN LAKHS OF RS.

	Copper		Brass	
	From U. K.	From Germany	From U. K.	From Germany
Pre-war average	167	93	6	2
1919-20	157	...	179	...
1922-23	124	22	179	61
1925-26	40	97	128	79
1926-27	28	87	77	127
1927-28	45	37	89	96
1928-29	49	48	84	120
1929-30	30	31	56	125

It will thus be seen that the imports of copper and brass from Germany have already exceeded those from the United Kingdom, being 156 lakhs of rupees against 86 lakhs from the latter in 1929-30. The other countries from which smaller quantities of copper and brass are imported are the U. S. A., France, Belgium and Japan.

(iii) ZINC, LEAD AND ALUMINIUM

The imports of zinc and lead are too small to deserve any special notice. In 1860-61, they amounted respectively to 12 and 2 lakhs of rupees. In 1925-26, they stood at 37 and 15.6 lakhs; and in 1929-30 at 39.73 and 9.43 lakhs respectively. The imports of zinc come mostly from the United Kingdom and Belgium, and those of lead from the United Kingdom and Ceylon.

The imports of aluminium are showing considerable progress in recent years as can be seen from the following figures :—

Imports of Aluminium	Value in lakhs of Rs.
Pre-war average	23·4
War average	10·8
Post-war average	67·9
1925-26	92·8
1926-27	95·1
1927-28	118·5
1928-29	107·8
1929-30	142·3

This is due to the increased use of aluminium vessels in the country. Aluminium utensils are cheap, light, fairly durable, decent-looking and clean ; as such they are being largely used in our kitchens, and we can expect the imports to show further growth in future. A small aluminium industry is also coming into existence.

(iv) IRON AND STEEL

INTRODUCTORY

The metals which are, by far, the most important and to which the growth of our total trade in metals has been mostly due are iron and steel, though in the earlier days the imports of iron and steel were quite insignificant, copper being then the foremost metal of import. This was due to the absence of industrial progress in the country.

The subsequent establishment of industries, the growth of mechanical transport and the construction of buildings and factories on modern lines, have been followed by a great rise in the imports of iron and steel. These imports consist of a number of building and structural materials such as sheets and plates, bars and channels, beams, pillars, bridge-work, angles and springs, wrought tubes, pipes and fittings, hoops and strips, nails, rivets and washers, wire, wire rope and nails, bolts and nuts etc.

GROWTH OF THE IMPORTS OF IRON AND STEEL

In 1860-61, the imports of iron and steel amounted to only 49.6 lakhs of rupees. Showing some slight fluctuations they rose to 154 lakhs in 1868-69. The increasing imports of these years were to a great extent due to the establishment of cotton and jute mills in the country. Owing to a slight rise in prices and the adverse condition of the newly established industries, the imports of iron and steel were curtailed during the next few years and amounted to 86 lakhs of rupees in 1873-74. In the next year, they rose to 135 lakhs and since then, with minor fluctuations, they grew steadily till they amounted to 400 lakhs in 1897-98. It should be observed that iron and steel had by this time come to occupy the foremost place among the metals imported. In 1897-98 they represented about two-thirds of the total imports of metals. The quantity rose from 1,04,000 tons in 1875-76 to 2,89,000 tons in 1897-98. During the next few years, the imports were curtailed, owing to the general famine prevailing in the country combined with a rise in prices. Thus, in 1901-02, the imports of 2,38,000 tons represented a value of 486 lakhs of rupees.

In the period 1901-02 to 1913-14, the imports showed a phenomenal progress. This was brought about by a combination of various causes. The iron and steel output of the world, with the development of the industry in the

U. S. A., Belgium and Germany, had risen manyfold, and there was a large surplus available for international commerce. Secondly, the uses of iron and steel had greatly increased. Thirdly, this was a period of general prosperity and industrial growth. The extension of the existing industries and the establishment of new ones led to the increased consumption of iron and steel. The reduction in duties and the gradual displacement of building materials like timber, bamboo, etc. by iron and steel greatly stimulated their imports. The gradual fall in prices was also a contributing factor.[1] As a result of all these, the imports rose year after year till they amounted to 1601 lakhs of rupees in 1913-14; in quantity they reached the record volume of 10,18,000 tons.

The outbreak of the War very seriously affected the imports of iron and steel. The imports from Belgium and Germany were stopped; and the United Kingdom which supplied the bulk of our imports, could send only a small quantity, all the resources of that country being devoted to the manufacture of munitions and the construction of battle-ships, aeroplanes, etc. Indeed, so great was the demand for iron and steel during the War period from the belligerent countries that prices rose to phenomenal heights. The following figures indicate how acutely this branch of our trade was affected during the War period.

IMPORTS OF IRON AND STEEL

	Quantity in thousands of tons	Value in lakhs of Rs.
1913-14	1018	1601
1914-15	609	977
1915-16	424	919
1916-17	257	886
1917-18	152	776
1918-19	181	1245

[1] In 1901-02, the price per ton amounted to a little more than Rs. 200; in 1913-14, it was Rs. 157.

With the close of the War, the imports rose at once to 4,27,000 tons in 1919-20 and further to 7,12,000 tons in 1920-21. Owing to the very high range of prices still prevailing, the imports of 1920-21 reached the record value of 3129 lakhs of rupees though in quantity they were much below the pre-war level. There was also some fall in quantity in 1921-22 ; but with declining prices, the imports rose year after year till in 1925-26 they amounted to 8,84,000 tons, valued at 1807 lakhs of rupees. It will thus be seen that the price of steel has fallen heavily since 1921-22. It still continued to fall and in 1926-27 the value per ton was Rs. 198 as against Rs. 204 of the previous year. But due partly to the depression of the cotton industry in Bombay, and the long coal strike in England, which affected the iron and steel trade of the United Kingdom, the imports declined slightly in 1926-27, amounting to 8,45,000 tons, valued at 1675 lakhs of rupees. The position in recent years is shown below :—

Year	Quantity tons	Value lakhs of Rs.
1927-28	11,97,300	2144
1928-29	11,69,900	2029
1929-30	9,72,700	1721

SOURCES OF SUPPLY

The United Kingdom occupies the foremost place among the suppliers of iron and steel ; her preponderance is as overwhelming in this branch of trade as in cotton manufactures. But as in the case of cotton manufactures, other countries are competing now with her in the supply of these goods, though their share is as yet very small in comparison with that of Britain. These countries are Belgium, Germany and the U. S. A.

The United Kingdom :—The imports from the United Kingdom have all along represented the greatest bulk.

In 1892-93, they amounted to 71 per cent. of our total imports. During the next few years, the share of Great Britain went down to some extent, due to the growing imports from Belgium. Thus they represented 68 per cent. of the total in 1897-98 and were only 62 per cent. in 1902-03. In the subsequent years, the imports from the United Kingdom showed greater progress than those from the other countries so that the share of the former once again rose to 69 per cent. in 1913-14. During the War years, the imports from the United Kingdom were much restricted; consequently, her share went very low, the vacant market being to some extent occupied by the U. S. A.; thus in 1917-18, it was only 45 per cent. With the return of normal conditions, the imports from Great Britain have, however, risen once again, and in 1925-26, her share was 67 per cent. of our total imports.[1] It will thus be seen that except during the War period, when the imports from the United Kingdom were very much curtailed, the country has occupied the most dominant position as a supplier of iron and steel materials to India.

Belgium :—With the growth of her iron and steel industry the imports from Belgium showed considerable developments from the close of the last century. In 1892-93, they amounted to 75 lakhs of rupees and by 1905-06 rose to 195 lakhs, representing about 30 per cent. of our total imports. The progress was thus quite considerable. The more significant fact was that while, considered as a whole, the imports from Belgium were less than half of those from the United Kingdom, when considered separately as iron and steel, the imports of steel from Belgium actually exceeded those from the United Kingdom, being 147 lakhs of rupees against 143 lakhs from the latter in 1905-06. It will thus be seen that in supplying steel the United Kingdom no longer enjoyed a monopoly and had

[1] The corresponding percentage in 1929-30 was 59.

a keen rival in Belgium. With her superior iron ores, Belgium was in a better position to manufacture the higher class metal, steel, and consequently she could send her goods successfully to India. But as a result of the competition from Germany and also from the United Kingdom, which was taking vigorous steps to re-capture the Indian market, the imports from Belgium fell heavily during the next few years, amounting to only 99 lakhs of rupees in 1910-11. In the three years before the outbreak of the War there was some recovery, and the total imports amounted to 185 lakhs of rupees in 1913-14. These were, however, below the level reached in 1905-06. During the War period, the imports from Belgium were altogether stopped, but they have shown quite rapid progress in the post-war years. In 1924-25 they amounted to 373 lakhs of rupees, representing about 20 per cent. of the total imports. In 1925-26, they declined to 281 lakhs but since then there has been again an increase. The quick developments in recent years have to some extent been due to an absence of competition from Germany. On the whole, it should be observed that the imports from Belgium have since 1905-06 fallen short of the general developments in our total imports.

Germany :—Germany entered the field later than Belgium. In 1903 the imports of steel from Germany amounted to 3.3 lakhs of rupees, and until the end of the last century they had shown no progress at all. Beginning from this century the imports grew rapidly and as they consisted of a similar kind to the Belgian, the imports from Belgium fell simultaneously with the growing imports from Germany, which amounted to 161 lakhs of rupees in 1913-14. It should, however, be noted that they were slightly less than those from Belgium.

In this connection, one point deserves special attention. Owing to the combined competition of Belgium and Germany, the United Kingdom suffered greatly in the

Indian market so far as the supply of pure steel was concerned. The following figures will illustrate the point :—

IMPORTS OF STEEL INTO INDIA: VALUE IN LAKHS OF RS.

	U. K.	Belgium	Germany	Total including other countries
1899-1900	59	30	1	100
1904-1905	108	96	18	234
1913-1914	60	105	97	266

Thus the share of the United Kingdom which was 59 per cent. in 1899-1900 was less than 23 per cent. in 1913-14.

During the War the imports from Germany were also stopped, but the post-war developments have been much less than in the case of Belgium. This has been due to the long occupation of the Ruhr territory by the Allies, and the general economic difficulties prevailing in the country, which prevented a smooth progress of trade. Thus in 1925-26, out of the total steel imports of 202 lakhs, while the share of Belgium was 101 lakhs, the imports from Germany amounted to only 18 lakhs. However, in recent years Germany has been struggling to improve her position and has met with appreciable success.

The U. S. A. :—The U. S. A. joined the market last of all and during the pre-war period showed but little progress, the imports from that country amounting to 40.5 lakhs of rupees in 1913-14. The stoppage of imports from Europe and the phenomenal rise in prices greatly stimulated the imports from the U. S. A. during the War period and they rose by leaps and bounds as the following figures will show :—

IMPORTS OF IRON AND STEEL FROM THE U. S. A.

	Value in lakhs of Rs.
1914-15	50·9
1915-16	180·0
1916-17	217·0
1917-18	303·0
1918-19	372·0

During the two years following the close of the War, owing to the very large imports of iron and steel, those from the U. S. A. also further rose to 409 lakhs in 1919-20 and to 457 lakhs in 1920-21. With the return of the U. K., Belgium and Germany into the market, the imports from the U. S. A. have declined heavily ; they amounted to only 69 lakhs of rupees in 1924-25. They showed some progress in the following two years, but have again fallen as the following table will show :—

	Imports from U. S. A. lakhs of Rs.
1925-26	81
1926-27	96
1927-28	57
1928-29	58
1929-30	52

METAL MANUFACTURES

We next pass on to a study of the manufactured metal goods in the four principal groups, enumerated at the beginning of this chapter.

(i) RAILWAY PLANT AND ROLLING STOCK

The imports of railway plant and rolling stock depend on the requirements of the Indian railways, with the extension of which they have shown simultaneous progress. The imports on private account represent only those

meant for the private companies, those for the State Railways being included under Government transactions. The figures given here, therefore, represent only a part of the total imports of railway materials, being accounts of the private imports only.

The special point to be noted in connection with the growth of the imports is their fluctuating nature. Thus, they were worth 150 lakhs of rupees in 1860-61, but in 1872-73 they amounted to only 33 lakhs. During the period 1906-07 to 1914-15, the imports were very heavy, and the same is true of the post-war period when the imports rose to 1891 lakhs of rupees in 1921-22. But afterwards they fell down to 326 lakhs in 1926-27 and touched Rs. 477 lakhs in 1927-28. The cause of this fluctuating trade is that as the imports depend on the requirements of the railways, they show a great rise if in a particular year some new lines are opened or some old plants are replaced, in the absence of which they at once shrink to a much smaller volume. Again, as already pointed out these figures refer to private imports only, and the Government imports are left out. So the recent taking over of the four main railway systems of India by the State naturally affects these figures to some extent, and it can be expected that imports on private account would diminish while the Government figures would increase. Unfortunately, owing to the discontinuance of the separate head "Railway Plant and Rolling Stock", with effect from April 1928, from the official trade accounts, it is not possible to attempt a statistical proof.

The trend of imports under this head is naturally an index to the development of transport facilities in the country and so long as some of these goods are not manufactured in India, they must be imported from outside. In recent years, the Indian Steel Industry has made appreciable progress and, with the growth of subsidiary manufactures in this line, there can be no doubt that imports

from outside are sure to be affected. This will be presently seen as we turn to analyse the imports and consider the different suppliers of these goods to India. The United Kingdom holds the first place in this sphere, thanks to the fact that most of the Indian Railways are incorporated in England, and the orders are therefore, given to British firms. An additional factor in England's favour is that substantial loans are raised by the Indian Government in England and the money so raised is mostly spent in buying materials in that country. But this predominance is gradually diminishing as can be seen below :—

IMPORTS OF RAILWAY PLANT AND ROLLING STOCK :

(Shares of Principal Countries)

	1923-24 per cent.	1924-25 per cent.	1925-26 per cent.	1926-27 per cent.	1927-28 per cent.
U. K.	94·6	87·0	79·9	61·1	66·8
Australia	1·3	...	2·2	4·8	1·9
Belgium	1·9	4·1	9·2	17·4	23·9
U. S. A.	1·2	2·6	2·0	3·9	1·2
Germany	0·4	2·5	4·3	6·9	3·9

There has been almost a steady decline in U. K.'s share of the total imports, and that of Belgium has been equally steadily mounting up. The shares of Germany, U. S. A. and Australia are fluctuating but are not negligible, and it is not possible to say what the future trend in their case will be.

But these foreign imports have to reckon an important rival factor in the growth of the Indian Steel industry which is responsible for an increasing output of rails and other rolling stock within the country. The following table clearly proves how in recent years these imports have been affected.

IMPORTS OF RAILWAY PLANT AND ROLLING STOCK

(Total value in lakhs of Rupees)

1923-24	1172
1924-25	607
1925-26	499
1926-27	326
1927-28	477

The home industry has to a very large extent thus replaced imports, and though special kinds of rolling stock and railway plant may continue to be imported, we may in future expect the ordinary requirements of the railway companies for iron and steel materials to be met by the home industry. Indeed, so far as the State Railways are concerned, the Government of India have accepted the policy of making their purchases in India and of giving preference to the Indian product.

(ii) MACHINERY

The imports of machinery are a direct indication of the industrial progress of the country, the growing imports of the articles under this group signifying the development of the various industries that have been gradually established in our country on modern scientific lines.

At the beginning of the period under study, the imports of machinery were very small. They amounted to only 55 lakhs of rupees in 1861-62. This was of course due to the absence of any large scale modern industry in the country. Large imports were made in 1867-68 amounting to 106 lakhs when a few cotton mills were established in Bombay. Along with the progress of various industries started in India, especially with those of cotton, jute and tea, the imports have risen much in value, though in years of depression they have been curtailed. Thus, during the years 1868-69 to 1872-73, they were very small, amount-

ing only to 52 lakhs in the latter year. In the three following years, with the extension of the cotton and jute mills, the imports of machinery showed corresponding progress. It is needless to trace the developments in the imports from year to year. Suffice it to say that they have fluctuated in accordance with the vicissitudes of the industries. A prosperous year has been followed by an extension of the existing factories and the establishment of new ones, meaning thereby increased imports of machinery. On the other hand, a year of depression has resulted in curtailing the imports. On the whole they have made much progress especially during this century have they risen quickly. Thus from 226 lakhs of rupees in 1900-01, the imports rose to 326 lakhs in 1913-14. During the War period, they were much reduced, though owing to the great rise in prices, the amount of actual decrease is not revealed in the value. The close of the War and the general boom in the industrial world witnessed unprecedented imports of machinery into the country which amounted to 2408 and 3459 lakhs in 1920-21 and 1921-22, those of 1921-22 being the highest on record. The subsequent industrial depression prevailing in the country, especially the very depressed condition of the cotton industry, has resulted in a gradual decline in the imports which have since fallen continuously amounting to 1363 lakhs of rupees in 1926-27. In 1927-28, there was a slight revival, and the total imports were valued at 1594 lakhs of rupees. The progress has continued in recent years, the figures for 1928-29 and 1929-30 being 1836 and 1822 lakhs respectively.

SOURCES OF SUPPLY

The United Kingdom:—The United Kingdom had almost a monopoly till the end of the last century. Thus in 1898-99, out of the total imports of 305 lakhs, those from the United Kingdom amounted to 301 lakhs. From

the beginning of this century Germany and the U. S. A. have come to supply machinery in small but growing quantities, so that the difference between the total imports and the imports from the United Kingdom has become larger and larger as can be seen from the following figures :—

IMPORTS OF MACHINERY FROM COUNTRIES OTHER THAN U. K.

	Value in lakhs of rupees
1892-93	2
1898-99	4
1902-03	10
1907-08	35
1913-14	80
1920-21	484
1926-27	297
1927-28	340
1928-29	427
1929-30	454

During the War period and a few years following it, the imports from the other countries represented a larger value than either before or after it, due to the United Kingdom's inability to supply the Indian market with these goods. Indeed for the same reason, the total imports were also much reduced. On the whole, in comparison with the imports from the United Kingdom, those from other countries are quite negligible.

Germany :—The imports from Germany amounted to 8.7 lakhs of rupees in 1903-04, and showing continuous progress, rose to 43.2 lakhs in 1913-14. During the following years they were altogether stopped but have once again risen in the post-war period. In 1920-21 they were valued at 17.1 lakhs of rupees, and rose to 94.6 lakhs in 1926-27, and to 173.8 lakhs of rupees in 1929-30. It will thus be seen that Germany has already more than recovered her pre-war trade in this material. It should

also be noted that during the last three years, the imports from the United Kingdom have fallen year after year while those from Germany show just the opposite movement.

The U. S. A. :—Along with Germany, small imports were also coming from the U. S. A. These had amounted to 7.6 lakhs of rupees in 1903-04 and rose to 28.6 lakhs in 1915-16. During the next few years, with the fall in imports from the United Kingdom, and those from Germany altogether stopped, the imports from the U. S. A. showed great developments. Rising rapidly, they amounted to 402 and 451 lakhs of rupees in 1920-21 and 1921-22. The very heavy imports of these two years were partly due to the large imports of machinery by the Tata Iron and Steel Company from that country. With the return of the United Kingdom and Germany and a fall in the total imports, the imports from the U. S. A. have declined to a considerable extent, amounting to 139 lakhs in 1926-27 and to 175 lakhs in 1929-30. It should, however, be observed that they are as yet far above the pre-war level, and what is more important is that while the imports from the United Kingdom have been declining for the last three years, those from the U. S. A. have remained stationary. In contrast with the imports of iron and steel from the U. S. A. it may be noted that while these imports have, after the temporary impetus received during the War period, heavily declined in recent years, the decline in the imports of machinery has been much less, and the U. S. A. continues to supply at present about 10 per cent. of our total imports of machinery, while in the pre-war period her share was not even half as much.

(iii) HARDWARE

Prior to 1875-76, the imports of hardware were not separately recorded but were included in metals ; in that

year they amounted to 47 lakhs of rupees. As they consisted of a large number of miscellaneous articles of common use, the imports grew steadily year after year, showing only small fluctuations. In 1913-14, they were valued at 395 lakhs of rupees. During the War years, the imports were much curtailed. Thus in 1917-18, they amounted to 271 lakhs of rupees. The close of the War and the boom following it resulted in the record imports of 908 lakhs in 1920-21. In the next year they declined to 592 lakhs and in 1923-24 further fell to 442 lakhs. They have subsequently shown some slight progress, rising to 507 lakhs of rupees in 1929-30. On the whole, they have far exceeded the pre-war level.

THE SOURCES OF SUPPLY

The principal countries from which the imports come are the United Kingdom, Germany, the U. S. A. and Austria-Hungary.

The United Kingdom:—In the earlier days, the United Kingdom occupied a monopolistic position in supplying India with hardware; but she no longer holds this position. This is notable in contrast with iron and steel, machinery and railway plant, etc. where the competition from other countries has only slightly affected the United Kingdom whose share in the imports of these articles still represents the bulk. But in the case of hardware, the United Kingdom has sunk low under the pressure of competition from Germany and the U. S. A., especially in the post-war period.

In 1892-93, out of the total imports of 122 lakhs the share of the United Kingdom was 100 lakhs. The imports from that country continued to grow till in 1913-14 they amounted to 226 lakhs out of the total of 395 lakhs. Thus, though the share of the United Kingdom in the total during the intervening period declined from about 80 per cent. to 60 per cent., she still continued to occupy

the predominant position. During the War period, the imports were reduced, after which they rose again and reached the record of 525 lakhs in 1920-21. In the next year they amounted to 368 lakhs, the share of the United Kingdom being a little more than 60 per cent. of the total. Thus till 1921-22, Great Britain continued to hold her position of dominance, but since then, while the total imports have remained more or less stationary, those from the United Kingdom have been continuously on the decline. In 1926-27, they amounted to 184 lakhs, her share being only 36 per cent. It should also be observed that while the total imports in 1926-27 were much above the pre-war level, those from the United Kingdom were actually below the level reached in 1913-14. In 1929-30 the share of the U. K. was 35 p. c. of the total.

Germany :—This decline in the imports from the United Kingdom has been due to the rising imports from Germany. The latter amounted to only 7.9 lakhs of rupees in 1892-93 ; showing steady progress, they rose to 72.3 lakhs in 1913-14, the share of Germany being 18 per cent. in that year. During the War period, the imports were altogether stopped ; but in the post-war period they have shown phenomenal progress, which has been greatly at the expense of the United Kingdom as the following figures will show :—

IMPORTS OF HARDWARE

	Value in lakhs of Rs.		Percentage of Total	
	From Germany	From U. K.	From Germany	From U. K.
1919-20	0·5	205	—	47
1921-22	61·0	368	10	62
1923-24	93·0	207	21	47
1925-26	143·0	198	27	38
1926-27	158·0	184	31	36
1927-28	161·0	206	31	39
1928-29	168·6	189	32	36
1929-30	165·3	180	33	35

Thus while during the period 1921-22 to 1929-30, the share of the United Kingdom fell from 62 to 35 per cent. that of Germany rose from 10 to 33 per cent. It will therefore be seen that in recent years, Germany is showing great progress in capturing the Indian market for her hardware.

Austria-Hungary:—The imports from Austria-Hungary showed considerable developments in the pre-war period. From 4.3 lakhs in 1892-93, they rose to 33.4 lakhs in 1913-14. The post-war developments in the imports from Austria have been very small. They amounted to only 12.5 lakhs in 1929-30.

The U. S. A.:—The imports from the U. S. A. amounted only to 7 lakhs of rupees in 1903-04 against 22.1 lakhs from Austria-Hungary. They, however, showed a greater amount of progress than the latter and in 1913-14 the imports from the U. S. A. were slightly larger than those from Austria-Hungary, amounting to 38.2 lakhs. In the War period, when the supplies from Europe were cut off, like those of iron, steel and machinery, the imports of hardware were also stimulated. They rose to the high-water mark of 225 lakhs in 1920-21 ; but with the recovery of the imports from Europe, those from the U. S. A. have declined in subsequent years, falling to 71.2 lakhs of rupees in 1926-27 and to 59 lakhs in 1929-30. It is, however, worthy of note that though diminished, the imports from the U. S. A. are still double in value of those in pre-war years ; besides, during the last five years they are more or less stationary while those from the United Kingdom have been heavily falling. In other words, the U. S. A. has better withstood the competition from Germany than the United Kingdom.

(iv) MOTOR CARS, WAGGONS AND ACCESSORIES

Motor vehicles are a very modern article of trade. With the growth of the motor car manufacturing industry in

the twentieth century, and especially its great progress in the course of the last decade, followed by the extensive use of motor vehicles for conveyance, the imports have very greatly risen in recent years as will be seen from the following figures :—

IMPORTS OF MOTOR VEHICLES

	Value in lakhs of Rs.
Average 1912-13 to 1913-14	101
War average	111
Post-war average	479
1925-26	448
1926-27	509
1927-28	617
1928-29	772
1929-30	752

The following figures reveal the position of the supplying countries :—

VALUE IN LAKHS OF RS.

	U. K.	U. S. A.	Canada	Italy	France
Pre-war average	74·5	8·5	...	0·6	5·9
War average	44·7	59·4	...	2·8	2·7
Post-war average	146·9	238·9	46·3	15·3	9·4
1925-26	123·6	164·4	111·0	29·9	11·4
1926-27	136·1	177·9	128·7	40·1	16·2
1927-28	169·9	254·8	123·7	39·3	16·1
1928-29	161·0	418·6	139·9	27·5	10·3
1929-30	156·6	444·9	95·7	28·2	12·9

From the above figures it will be seen that the position of the United Kingdom has been shaken in this branch aiso. While in the pre-war days, the imports from the United Kingdom represented the bulk of the total, in the post-war period they have come to represent only a small percentage. The progress of the industry in the

U. S. A. and Canada has greatly stimulated the imports of motor vehicles from those countries, and it should also be noticed that the imports from the U. S. A. and Canada are showing quicker movements than those from the U. K. which are being to some extent replaced by the former.

The uses of motor cars are greatly on the increase and as there is not in existence a home industry, the imports are sure to show further progress in future, in spite of the fact that the import duty of 20 per cent. has been recently increased by the addition of a surcharge of 10 per cent. The nature of the imports is, however, likely to change because of the policy of certain well-known manufacturing firms to establish assembly plants in India. The establishment of such a plant in Bombay by General Motors about a year ago, has been recently followed by similar works by Ford in Bombay, Madras, Calcutta and Multan.

II. THE STEEL INDUSTRY

INTRODUCTORY

From the foregoing study of our import trade in iron and steel, it will be seen that in spite of the very heavy fall in prices, the imports are as yet below the pre-war level. This is due to the growth of the Indian Steel Industry.

India is rich in iron ores and the art of smelting and manufacturing iron was known from times immemorial, and there is ample evidence in the famous iron pillars of historic antiquity that the industry was greatly developed in ancient times. But in the 18th and 19th centuries, modern methods of steel manufacture were discovered and the industry was developed to huge dimensions in Europe and America with the application of mechanical processes. While this was being done in the West, similar developments did not take place in India. The consequence was

that the antiquated Indian industry decayed, and large quantities of iron and steel began to be imported into the country, especially as the establishment of railways greatly facilitated their movements.[1]

Simultaneously with the growth of the imports, some attempts were made to establish an iron industry in India, but with indifferent success. No doubt, most of these attempts have interesting history about them but except the main facts it is impossible to give the details here. The first effort was made in 1830, when at Porto Novo in the South Arcot District of the Madras Presidency works were established. In the following years at Trinomali and Beypore similar attempts were made, but by 1867 all of them were no more. In 1855, furnaces were erected at Mahomed Bazaar in Birbhum district but with no better fate, and only in 1874 some real beginnings were made. In that year, the Barakar Iron Works, the fore-runner of the present Bengal Iron Co., Ltd., launched upon its career to mark the first effective step towards the establishment of an iron industry in India on a somewhat permanent basis. Though the progress was slow, and the works passed through many vicissitudes of fortune, latterly they developed into a permanent concern and may be justifiably called the first effective step. The next venture to follow was that of the Tatas in 1911, and as forming a landmark in the history of the Indian steel industry it needs to be noticed in greater detail.

The modern iron industry is essentially a very large-scale industry, and as the initial attempts fell far short of the demands made by way of capital, organisation and technical skill, the growth of the industry in this

[1] cf. "When British rule was being established throughout India, the new-comers depended for their supplies of metals chiefly upon imports. The introduction of railways dealt a death blow to the indigenous industry, because cheap imported steel was carried everywhere, and the Indian craftsmen soon found their occupation gone". F. R. Harris: J. N. Tata, pp. 157-58.

country was delayed. However, in course of time, thanks to the natural abundance of iron ores in the country and the progress of the coal industry, pig iron was manufactured in increasing quantities. By 1911 not only was India able to dispense with the imports of pig iron, but also began to build up an export trade in it. Pig iron is, however, only a half manufactured product and cannot be used for modern structural purposes for which steel is required. So the urgency of a steel industry to supplement the existing facilities was decidedly felt. It was at this juncture that the Tata Iron and Steel Works began the manufacture and rolling of Indian steel in 1913.

The initial difficulties encountered ever since the conception of the scheme began to take a practical form are recorded in the life of J. N. Tata by Harris.[1] The search for the ore, the preliminary survey and expert investigations, have a romantic tinge about them but they have a real economic value at the same time. From its initial stages, the Government rendered good help to the industry by promising to purchase a certain amount of rails for the State Railways for a stipulated number of years. In the beginning a good standard of production was difficult to attain and even when attained, the cost of production was so high as to make it impossible to compete with foreign imports. But, fortunately for the industry, the War intervened and cutting off the foreign imports, indirectly afforded protection to the budding industry. At the same time there was a heavy demand for iron and steel for military purposes, and the works were occupied to their utmost capacity. The output naturally increased and from 19,130 tons in 1912-13, the outturn of finished steel in 1918-19, the last year of the War, reached 1,23,890 tons.[2]

[1] See chapters VIII to X; also Lovat Fraser's Iron and Steel in India.

[2] Figures from statements and notes by the Tata Iron and Steel Co., Ltd., to the Tariff Board, 1923, p. 7.

This war prosperity, no doubt, demanded further extension of plant and an increase in the capacity of production, but owing to the difficulties of getting machinery at that time, it had to be deferred. In the meantime came the post-war depression with a heavy fall in prices, and large imports of cheap foreign steel threatened the very existence of the industry whose utility and importance proved to be so effective during the War. Reduction of costs was one method of facing this foreign attack, but the conditions under which the industry had started as well as the circumstances prevailing at that time made it hardly possible. The very equipment of the works was unfavourable to economical production and there were other factors, too, which were against it.

The industry was still in its infancy, and it had to maintain a highly-paid staff of foreigners, because Indians were not experienced in the work ; besides, it had incurred heavy expenses for new plant which was purchased at abnormal prices at a time when the price of iron and steel was at its maximum. As a result of all this, the Indian industry was unable to compete with foreign imports and began to incur heavy losses. Fortunately for it, the tariff policy of the Government of India came to be changed by this time and the Fiscal Commission made its report in 1923, recommending an immediate inquiry into the Indian Steel Industry.[1]

But before we turn to the Tariff inquiry, let us tabulate the progress of the industry since 1921 :—

[1] Report of the Fiscal Commission, p. 60.

PRODUCTION IN TONS OF TATA IRON AND STEEL WORKS: 1921-29[1]

	Pig Iron	Steel Ingots	Finished steel Products
1921-22	2,70,270	1,82,107	1,25,871
1922-23	2,42,083	1,52,573	1,12,867
1923-24	4,42,000	2,35,000	1,63,000
1924-25	5,52,000	3,70,000	2,48,000
1925-26	5,73,000	4,70,000	3,20,000
1926-27	6,12,000	5,30,000	3,74,000
1927-28	6,44,296	5,99,565	4,28,654
1928-29[2]	4,96,737	3,96,055	2,75,841

All the three columns show a progressive growth up to the last year, (figures of which are vitiated by labour troubles) and the total production has almost trebled itself since 1921-22.

We shall now consider the different aspects of the industry from the point of view of the scheme of protection. This will enable us to follow the growth of the industry in recent years, as well as the difficulties through which it has passed and the remedies that have been adopted.

DISCRIMINATING PROTECTION

The principles of discriminating protection recommended by the Fiscal Commission were accepted by the Legislative Assembly in February 1923 by a special resolution. A Tariff Board was appointed to carry out the scheme of protection as laid down in paragraph 97 of the report of the Fiscal Commission. The steel industry was the first to receive attention at the hands of the Tariff Board, which had therefore to lay down a definite method of approach in connection with all similar questions that might be rais-

[1] Compiled from the Annual Reports, the Tata Iron and Steel Industry Co., Ltd., of respective years.

[2] Figures vitiated by labour troubles.

ed in future. The report of the Tariff Board on the steel industry, therefore, is a classical document of great importance for a proper understanding of the actual working of the scheme of discriminating protection now in operation in this country.

RAW MATERIALS[1]

The principal raw materials required for the steel industry are iron ore, coking coal and limestone. We have large deposits of iron ore in the Central Provinces which are, however, not yet worked. At present it is the so-called "iron belt" extending over the districts of Singbhun and the adjoining states of Orissa which supply the iron ore to the steel industry at Jamshedpur. We have in these areas enormous quantities of iron ore containing metallic iron to the extent of 60 per cent. or more. The mining costs are not high, and the ore can be delivered at the works at Jamshedpur at Rs. 3 to 4 per ton. The geological estimate of the available ore in this part is about 300 crores of tons. In other parts of the world rich ore is found, but it cannot be delivered at the works at such a cheap price. At the same time, though in some countries cheap ore is available, it is not of the same quality. On the whole, therefore, India is at a very great advantage in this respect.

The advantage of India in the matter of coking coal is not as great. This coal is not available in very large quantities, nor is it of superior quality as it contains a high percentage of ash. It is, however, estimated that we can get about 40 lakhs of tons of coking coal per year, for 150 years. This shows that we have sufficient supply of coking coal for more than a century, but that if we want to develop the steel industry fully, with a view to be able to export, we shall have to depend upon further supplies

[1] The following discussion has been mainly based on the various reports of the Tariff Board on the Steel Industry.

being found. In the absence of favourable surveys, it is therefore desirable to conserve our resources of coal which can be used for metallurgical purposes. If we do not do this, we run the risk of not being able to utilise our rich iron ore to the fullest extent. The Tata Co. have their own coal mines ; the United Steel Corporation of Asia have also secured an ample supply of coal. It may be said that generally, the coalfields are in the vicinity of the iron belt within a radius of about 200 miles on the whole. The Tata Co. bring iron ore from a distance of 50 miles and coal from about 100 miles. Compared with the situation in other countries, India is at an advantage in this respect. We do not enjoy the same superiority regarding limestone, but we are not at a serious disadvantage. Lime of the best quality is only available in India, at a comparatively long distance from the steel works. Ordinary limestone is, however, available in the neighbourhood and it is comparatively cheap. It may be added that we have an ample supply of manganese in the Central Provinces, and so far as refractory materials are concerned, we are now producing silica bricks of good quality.

The effect of these natural advantages is evident in the low cost at which we are able to manufacture pig iron. There are two stages in the manufacture of steel ; iron ore is first converted into pig iron which is a crude form of iron containing impurities to the extent of about 6 to 7 per cent. In the second stage, these impurities are removed and the product is then steel. In this second stage, a very high temperature of 1,600°C. is required in the operations, which yield molten products. We produce pig iron more cheaply than perhaps any other country. We export it to Japan and the west coast of America ; but this advantage with which the Indian manufacturer starts, is lost owing to the higher cost of the subsequent process.

LABOUR

In the matter of labour, we are at a disadvantage. We have to import skilled workers for the more difficult process and for the work of supervision from Europe or America. In course of time we may be able to replace the foreign workers by Indians. The unskilled labourer receives a low wage, but is not therefore necessarily cheap as we have to employ more men for the same kind of work than in other countries, and the total cost per unit of production is high. In this case also it will take time before the desired improvement can take place.

MARKET

The market available to the Indian steel manufacturer is not as large as that in Europe and America. We are, moreover, importing large quantities of iron and steel. Out of our imports of 15 lakhs of tons of iron and steel, steel accounts for 10 lakhs. These figures include machinery, hardware, motor cars etc. which are not likely to be produced in India in the near future. Even if we make allowance for these, the market is fairly large. With increasing transport facilities in the country, the demand for steel goods is bound to expand, and there will be room for two or three iron and steel works, each of the size of the Jamshedpur Works.

This shows that we have large natural advantages in raw supplies, and an increasing home market; the disadvantage in connection with labour is likely to grow less in course of time. The first condition of discriminating protection is thus fulfilled.

THE NECESSITY OF PROTECTION

The second condition refers to the necessity of protection and it is to be ascertained whether the industry cannot

be established without protection. In 1924, when the first inquiry into the condition of the steel industry was made by the Tariff Board, it was found that at the then existing level of prices, and with the existing cost of production, the manufacture of steel at Jamshedpur was unprofitable. It was expected that in three or four years the cost of production would be reduced owing to the adoption of a new process of manufacture and the provision of an up-to-date and efficient plant. There was, therefore, an extremely difficult transition period during which assistance was necessary. The question was not that of giving dividends but of inability to manufacture economically, which compelled the manufacturer to sell steel at an actual loss. If the pioneer firm were to fail, it was unlikely that fresh capital would come forward to develop the industry for many years to come. In view of this, the Tariff Board observed that "our deliberate opinion is that without the help of protection, the steel industry is not likely to develop at all".

PROTECTION AS A TEMPORARY MEASURE

The third condition of discriminating protection refers to the ultimate ability of the industry to stand on its own legs without protection. The Tariff Board had no hesitation in asserting that it would do so. The industry required time to have experience and skill in the difficult process of steel manufacture which they would get if protection were granted. They were already in a position to manufacture pig iron at a cheap rate, and in course of time, they should be in a position to manufacture steel also at a competitive rate.

A KEY INDUSTRY

Besides this, the steel industry is of great importance from the point of view of national advance. The value of steel manufactures was greatly demonstrated during the

War, and no country can afford to neglect the development of an industry of this kind. It has been laid down in paragraph 106 of the report by the Fiscal Commission that such industries, for which conditions in India are not favourable, should be protected irrespective of the general conditions. On this ground, therefore, there is an additional reason for giving adequate protection to the steel industry.

GENERAL PRINCIPLES UNDERLYING THE SCHEME OF PROTECTION

The Tariff Board had to work out certain general principles in order to apply the policy of discriminating protection to specific cases that may be referred to them. This was done in connection with the steel industry which was the first to receive protection. From this point of view, the report of the Tariff Board on the steel industry is important because these general principles have been followed more or less in connection with subsequent enquiries.

I. The answer to the question whether protection is necessary, depends in the main on the difference between two prices :—(a) the price at which steel is likely to be imported into India from abroad, and (b) the price at which the Indian manufacturer can sell it at a reasonable profit. The difference between these two prices would be the natural measure of protection, but the difficulty of ascertaining either price is great. Both of them are variable and are subject to factors which are open to controversy ; various world forces come into play in the determination of these prices, and it is, therefore, difficult to know with a reasonable amount of exactness the measure of protection required.

II. If protection is found necessary, and the advantages to be derived from it are likely to outweigh any

objections which may exist, then the measures taken must be adequate to secure their purpose.

This condition is very important for obvious reasons. The immediate object of protection is the preservation of the existing industry ; the remote object is to direct capital to the industry, and promote the development of India's natural resources. In 15 or 20 years, India should be able to provide her whole domestic requirements and produce them as cheaply as other countries. This cannot be done unless sufficient confidence is inspired among the capitalists regarding the policy and intentions of the Government. Though the rate of protection may change with circumstances, the policy should be laid down very clearly. This is all the more necessary because from the date a new firm decides to establish steel works, it would take about 5 years before steel is actually manufactured, and another five years before the success or failure of the venture could be estimated. Continuity of policy is therefore essential ; such a desired continuity may, however, be broken because of the uncertainty of the future course of world prices. In order to remove this difficulty the executive should have power to take action if, say, there is a material fall in import prices. In certain countries, there are what are known as anti-dumping measures ; the executive has power to take action when the fall in price is due to some particular cause, for example, depreciation of exchange, grant of bounty, or low cost of production in the country of origin. The Tariff Board proposed that the executive in India should have complete powers to take action in any emergency. They laid down that "if the Governor-General-in-Council is satisfied, after such enquiry as he considers necessary, that steel is entering India from abroad at such prices as are likely to render the protection given ineffective, he may impose such additional duties as in his judgment are required".

III. The scheme of protection should be so adjusted

as to interfere as little as possible with those kinds of steel which are at present not manufactured in India, and are not likely to be manufactured in the near future.

This is indisputably in conformity with the principles of discriminating protection which restrict the burden on the consumer to the minimum. From this it follows that those kinds of steel which are not produced in India at present or are not likely to be produced in the near future, should be left untouched. "There is no need for protection unless there is something to protect", this seems to be the principle underlying this recommendation.

Though this may be taken to be the strict interpretation of the policy of discriminating protection, it is on deeper consideration in conflict with the condition laid down by the Fiscal Commission that the industry should be eventually able to do without protection. If the maximum development of an industry in all its branches is not made possible by the scheme of protection, it is difficult to see how that industry can do without protection in course of time. The halting nature of the policy of discriminating protection as interpreted is thus obvious and requires an early change.

PRICES OF IMPORTED STEEL

Among the principal articles that we import may be mentioned rails, angles and channels, British beams, continental bars, galvanized sheets, and so on. It was found that on an average, the post-war prices of steel products were higher by 25 to 40 per cent. as compared with pre-war prices; as against this, the prices of other articles were higher by 60 per cent. The low range of steel prices was due to the existence of economical methods in Belgium and North France, and depreciation of exchange. The steel industry was faced with a peculiar situation, namely, that there was an immense decrease in the capacity of the world to consume steel goods, at a

time when there was a great increase in the manufacturing capacity owing to the War. The consequence was that there was keen competition and cutting of prices to keep the works going in different countries, and all these resulted sometimes in allegations of dumping. The future course of world prices was uncertain ; political and other factors were bound to have their influence on the price movement. At the same time, there were two economic influences which were likely to work ; (1) it was not possible that prices would remain for a long period at the lowest level, because manufacturers could not continue to produce steel at a loss indefinitely ; (2) any revival of trade which increased the demand for steel, would induce manufacturers to bring into play a good deal of plant which was lying idle, or which was partially employed. This would retard any advance in prices. Taking all these things into consideration, the Tariff Board took as their basic prices of imported steel the following figures :—

	RS. PER TON	
Steel bars and rods...	140	Continental, Belgium
Structural shapes	145	
Rails, 30 lbs. and above ...	140	English
Plates...	150	Continental
Sheets black	200	English
Sheets galvanized	300	

COST OF PRODUCING STEEL AT JAMSHEDPUR, 1921-22

The two principal items to be taken into account in this connection are the Works' costs and the overhead charges. The selling price should include the total of these two plus a reasonable profit. Compared with earlier years, say 1916-17, the cost in 1921-22 had increased by about 56 per cent. This was partly due to an increase in wages amounting to 40 to 50 per cent. The number of

unskilled men was comparatively large. The covenanted men consisting mostly of the superior staff accounted for a wage bill of Rs. 10 lakhs per year and out of this, a very considerable saving could be effected if Indians were appointed. Another reason for higher cost was the necessity for improving the quality of goods produced which during the War had been sacrificed to quantity. It was difficult to do so because of climatic reasons ; for example, the furnace fronts have to be water-cooled continuously, particularly in the summer, in order to enable the men to stand the heat for any period of time.

Regarding over-head charges, the usual items were taken into consideration, namely, interest on working capital, head office expenses, agents' commission and depreciation. In calculating profits, an average interest of 8 per cent. on the different kinds of shares of the Tata Co. was taken into account ; on the basis of these estimates, it was found that on an average, Rs. 180 would be the reasonable selling price, whereas in 1921 the company had realised Rs. 159, and in 1922-23, Rs. 142. In other words, the Jamshedpur Works were being run at a loss.

On the basis of these facts, the future cost of production and the future selling price had to be estimated. There were several extensions of the Jamshedpur Works in progress involving large capital costs. The total cost of the works including extensions was estimated at Rs. 15 crores. Interest on the same at 8 per cent. must be earned, which meant a sum of Rs. 120 lakhs per year. As against this, it was estimated that there would be greater output and therefore, the cost per unit would be lower. It was not possible to reduce over-head charges, whereas the price of coal might rise. Considering all these things, it was estimated that a selling price of Rs. 180 per ton should be secured in order to give the manufacturer adequate return on his capital. The ques-

tion was how to do this, or what was the best method of giving protection with discrimination.

PROPOSALS OF THE TARIFF BOARD

After discussing the relative importance of different methods of protection, and after taking into account the main facts of the situation, the Tariff Board proposed certain measures. In doing so, they were guided by the general principle that the assistance given to the steel industry should be sufficient to give to the company a fair return on its capital outlay when it reached its full production, provided the working expenditure was reduced in the meanwhile to a reasonable figure. At the same time, the assistance to be given should be the minimum in order to safeguard the interest of the consumer. It was also laid down that in view of changing conditions, there was a possibility of a reduction in price which would require a revision of the proposals ; the protection was, therefore, to last in the first instance for three years only, and was to be revised before the end of that period. The proposals may be summarised as under :—

(a) A specific duty varying from Rs. 25 to Rs. 45 per ton on different kinds of steel and iron goods.

(b) Goods of superior quality which were not produced in India were to remain subject to the existing revenue duty.

(c) Bounties were to be given on the manufacture of rails and fish-plates according to the following scale :—

	Rs. per ton
1924-25	32
1925-26	26
1926-27	20

(d) Certain changes in the duties were proposed in

order to safeguard the interest of allied and dependent industries which will be explained below.

It was estimated that the burden of the increased duties would be distributed among various parties. The Railways and Government departments would have to bear one-third of the burden; another one-third would go to the industries; the general consumer and minor handicrafts would between them have to meet the remaining one-third. As against this burden, there was the advantage of a well-developed steel industry which was worth having; the failure of such an industry would give a great shock to public confidence and mean a setback to the industrial advancement of the country.

THE ALLIED AND DEPENDENT INDUSTRIES

There are certain industries which are closely related to the steel industry, and their position was bound to be affected by the scheme of protection given to the steel industry. It was therefore necessary to give to these allied or dependent industries a sort of Compensating Protection as against the substantive protection granted to the principal industry. We shall consider these industries in brief.

The Engineering industry:—In the steel works, raw steel is finished by a process known as rolling. Where raw steel is finished by forging and not by rolling, it is an engineering process. Certain firms in India do this work covering all processes of fabrication, such as painting, machining, drilling, rivetting etc. by which rolled steel is adapted to its final purposes. These Engineering firms were now required to pay a higher price for the raw product, particularly because there was no internal competition with the Tatas. There are about 40 firms employed in this industry with a large capital and 75,000 workers; it was therefore decided to increase the duty on fabricated steel from Rs. 10 to 25.

Wagon Building Industry:—We have two or three firms engaged in wagon building, but the most important is the Standard Wagon Co. This industry is quite suited to Indian conditions as it does not involve any difficult processes and is a natural development of the steel industry. It was proposed that the industry should be gradually developed by placing an increasing scale of orders for certain types of railway wagons which the local companies manufacture and a diminishing scale of bounty to be given. The bounty proposed was as under :—

	No. of wagons on which bounty payable	Amount of bounty per wagon Rs.
First Year	800	850
Second ,,	1,000	700
Third ,,	1,200	580
Fourth ,,	1,400	500
Fifth ,,	1,600	440

Tinplate Industry:—There is an increasing demand for tins of different sizes and shapes for various commercial products ; for example, kerosene, petrol, cigarettes, biscuits and fruit provisions. A flourishing tinplate industry exists in South Wales ; the United States also have developed the tinplate industry by high protective duties and it may be added that they imported Welsh workers for the purpose.

The Tinplate Company at Jamshedpur is jointly run by the Burmah-Shell Oil Co. and the Tata Co., wherein the latter supplies the raw material and the former takes all the products. The present consumption is estimated at 50,000 tons whereas the production is only 28,000 tons. The natural advantages are the same as in the case of the steel industry, and in view of the increasing demand, there are good prospects for the industry. Among the disadvantages may be mentioned the fact that the work becomes difficult during the hot weather which

requires special arrangements of building and machinery. Skilled workers will also have to be imported for some years. But in spite of these difficulties, the prospects were good enough to justify protection, and a specific duty of Rs. 60 per ton, equivalent to 16 per cent., *ad valorem* was recommended.

Wire and Wire Nails:—The Indian Wire Products Co., Ltd. is concerned with the production of these materials. It depends for its raw material on the Steel Works at Jamshedpur and its general position is the same as that of the tinplate industry. The same duty, namely, Rs. 60 per ton was therefore recommended.

Agricultural Implements:—The Agricultural Implements Co., Ltd. manufactures picks, *powrahs or kodalis*, hoes and other implements useful to the farmer. A temporary protection was considered necessary for this industry and the duty was therefore raised from Rs. 10 to 25.

Locomotive Building Industry:—The Peninsular Locomotive Co. came into existence in 1921; it has a capacity for building 200 locomotives a year. In the case of this industry, the condition of the Fiscal Commission that an industry seeking protection should have a large home market, is not fulfilled. The Company was, however, started because of the announcement of the Government of India that they would require 400 locomotives about that time. Conditions having changed the Company had to work at a loss and after protracted negotiations this Company has been recently purchased by the Government of India.

SUPPLEMENTARY PROTECTION

By a combination of circumstances, the Steel Protection Act of 1924 which embodied the recommendations of the Tariff Board became a dead letter within a few months. The sterling price of steel was falling; the rupee

sterling exchange was rising at the time when the Steel Protection Act was passing through the Legislature. Soon after this there came a collapse of the French and Belgian exchanges, which resulted in a great fall in continental prices ; the consequence was that for four months after the passing of the Act, almost every class of steel to which protection had been given, was cheaper in India than it had been in 1923. Protection was expected to increase prices, to restrict the imports, and to give an impetus to the local industry. In spite of this, we find that there was a decline in prices which brought about a substantial increase in the imports of all classes of steel.

The Government of India were invested with special powers by Section 3 (4) of the Act to impose more duties under certain conditions, when steel goods were being imported into British India, at a price likely to render ineffective the protection intended to be afforded by the Act to similar articles manufactured in India. The Government of India were required by this section to impose additional duties to make up for the difference and it was not necessary for them to refer to the Tariff Board in this connection.

The matter was, however, referred to the Tariff Board for urgent enquiry. It was found that the basic import price on which the protective scheme was based was materially affected by the new circumstances. The heavy imports had resulted in an accumulation of stocks at Jamshedpur, and prices at Jamshedpur had to be adjusted with the import prices in order to get orders. In some cases the delivery prices were lower than the booked prices, due to the falling market. In other words, the Tatas could not get the basic price of Rs. 180 per ton, and had, therefore, to sell at a loss. The implication of the original scheme of protection was that on an average for three years, the Indian manufacturer should be able to sell his steel at an average price of Rs. 180 per ton in

order that the industry be established on a firm foundation.

The fluctuations in the rupee sterling exchange added great uncertainty to any revised scheme. If a duty of 25 per cent. was adequate when exchange was at 1 sh. 4 d., a duty of 40 per cent. would be required when exchange stood at 1sh. 6d., and 56 per cent. at 1sh. 8d. Taking the rise in exchange and its effects and other circumstances in view, the Tariff Board suggested detailed changes in the rates of duty and pointed out the necessity for immediate action.

The recommendation of the Tariff Board for enhanced duties was not accepted by the Government of India, who proposed that the supplementary protection should be given in the form of bounties, not exceeding Rs. 50 lakhs in the aggregate, during the period October 1924 to September 1925. The original scheme of protection was to last up to 31st March 1927. In view of the uncertain exchange situation and other doubtful factors, it was thought necessary to take a fresh review of the position before September 1925, to decide whether the supplementary protection should be continued, and if so, whether with any alteration. This decision was arrived at with the consent of the Legislative Assembly.

FURTHER SUPPLEMENTARY PROTECTION, 1925

When the position was reviewed a year after, it was decided to continue to give the additional protection in the form of bounties, and it was ascertained that the additional duties imposed on steel goods in 1924 were likely to bring in sufficient revenue to pay for the bounty. The recommendations of the Tariff Board were (1) that bounty should be given only to firms manufacturing mainly from pig iron made in India, (2) that it should be paid at the rate of Rs. 18 per ton on 70 per cent. of the total weight, and (3) that the total amount of such further assistance

should not exceed Rs. 90 lakhs up to March 1927. Bounties to the extent of Rs. 166 lakhs had been already provided for, partly by the original scheme of 1924 and partly by the supplementary protection of the same year. Thus a bounty of Rs. 256 lakhs in the aggregate in three years, was to be given to the steel industry. As against this, it was estimated that during the same period, the increased duties on steel goods would yield a revenue of Rs. 280 lakhs. The Government of India accepted the recommendations of the Tariff Board with this difference that they reduced the rate of bounty from Rs. 18 to Rs. 12 per ton, and the total from Rs. 90 lakhs to Rs. 60 lakhs.

THE STATUTORY ENQUIRY, 1926-27

As laid down in the Steel Protection Act of 1924, an enquiry into the condition of the steel industry was to be made before the expiry of that Act in March 1927. Accordingly the Tariff Board was asked in 1926 to consider the question. It was ascertained that the extension of the Works at Jamshedpur, which was pending in 1924, had been carried out and that the output was larger and therefore the cost per unit was lower. During the same period, the Steel Industry in Europe and America was not able to avoid loss in spite of superior equipment. The conclusion was, that taking all things into account, the protection given to the industry had enabled the Tatas to survive the most difficult transitional period. There were of course losses, but on the whole, the Industry was in a state of improvement and growing efficiency.

From the point of view of the consumer, the prices did not approach Rs. 180 per ton in spite of the duties; for the greater part of the period, the prices were lower than in 1923. In consequence, consumption had increased and not decreased. In order to give the scheme of protection a stable basis, calculations were once again made on the method followed in 1924. The 1926 prices were

taken as the basis for these calculations. In addition to exchange fluctuations in Europe, there were two new factors which had to be taken into account. The formation of the Continental Steel Cartel about this time showed that the competition from Continental steel goods would be on a more organised basis. The important members of the Cartel were Germany, France and Belgium; the object was to avoid overproduction and to undertake a joint sales organisation. The British manufacturers took another step soon after this by deciding to give a rebate to those who purchased all their steel requirements from them. Taking these factors into consideration, the position with which the steel industry was faced may be summarised as under :—

	Fair selling price per ton in Rs.	Foreign prices without duty in Rs.	
		British	Continental
Rails	118	105	...
Tinplates	156	150	...
Structural sections ...	120	104	86
Bars	129	108	90
Plates	133	105	92
Black sheets	183	153	122
Galvanised sheets ...	278	240	...
Sleepers	115	...	105

It was obvious, therefore, from this that though the protection required by the Indian Industry was now on a smaller scale, it was not yet possible to do without it. The steel produced at Jamshedpur was of British standard and specification, but the market for the same was not wide and it was further necessary to sell a part of it at least on the basis of the lower prices of continental steel. In view of this, the duty based on British prices was likely to be inadequate. The problem, therefore, was to devise a scheme which would be adequate for the Indian industry, and at the same time not impose an

undue burden on the consumer of other classes of goods. After considering the different methods of securing protection on these lines, the Tariff Board recommended that there should be, in the first instance, a basic duty in all cases which should be based on British prices. This would be a definite measure of protection about which the industry will be quite sure in any case. Fluctuations in the price of British goods were not great, and it was therefore possible to have a basic duty based on these prices. In addition to this, there were to be duties on certain articles coming from other countries. These additional duties might be varied by the Government if there was a change in prices. The scheme was to work for a period of 7 years as it was expected that the Tatas would be in a position to dispense with protection by the end of that period. It was further laid down that the policy of protection should be maintained until the findings of a statutory enquiry accepted by the Legislature showed that it was no longer required. The principal duties proposed by the Tariff Board on the lines mentioned above may be thus summarised :—

	Duties recommended		Existing Duties
	Basic Rs. per ton	Additional Rs. per ton	Rs. per ton
Rails	13		14 (plus
Fishplates	6		14 bounties)
Structural Sections	19	11	30
Bars	26	11	40
Plates	20	16	30
Black sheets	35	24	30
Galvanised sheets	38		45

In order to encourage the steel industry, it was further laid down that the purchase of rails by the railway companies should as far as possible not be made from outside the country. On account of these privileges the Company had to bear certain responsibilities. It was expected that an industry of such national importance,

established partly at the expense of the tax-payer, should be wisely and efficiently managed and at the same time the treatment of labour was expected to be in line with the best modern industrial practice. In the superior staff a gradual increase of the employment of Indians was also expected.

A depreciation fund was to be maintained so that the plant and equipment could be kept up-to-date from time to time. From the point of view of the labourer, it was found that the town arrangements at Jamshedpur compared favourably with other Indian industries. In the matter of water supply, drainage, sanitation, hospitals, open spaces and general amenities, adequate provision has been made at Jamshedpur. The housing is good both in design and construction, though it is not enough for all workers. Since 1912, the Tatas have adopted an eight-hour day, though at that time this was not in vogue in the steel industries of Europe and America.

A gradual progress in the employment of Indians in higher posts is made, though complaints are still heard in this connection. A Technical Institute is maintained in close association with the Works for the practical training of apprentices, which will enable an increasing number of Indian youths to be trained for certain classes of work. It is expected that by 1933-34, when the present scheme of protection expires, the position of the industry will be sound. We have seen that there is room for two or three Works of the size of Jamshedpur Works in the country. It has been estimated that the existing scheme of protection is adequate for starting a new firm of the same magnitude.

ADDITIONAL PROTECTION FOR GALVANISED SHEETS

The Tariff Board was asked in September 1930 to consider an application from the Tata Iron and Steel

Company for an increase in the duty on galvanised sheets, as such sheets were imported at a price likely to render the protection given to the industry ineffective. After a review of the situation, the Board recommended an additional duty of Rs. 37 per ton on galvanised sheets for the remainder of the protective period, that is for three years. The Assembly, however, passed the additional duty for one year only.

PURCHASE OF RAILS

The protective scheme included the purchase by the Government of a certain quantity of rails from the Tatas at a fixed price every year. The quantity purchased by Government in 1930 was less than originally arranged, and this involved the Company in undeserved loss. This was made good by a resolution of the Assembly passed in April 1931, by which the Government was empowered to make an additional payment of Rs. 20 per ton in the case of those rails for which the fixed price was Rs. 110 per ton, and Rs. 10 in the case of those for which the fixed price was Rs. 120 per ton. This is also to apply to purchases made in 1931-32.

CHAPTER XI

MINERAL OILS

SECTION I. THE IMPORT TRADE

Until the middle of the last century, the uses of mineral oils were unknown. Since the discovery of petroleum fields in the United States of America, kerosene oil has been extensively used as an illuminant all over the world and its other uses have also vastly multiplied, so that the world's consumption and output of petroleum have at present assumed vast dimensions. In 1928, the world's production of petroleum was 181 million metric tons, in 1929 it rose to 203 million metric tons. The production in India is less than one per cent. of the total.

Mineral oils are, therefore, an article of trade belonging exclusively to the modern period. Prior to their introduction into India, vegetable oils were used as illuminants. The introduction of refined American kerosene oil, which was cheaper and at the same time a better illuminant, succeeded in rapidly displaying vegetable oils as a house illuminant.[1] The subsequent uses of petroleum for driving motor cars and as a fuel oil have greatly stimulated its consumption.

THE GROWTH OF IMPORTS UP TO 1893-94

The first recorded imports of mineral oils were made in 1865-66 when they amounted to 2.46 lakhs of rupees. In spite of the $7\frac{1}{2}$ per cent. duty then levied on imported

[1] "It is a matter of twenty-five to thirty years ago, at most, since every European resident in India, and all the wealthier natives, employed either castor or cocoanut oil exclusively for house illumination. The subsequent introduction of refined kerosene from America drove these completely out of use, and that too within a remarkably short time". Watt, p. 812.

oil, kerosene was found to be a better and more economical illuminant than vegetable oils, and hence the imports rose rapidly till they amounted to 56 lakhs of rupees in 1881-82. With the abolition of the import duty in 1882, the imports at once rose to more than 105 lakhs the next year. In 1887-88, they amounted to 148.7 lakhs. The re-imposition of the import duty at ½ anna per imperial gallon in 1888 had no effect on the growing imports. This was due to the advent of Russia as a supplier of kerosene to India, and the successive decline in prices that followed the competition between her and the United States of America. Thus the price of kerosene oil fell from Rs. 3-9-6 per case of 651 lbs. in 1889 to Rs. 2-8-6 in 1893. This heavy decline in price greatly stimulated the imports which rose in value to 327 lakhs of rupees in 1893-94. The full extent of this rise in imports can be gauged from the quantity, which rose from 302 lakhs of gallons in 1887-88 to 836 lakhs of gallons in the latter year. With 1893-94 we come to the close of a period in which the imports of mineral oils showed a continuous and rapid growth.

THE NON-PROGRESSIVE IMPORT TRADE 1893-94 TO 1918-19

During the next quarter of a century, from 1894 to 1918, the imports were on the whole stationary. In 1894, the import duty on kerosene was further raised to one anna per gallon. As a result, there was a positive decline in the imports for the next few years. Later, though there were slight recoveries and considerable year to year fluctuations in the imports, on the whole, they were of a non-progressive character till 1918-19 when they amounted to 361 lakhs of rupees. The quantity imported was, however, 604 lakhs of gallons only.

This non-progressive trade was due to the development of the Indian petroleum industry. Negligible quantities of rock oil were being extracted in the Burma oil fields

till 1887, when the Burma Oil Company was formed with British capital, and systematic drilling was introduced, resulting in a largely increased output. New fields were discovered and worked upon in Burma as well as in other parts of India, so that the total output of petroleum, which was estimated at 413 lakhs of gallons in 1890, rose to a little more than 500 lakhs of gallons in 1901. In 1919, it amounted to 3060 lakhs of gallons. It was, therefore, this continuously growing home output which restricted the imports, the stimulated demand for mineral oils being successfully met by the former.

THE GREAT RISE IN THE IMPORTS OF MINERAL OILS SINCE 1919-20

With the close of the War a great change has taken place. In 1919-20, the imports, all of a sudden, rose to 1445 lakhs of gallons valued at 926 lakhs of rupees. Showing further progress in 1925-26 they stood at 2004 lakhs of gallons valued at 1005 lakhs of rupees. In 1926-27 there was, however, some decline, when they amounted in quantity and value respectively to 1865 lakhs of gallons, and 889 lakhs of rupees; in 1928-29, there was again a rise and 2419 lakhs of gallons valued at 1069 lakhs of rupees were imported. This sudden and phenomenal rise in the imports of mineral oils after a non-progressive trade of 25 years was due to the combination of various causes.

The annual output of petroleum in India rose somewhat rapidly year after year till 1913, but since then the progress has been very little, and except in a few years, the total production has been on the whole stationary. This indicates an exhaustion of the older fields and a lack of newer ones. The following figures are illustrative :—

ANNUAL OUTPUT OF PETROLEUM OR CRUDE OIL IN INDIA

(Quantity in lakhs of gallons)

Year	Quantity	Year	Quantity
1916	2970	1923	2940
1917	2830	1924	2940
1918	2860	1925	2890
1919	3060	1926	2800
1920	2830	1927	2810
1921	3060	1928	3060
1922	2980	1929	3061

While the output has thus been stationary, the demand for mineral oils has gone on increasing by leaps and bounds. They are now most widely used as illuminants, fuels, lubricants, and as motor spirit. The universal use of motor vehicles and the gradual extension of the use of aeroplanes have resulted in a very great demand for petrol all over the world. This remarkable increase in demand has been reflected in the much higher level of prices prevailing at present, in spite of the exploitation of new fields in Persia and Iraq. The stationary output of the Indian wells, combined with the stimulated demand, would have resulted in augmented imports much earlier had it not been for the outbreak of the War, when imports were restricted and prices rose to phenomenal heights.[1] With the return of normal conditions, the demand asserted itself, and the imports rose from 1919.

It should be pointed out that though in India the consumption of petrol for motor vehicles has risen much in volume during the last few years, the demand is met

[1] Prices of kerosene oil (imported) per case of 65 lbs. net.

In January	1913	Rs. 4-12-0
,,	1914	5- 0-0
,,	1917	6- 9-0
,,	1918	7-14-0
,,	1919	10-10-0
,,	1920	10-12-0

almost entirely by home output, very little being imported from outside. The bulk of the imports consists of kerosene and fuel oils, the rest consisting of lubricating oil. For example, in 1925-26, out of the total imports of mineral oils, over 39 per cent. represented kerosene oil, 47 per cent. fuel oil and 11 per cent. lubricating oil.[1] The corresponding figures for 1929-30 were 42, 44 and 10.5 respectively.

THE SOURCES OF SUPPLY

The United States of America:—As petroleum was first discovered in the United States of America, she was the monopolistic supplier of this material to India till almost the nineties of the last century when Russia entered the field. As a result of the keen competition from the latter, the imports of mineral oils from the United States of America fell heavily during the last decade of the 19th century. From 140.3 lakhs of rupees in 1890-91 they declined to 48 lakhs only in 1900-01. For the next few years also they were much restricted. In 1904-05, out of the total imports of 332 lakhs, those from the United States of America amounted to 63.3 lakhs only. With the collapse of the Russian imports in 1905-06, the former at once rose to 120.7 lakhs. Since then, the United States of America continued to occupy the foremost place as a supplier of mineral oils to India, and the development in the imports from that country were more or less similar to those of the total. In 1925-26, they amounted to 557 lakhs, representing 55.4 per cent. of the total imports, but since then a rapid decline has set in and imports from the U. S. A. amounted to 312 lakhs only in 1929-30.

Russia:—The advent of Russia in the Indian market was meteoric. In 1886-87, the imports of Russian oil amounted to 16 lakhs of gallons. The next year they were 56 lakhs, and in 1891-92 rose to 283 lakhs of gallons

[1] Review of Trade for 1925-26, p. 17.

valued at 113 lakhs of rupees, exceeding those from the United States of America by 4.5 lakhs of rupees. During the next ten years the imports of Russian oil thrived at the expense of the United States of America as the following figures will show :—

IMPORTS OF MINERAL OILS

Value in Lakhs of Rupees

	From Russia	From U.S.A.
1892-93	148·8	102·8
1895-96	183·6	96·3
1898-99	200·8	95·5
1901-02	315·0	48·6

It was indeed feared that Russian oil would altogether drive away the United States of America from the Indian market, but various factors united to make that impossible. Firstly, though cheap Russian oil was much inferior to the American stuff, there was a demand for the latter from the well-to-do people. Secondly, the import duty being specific it told more heavily on the former and put the American oil at an advantage. Thirdly, the American exporters were trying their best to bring down the price of their oil by arranging to send it in bulk which before had been sent in cases only. Lastly, the growth of the Burma petroleum industry in its earlier days meant an output of cheap and inferior rock oil which competed more with the Russian imports than with those from the United States of America. In consequence, the imports from Russia began to fall, amounting to 162.5 lakhs only in 1904-05. With the outbreak of the Civil War in Russia, the imports collapsed and went down to 27 lakhs in 1905-06, since then they continued to be quite insignificant, till they ceased altogether in 1915-16. In recent years, the imports from Russia have assumed

importance. In 1928-29 they amounted to 233 lakhs of rupees and in 1929-30 they were worth 148.5 lakhs of rupees.

The United Kingdom :—Small consignments of mineral oil have all along come from the United Kingdom. These imports are really re-exports from that country and are too insignificant to deserve any special attention.

Germany :—During the last four years there have been considerable imports of mineral oil from Germany. These consist of the variety called 'white oil' of which she is the monopolistic supplier. The imports from Germany amounted to more than 23 lakhs of rupees in 1929-30.

Borneo :—The imports from Borneo began from this century. They have shown steady and fair progress, and although amounting to only one-fourth of the imports from the United States of America they took the second position in 1925-26. In 1929-30 they amounted to 120 lakhs of rupees.

Persia :—Persia deserves special attention as the imports from that country have shown considerable developments in a very short period. In 1912-13, the imports from Persia amounted to 4.9 lakhs of rupees only ; in 1924-25 they had risen to more than 150 lakhs and in 1929-30 to 310 lakhs. The rapid rise in the imports from Persia is due to the discovery of extensive oil fields in that country in the first decade of this century, and their exploitation by the Anglo-Persian Oil Company. The proximity of Persia to India stimulated the imports from that country with the rise in output. Moreover, as the company is a British one with representatives all over India, we can expect further progress in the future also in our imports from Persia.

THE IMPORT AND EXCISE DUTIES

As already observed, till 1882 the imports of mineral oils were subjected to a duty of $7\frac{1}{2}$ per cent. *ad valorem*.

In that year along with the general abolition of the Customs tariff, the duty on mineral oils also was done away with. But while till 1894, the general tariff continued to be non-existent, a specific import duty of half an anna per gallon was levied on petroleum in 1888 and was subsequently raised to one anna in 1894. Though this was supposed to be purely a revenue duty, it is, however, significant that with the formation of the Burma Oil Company in 1887, petroleum was singled out for the levy of an import duty while all other articles were imported free. The duty on petroleum was further raised to one anna six pies per gallon in 1910, and to two annas six pies in 1917.

In 1917 an excise duty of six annas per imperial gallon was levied on motor spirit produced in India along with a countervailing import duty of an equal amount on imported petrol. There is very little to be said against this duty. It is of the nature of a luxury duty and it is supposed that those who can afford the luxury of having motor cars can very well bear the burden of this heavy duty. But with the recent development of motor traffic all over the country, this duty became rather injurious to the growth of economic transport. Consequently this duty was reduced to four annas in 1925 with a view to stimulate mechanical transport. In view of the findings of the Indian Road Development Committee, a Road Development Fund was created, and for this purpose, the duty on petrol was again raised to six annas a gallon in 1929. The budget of 1931-32 has added a surcharge of two annas per gallon to this duty.

An excise duty of one anna per gallon was levied on kerosene in 1922-23 and this was raised to one anna six pies in 1930, when the import duty was reduced from two annas six pies to two annas three pies. The budget of 1931-32 added a surcharge of nine pies to both the excise and import duties.

SECTION II. THE MINERAL OIL INDUSTRY[1]

The production of petroleum products in India is confined to the Attock District of the Punjab, Assam and Burma. The Attock Oil Co. and the Assam Oil Co. control the first two areas respectively. The major portion of the indigenous petroleum is, however, found in the Burmese fields which account for nine-tenths of the total. The Burma Oil Co. controls 1650 wells ; the other companies having a comparatively small number. The British Burma Petroleum Oil Co. has 113, the Rangoon Oil Co. has 118 ; the Indo-Burma Petroleum Co. has 116, and so on.

Without going into the details of the methods of production, it is of interest to note in brief a few points which conduce to economy of production. It has been ascertained that to derive the full benefit of oil resources it is important—

(1) to utilize surplus gas to the utmost as a source of power ;
(2) to recover all petrol from the gas before so using it ;
(3) to conserve gas pressure in the wells so as to obtain the maximum output of oil.

Among the important petroleum products manufactured in India, the following may be mentioned :—

Superior kerosene
Inferior kerosene
Petrol
Lubricating oil
Wax
Jute batching oil
Turpentine
Diesel fuel.

There are several companies doing the work, but the

[1] This section is mainly based on the Report of the Tariff Board.

B. O. C. is in a predominant position. It holds a large percentage of shares in some of the other companies, and in the case of others, it has the marketing organization under its control. The Asiatic Petroleum Co., (India) Ltd. is the marketing organization in India of the Royal Dutch Shell Group of oil companies. It is concerned with sale only and not production. Since December 1927, this company has been amalgamated with the B. O. C. and the combined marketing organization of the B. O. C. and the Shell group is now carried out by the Burma Shell Oil Storage and Distributing Co. of India, Ltd.

It is of interest to note briefly the early history of some of the more important concerns. The B. O. C. was started in 1902 when it took over the company which was formed in 1886. From its early career, it had to meet the competition of the Shell Group. The Shell Group could supply from the Dutch East Indies. One of the consequences of this was a Price War which was terminated by an agreement made in 1905. It was understood by this that the Shell Group was to make up the deficiency which could not be met by local companies in India. The other important company in the Indian market is the Standard Oil Co. of America which imports its products. It is under a great disadvantage because of the heavy freight which it has to pay on account of the distance of its source of supply. Generally, it follows the prices of the B. O. C. and the Shell Group.

PRICE WAR

The price of kerosene in India is controlled by the B. O. C. The control is brought about by an organization called the Kerosene Pool to which most of the companies in India and the Shell Group contribute. The oil is first received from the Pool from the different countries ; it is frequently mixed before sale and is sold at prices

which will cover the price paid by the Pool to the contributing companies. The difference between superior and inferior quality of kerosene is maintained by a difference in price which is also fixed by the Pool.

The Kerosene Price War which came into prominence in recent years was due to the following causes. The Standard Oil Co. made large purchases of oil from the Soviet Government. According to the Tariff Board,[1] "the ostensible reason for the Price War was the sale of Russian oil, stated to be 'stolen oil,' in India." The Standard Oil Co. was able to purchase this new supply at a cheap rate, and it was now in a better position to import oil into India and sell it in competition with the Kerosene Pool, as against its American source of supply. The Standard Oil Co. could now economise in freight, insurance, interest etc., because of the proximity of the Russian source. This possible advance of the Standard Oil Co. was not palatable to the Shell Group. As we have already seen, the Shell Group had obtained a dominant position in India by its arrangement with the local companies, and it was able to maintain a high level of prices. The acquisition of the Russian supply by the Standard Oil Co. was a menace to Shell; at the same time there was another consideration of some importance. The Anglo-Persian Oil Co. had a better geographical claim to a share in the Indian market. The B. O. C. has a large interest in the Anglo-Persian Oil Co., and the claim of the latter had therefore to be accepted. The admission of this claim would be at the expense of Shell, unless it could be made at the expense of the Standard Oil Co. In other words, any further advance of the Standard Oil Co. into Indian market must be fought by Shell if it was to maintain its position. In view of these circumstances, the Shell Group threatened a Price War and obtained the co-operation of the B. O. C. for the

[1] cf. Tariff Board Report, p. 13.

same. On 21st September 1927, two days before the first consignment of Russian kerosene was landed in India, the Burma Shell Group reduced the price by Re. 1 per 8 gallons; further reductions were adopted in quick succession, though different parts of the country were treated differently.

DEMAND FOR PROTECTION

The great national importance of oil supplies in modern times need not be emphasised. India produces 70 per cent. of its kerosene demand, and the whole of its petrol requirements, but recently there is a tendency for the demand for petrol to exceed the local supply. The Price War referred to above was for determining the share of the different companies in the expanding Indian market. The question naturally arose whether this Price War would affect the local companies adversely by decreasing the production, or by compelling some of them to close down owing to financial losses. If such a result was probable, it was in the national interest that the State should intervene by giving adequate protection to the indigenous companies; and it was on this ground that protection was sought from the Government of India.

It was, however, found that it was not a *bona fide* case, and that the machinery of the Tariff Board was being used by interested parties for their own advantage. We have seen the close relations of the Shell Group with the B. O. C., and the way in which they have combined to determine prices in India. We have also seen that it is not to the interest of Shell to allow any other foreign company to have a hold on the Indian market. It is obvious that the Price War was initiated by the Shell and the B. O. C., and the allied companies co-operated with them in the same. It was brought to the notice of the Tariff Board at rather a very late stage that the Shell Group had promised B. O. C. to indemnify her against

losses due to the Price War. This arrangement was made by the head offices in London and was perhaps not known for some time to agents in India. The Indian companies applied for protection against the effects of the Rate War; most of them were parties to the war in league with Shell, and Shell had promised them an indemnity. Under the circumstances, it was obvious that the application was not *bona fide,* and ought to have been dismissed without further enquiry. The enquiry of the Tariff Board, however, brought out certain facts to light which are of interest.

The claim to protection was based on the statement that the import prices were reduced below world parity with a view to dump the Indian market, and that local prices had to be reduced in consequence, involving losses to the indigenous companies. The world parity price was thus taken as the basis of comparison; the world parity price is the same as the F. O. B. American Gulf Price. Most of the American exports are sent from the American Gulf ports, and these constitute about 70 per cent. of the world supply. In view of the importance of this trade, this price is taken as the basis; transport charges up to India are added to it, and if current prices in India fall below that level, it is said that there is evidence of dumping which requires protection.

It is obvious that the world parity price is really the American price, and it has no relation to the cost of production or a fair selling price in India. As a matter of fact, we have seen that prices have been regulated by the Burma Shell Group to suit its purposes, namely, to compel the Standard Oil Co. to come to terms. One of the terms which will satisfy the Shell Group is the surrender by the Standard Oil Co. of two-thirds of its contract with the Soviet Government to the Shell Group and the Anglo-Persian Co. to be divided equally between them. It may be added that while the Tariff Board

was enquiring into the condition of the oil industry, it was to the interest of the applicant companies to lower prices to show that they were uneconomic with a view to establish their claim for protection. It was impossible, therefore, to ascertain current or economic prices because an artificial situation had been created by monopolist companies. There was no relation between foreign and internal prices due to the same causes, and the Standard Oil Co. did not reduce its prices except to follow the cuts of the Kerosene Pool.

From a detailed examination of the financial position of the more important companies, the Tariff Board came to the following conclusions :—

(1) That the work of development will not suffer by the Price War.

(2) That the Price War has been an incentive to conservation of internal resources. Such competition compels the Indian companies to introduce economies and to get a higher proportion of more available products.

(3) The Indian companies are not likely to lose control of the Indian market because of the decrease in prices.

(4) It is to the interest of the consumer to have a lower price.

(5) The Government revenues will not suffer in the aggregate.

There was a difference of opinion regarding the question of dumping, the majority believed that dumping had taken place because they took their stand on the world parity price. The minority believed that dumping was not established because they did not accept the world parity price as the basis of comparison, and because they could show by a detailed investigation of prices realised by the various companies before and during the Rate War that the companies had not suffered. No action on

behalf of the Government was, therefore, recommended by either party.

The following table shows the production and demand for petrol in India in recent years :—

Year	Lakhs of gallons production	Thousand gallons import	Lakhs of gallons export	Lakhs of gallons demand
1920	350	4	210	140
1921	380	3	200	180
1922	400	1	200	210
1923	400	1	190	210
1924	400	5	220	180
1925	400	6	130	270
1926	400	3	20	370
1927	470	112	...	470

We find from the table that there is an increase in the demand of 100 lakhs of gallons a year since 1925. The Tariff Board expected that the demand might easily overtake supply, which would necessitate imports. The Standard Oil Company had already made preparations to obtain a share in the imports, by erecting installations at the main ports for storing petrol. The import in 1928 was 168 thousand gallons and is on the increase. A shortage of petrol may also be brought about because of the fact that the demand for other petroleum products is also increasing, which means that it is not possible to increase the production of petrol from crude oil because some of the other products are more lucrative.[1] It is obvious, therefore, that in a short time, we may be faced with another Rate War between the same parties, namely,

[1] Increase in the demand for petroleum products in India.

	1926 Gallons in lakhs.	1927 Gallons in lakhs.	Increase Gallons in lakhs.	Percentage.
Lubricating Oil	1840	2,440	600	33
Petrol	130	479	340	261
Fuel Oil	540	1,040	500	92
Batching Oil	110	160	50	45
Kerosene	110	160	50	45

the Standard Oil Co. on the one hand, and the Burma Shell Group on the other, for the capture of the additional petrol market in India.

EVILS OF MONOPOLY

It is of interest to note that the monopoly position which the companies in India have obtained, has enabled them to maintain high prices for articles of such common consumption and this has resulted in heavy burdens on the consumer. This additional burden has been estimated at about 5 crores per annum.[1] It has been ascertained that the margin between prices of crude and refined products is much larger in India than in America, and that this is a measure of exploitation of the consumer which the Indian companies are in a position to carry on because of their monopoly position. It may be noted that the existence of similar conditions in America led to an agitation against the Standard Oil Co., and its dissolution by law in its original form. The remedy is to introduce competitive conditions by importing crude oil and encouraging the refining of the same in or near Bombay. At the same time, genuine Indian enterprise should be encouraged, for example, in the refining and marketing of oil. Indian companies with rupee capital may undertake such work, and if they are unfairly treated by the Oil Trusts, the Government should be ready to afford protection. The existing companies are almost entirely registered outside India and are not genuinely Indian. Another alternative is to institute a Government control of prices; the marketing companies constituted on a rupee basis may be recognised and may be asked to import the surplus requirements of India under Government control. Such a measure may remove the harm which the Oil Trusts are perpetrating at present.

[1] cf. Tariff Board Report, p. 88.

CHAPTER XII

CEMENT

Portland cement is defined as 'a compound consisting chiefly of silicates and aluminates of lime, produced by the calcination to incipient vitrification of a mechanical mixture of chalk and clay, or similar materials containing the requisite chemical constituents, the clinker thus produced being subsequently ground to a more or less impalpable powder'. Compared with other important industries, the machinery required for the cement industry is not very elaborate. It does not, therefore, require a number of skilled workers who may not be available in the country, and therefore, may have to be imported. Though the processes are simple, the complete equipment is expensive to start with and without such equipment, it is difficult to secure cheap and efficient production.

The use of Portland cement in India is gradually increasing. In 1905 we imported more than 89,000 tons of cement; this figure had increased to about 1,50,000 tons in the years immediately before the War. The manufacture of cement in India was begun in 1914 when the Indian Cement Company at Porbandar and the Katni Cement and Industrial Company at Katni began working. The importance of the industry to the country was proved during the War because the few companies that came into existence during the early period of the War proved of great assistance to the Government. In fact, the work was carried on under Government control. Since then other factories have been started and the productive capacity of the industry as a whole has increased considerably. The following table gives the production of Indian cement and imports since 1914 :—

	Total Indian production. (thousand tons)	Imports. (thousand tons)
1914	1	1,66
1915	18	1,42
1916	39	96
1917	73	86
1918	84	27
1919	87	93
1920	91	1,39
1921	1,33	1,30
1922	1,51	1,37
1923	2,35	1,25
1924	2,64	1,24

This shows that by 1924-25, the total consumption of Portland cement in India was about 4,00,000 tons of which about 70 per cent. was manufactured in India. In view of the recent growth of the industry, this is indeed satisfactory. The present position is reflected in the following figures kindly supplied by the Indian Cement Manufacturers' Association :—

	Total Indian production. (thousand tons)	Total imports[1] of foreign cement. (thousand tons)	Total consumption. (thousand tons)
1925-26	3,78	1,10	4,88
1926-27	4,68	1,02	6,58
1927-28	5,56	1,12	6,68
1928-29	5,49	1,27	6,76
1929-30	5,61	1,21	6,82
1930-31	5,65	1,15	6,90

The figures clearly reveal how indigenous production has been substantially growing in recent years. We see

[1]

	Imports of Cement lakhs of rupees.
1925-26	65
1926-27	58
1927-28	64
1928-29	68
1929-30	64

that out of the total quantity of cement consumed in India, nearly 80 per cent. was produced in the country, which shows a substantial rise over the previous figures. In 1924, the Indian factories were working much below their capacity. The nine factories, having between them thirteen rotary kilns, had a total capacity of 5,00,000 tons and yet the actual production was only about 3,30,000. Some of these factories were in a position to expand their work at a proportionately less cost. The capacity of the Indian factories has now been increased so much that they can greatly exceed the 1924 level of 5,00,000 tons. The Indian Cement Manufacturers' Association estimates the potential capacity of members' work to have been 7,85,000 tons in 1929-30 rising to 9,85,000 tons in 1930-31.[1]

The following is a list of cement manufacturing companies in India :—

	Name	Place	Capacity (in tons)
1.	Bundi Portland Cement Ltd.	Lakheri, Bundi State, Rajputana	60,000
2.	The Central Province Portland Cement Co., Ltd.	Kymore (25 miles from Katni)	1,00,000
3.	The Gwalior Cement Co., Ltd.	Banmor (12 miles from Gwalior station)	40,000
4.	The Indian Cement Co., Ltd.	Porbander, Kathiawar ...	30,000
5.	The Jubbulpore Portland Cement Co., Ltd. ...	Jukehi, C. P. (near G. I. P. Ry. line)	60,000
6.	The Katni Cement and Industrial Co., Ltd. ...	Tikuri village (about 2½ miles from Katni junction)	72,000
7.	Punjab Portland Cement Co., Ltd.	Wah (28 miles north of Rawalpindi)	33,000
8.	Shahabad Cement Co., Ltd.	Shahabad, Deccan (on the G.I. P. Ry. Madras to Bombay)	40,000
9.	Sone Valley Portland Cement Co., Ltd.	Japla (Bihar and Orissa E. I. Ry.)	50,000
10.	The South Indian Industrial Ltd.	Washermanpet, Madras ...	10,000

[1] Capital, June 27, 1929, p. 1442.

IMPORTS

It is interesting to note that though local production has increased, foreign imports have not decreased, as can be seen from the figures of imports given above. This shows that the total consumption of cement in the country is on the increase.

It has been found that the quality of Indian cement is much better than the average quality of imported cement. If inferior cement is sold in India, it is generally imported cement.

CLAIM FOR PROTECTION[1]

The claim for protection to the cement industry made in 1924 was based on the fact that though the quality of Indian cement was quite good there was a prejudice in favour of British cement among the consumers; and it would take time before it could be removed. Even to-day it continues and the quality of imports is comparatively unchanged. The productive capacity of the Industry was already larger than the demand, but so long as imported cement was in competition, it was not possible for the Indian factories to work to their full capacity. If they got a chance to increase their output by temporary protection, their cost of production would go down and in course of time they would be in a position to stand on their own legs. The existing customs duty of 15 per cent. on a valuation of Rs. 60 per ton worked out at Rs. 9 per ton; the industry asked that the duty should be raised from Rs. 9 to Rs. 25 per ton.

In the matter of natural advantages, the cement industry is favourably situated. Limestone is to be found in abundance in several parts of the country, and most of the factories have been established in the vicinity of the quarries of limestone. Suitable clay is also available

[1] This section is mainly based on the Report of the Tariff Board. The figures of prices refer to the year 1924.

in large quantities. So far as labour is concerned, though some European and American workers have to be employed, the average cost per ton is small, and it is possible in course of time to replace these by qualified Indians. As regards the supply of coal, the cement industry is at a disadvantage. Coal is available near some of the factories in the Central Provinces, but the C. P. coal is inferior, and they have to import at least half of their requirements from the Bengal and Bihar coal fields. Another disadvantage from which the cement factories suffer is that most of them are situated at a distance from the ports, that is, in the interior, though from one point of view this is an advantage because imported cement will have to pay about Rs. 10 per ton, on an average, to reach the market in the interior. This affords a sort of natural protection to the cement industry so far as the internal market is concerned.

The principal market for cement is, however, to be found in the ports and particularly in Calcutta and Bombay. These two markets consume between them more than half the cement required by the country. There are no cement works within 350 miles of Calcutta or 250 miles of Bombay, and imported cement, therefore, finds an easy access to these markets.

Though the use of cement is obviously increasing in India, one cannot be very optimistic about a rapid expansion of the same. The Industry will have to take steps to popularise the use of it for different purposes; a substantial rise in the price is likely to come in the way of increased consumption, and it is, therefore, not in the interest of the Industry to see a large rise in the price of cement. Before the War, the price of imported cement in Bombay was about Rs. 45 to 50. During the War, the price rose enormously and the cement industry made good profits. Since 1922, there has been a rapid decline; the price of British cement in the ports is

now about Rs. 55 to 60. Most of the imported cement comes from Britain, that coming from Germany and Belgium forms a small proportion. The price of non-British cement is about Rs. 10 lower. The prices of Indian cement in Calcutta were reported to be as under :—

June 1923	Rs. 52	per ton
February 1924	Rs. 43-13-0	per ton
May 1924	Rs. 36-12-0	per ton

Two important facts emerged out of these figures ; the first was that the existing prices at which Indian cement was sold, were unprofitable, and did not even cover the works' costs ; the second fact was that the existing low price was due mainly to internal competition among the Indian factories themselves. It was not possible to establish any direct relation between the price of imported cement and that of Indian cement. Internal competition was so great that even if imported cement were prohibited, the internal price would not be affected. The third difficulty was with reference to the distinct preference to British cement among the principal consumers in India. This was due to long tradition, and the reluctance to take unnecessary risk by the use of new brands of cement, with which engineers and others might not be familiar. Various tests of Indian cement have been made, and it has been definitely proved that though Indian cement is of high quality, it may take some time before it will satisfy the consumer. In other words, in order to induce the consumer to take Indian cement, the price must be substantially lower than that of British cement. Another difficulty from which Indian cement suffers is in the method of packing. Imported cement comes in wooden casks which are lined with waterproof paper. Indian cement is packed in gunny bags. It is found that while in transit, or when stored, Indian cement is liable to be affected in quality by the action of moisture, which is not

the case with imported cement because of the difference in packing. Packing of Indian cement in barrels would increase the cost by Rs. 19 per ton which is obviously impossible for the Indian industry to manage.

The Tariff Board worked out in detail the cost of production of the Indian factories and the fair selling price which they should receive. The following table summarises the results of their investigation :—

	All-in cost f. o. r. works	Freight to port	Manufacturer's profit	Fair selling price
	Rs. per ton	Rs. per ton	Rs. per ton	Rs. per ton
Katni group (to Calcutta)	34-36	11·5	6·5	52-54
Katni group (to Bombay)	34-36	15·5	6·5	56-58
Gwalior (to Bombay)	35-37	13·5	6·5	55-57
Bundi (to Bombay)	38-40	13·5	6·5	58-60
Kathiawar group (to Bombay or Karachi)	41-43	8·5	6·5	56-58

The conclusion from this was that it was possible for the Indian manufacturer to sell cement at Rs. 53 per ton in Calcutta and Rs. 57 in Bombay and get a reasonable profit provided he was able to work to his full capacity. It would also be possible to sell cement in Bombay at Rs. 53 if the Katni group of factories received certain freight concessions from the G. I. P. Railway.

Compared with the prices of Indian cement, they found that those of imported cement were lower. Taking into consideration all factors, it was ascertained that British cement could be landed at Calcutta or Bombay at about Rs. 48 per ton without duty. Allegations had been made that the British exporter sold his cement at an unremunerative price in India. Though the truth of this was not ascertained, the Tariff Board had sufficient

reason to come to the conclusion that it was not possible to expect a further fall in the price of British cement. In view of this, it was obvious that if the Indian manufacturer could, in course of time, sell at a price below Rs. 50 and still make a profit, then he could hold his own both in Calcutta and Bombay against outside competition provided, of course, that the quality of his cement was satisfactory. As we have already seen, one of the reasons why the Indian manufacturer was not able to reduce his price was the fact that he was not working at maximum capacity. When the Indian industry is able to work to its full capacity, it will be reasonable to expect an economy which will enable him to sell at something below Rs. 50. On this calculation it can be said that the cement industry should, in course of time, be able to face world competition at the ports without any protective help.

The other condition of the principle of discriminating protection is that the industry should be such as is not likely to develop at all, or not likely to develop as rapidly as is desirable, unless protection were given. In view of what we have seen, the application of this principle to the cement industry in its literal form, becomes ridiculous. This is so, because this industry is suffering from an excess of development. If, however, the principle is applied in the sense that the industry may be in danger of disappearing, or of being driven out of its principal market, then the main object of the policy will be served. In this connection, it should be observed that so long as there is a customs duty of 15 per cent., the cement industry will not entirely disappear. The up-country factories have, as we have seen, a natural advantage against imported cement, but the factories which depend for their existence or expansion on the markets at the ports, are likely to suffer. Even this may not be so, if the consumer were willing to give the same price for Indian cement as he does for British cement, namely, Rs. 57 per ton including

duty. The disadvantage of the Indian manufacturer arises from the fact that the consumer has a preference for British cement, which means that Indian cement should be sold at a price sufficiently low to overcome this preference. A calculation made on these lines by the Tariff Board brought them to the conclusion that the difference in prices should be about Rs. 8 a ton in Bombay and Rs. 12 a ton in Calcutta. These calculations pre-suppose that the factories were working at their full capacity; in other words, so long as the output was only a fraction of the total capacity, even these prices would involve a loss; in other words, if a temporary protection to tide over this difficulty was not given, more than half the companies would have to be shut down.

PROPOSED MEASURE OF PROTECTION

A great difficulty exists in granting protection to this industry even if it were accepted in principle. The Indian factories have followed a policy of intense internal competition which has resulted in very low prices and consequent loss. If the industry could join hands and come to an agreement, this particular phase would disappear. Unless some such arrangement came into existence, no scheme of protection could successfully work. So far as the method of protection is concerned, it was found desirable to suggest bounties in preference to protective duties. In the interest of the industry, it was necessary to encourage the consumption of cement and this could be done only by keeping the price at a relatively low level. Import duties are bound to raise prices and are, therefore, not the right form of assistance to the industry. After considering the relative position, with reference to the market at the ports, of the different factories, the Tariff Board came to the conclusion that the bounties should be uniform and should be paid only on cement consigned to the ports. To this exceptions were made in the case of

cement which was to be delivered under contract to the Bombay Development Department, because the contract provided for a remunerative price, and also with reference to the Sone Valley Portland Cement Co., Ltd., which refused to supply facts to the Tariff Board; besides, it does not fulfil the general conditions which are required for protection; for example, it was laid down in the Steel Protection Act of 1924, that companies seeking protection should be formed and registered under the Indian Companies Act in India, should have a rupee capital and should have a certain proportion of Indian Directors. With the exception of these, the Tariff Board recommended that the existing *ad valorem* duty of 15 per cent. should be turned into a specific duty of Rs. 9 per ton, and in addition, a bounty of Rs. 8 per ton should be given in certain cases, namely, to cement consigned to great ports and their adjacent areas. If the cost of the bounty was considered high, an alternative scheme was suggested, namely, a protective duty of Rs. 12 per ton, and a bounty of Rs. 5 per ton.

In order to do away with the policy of price cutting followed by the cement companies, it was further suggested that the measure of protection, even if passed by the legislature, should not be put into operation unless the Government was satisfied that the price of Indian cement at the ports was in such relation to the price of imported cement, that the payment of bounties was not likely to lead to a reduction in the price of Indian cement. There was a difference of opinion among the members of the Board; Sir P. Ginwalla was of opinion that the bounty should be payable as soon as the bill became law for a period of two years, after which the condition referred to by the majority should be fulfilled.

So far as the market in Burma was concerned, it was not possible for the Indian factories to get a footing in Rangoon because of the higher freight involved which

meant a difference of Rs. 14 per ton. Imported cement in Rangoon was sold, however, at a price which was higher by Rs. 3, than that prevailing in Calcutta or Bombay. On this basis, the Board suggested that the bounty on cement consigned by Indian factories to Rangoon should be Rs. 11 per ton ; this was suggested as a temporary measure which would not be required once the cement industry had established itself in the Indian market. The President of the Board considered the expenditure involved in this suggestion disproportionate and dissented from the same.

THE CEMENT ASSOCIATION

The Government did not think it fit to take the steps advised by the Tariff Board, but since the publication of the report the industry itself has shown some activity towards proper organisation. In October 1925, an association of the Indian Cement Manufacturers was formed, and except the Sone Valley Portland Cement Co. all the existing concerns joined it. The main object of the Association was to end the internecine competition between the various companies, which was threatening ruin to some of them, and this was achieved by standardising the price of cement at an economic level which would assure a reasonable return to the manufacturers, and at the same time would not affect the consumption of cement.

Subsequent events have proved that this introduction of stability, both from the manufacturers' and consumers' point of view, has been a sound policy and the consumption of cement has increased progressively. Another achievement to the credit of the I. C. M. A. was to reduce the railway freight charges on produce marketed by factories irrespective of the distance between the works and the destination. This has been brought about by allotting certain geographical areas to various factories as their marketing limits. Even the Sone Valley Co. and

the Shahabad Cement Co. (which came into existence subsequently) have, if not actually joined the Association, made mutual agreements which virtually assures them all the benefits of membership.

Besides, by its centralised advertising and propaganda, the Association has been doing effective work in extending the market and increasing the use and consumption of Indian cement. The latest step they have taken is to encourage the use of cement on public roads, and there is no doubt that I. C. M. A. provides an effective organisation for the industry, proving how beneficial it would be if some of the other industries in India decided to work on similar lines.

PART IV

OTHER ARTICLES

CHAPTER XIII

MATCHES[1]

The problem of the match manufacturer differs according to the raw material he uses. The following three kinds of matches are manufactured in India :—

(1) Matches with aspen splints and boxes ;
(2) Matches with Indian wood splints and boxes ;
(3) Matches with aspen splints and Indian wood boxes.

It is of interest to note that no match manufacturing country is self-supporting regarding all or most of the raw materials required. Certain materials have to be imported in any case, and India is no exception. This means that the condition of discriminating protection, which requires that an industry should have an abundant supply of the raw material, will have to be modified in the case of this industry, if it deserves protection on the whole.

We need not describe in detail the processes of manufacture e. g. box making, splint making, box filling, painting and packeting etc. We may note that three sizes of matches are made in India, namely :—

	Dimensions of boxes in inches
Full size	$2\frac{1}{8}\frac{1}{4} \times 1\frac{1}{3}\frac{5}{2} \times \frac{2}{1}\frac{3}{2}$
Three quarter size	$2\frac{1}{8}\frac{5}{4} \times 1\frac{2}{8}\frac{9}{4} \times \frac{5}{8}$
Half size	$1\frac{5}{8}\frac{3}{4} \times 1\frac{1}{8}\frac{1}{4} \times \frac{3}{8}\frac{1}{4}$

Another classification of matches should be according to the way in which they can be ignited. We make safety matches and sulphur matches. Safety matches can be ignited "by friction on the specially prepared surfaces of

[1] Mainly based on the report of the Tariff Board.

the sides of the box". Sulphur matches can be ignited by friction on any uneven surface. The greater portion of our output is of safety matches.

CAUSES OF RECENT GROWTH OF THE INDUSTRY

One of the most remarkable things about this industry is that it is mainly an outcome of the war. Before the war, efforts were made to manufacture matches in India, but they failed because of one reason or another. The only factory which carried on work with difficulty before the war was the Gujarat Islam Match Factory at Ahmedabad, which was started in 1895. The reason of the growth of the industry during the war period was the imposition of duties on imported matches, which afforded a substantial protection to the Indian manufacturer, though this was not the object of the duties. Before 1916, the duty was 5 per cent. *ad valorem*. In 1916, it was increased to $7\frac{1}{2}$ per cent. In 1921, the duty was made specific and fixed at 12 annas per gross boxes. This was further increased to Re. 1-8-0 per gross in 1922. These duties had an *ad valorem* incidence varying from 100 to 200 per cent.

The first effect of this was that undipped splints and veneers were imported from Japan and turned into matches in Bombay. The object of the Government in raising more revenue was defeated to this extent, and therefore, in 1924, the Government levied an import duty of 4 As. 6 Ps. per lb. on undipped splints, and 6 As. per lb. on veneers. This led to the erection of factories in India, and to the import of aspen wood from Japan and Sweden. Aspen wood was subject to a 15 per cent. duty. In course of time, Indian wood took the place of aspen in the manufacture of veneers for boxes ; though aspen is still used for splints in the factories near Bombay. In other parts of the country also, factories sprang up. We had new match factories in Calcutta, Rangoon, Lahore and Bareilly. In consequence of increased production at

home, the imports suffered. The Swedish Match Company were the largest suppliers to India, and they now decided to enter the field of production in India by establishing factories in different parts of the country, as shown below :—

	Capacity—gross per day
Swedish Match Co., Ambernath, July 1924 ...	10,000
,, Calcutta, Sept. 1924 ...	5,250
,, Parel, Sept. 1926 ...	750
Assam Match Co., July 1926	1,750
Burma Match Co., August 1925	2,000
Mandaly Match Co., October 1925	750
	20,500

The Parel and Mandalay factories have been closed. The approximate total capacity of the Swedish Match Co. in India may be put at 60 lakhs gross a year and we have in all 27 factories in India with an aggregate capacity of 180 lakhs gross a year.

The increase in the output has resulted in a reduction of costs, which has been possible partly by the introduction of modern machinery, and partly by improving the efficiency of labour. The quality of Indian matches which was inferior at first, has also improved.

Unlike other industries, labour in this industry has been found both cheap and efficient. The processes of manufacture are not difficult and can be learnt with ease. Hand labour is used in some factories for box making, labelling and packeting. In many cases, box making is carried on as a cottage industry ; the materials are supplied by the factory and boxes are made out of them at home by women and children.

Another advantage to the Indian industry is a large home market. For such a cheap commodity in daily use by all classes of people, the market must be large indeed. That modern matches are becoming more and more popular can be seen from the figures of imports. During

1900 to 1910, the imports rose from 40 lakhs of rupees to 81 lakhs. Though figures of quantity for these years are not available, we can say that the quantity was doubled because the price did not fluctuate much. In 1913-14, the imports rose to 90 lakhs. The figures of value during the war period are not a correct guide, and we may, therefore, take the quantity of imports, which were 145 lakhs of gross boxes on an average during the war period. In 1921-22, the figure was 137 lakhs of gross boxes. If we take into account the limited manufacture that existed in India in this year, we may put the total consumption in this year at 145 lakhs of gross boxes. In the following years, the consumption must have increased, partly because of local production, and partly because of lower prices. The Tariff Board estimates the consumption at present at about 170 lakhs gross boxes. In 1926-27, the Indian production was 105 lakhs gross and the imports were 61 lakhs gross, the total being about 170 lakhs gross. The world's annual consumption is put at 1500 lakhs gross, which means that India is an important market. The Swedish Match Co. has a limited market in Sweden and depends on exports. The Indian industry has already a capacity of producing as much as required by the home market. In other words, the import duties have enabled the industry to expand to the limit required by local demand, and we have effective internal competition which limits the price in favour of the consumer.

THE RAW MATERIAL

We have referred to the different proportions in which Indian wood is used in different kinds of matches, and have pointed out that aspen is imported particularly for splints. Taking the costs into consideration, the Tariff Board has come to the conclusion that the factories in the vicinity of Bombay would do well to use aspen for splints. The use of Indian wood for splints is possible in Calcutta

and Rangoon because of the proximity of the supplies. In this connection, the Tariff Board has, after detailed inquiry, pointed out that supplies of suitable wood are available for factories near Calcutta and Rangoon, but that this is not so for factories near Bombay, with the exception of that in Gujarat. Suitable experiments in the possible use of Indian woods for match manufacture and a systematic arrangement for plantation of such selected trees have been recommended.

FOREIGN COMPETITION

Before the war, we used to import matches from several countries. Figures of quantity according to countries are not available for the years prior to 1912-13. In that year we imported 151 lakhs of gross boxes. Of this, about half came from Japan ; about 28 per cent. from Sweden and the rest from other European countries. During the war, the European supply ceased, and Japan had the monopoly. In 1918-19, out of an import of 111 lakhs gross, Japan's share was 107 lakhs.

THE SWEDISH COMPANY

In 1917, several Swedish companies formed a combine called the Swedish Match Company and began to work for the recapture of their markets. By 1923-24, Sweden had got about half the share in the Indian market. Out of a total import of 112 lakhs gross in that year, Japan sent 55 lakhs, and Sweden supplied 51 lakhs. The imposition of the import duties in 1921 and 1922 led to manufacture in India, and the Swedish company followed the usual practice of foreign manufacturers by establishing factories in the consuming country and taking advantage of the tariff. The object was to retain the market as against the Indian manufacturer on the one hand and the Japanese importer on the other. Certain superior kinds of matches were still imported by the Swedish company

from Sweden to compete against similar goods of Japan. By 1926-27, Japanese imports were reduced to insignificance; the imports from Sweden were 45 lakhs gross, and the production of the Swedish Co. in India was 36 lakhs. Sweden thus secured a market of 81 lakhs, or about 50 per cent. of the demand. More recently the Swedish Co. has made arrangements with the Japanese manufacturers by which they work as a combine. This has resulted in the elimination of Japan as a rival. We have, therefore, no outside competitor to Sweden. In other words, in future the competition lies between Sweden and India, so far as our Match Industry is concerned. The object of the Swedish Co. is to retain at least half the Indian market, partly by the production in India and partly by her imports. In order to do so, she is expanding her production in India, and at the same time reducing the prices of imported matches.

In this connection, we must take a brief note of the position of the Swedish company. The resources of this company are great, and in view of its export to various countries of the world, it decides its policy of production, export and price as best suits its own position. The company may, therefore, increase its exports to India or reduce them or keep them stationary, and in this, it may be influenced by considerations other than Indian. This company frequently enters into struggles with other competitors, which decide its policy with reference to certain markets. For example, when it recently competed with Japan, it exported matches at lower and lower prices to all those countries where Japan had a market, and thus succeeded in destroying Japanese competition. This means that conditions of outside competition or extraneous factors may affect its policy towards India. Again, now that the company has acquired a controlling interest in Japan, it may send matches from Japan instead of from Sweden. The company may also stop all imports into

India if it thinks of pointing out that the duty is too high or that India has nothing to fear from Swedish competition.

From the point of view of the Indian industry, we should have some idea of the possible future price of imported matches. We cannot, however, form any idea of this, because we have seen that the future price will be fixed at any level that suits the Swedish company best. The Tariff Board tried to consider the existing prices of imports, and after deducting all charges by way of freight, duty etc. came to the conclusion that the Swedish company realised a price of $7\frac{1}{2}$d. or 6 as. 6 pies per gross at the works. Even if we allow for the experience and capacity of the company, this price is too low, and in this sense the competition from Sweden is unfair. Our law does not provide for any measure against this sort of competition. Only those cases of unfair competition where the State gives a bounty are taken note of by our law. The Tariff Board has not recommended any step against this, though under the law of some countries such a practice would come under the category of anti-dumping legislation.

PROTECTION

The Tariff Board has made calculations regarding the fair selling price of imported matches as well as of Indian matches. In the case of the latter, they have taken into account the revenue duty of 15 per cent. which the Indian manufacturer has to pay on aspen, and chemicals which he imports. It has been found that whereas the future price of imported matches is likely to be Re. 1-4-0 per gross,[1] that of Indian matches will be less than Re. 1-3-0 even when aspen is used and will be near Re. 1-2-0, when aspen is not used. This shows that the Indian industry can do without protection, if the foreign manufacturer

[1] This includes the revenue duty on aspen, chemicals etc. included in the matches.

charged a price which would give him a fair return. The industry, however, must be protected because of the fact that foreign matches are sold at prices which are below the economic level. If this is not done, the industry may not develop and may suffer. In course of time, it should be possible for the industry to introduce further economies and reduce costs, which would enable it to dispense with protection in future. As we have already seen, the main condition of protection, namely, cheap labour and a large home market, is fulfilled by the industry. Regarding raw material we have seen that no country is self-supplying, that India has adequate resources, some of which need to be developed by a system of plantation. In view of these considerations, the claim of the industry for protection is established.

Under ordinary circumstances, the measure of protection would be the difference between the fair selling price of the local product and that of the imported material. If we take into account the present landed price of imported matches without duty (11 as. 10 ps.), and the present price of corresponding Indian matches (Re. 1-4-1) we find that about 9 as. is the measure of protection required per gross.

But the case of the Match Industry differs from that of others in several respects. Other industries for which protection has been considered, were either developed or partially developed. The object in such cases has been to find means by which such industries may develop to the fullest extent required to meet the home market, and to be able to do without protection in the end. In the case of the Match Industry, the capacity is already somewhat larger than that required for the home demand. Again, the ordinary assumption regarding prices in the case of protected goods does not hold good in the case of matches. Ordinarily it is believed that the home goods will sell at about the same price as the foreign or perhaps

at a somewhat lower price, and that this will enable the local manufacturer to reach maximum production. In the case of matches, Indian matches are sold at a rate which is much below that of foreign matches, and as we shall see later, the output of Indian matches is determined by the prices of local and imported matches.

It has been found on detailed comparison that there is a difference in price of about 15 as. per gross between the best imported and the best Indian matches. [1] The reasons for this difference are mainly two: The Swedish Co. has great advantages because of her capacity, world connections and experience. She was one of the earliest exporters of matches to India. The quality of matches in India has been connected with the name of Sweden and the company has carried on systematic propaganda in favour of her products, which had the effect of lowering Indian matches in the eye of the public. Though the best Indian matches are as good as Swedish in quality and appearance, there are some minor defects with the rest, which are, however, capable of removal with little effort. But the fact remains, that Indian manufacturers have realised that there must be some difference in the price of the two kinds of matches, if the Indian industry is to hold its own.

The other reason relates to the position of the retail market. Matches are not sold by gross, but in dozens or in single boxes to the consumer, and in a majority of cases they are sold by single boxes. In this connection it must be pointed out that the lowest monetary unit in a country has a great deal to do with such retail transactions in articles of daily use. [2] Though the pie is the lowest mone-

[1] T. B. Report, p. 62.

[2] cf. "In many instances the monetary system of a country is decisive for the retail price which the country has to pay. For example, in the United States of America, the retail price of matches will be at least 1 cent. a box and in Great Britain at least 1 penny a box independently of the price charged by the manufacturer". Mr. Kregner, Chairman, Swedish Match Co., T. B. Report, App. C.

tary unit in our country, we find that for all practical purposes in the Match trade, as in several others, the pice is the smallest coin.[1] This means that if the Indian match is to be favoured, there should be a difference in its favour of at least one pice per unit in the retail trade. This advantage is enjoyed by the industry under the present duty of Re. 1-8-0 per gross. In spite of this, however, we import 40 lakhs gross of boxes. If the advantage were removed, we shall get more imports at the cost of the Indian industry.

From the point of view of the consumer it is fortunate that the prices of Indian matches are not as high as those of imported matches. Prices are kept low by internal competition and are less by about 14 as. per gross. In this connection the effect on the Swedish Co. should also be considered. This company has 20 factories in Sweden producing 300 lakhs gross of boxes per annum, 95 per cent. of which are exported. The exports to India are not negligible. Even at present, we have seen that exports are kept up by selling matches in India at an uneconomic level. This means that the company will not miss an opportunity to increase her exports to India if she can, which will be provided by any lowering of the duty.

Nor is it necessary to increase the duty, for the industry has already reached a maximum productive capacity. It is best, therefore, to retain the present duty of Re. 1-8-0 per gross on matches and the duties on splints and veneers and to transfer them all to the protective category. This recommendation of the Tariff Board was accepted by

[1] cf. The following table showing the effect of the monetary unit on retail prices, given by the T. B. Report, p. 67.

	Price per gross.	Price per dozen.	1 box	2 boxes.	3 boxes.
	Rs. as. ps.	as. ps.	pice	pice	pice
Indian	1 5 0	2-3 to 2-6	1	2	3
Imported	2 4 0	3-6 to 4-0	2	3	4
Difference per unit of sale			1	1	1
Difference per box			1	½	1/3
Difference per gross			Rs. 2-4	Re. 1-2	Re. 0-12

the Government. The period of protection has not been fixed, but is left for future consideration.

COTTAGE FACTORIES

Small factories with a capacity of 50 to 100 gross boxes per day are called cottage factories. Several of these are situated in or near Calcutta. From a consideration of the costs and other features, it is found that they cannot compete with the large factories and have no future before them. In case, however, the Government imposed an excise duty on matches for revenue purposes, the cottage industries would suffer much because, their financial condition being weak, they would have to sell out their stock at a low price to pay the duty. It has been suggested that in such an event a difference of 2 annas per gross should be made in their favour.

SWEDISH MATCH CO.

So far as imported matches are concerned, we have seen that the competition of the Swedish Co. is unfair. This is not true of their Indian production. The fact is, however, that the advent of the Swedish concerns in India has reduced the profits of the Indian companies which were at one time as high as 50 to 60 per cent. The competition of the Company has, therefore, by reducing profits to a reasonable level, benefited the consumer.

The Swedish Co. has adopted methods of propaganda which have lowered the reputation of Indian matches. The Tariff Board has made adverse comments on such methods, which lead to animosity.

Efforts were made by the Company to acquire control over the whole of the Indian industry. These were not successful at first, but in view of the history of the Company in other countries,[1] a general apprehension regarding their intentions was bound to remain. No action was, however, recommended by the Tariff Board till any

[1] Tariff Board Report, pp. 86-90.

untoward situation arose. In the meanwhile, the Company was advised to identify itself with Indian interests by registering itself in India, by inviting Indian rupee capital, and by including Indians in its Board of Directors and management. The Company has made some efforts in this direction, part of its share capital is subscribed by Indians and a further offer is likely to be made.

The apprehension referred to above has at last come true, because it is well known that the Swedish Company has by now so increased its activities that the local manufacturers may either be forced to close down their works or hand over control to it. The usual rate war has begun. The situation may be indicated in the words of the Indian Match Manufacturers' Association which in a representation recently submitted to the Government of India observes as under :—

"Since the submission of its report by the Tariff Board the Swedish Company has doubled the output of its factories and started new factories almost at every place in the country. In 1928 the Company had a factory at each of the following places: Calcutta, Assam, Bombay, Burma. To-day the Company has two factories at Calcutta, one at Assam, one at Bombay, two in Burma, one in Madras, two in the U. P., and two in the Andaman Islands.

"That is to say, whereas it had only four factories at the time the Tariff Board conducted its inquiry the Company has now eleven factories with vastly increased production. A rate war is also in progress. This competition has told so heavily on the Indian manufacturers that they have been obliged to reduce their output and some have even closed their factories. If this state of things continues for a few months more almost all the Indian match manufacturers will have no other alternative except to sell their factories to the Swedish Company at any price it may choose to offer. The following steps should therefore be taken by Government: —

"The operations of the Western India Match Company, which is only another name for the Swedish Match Trust, should be restricted by law to the production of matches not exceeding 30 per cent. of the total requirement of the country.

"An excise of annas twelve per gross may be levied on its production."

CHAPTER XIV

PAPER

The manufacture of paper by hand has existed in India for centuries, but this work is of no importance at present.[1] The establishment of Bally Mills on the Hooghly in 1870 introduced the modern paper industry in the country. This concern was liquidated in 1905 and some of its machinery was taken over by the Titaghur Paper Mills which had begun work in 1884. The Imperial Paper Mills which was also started on the Hooghly in 1894 did not prove successful, and was taken over by the Titaghur Mills in 1903. The estimated production of the Titaghur Company is about 20,000 tons of paper per year. More recently (1922) a new concern called the Naihati Mill has been started on the banks of the Hooghly, by the India Paper Pulp Company, Ltd. Its capacity is 2750 tons per year.

We have small concerns in other parts of the country. The Upper India Paper Mills at Lucknow which began work in 1882 have a capacity of 4000 tons. The Gwalior Mill started by Maharaja Scindia in 1881 was taken over by the Bengal Paper Mill Company and its machinery removed to Raniganj in 1922. The capacity of this concern is 8400 tons. The Deccan Paper Mill Co. situated in Poona began operations in 1887 and has a capacity of 1700 tons. There are a few very small concerns, which need not be noticed here. The total capacity of the existing mills is put down at 33,000 tons ; this would increase to 43,000 tons if we take into account the capacity of the two new projects one in Madras and another in the Punjab, which are in the course of construction.

[1] Based mainly on the Reports of the Tariff Board.

RAW MATERIAL

The vegetable fibres[1] from which paper is made can be had from many sources, 'but practically the choice is governed by the necessity that the fibre should be such as will give the paper the requisite strength, and that the supply should be sufficiently abundant to permit of cheap production.'[2] In other words, the raw material should be almost a waste product. For many years paper was manufactured in Europe from old rags, which are still used for superior qualities of paper. The Esparto grass began to be used during the latter half of the last century, and wood-fibre by the end of the century. The conifer trees, which grow abundantly in Scandinavia, the Baltic States, Canada and the U. S. A. have been found suitable. The huge increase in printed matter, which is a feature of modern times, is closely connected with the use of wood fibre for making paper. But the difficulty is that it takes a long time, say 60 years, before the conifer trees can be replaced, whereas the grass grows every year. The destruction of coniferous woods in certain parts of Europe and America has resulted in the problem of a shortage of cheap raw material for paper. Among the substitutes, bamboo is thought of, and in this connection India has a great future.

Sabai grass, which grows abundantly in Northern India and in many respects resembles Esparto grass, is used in India for making paper. No attempt has been made so far to manufacture paper from Indian wood, though Indian paper contains a good deal of wood fibre; this however is imported from Europe in the form of pulp. For

[1] "Paper has been defined as a fabric composed mainly of minute vegetable fibres which have been deposited on to a sieve-like structure from their suspension in water, and commingled and felted together in such a way as to form a homogeneous sheet or web". Maddox—Paper—its history, sources and manufacture, quoted in T. B. Report, p. 4.

[2] T. B. Report.

cheaper varieties, rags, hemp and jute waste and also waste paper are used.

So long as grass and rags were the raw material, we had all the stages of manufacture in one mill, but with the use of wood-fibre there has been a change. Some mills specialise in the production of wood pulp, and this is subsequently made into paper in other mills, which may be situated in a distant country. So far as bamboo is concerned, we have the possibility of such a separation of processes.

Pulp which is treated by chemical processes is known as 'chemical pulp'. On the other hand, we have 'mechanical pulp' which is made by grinding the wood without the use of chemicals. The latter would produce weak paper. Most newspapers are printed on a paper which is called "newsprint"; this contains 70 per cent. of mechanical pulp, and 30 per cent. of chemical pulp.

The essential operations of paper manufacture have been thus summarized by the Tariff Board:

"(1) The removal by chemical means from the fibre of the elements which are not required, so as to isolate the cellulose. It is this process which converts the fibre into chemical pulp.

(2) The bleaching of the pulp with chloride of lime.

(3) The treatment of the pulp in the heaters. It is here that the experience of the trained paper-maker comes chiefly into play, and the quality of the paper made depends mainly on his skill and experience.

(4) The conversion of pulp into paper on the paper machine. Here the essential point is the interlacing of the fibres on the wire cloth and the ingenuity of the craftsman has had ample scope in devising the apparatus by which this is accomplished".

THE INDIAN MARKET FOR PAPER

The production of paper in India was 27,000 tons in 1923; the imports in 1923-24 amounted to 72,000 tons,

the total consumption being 99,000 tons. From the point of view of the Indian industry, the question is whether it can expand to the full extent of the demand. The capacity of the industry to do so is limited by certain considerations. Certain classes of low grade European papers are so cheap that it is not possible for the Indian manufacturer to compete with them, even with the help of a high duty. This is particularly true of "newsprint" which contains 70 per cent. of mechanical pulp, and which is largely used by Indian newspapers. It is not wise to make this dear by a high protective duty. The imports of newsprint amounted to 10,000 tons in 1923-24 and to 17,800 tons in 1924-25; they increased to 24,300 tons in 1929-30.

About 30 per cent. of the imports of paper are those of old newspapers which come chiefly from the U. K. and are used for wrapping purposes. It is not possible for the Indian paper industry to substitute manufactured paper for these, because of the very low price at which they are imported. The imports of these amounted to 22,000 and 26,000 tons in 1923-24 and 1924-25 respectively; they increased to 45,600 tons in 1929-30.

Paper manufactures, or articles manufactured out of paper, were imported to the extent of 1600 tons in 1924-25. The imports of pasteboard, millboard, and cardboard amounted to 10,800 tons in the same year. Indian mills do not manufacture these varieties as yet.

If we take the above-mentioned paper imports out of consideration, as being not in competition with the Indian industry at present, we have about 30,000 tons of imports of other varieties,[1] which do enter into competition

[1]

	Imports in 1924-25 tons.
Printing paper other than newsprint	11,700
Writing paper and envelopes	8,300
Packing paper	7,000
Other kinds of paper	2,000
Government stores	1,000
	30,000

with Indian paper. Among these, however, are certain special kinds of paper which the Indian manufacturer will find it difficult to replace, e. g. papers made from rags or art paper for which special apparatus may be necessary. The reason is that the rags available in India are of low quality, and the demand for a superior paper, like art paper, is so limited that it is not worth while for a manufacturer to set up a special equipment for the same. At the same time cheap wrapping papers known as Nature Browns or Machine Glazed Pressings are imported at such low rates that Indian manufacturers do not hope to compete with them in the near future. Making allowance for these, we have about 20,000 tons of imports which effectively compete with Indian paper, and which the Indian industry can replace.

Complaints are made by the consumers of Indian paper regarding the quality. These relate to the finish, cleanliness of surface and uniformity of quality. The colour is also criticised. The whitest paper is the weakest, due to overbleaching. Sometimes the colour is inferior because of impurities in the grass.

In this connection we have to remember that paper is produced in large varieties and, therefore, has different prices. If one quality is dear, there will be the temptation to buy another. This means that the possibility of substitution is great, and it is not possible to divide consumers in different classes according to their requirements.

It is sometimes alleged that dumping is practised by some countries. Instances of this could be cited. The paper industry in Europe has been passing through bad times and sometimes sells for export at prices distinctly below those charged to local buyers. This has been done by countries like the U. K. and Germany which export only a small part of their production. In the case of the chief exporting countries Norway and Sweden, this is not possible. They export 90 per cent.

of their output, and cannot afford to sell at a lower price. This means that dumping has not been effective as against the Indian industry.

So far as the prices of Indian paper are concerned, they are generally determined by the Titaghur and Bengal companies which are working together in this connection. The comparison of prices of Indian paper with those of imported paper is difficult because we cannot ascertain the competition between different classes of paper.

THE CLAIM TO PROTECTION

In considering the claim to protection, the question of an abundant supply of the raw material is first taken into account. The sabai grass has become costly because of competition. It is not available in proximity to the mills and the natural advantages in this connection are limited. But the position is better so far as the supply of bamboo is concerned. India could produce 100 lakhs of tons of bamboo pulp every year, and this would supply the need of the whole world. Though the time when this can be done is not within sight, we have sufficient facilities to produce bamboo pulp to supply all the needs of the Indian mills, and an export trade may be built up when we have a surplus.

So far as the chemicals required for paper manufacture are concerned, some are available in the country and some are imported, but we have no special advantage in this. With the exception of Cuttack and Saharanpur, there are no sites where we can combine cheap power resources with the proximity of the raw material, either grass or bamboo.

For skilled labour we still depend on European staffs, which are costly. Indians of the right type are not available. It is desirable that boys should begin apprenticeship at the age of 15 or 16 as it is too late to think of such work at 22 or 24 after a college career. It is neces-

sary that we should have an organised training of young men for the higher work by a system of foreign scholarships. The ordinary labour in the paper mills is relatively cheap.

Considering all things, the Tariff Board came to the conclusion that the industry was not likely to develop without protection. The Grass Mills were likely to close down soon, and though the bamboo pulp maker might continue for some time, he also could not stand the existing competition for very long. It was also believed that if sufficient opportunities were given to the bamboo pulp industry to develop there was a reasonable assurance that the industry would be able to stand foreign competition in due course.

The manufacture of paper from bamboo is still in the experimental stage, and requires costly investigation. It has been suggested that State help should be given in this matter and some of the existing concerns, which are in a position to carry out investigations, should be given financial assistance by the State to explore the possibilities of manufacture of paper from bamboo. In addition to this, the Board recommended the imposition of a specific duty in place of the existing 15 per cent. duty. This was to be 1 anna per lb. on all writing paper, and on all printing paper, other than 'newsprint' containing 65 per cent. or more of mechanical pulp. The intention of the Board was to bring the prices of imported paper back to the level at which they would have been, had exchange remained at 1s. 4d.

The recommendation of the Board regarding the duty was accepted. In view of certain defects in the tariff framed in 1925, a second reference was made to the Board in 1927 and some changes in detail were made.

The protection granted to the paper industry in 1925 was to last for seven years; this period ends in 1932. In view of this, the Tariff Board has been asked to con-

duct a fresh enquiry into the condition of the industry with a view to ascertain as to how far the objects of the protection granted so far have been realised, and to recommend whether protection should be continued for a further period.

The Tariff on Paper at present is as under :—

Printing paper (excluding chrome, marble, flint, poster and stereo) all sorts containing no mechanical wood pulp or in which the mechanical wood pulp amounts to less than 65 per cent. of the fibre content	one anna per lb.
Writing paper :—	
(a) Ruled or printed forms (including letter paper with printed headings) and account and manuscript books and binding thereof.	one anna or 15 p. c. *ad valorem* whichever is higher per lb.
(b) all other sorts	one anna per lb.

CHAPTER XV

OILSEEDS

I. THE EXPORT TRADE

INDIA'S POSITION IN THE WORLD MARKET

India occupies a predominant position in the world market as a producer and an exporter of oil-seeds. The following world statistics though relating to 1913-14 stand true in their main aspects even to-day, and clearly portray the strong position of India as a producer and exporter of the various kinds of seeds.

	(Figures in thousand tons[1])			
Name of seed	World's exported surplus 1913	India's exported surplus	Proportion of India's share to the world's exported surplus (per cent.)	Total Production in India
Copra	5,73	38	7	...
Moura	...	33	100	...
Cotton	9,00	2,84	31	21,10
Sesamum	2,64	1,12	42	4,03
Castor	1,37	1,35	98	...
Rape	3,85	2,49	65	10,87
Groundnut	7,80	3,83	45	7,49
Linseed	21,50	4,14[2]	20	3,86
Poppyseed	25	19	76	30
Niger	...	4	10	...

Thus, in comparison with other countries, the pre-eminent position of Indian production is quite marked. In certain seeds, India possesses almost a monopoly of the world's supply, while in the case of others her share is quite large. In a recent pamphlet on the Seeds Trade

[1] Compiled from the Imperial Institute's Report on Oil-seeds.

[2] Partly derived from crops of the previous year.

and Industry prepared for the Seeds Traders' Association, Bombay, it has been estimated that in 1929 India produced 65 lakhs of tons out of the estimated world production of 330 lakhs of tons. In groundnuts, out of the total world production of about 40 a little over 30 lakhs of tons are to the credit of India. In the rape and mustard seeds also, India contributes almost $\frac{3}{4}$ths of the world's demand, and the same is true of castor-seeds. An additional fact to note is the rich variety of Indian production, as in addition to the more important kinds of seeds mentioned above, Indian production and export in Aniseed, Coriander, Cummin, Ferurel, Fenugreek, Sawa and other kinds are quite substantial. Indeed, the industrial use of different kinds of seeds has so greatly increased that the trade in them has been stimulated since the war. This is fully reflected in the production of and trade in seeds in India.

GENERAL DEVELOPMENTS IN THE TOTAL EXPORTS OF SEEDS

In 1860-61, the total exports of oil-seeds amounted to 1·78 crores of rupees. In 1867-68 they rose to 2·16 crores and represented in quantity 41 lakhs of cwts. While tracing the growth of the exports of oil-seeds, it should be remarked that though on the whole they have shown very great progress they have been liable to violent fluctuations. This is due to the fact that as the seeds are agricultural products they are liable to great variations in output.

Thus the exports which had arisen to 51 lakhs of cwts. in 1871-72 declined to 28 lakhs the next year owing to a failure of crops. With successive good crops, they rose again and in a few years to 182 lakhs of cwts. in 1884-85. In 1893-94 the exports amounted to 242 lakhs of cwts., and in the next year to 209 lakhs. During the following six years they fell heavily, and climbed down to 110 lakhs of

cwts. only in 1900-01. This great decline in exports was, of course, due to the successive failure of crops and the widespread famine that prevailed in the country during these years. With the return of normal conditions, they at once rose to 229 lakhs of cwts. in 1901-02, and reached the record volume of 316 lakhs of cwts. in 1913-14, amounting in value to 25.7 crores of rupees.

It will thus be seen that, in spite of violent fluctuations caused by seasonal conditions during the period 1867 to 1913, the exports rose in quantity from 41 lakhs of cwts. to 316 lakhs, and in value from 2.16 crores of rupees to 25.7 crores. This phenomenal rise in the exports of oil-seeds reveals one fact, namely, that there has been a constantly increasing demand for Indian seeds from European countries and the exports have therefore, continued to rise, the fluctuations being due entirely to variations in output.

The outbreak of the War gave a severe shock to the exports of seeds. As the entire quantity of our seeds was exported to Europe, this branch of trade was severely affected. From 316 lakhs of cwts. in 1913-14 the exports declined to 191 lakhs of cwts. the next year, and were only 91 lakhs of cwts. in 1917-18. With the close of the war exports began to rise once more. In 1918-19, they were 97 lakhs of cwts. rose to 165 lakhs of cwts. the next year, and in 1924-25 stood at 265 lakhs of cwts. During the latter year, though they were considerably below the pre-war level in quantity, in value they exceeded those of 1913-14, being 33.17 crores of rupees against 25.67 crores in 1913-14. This great rise in the value realised is partly due to a rise in prices as well as to the larger exports of more valuable seeds such as groundnuts. In 1925-26, there was a slight decline both in quantity and value which amounted respectively to 250 lakhs of cwts. and 29.6 crores of rupees, while in 1929-30 they were 290 lakhs of cwts. and 26.4 crores of rupees respectively.

THE CHIEF SEEDS EXPORTED

The chief seeds exported, as will be seen from the table, are linseed, rapeseed, castor, groundnut, cotton-seed and copra. The share of these seeds in the total exports, as well as their proportion to total output, vary widely. In other words, though the exports of seeds have on the whole shown a great amount of progress, the developments in the exports of the individual seeds have been on different lines. Moreover, different countries have been importing different seeds. It is, therefore, necessary to study the growth of the export trade in the various seeds separately.

COPRA

In the pre-war days, the export of copra (the bulk of which was sent to Germany), though very small in quantity, represented a considerable value. In 1913-14, the exports were worth 156 lakhs of rupees of which Germany's share was 98.64 lakhs. With the decline in the exports to that country, the total exports also correspondingly declined till they were worth no more than 74 thousand rupees in 1925-26. In recent years, the exports have shown a further decline. India occupies a very minor position among the coconut-growing countries of the world, and as such there are no prospects of having a flourishing trade in copra.

POPPY

Poppy seed which was mostly exported to France and Belgium amounted to 2 crores of rupees in 1913-14. Of late exports have declined heavily, amounting to 21 lakhs only in 1925-26. This has been due to the gradual reduction of the cultivation of the poppy plant in conformity with the opium policy of the Government. As in the case of copra, in recent years, the exports of poppy have shown a further decline.

LINSEED

Production of the Seed:—Indian linseed is a commercial crop chiefly meant for export. But though almost the entire output is exported, India occupies only a secondary position as an exporter of this seed, being far exceeded by Argentina. As a producer, she holds a still lower place. The following are the relevant figures :—

WORLD'S PRODUCTION AND EXPORT OF LINSEED IN 1925[1]

(Quantity in millions of quintals of 220·46 lbs. each)

	Argentine	India	Russia	Canada	U.S. A.	Japan	Total including other countries
Production	19·07	4·23	6·27	2·36	5·59	1·27	41·46
Exports	9·61	3·56	0·48	1·40	Imports	—	16·05

Growth of Exports:—The first recorded exports of linseed were made in 1832 when 3 cwts. were sent abroad.[2] In 1860-61, they amounted to 5.5 lakhs of cwts. valued at 1.25 crores of rupees. It should thus be noted that in the earlier days, the bulk of our export trade in oil-seeds was made up of this single seed, the total seed exports amounting in that year to 1.78 crores. Later, with increased exports of the other seeds, the preponderance of linseed began to diminish. Even then, till 1921-22, linseed continued to occupy the first position among the seeds exported when the exports of groundnut for the first time exceeded those of the former. The reason for the earlier developments in the exports of this seed and its preponderating position is that while a major portion of the other seeds produced is consumed within the country, almost the entire output of linseed has been exported.

Though the exports of linseed went down in relative

[1] Figures compiled from the Year-book of the International Agricultural Institute, Rome, 1926.

[2] Watt, p. 729.

position among the other seeds exported, in themselves they have greatly increased since 1860-61. In 1880-81, the exports rose in value to 3.7 crores of rupees and in 1890-91 stood at 4.98 crores. The highest value was reached in 1911-12 when the exports amounted to 12.96 crores of rupees. Since then they fluctuated violently especially in the war years, declining to 2.68 crores only in 1917-18. The exports increased to 8 crores by 1925, but declined again, the figure for 1929-30 being 5.72 crores.

IMPORTERS OF LINSEED

The United Kingdom:—The United Kingdom has all along imported the largest quantity and still continues to occupy the foremost place among the importers of Indian linseed. But though she occupies the first place, the exports to this country, except in particular years, have shown little progress and in recent years have positively declined. Thus while in 1891-92, they amounted to 3.5 crores, in 1925-26 they represented only 2.89 crores. In recent years they have shown a further decline as under :—

	Lakhs of Rs.
1927-28	112
1928-29	87
1929-30	181

Germany:—Beginning her imports much later, Germany rapidly increased them and occupied the second place among the consuming countries in 1896-97. She continued to occupy this place, being sometimes replaced by France, till 1904-05 when she definitely yielded her place to France and declined to the third place. With the beginning of the War, exports to Germany were

stopped and though they have again been resumed, they are as yet quite small so that Germany at present occupies a very minor position as a consumer of our linseed.

France :—The exports to France have shown great developments ; in 1890-91 they amounted to 90.7 lakhs of rupees only, and in 1924-25 they had risen to 221 lakhs. Though in 1925-26, they declined to 170 lakhs, and in 1929-30 to 114 lakhs, they are still quite considerable. Except during the years when the exports to Germany exceeded those to France, the latter has all along occupied the second position among consumers, being next to the United Kingdom. The developments in the exports to France are, however, well contrasted with the non-progressive trade with the U. K. and in recent years France heads the list of countries to which Indian linseed is exported.

The exports to Italy, Belgium and Holland have been rather small and, on the whole, have shown little progress. These countries are, however, regular importers of Indian linseed and the combined exports to these countries represent quite a considerable amount.

Australia :—Australia deserves special attention, not for the volume of trade, which is as yet quite small, but for the comparative recency of our trade with that country, and the fact that compared with continental countries it shows an increasing demand. The exports which amounted on the average, to 1,600 tons during the period 1908-09 to 1913-14 rose to 16,500 tons in 1924-25, to 20,300 tons in 1925-26, and increased to 22,800 tons in 1929-30. From these figures it will be seen that Australia is a growing market for our linseed. But there is nothing to be jubilant about in these increased exports to Australia, for the growing exports only mean that while before the War she was importing linseed oil, with the opening of a mill in Melbourne for crushing linseed, she has been replacing the oil with the seed.

GENERAL REMARKS ON THE TRADE IN LINSEED

One remarkable thing to be observed in connection with the exports of linseed is that after remaining stationary over a long period of about twenty years, they have been substantially declining in recent years.

EXPORT OF LINSEED IN HUNDREDS OF TONS

Pre-war average	3790
War average	2704
Post-war average	2517
1924-25	3711
1925-26	3081
1926-27	1919
1927-28	2225
1928-29	1567
1929-30	2482

This non-progressive nature of the trade in linseed is due to our having a great competitor in the Argentine which besides being the largest producer of the seed has also the largest exportable surplus. Another reason is that while the price of linseed is kept down at a low level owing to increased output in the Argentine and elsewhere, in India it has been found profitable to raise more valuable crops, such as groundnuts, and extend their cultivation in place of the less valuable crop. The third cause is that the imports of linseed into the United Kingdom and France, the two principal consumers of the seed, have, of late, greatly declined. Thus the total imports of linseed into the United Kingdom and France, which were respectively 65.5 lakhs and 25.1 lakhs of quintals in 1913, declined to 34.1 lakhs and 15.1 lakhs of quintals in 1925. How these causes have combined to restrict the growth of linseed exports from India is well portrayed in the following table :—

IMPORTS OF LINSEED INTO U. K., FRANCE, ITALY AND AUSTRALIA

(in thousands of quintals)

	1913	1914	1925	1926	1927	1928
United Kingdom:						
Total	6550	4950	3405	3608	3529	3496
Argentine	2250	2090	1510	2699	2784	2994
India	1360	2380	1467	411	564	386
India's percentage ...	21	48	43	11	16	10
France:						
Total...	2514	1337	1575	1887	1802	2114
Argentine	1143	546	637	1140	1039	1394
India	1026	617	760	492	610	560
India's percentage ...	41	46	48	27	33	26
Italy:						
Total...	454	324	466	577	731	669
Argentine	133	11	15	157	193	188
India (and Ceylon) ...	261	282	358	313	466	432
India's percentage ...	57	87	77	54	64	60
Australia:						
Total...	35	46	244	228	194	247
Argentine	—	—	61	47	—	31
India...	27	38	176	177	192	213
India's percentage ...	77	82	74	79	99	86

The competition of the Argentine, the gradual displacement of Indian linseed from the U. K. market, and its increased hold over the Australian market are clearly shown in the above table.

The future of linseed is dependent upon the variety of uses to which the crop can be put industrially. It can be said that the oil-percentage being less in linseed than in seeds like groundnuts, the consumption of the former is likely to be replaced by seeds of better quality. But though owing to its lesser oil contents, its use as a raw product for manufacturing the edible margarine may show decline, the fact that linseed yields a drying oil and as such is widely used for manufacturing oil-paints, varnishes, printers' ink etc., assures its large consumption for

industrial purposes. Moreover, as linseed is produced in India as a mixed crop, its production must flourish in spite of its lower price in comparison with some other seeds, and being a mixed crop with food-grains, "it is a crop that may be used as a safety valve".[1]

RAPE SEED

India's position in the world market:—While almost the entire output of linseed is exported, rape seed is grown primarily for home consumption. Hence though the production of the latter is very large, the exports have been comparatively small and much less than those of the former. Even then, India occupies a dominant position in the world market as a supplier of this seed, as the following figures will show :—

WORLD'S OUTPUT AND EXPORTS OF RAPE SEED IN 1925
(in millions of quintals)

	India	Japan	Total
Production	6·77	5·13	14·03
Exports	1·71	..	2·56

Indeed the position is in direct contrast to that of linseed. Thus in 1913-14, though the exports of linseed amounted to even more than the total output in that year, India's share in the world's exported surplus was only 20 per cent., while on the other hand her share in the case of rape seed was as high as 65 per cent., notwithstanding the fact that the exports represented less than 20 per cent. of the total output. That, in spite of India's occupying this premier position, the exports have been comparatively small, is partly due to stimulated home consumption and partly to its inferior quality, and the greater difficulty experienced in refining the oil, and especially in making it odourless.

[1] Watt, p. 730.

Growth of the exports:—The exports of rape seed were valued at 98 lakhs of rupees in 1890-91 and after some fluctuations rose to 273 lakhs in 1904-05 and stood at 428 lakhs in 1913-14. During the war, they declined heavily, amounting to only 88 lakhs in 1917-18. This great decline in the export of rape seed was due to the fact that it was formerly mostly exported to Belgium and Germany. After the close of the War, the exports of rape seed rose, quickly reaching the record value of 736 lakhs of rupees in 1923-24. Since then, they declined heavily amounting to 268 lakhs only in 1925-26. The great decline of the exports in 1925-26 was due to a partial failure of the crops the total output of which fell from 12 lakhs of tons in 1924-25 to 9 lakhs of tons the next year. In 1929-30, the exports fell to 92 lakhs of rupees; in this year, the purchasing countries curtailed their requirements. It should, however, be observed that the exports of rape seed have shown extreme fluctuations which are due to a combination of two causes. The first cause is, of course the variations in output. Because the home consumption is large, in a year of bad harvests the exports show a great decline, the crop being utilised mainly for home use. Secondly, the quantity exported being only a fraction of the total output, or less than 10 per cent., variations in output immediately affect the exportable surplus, and hence the wide fluctuations.

IMPORTERS OF RAPE SEED

The principal importing countries of this seed are Belgium, Germany, France, Italy and the United Kingdom but these countries have undergone great changes in their relative positions. Till the outbreak of War, the exports were evenly distributed between Belgium, Germany and France each of which imported a considerable quantity of the seed, and occupied among themselves the first three

positions, the exports to the United Kingdom and Italy being small.

After the War, exports to Italy showed great developments; compared to the pre-war average and war average of 7100 and 600 tons they rose to 26,000 tons in the post-war quinquennium. In recent years, however, the total quantity taken by Italy is gradually falling. In 1926-27, the exports were 43,000 tons but in 1927-28 and 1928-29 they were only 21,000 and 13,000 tons respectively. In 1929-30 the figure went down to 700 tons only.

The exports to the United Kingdom also have shown fluctuations; the exports to U. K. in 1928-29 and 1929-30 being 29,000 tons and 8,000 tons respectively.

The exports to Germany and Belgium also have been resumed after the War and have shown progress, but they declined heavily in 1925-26. The exports to France have not declined as much as those to Germany or Belgium, but they are as yet much below the pre-war level. In 1929-30 France took 10,000 tons and Germany 6,000 tons.

General Remarks:—In view of the fact that the seed is widely consumed within the country, the exports are bound to be restricted within certain limits. But as India is almost a monopolistic producer of this seed and there are a number of countries importing it, there is every possibility of a flourishing trade when there is a good harvest.

SESAMUM OR TIL SEED

Sesame is cultivated all over India and is extensively consumed within the country. In view of this, as in the case of rape seed the exports represent only a fraction of the total output, but while in the case of the former India has no competitor, China is a great competitor of India as an exporter of sesame. For example, in 1913

the exports from China amounted to 1.2 lakhs of tons against 1.1 lakhs of tons from India.

The sesame seed exported to Europe is mostly utilised for manufacturing soap. In the earlier days the bulk of our exports went to France ; e. g. in 1891-92, out of the total exports of 175 lakhs of rupees, France's share was 134 lakhs. With increased exports of groundnuts to that country those of sesame declined. She was followed by Austria-Hungary, Germany and Italy each importing considerable quantities of the seed, but though there were as many as five importing countries, the exports did not, on the whole, show much progress. Thus while they were worth 175 lakhs of rupees in 1891-92, they amounted to only 117 lakhs in 1925-26, and only 82 lakhs in 1928-29. In 1929-30, the exports declined further to 27 lakhs only.

India has a great competitor in China, and there is always a large demand for the seed within the country, under such circumstances, there is little likelihood of the exports showing much progress in future. The fact that France which was, in the earlier days, the largest single consumer of sesame has since replaced it by increasing imports of groundnuts is a sufficient reason for the conclusion that the progress of the export trade in this particular seed is bound to be restricted.

CASTOR SEED

The castor seed can be easily produced in most of the tropical countries ; but India has a virtual monopoly of the trade, and it is extensively imported by a number of European countries such as the United Kingdom, Belgium, France and Italy. In the earlier days, France took the largest quantity till she was replaced by the United Kingdom. Of late a new market has been created in the United States of America which, though herself a good producer of the seed, has come to be the foremost im-

porter of our castor seed. France comes next in order; after the War she superseded the United Kingdom, and Italy and Belgium continue to import small quantities of the seed.

The remarkable thing to be noted in connection with the exports of castor seed is that they have shown comparatively steady progress throughout; of all the oil-seeds, the fluctuations have been the least in the case of this seed.[1] Except during the two years 1919-20 and 1920-21, when the exports were abnormally reduced, they have been steadily on the increase, rising from 44.9 lakhs of rupees in 1891-92 to 268 lakhs in 1925-26. The figure for 1929-30 was 215 lakhs.

Castor oil is chiefly used as a lubricant, and with the increased use of machinery all over the world, its consumption is bound to rise; and as India is the monopolistic trader in this seed, the exports are likely to increase in future.

COTTON SEED

While all other seed-plants are cultivated for the seed only, cotton seed is entirely an agricultural bye-product, the plant being cultivated for the cotton, therefore the output of the seed varies with the output of cotton. It does not require stating that India occupies the second position among the producers of this seed, the first place being occupied by the United States of America. The special interest to be attached to the exports of cotton seed is that making their beginning at a much later date, they showed very rapid developments and soon assumed a considerable volume. For example, in 1899-1900, the exports of cotton seed amounted to one lakh of rupees only, and two years after in 1902-03, they rose to 101

[1] Even during the war period when the exports of all other seeds fell heavily, those of castor seed continued to grow. This was due to the stimulated consumption of castor oil for lubricating aero-engines.

lakhs. In view of the fact that cotton began to be exported from a much earlier date, it requires a word of explanation as to why the exports of the seed came into existence so late. This was due to the fact that it was only by the end of the nineteenth century that mechanical processes were invented by which solid edible fat could be manufactured from the seed. The entire exports have gone to the United Kingdom and with increasing exports to that country, they rose to 229 lakhs in 1910-11. They subsequently fell in value and during the War were heavily reduced, but after the War they rose once again, and amounted to 218 lakhs in 1925-26. In recent years they have declined, being 133 lakhs in 1928-29, and in 1929-30, the figure was only 55 lakhs. This was due to good supplies of Egyptian cotton seed, which resulted in a decline of shipments of Indian cotton seed which fell from 1,31,000 tons in 1928-29 to 58,000 tons in 1929-30.

In recent years, the production of cotton has increased greatly and with it that of the seed also. It is true that only a fraction of the output is exported, the major portion being used in the country for feeding cattle. With the growing demand from the United Kingdom, however, the exports may continue to rise, especially as the United States of America does not export the seed in a raw condition.

GROUNDNUTS

India's position as an exporter:—Of all the oil seeds exported, the developments in the exports of groundnuts have been the most marked. This is so, in spite of the fact that on the one hand, the home consumption is very large, and on the other, India is by no means a monopolistic supplier of the seed. The following figures will show the position of India in the world market :—

WORLD PRODUCTION AND EXPORTS OF GROUNDNUTS IN 1925

(Quantity in millions of quintals)

	U. S. A.	India	China	Senegal	Nigeria	Java	Total
Production	3·15	19·38	6·21	4·45	...	1·45	...
Exports	0·01	4·70	...	4·46	1·29	...	13·14

From the above it will be seen that, while as a producer India certainly occupies the predominant position, as an exporter, Senegal is as important as India, and India has therefore, a great competitor in this country.

The remarkable feature of the trade in groundnuts is that almost the entire quantity is exported to France, not only the exports from India but also those from other countries. Thus in 1924, out of the world's total imports of 8.50 million quintals, France alone imported 5.09 million quintals. It will thus be seen that France has almost monopolised this branch of oil manufacturing industry.

Growth of the Exports :—The exports of groundnuts, which had risen to 130 lakhs of rupees in 1894-95, were seriously affected during the next few years owing to successive failures of crops, and the prevalence of a disease which greatly deteriorated the quality of the seed. Indeed the trade was almost threatened with extinction, the exports amounting to 2.8 lakhs only in 1897-98. Disease-resisting seeds were, however, successfully introduced from Senegal and Mozambique,[1] and production again rose and with it the exports also. From 1898-99 onwards, the exports rose year after year, showing very slight fluctuations, till they amounted to 488 lakhs in 1913-14. During the War, they declined heavily due to the disorganization of the Marseilles market, and the closing down of various French oil-mills, with which were

[1] Cotton, p. 173.

also combined shipping difficulties. The lowest point was reached in 1918-19 when the exports amounted to 37.5 lakhs only.

Since the close of the War, the exports of groundnuts have shown very rapid developments. The following figures will show how rapidly the exports of groundnuts have grown since 1920-21.

VALUE IN LAKHS OF RUPEES

1920-21	285	1925-26	1,202
1921-22	626	1926-27	950
1922-23	757	1927-28	1,563
1924-25	1,067	1928-29	1,937
		1929-30	1,639

It should be noted that this phenomenal rise in the exports has been greatly due not only to the stimulated consumption of France, but also to the rapidly growing exports to Germany, Holland and Italy as is shown below :—

EXPORTS IN HUNDREDS OF TONS

	France	Germany	Holland	Italy
Pre-war average	1691	74	1	7
1925-26	2038	909	754	373
1927-28	1512	2183	1121	801
1928-29	2162	2412	1325	1213
1929-30	2109	2101	1542	550

It will thus be seen that the advent of the last three countries as consumers of Indian groundnut has taken place in the post-war period only. These large exports of groundnut in recent years have been caused by the fact that while at first the Indian groundnut was found suitable only for soap-making, better processes for refining the oil were subsequently discovered, so that ground-

nut oil is now an important article of food "compared with olive oils and refined cotton oil as a salad oil and entering largely into the composition of margarine". [1]

General remarks:—Though the bulk of the output is consumed within the country, this growing export trade has greatly stimulated the cultivation of groundnut in India. In 1879, the area under groundnut was estimated at 1.1 lakhs of acres, in 1925-26 it amounted to 37.7 lakhs of acres, and in 1926-27 the area increased to 38.6 lakhs of acres. As evidence of the fact that the output is greatly influenced by the export trade, we can point out that during the War period when exports fell, the cultivation of groundnut also was restricted. Thus, the area under it which had risen to 23.8 lakhs of acres in 1914-15 declined to 14 lakhs only in 1918-19, and with subsequent developments in the trade, the total acreage also has gone up. Groundnut is a costlier seed than the other varieties, and it is therefore, satisfactory to find that the progress has been most marked in it. Nevertheless, it should be noted that India's share in the total imports of France is about 40 per cent. only, there being thus ample scope for further developments. India is, however, at a disadvantage in that Senegal being a French colony, the imports from that country are preferred. But the recent advent of Germany, Holland and Italy, especially of the first, as consumers of Indian groundnut is a significant fact which promises to lead to considerable developments in our exports of this seed in future.

THE PRESENT SITUATION

The diversity in India's position in the world market as regards the various seeds and the dissimilar growth in their exports led us to make a survey of the trade in the principal seeds individually. The following figures show

[1] cf. Imperial Institute Report, p. 116.

the recent trend in the growth of the exports of the more important seeds :—

EXPORTS OF INDIAN SEEDS

	Quantity in thousands of tons					
	Linseed	Rapeseed	Sesame	Groundnut	Cotton seed	Castor seed
Pre-war average	379	273	119	212	240	114
War-average ...	270	91	32	119	69	89
Post-war average	251	206	28	195	155	48
1924-25	371	260	30	376	161	94
1925-26	308	112	40	455	197	110
1926-27	192	94	2	368	51	102
1927-28	222	66	11	613	153	122
1928-29	157	77	30	788	131	121
1929-30	248	44	11	714	58	106

The above table clearly shows that with the exception of groundnut, the exports of which have more than doubled themselves in comparison with the pre-war average, and a slight rise in castor seed, those of the rest are as yet below the pre-war level. Sesame shows a very great decline, and rape seed also shows a falling tendency.

The following figures show the shares of the principal importing countries in the total exports of seeds :—

	Value in lakhs of rupees				
	United Kingdom	France	Belgium	Italy	Germany
Pre-war average	536	711	444	113	345
War average	635	325	26	65	18
Post-war average	829	621	287	194	146
1924-25	798	921	227	487	246
1925-26	668	825	150	378	301
1926-27	258	514	76		
1927-28	421	580	78	365	622
1928-29	416	704	56	425	632
1929-30	436	663	67	208	524

The predominant position of France, which is due to her large imports of groundnut, is now challenged by Germany which has not only regained her pre-war position, but has also improved upon it considerably. The exports to Belgium on the other hand have declined heavily, and those to U. K. also betray a downward trend. Italy has shown great developments in importing Indian seeds in the post-war period, but unlike Germany the trend is fluctuating. However, on the whole, it can be expected that the exports may show further progress along with the output of seeds in the country.

SUMMARY

(1) The exports of oil-seeds have shown very great developments during the period under study. From 1.78 crores in 1860-61, they rose to about 30 crores of rupees in 1928-29, and in 1929-30, they amounted to 26.5 crores.

(2) Though the exports have thus shown remarkable progress, they are liable to extreme fluctuations. This has been due to the fact that they are agricultural products, with a considerable home consumption.

(3) The exports are chiefly made up of the following seeds : Linseed, rape seed, sesame, groundnut, cotton seed and castor seed. Of these, groundnut has shown the greatest amount of progress. Till 1920-21, linseed occupied the foremost place among the seeds exported ; but since that date, groundnut has come to hold the first place. The exports of castor seed have shown almost unbroken though slow growth. The rest have fluctuated violently.

(4) The exports go mostly to Europe.[1] The chief importing countries are France, Germany, U. K., Italy and Belgium.

(5) The bulk of the exports to France is made up of

[1] With the exception of castor seed of which the principal customer is the U. S. A.

groundnut in importing which the country has shown great developments.

(6) The bulk of the exports to the United Kingdom is made up of linseed.

(7) The exports to the other countries are made up of small quantities of several seeds.

II. THE INDIAN OIL-MILL INDUSTRY

The seeds that are exported from our country are used in the importing European countries as raw materials for manufacturing oil, a part of which they export after meeting the home consumption. Cannot India crush the oil-seeds within the country and export the oils instead? In this connection the following remarks from the Review of Trade in India, 1878-79 are of interest even to-day :—

"It seems strange that the wasteful practice of exporting the seed should continue. It causes great pecuniary loss by waste and damage of the seed in transit from the place of production in the inland districts of India to the place of manufacture in France, England and the United States. The unnecessary expenditure in freight is also serious consideration and lastly it should not be forgotten that under the present system India literally throws away enormous quantities of oil-cake, that is, an invaluable food for cattle and fertiliser for land. It is really a national misfortune that India should send away all this oil-producing material in the crude condition instead of pressing the oil in the country".[1]

The right policy should, therefore, be to take steps to foster an oil-pressing industry within the country and gradually replace the exports of seeds with those of oils till at last the entire exports should consist of oils only.

It is rather difficult to suggest a definite line of action

[1] Pp. 31-32. Similar remarks were made in the Moral and Material Progress Report for 1876-77, p. 67.

so as to bring about the desired state. It should, however, be remarked that though stringent remarks were made in the Government publications, especially in the Trade Reviews depreciating the exports of oil seeds and suggesting that oils should be exported instead, no steps were taken by the Government either direct or indirect, to promote a seed crushing industry in the country. In spite of the many evident advantages and India's strong position as regards the raw material, private enterprise also was absent. The people of the country have been equally negligent in developing this useful and profitable industry. They have remained content with exporting increased quantities of seeds so that a seed-crushing industry has thoroughly developed in the United Kingdom, France and other countries of Europe with the help of the Indian raw material. Had steps been taken in earlier days when the exports were small, it would have been much easier to foster an Indian oil-pressing industry, the development of which will now have to face keen competition from the well-established European industry.

THE PRESENT STATE OF THE INDUSTRY[1]

So far as the present position of the Indian oil mill industry is concerned, it has to be noted that it compares very unfavourably both in sufficiency and efficiency with the industry in Europe or America. As a large consumer of vegetable oils as food, one would expect that the industry in India would be on a well-developed basis What we find, however, is that its extent, organization and method are comparatively very primitive, and there is an enormous waste of seed, oil, oil-cake, labour and fuel. There are four classes of oil mills or rather oil millers in India. The first is the small village *Teli* with his primitive wooden pestle and mortar ; the second consists of *ghannies*

[1] Based on an article in the "Capital" Indian Industries, Trade and Transport Supplement of December 19, 1929, p. 38.

or *kolhus*, somewhat similar to the first but on a larger scale, more elaborate and promising some progressive enterprise ; the third have modern equipment in the way of power plant or an hydraulic press, while the fourth is the elaborate oil mill with efficient equipment of oil-expellers and the like. But this modernising process is yet in its teens and its results are not quite up to the mark, due to the fact that most of the mills are not equipped with efficient seed-cleaning and milling plant and generally have no skilled engineers or mechanics.

This noticeable lack of engineering and technical knowledge is well reflected in the poorly equipped state of the industry and no wonder oil is imported in substantial quantities every year, despite the limitless local potentialities. This paradoxical situation is not easy to correct, but surely it is time for the industry to mend its ways. Fluidity of capital, modernisation of plant, and utilisation of the best technical skill as can reduce waste to the minimum and at the same time open out newer fields for bye-products and subsidiary production, are some of the milestones on the way which need to be traversed. External aids are easy to suggest, but internal improvement and progress must justify their need.

AN EXPORT DUTY

We are against the imposition of any export duty on oil-seeds as a step towards encouraging the seed-crushing industry. An export duty can be justified only on a monopoly product for which there is either a great demand in foreign countries, or the curtailed exports of which (as a result of the duty) would be followed by a better utilisation of the commodity in the country itself. It is true India has a monopoly in certain of the seeds, but this monopoly is often only apparent rather than real. Some of the seed exports, on the other hand, are liable to keen competition from foreign countries. A duty on these

seeds can, therefore, in no way be advocated. Not only is an export duty unjustifiable, but it would be positively harmful. We must remember that the exports consist of surplus products, and if they decline production will also fall, there being no chance of India herself consuming the entire output. Besides, there is no guarantee, supposing the exports are curtailed, that the surplus left will be utilised in developing an oil-pressing industry? There are at present very few oil-mills in the country, the export trade in vegetable oils is quite nominal, and India is not a monopolistic producer of oil-seeds. Hence the imposition of an export duty would mean that production would suffer, and as the Fiscal Commission observes "the main result therefore of imposing a protective export duty on oil-seeds would be that the producer would be sacrificed to an unsound economic theory and that the production of a valuable crop would be discouraged."[1]

A BOUNTY ON EXPORTS OF OILS

Neither would a bounty on the exports of oils serve the purpose. In the first place, a general bounty on exports is a very costly affair ; at the same time it is most unlikely that the countries to which the bounty-fed oils would be exported would allow these to be imported free. If countervailing duties are imposed, as they are bound to be, the object of the bounty would be defeated.

POSSIBILITIES OF OIL EXPORTS

This aspect of the question leads us to the conclusion that the chances of substituting our exports of seeds with oils are extremely remote. The replacement of the exports of oil-seeds by oil will mean almost a death blow to the European oil-pressing industry, and it is, therefore, inevitable that the countries of Europe will resist

[1] Report, p. 109. See, however, the Report of the Indian Taxation Committee, p. 132.

the imports of Indian oils with all the power they command, especially with the levy of high import duties. This peculiar position of the Indian seed-crushing industry should be carefully noted. While in the case of the cotton or the sugar industry, the development of the home industry would mean the replacement of foreign imports by home production, the development of the seed-crushing industry means the creation of a foreign market, there being very little home demand to cater for.

If, therefore, the industry is to be developed it must be done by means of private enterprise availing itself of the natural advantages India possesses; the Government also can indirectly encourage the industry to a certain extent. While the increasing exports of seeds were being depreciated in the Trade Review, they were on the other hand being stimulated by a lower rate of freight charges to the shipping ports. Instead of this, the Government policy should be to allow a rebate in railway freights for carrying the seeds to the places of manufacture, and the oils to the ports of shipment. If private enterprise and Government sympathy combine, the Indian oil-pressing industry, though it may not reach the stage when the entire volume of seed exports can be replaced by oil, it can make a steady progress in building up an export industry of great value.

III. ESSENTIAL SEEDS

We have so far mainly dealt with what are in official statistics called non-essential seeds, and undoubtedly their importance deserved such a full treatment. However, there remain certain varieties of seeds grouped officially as 'essential', such as Ajama, Ajwan, Aniseed, Coriander, Carraway, Cumnir, Ferrel and others, and their trade which amounts to lakhs of rupees, justifiably demands a separate treatment. Figures for the last five years reveal the following position as to their export trade.

TOTAL EXPORTS OF ESSENTIAL SEEDS, 1923-29

Year	Quantity (tons)	Value (in lakhs of Rs.)
1923-24	12,600	53
1924-25	12,277	41
1925-26	10,528	31
1926-27	7,145	24
1927-28	7,502	31
1928-29	5,358	24

It can be seen that there has been almost a steady decline in the volume of trade in the last five years, but taking into consideration the pre-war average of 1000 tons valued at about Rs. 21 lakhs, it is found that the trade in these seeds is still considerably over what it was in the last decade. This is true of the group as a whole. An analysis of the trade in the principal constituents is given below :—

EXPORTS OF EACH OF THE ESSENTIAL SEEDS

(Value in thousands of rupees)

	Ajama	Ajwan	Aniseed	Coriander	Cumnir	Fennel	Fenugreek	Dil or Sawa
1923-24	77	169	15	1575	2417	426	248	329
1924-25	120	379	37	1266	1490	210	348	292
1925-26	214	377	38	1031	795	184	248	183
1926-27	61	6	23	1170	526	137	220	217
1927-28	64	4	6	1707	536	236	264	244
1928-29	68	19	10	911	593	338	276	140

Excepting Coriander and Fenugreek, the figures of 1927-28 are in all other cases smaller than those of 1923-24, verifying substantially the decline we had just noticed. If quantity be any criterion to the importance of the trade, coriander is far above the rest, and it is comparatively free from the general declining trend so noticeable in the case

of others in spite of the fall in 1928-29. It is unfortunate that we have no definite data, which can throw light on the causes of this recent decline. But, if we may guess, a shrewd suspicion is aroused that these essential varieties are not paid the same attention or are neglected in preference to non-essential varieties which include groundnuts and other seeds whose commercial importance and industrial value are apparent.

CHAPTER XVI

HIDES AND SKINS

I. THE EXPORT TRADE

INTRODUCTORY

The term 'hides' denotes commercially the skins of cows and buffaloes, and 'skins' those of goats, sheep and other smaller animals. Besides this technical distinction, the classification of the exports into these two separate categories is also important from the point of view of quality and the direction of trade. While the hides are derived mainly from dead cattle, (the Hindus being averse to taking the lives of cows and buffaloes), the skins, on the other hand, come mostly from goats and sheep, killed for their mutton in the slaughter-houses, and as such are of a better quality than the former.

As they are derived from the cattle and other animals, hides and skins are not liable to that amount of fluctuation in output as an agricultural crop like rice, wheat or cotton is. The quantity annually available can fluctuate only within narrow limits in normal years, though in a year of famine or pestilence, the output may soar high. Consequently, when there is a very wide market for hides and skins, the more important factor regulating the trade is supply rather than demand.

It has been estimated that about nine-tenths of the goat and sheep skins and half of the cattle hides which become available every year are exported.[1] It will thus be seen that the major portion of the total output is exported, though home-consumption is also very considerable.

[1] Munitions Board's Review of the Trade in hides, skins and leather, p. 3.

GENERAL DEVELOPMENTS IN THE EXPORTS OF HIDES AND SKINS

Owing to the diverse uses of hides and skins and their increased consumption all over the world, the exports have shown great progress during the period under study. In 1860-61, they were worth 66.2 lakhs of rupees. Progressing continuously they rose to 534 lakhs in 1885-86. Showing some slight fluctuations they further went up to 745 lakhs in 1898-99. During the next two famine years, the exports were very much stimulated, amounting to 1046 and 1148 lakhs respectively in 1899-1900 and 1900-01. With the return of normal conditions they declined to 823 lakhs in 1901-02. Since then, with small fluctuations, they showed almost continuous progress till they amounted to about 16 crores of rupees in 1913-14. During the War, though the continental markets were closed, the exports were maintained at their pre-war level owing to stimulated demand from the United Kingdom for military purposes. For example, the exports reached the record value in 1919-20 amounting to about 36 crores of rupees. These extraordinary exports were of an artificial nature, in the next year they dropped down to 8.4 crores only. Since then, however, they have shown steady and continuous growth rising to 14.5 crores in 1926-27, and 18.75 crores in 1928-29. In 1929-30, however, they fell to 16 crores.

It will thus be seen that the export trade in hides, skins and leather has shown very remarkable developments. The more notable feature is that except during the War period and the two years following it, they have shown almost unbroken growth. This has been due to a steady growth in the supply accompanied by a constantly increasing demand from the continental countries of Europe and the United States of America.

THE FOUR VARIETIES

The exports are classified into four categories, namely, (1) raw hides, (2) raw skins, (3) tanned hides and (4) tanned skins. It is necessary to deal with each of them separately, especially distinguishing between the raw hides and skins and the tanned ones, for the latter represent a semi-manufactured product and therefore secure a better price than the raw ones. Moreover, important changes have taken place in the relative positions of these four varieties, and it is worth while to point out these changes, particularly from the point of view of the effects of the recently instituted export duty on raw hides and skins.

RAW HIDES

The exports of raw hides have undergone very considerable changes in their relative value. In the earlier days, they represented the bulk of our total trade in these articles ; now they represent only a fraction of it. With small fluctuations here and there, the exports of raw hides showed almost continuous progress till the outbreak of the War. From 187 lakhs in 1880-81, they rose to 830 lakhs in 1913-14. This great rise in the exports was mainly due to the stimulated trade with Germany. During the War period, the exports of raw hides fell heavily, as trade with Germany was stopped, and they were worth no more than 261 lakhs in 1918-19. The imposition of the export duty of 15 per cent. on raw hides in 1919 led to a further decline in the exports which amounted to 181 lakhs of rupees only in 1921-22. Of late, however, with the reduction of the export duty to 5 per cent. in 1923, the exports have shown some developments rising to 321 lakhs in 1925-26 and to 406 lakhs in 1928-29. In spite of these recent developments, they are as yet far below the pre-war level. In 1929-30 they

fell to 270 lakhs. The progress of the Indian tanning industry and the levy of the export duty on the raw materials from which the tanned products are free have been causes of this restricted trade.

THE CONSUMERS OF RAW HIDES

The United Kingdom:—In the earlier days, the bulk of our exports went to the United Kingdom. Thus in 1880-81, out of the total exports of 187 lakhs of rupees, the United Kingdom's share was 124 lakhs. In 1884-85, the exports to the United Kingdom further rose to 154 lakhs. Since then they declined heavily, amounting to 24.8 lakhs in 1913-14. This decline in the exports to the United Kingdom was caused by the advent of Germany as a great consumer of Indian hides. During the War period, with the stimulated demand for leather goods combined with the closing up of the German market, the exports to the United Kingdom showed considerable progress, reaching the record value of 233 lakhs in 1919-20. With the return of normal conditions, they have once again shrunk to their pre-war dimensions amounting to 23.9 lakhs in 1925-26 and 17 lakhs in 1928-29. In 1929-30 they fell to a low level, amounting to 5.3 lakhs only. It appears from a comparative study of the export trade in raw hides and tanned hides especially with the United Kingdom, that the British tanning industry is not in a position to compete with that of the continental countries, especially Germany. The United Kingdom has concentrated on the leather-manufacturing industry, and imports tanned hides and skins in progressively growing quantities.

Germany:—At present Germany is by far the most important market for our raw hides, though till 1883-84 she did not import hides from India. The first exports were made in 1884-85, amounting to about 60 thousand rupees only. In 1891-92, they rose to 69 lakhs, Germany

occupying, for the first time, the premier place among the consumers of Indian hides. Since then, till the outbreak of the war, the exports showed continuous progress amounting in value to 307 lakhs of rupees in 1913-14. This phenomenal rise in the exports of raw hides to Germany was due to the development of the already flourishing tanning industry in that country, which was fostered by an abundant home-supply of tanning materials combined with the scientific skill and organising capacity of the people. The outbreak of the War led to a temporary collapse of the exports to Germany, but since the resumption of trade relations they are again showing progress.

In 1925-26, the exports amounted to 126 lakhs and rose to 184 lakhs in 1928-29, which, it should be noted is far below the pre-war level. In 1929-30 the exports showed a decline, being 112 lakhs only.

Austria-Hungary :—Until the outbreak of the war, the exports to Austria-Hungary had shown very considerable progress. From 7.7 lakhs in 1880-81, they rose to 184 lakhs in 1913-14, occupying for a number of years the place next only to Germany. Since the War, however, trade relations with this country have not improved and this market has lost its importance to India ; the export in 1929-30 being Rs. 19,000 only.

The United States of America :—The exports to the United States of America were worth 25.7 lakhs in 1880-81, but during the last century they showed no progress at all. Thus in 1896-97, they amounted to no more than 24.4 lakhs. During the present century there were considerable developments in the exports to that country, which reached the record value of 386 lakhs in 1916-17. One thing to be noted regarding the exports of raw hides to the United States of America is that they have fluctuated most violently. The country has concentrated herself in importing skins, and it appears that hides are

imported only to supplement the skins when there is a shortage of the latter. Of late, the exports to the United States of America have fallen very much. They amounted to 7.1 lakhs of rupees only in 1925-26, touched 12.4 lakhs in 1928-29, and again declined to 8.7 lakhs in 1929-30.

Italy :—The exports to Italy, though comparatively smaller, have shown a greater amount of stability than those to any other country. In 1880-81, these were worth 21.1 lakhs ; in 1913-14, they had risen to 84.4 lakhs. During the War there were large exports followed by a subsequent decline in trade. The trade has, however, revived itself ; the exports amounting to 70.5 lakhs in 1925-26. There have been fluctuations since then, the figures for 1928-29 and 1929-30 being 55 lakhs and 45 lakhs respectively.

From the above it will be seen that of the five principal countries importing Indian raw hides, Austria-Hungary which once occupied the second place is of no importance now. The exports to the United Kingdom and the United States of America have been small. Germany and Italy are, at present, the two most important markets for our raw hides.

RAW SKINS

Prior to 1890, the exports of raw skins were very small, but with the development of chrome-tanning India came to occupy the foremost place among the suppliers of skins. It has been calculated that India produces about one-third of the world's exportable surplus of goat skins, [1] which makes up the bulk of our skin exports. It is due to this that, while in the case of hides India occupies only a secondary position in the world-market, in the case of skins she occupies a much superior position.

From 87.7 lakhs of rupees in 1892-93, the exports rose

[1] Munitions Board's Review of Trade in Hides and Skins, p. 15.

to 399 lakhs in 1913-14. Though the progress was thus quite considerable, the exports of skins were as yet less than even half of those of raw hides. During the War, however, with the cessation of trade relations with Germany, the exports of raw hides received a great set-back ; this was not so in the case of raw skins of which the chief and almost monopolistic consumer was the United States of America. Consequently, with a heavy decline in the exports of raw hides, those of skins exceeded them for the first time in 1916-17, and have since continued to represent a greater value than the former.

Besides, it should be noted, that while the exports of hides are as yet far below the pre-war level, those of skins have already reached it. Thus, the exports of raw skins which were valued at 399 lakhs in 1913-14 stood exactly at the same amount in 1925-26. The reason of this is not far to seek. The export trade in raw skins owes its existence to a flourishing trade with the United States of America (where these are imported for the manufacture of glacé kid leather), and therefore its growth was not interrupted during the War. Moreover, the export duty which could seriously hamper the progress of the exports of raw hides (India being one of the many exporting countries and occupying at best only a secondary position among them), could have no such effect on the export of raw skins, in which India occupies a predominant position in the world-market. In consequence, these exports have been maintained at the pre-war level in spite of the export duty.

We see, therefore, that the United States of America is the chief importer of our raw skins, and the rest of our exports go to the United Kingdom and France.

TANNED HIDES AND SKINS

The export trade in tanned hides and skins is a characteristic feature of the Madras and Bombay Presi-

dencies and particularly of the former. The location of the industry, and therefore of the trade in these two provinces, is due to the prevalence of the shrub *cassia auriculata,* the bark of which is the principal tanning material used in preparing these hides and skins for export.

Until 1875, the exports of tanned hides and skins were very much restricted owing to the export duty of 3 per cent. that was levied on tanned hides and skins, while the raw ones were allowed to be exported free. The repeal of this duty in August 1875 stimulated the exports of tanned hides and skins, and with the progress of the Madras tanning industry they have been continuously on the increase.

EXPORTS OF TANNED HIDES

In 1880-81, the exports were valued at 35.2 lakhs of rupees. Showing some occasional fluctuations, they rose to 159 lakhs in 1913-14. All throughout this period, the exports of tanned hides were quite inconsiderable in comparison with those of raw hides, which represented the bulk of our hides exports. With the outbreak of the War, an important change took place in the relative positions of raw and tanned hides. As the bulk of the raw hides were exported to Germany and Austria-Hungary, the War seriously affected the trade, and in spite of increased imports by the allies, it heavily declined in volume. On the other hand, the exports of tanned hides, of which the United Kingdom has all along been the chief consumer, were highly stimulated owing to a greater demand from that country to meet military requirements. The combined effects of these two causes was that for the first time in 1917-18, the export of tanned hides exceeded that of raw hides in value, reaching the figure of 490 lakhs. The record figure was reached in 1919-20, when they amounted to 788 lakhs of rupees. Since then, along

with those of raw hides, the exports of tanned ones also have declined considerably, amounting to 304 lakhs in 1925-26. However, of late, there has been a rise and in 1928-29 they amounted to 440 lakhs ; in 1929-30 they were 344 lakhs. An important thing to be noted is that while the exports of raw hides are much below the pre-war level, those of tanned hides have assumed more than double the pre-war volume. At the present time the exports of tanned hides are of a greater magnitude than those of raw hides, whereas in pre-war days the former represented only a fraction of the latter. This diversion of our trade from raw hides to tanned ones has been due to the operation of three causes. First, the development of the Indian tanning industry has to a great extent contributed to the stimulated exports of tanned hides. Secondly, the exports of raw hides are restricted by the levy of an export duty while those of tanned ones are not hampered by any duty. Thirdly, as the United Kingdom has been the sole market for our tanned hides, the trade was not much affected by the War, while the trade in raw hides was seriously affected as Germany and Austria were the chief markets for them. Since the War, the Austrian market has been completely lost, while the exports to Germany are far below the pre-war level.

As a consequence of all these factors, the trade in tanned hides has risen much in relative importance and, as already noted, the United Kingdom has all along been almost the single market for our tanned hides, the exports to other countries being very small.

GROWTH OF THE EXPORTS OF TANNED SKINS

Until the outbreak of the War, the exports of tanned skins showed little progress while those of untanned ones had risen considerably in volume. Indeed, among the four varieties of hides and skins, tanned skins were the single item in which there was no progress. Thus in

1892-93, the exports were valued at 231 lakhs of rupees, in 1895-96, they had risen to 313 lakhs and in 1913-14, they amounted to no more than 264 lakhs. The reason for this stagnant trade in tanned skins was the fact that the United States of America, which was the principal market for our skins, favoured the imports of the raw variety by tariff regulations, so that the trade was stimulated in raw skins to the detriment of the tanned ones. It should also be noted that the exports of tanned skins had assumed relatively a much larger volume at a comparatively earlier date. Thus, for example, out of the total exports of 656 lakhs in 1894-95, tanned skins alone represented 309 lakhs.

Since the outbreak of the War, there have been some developments in the exports of tanned skins, which rose in value to 393 lakhs in 1925-26 and 491 in 1928-29, and to 462 lakhs in 1929-30; so on the whole, it will be seen that the trade in tanned skins has shown little progress. While the recent levy of the export duty has diverted the export trade in hides from raw to tanned ones, it has not at all been able to affect the trade in skins in which the raw exports are as yet thriving, though it must be admitted that the tanned exports also have shown some progress.

CONSUMERS OF TANNED SKINS

As in the case of tanned hides, the bulk of our tanned skins are also exported to the United Kingdom. While the former are almost exclusively taken up by that country, the monopoly is not so complete in the case of the latter. The United States of America and Japan are two other countries importing small quantities of tanned skins. The exports to these two countries amounted respectively to 29.9 and 39.6 lakhs of rupees in 1925-26 and to 30.4 and 31.9 lakhs respectively in 1929-30. That the United Kingdom is the chief importer of both tanned hides and

skins is due to the fact that while the imports of these are restricted in all other countries by an import duty, in the United Kingdom alone they are admitted free.

THE EXPORT DUTY

During the war, the Indian tanning industry received a good stimulus, and in order to help the Indian industry when the military purchases on Government account ceased with the close of the war, an export duty of 15 per cent. *ad valorem* was levied on raw hides and skins in 1919. A rebate of 10 per cent. was, however, allowed in the case of exports to the United Kingdom and British possessions. The intention of this rebate was to divert the exports of raw hides and skins from Germany and the United States of America respectively to British countries, at the same time giving encouragement to the Indian tanning industry. Leaving aside the question of the export duty itself, the preference given to the United Kingdom and other British territories was unjustifiable. During half a century of trade, no market had existed for these raw materials in any of the British countries, the exports to the United Kingdom consisting almost entirely of tanned hides and skins of which that country was the chief importer. On the other hand, the export trade in raw hides and skins had been developed with Germany and the United States of America. It was therefore more than futile to grant preference on an item in which no trade existed at all. The futility of this preference was soon detected; it had to be removed in 1923.

The levy of this high export duty could not but adversely affect the trade. The consuming countries favoured the imports of the raw material, inasmuch as the imports of tanned hides and skins were subjected to a duty while the raw ones were admitted free. In view of this, the restriction of the exports of raw hides

and skins could not be accompanied by a corresponding progress in those of tanned ones. Moreover, with a reduced demand for leather goods after the war, the price of hides and skins declined heavily, and the duty of 15 per cent. was consequently a severe handicap on the growth of this important branch of trade. The duty was therefore reduced to 5 per cent. in 1923, simultaneously with the removal of the rebate granted to exports to British countries. In the budget of 1927-28, the Government proposed to abolish the duty altogether; the Legislative Assembly was, however, equally divided on the question, and the duty was retained by the casting vote of the President.

II. THE TANNING INDUSTRY

The Industrial Commission which made an exhaustive survey of the Indian tanning industry came to the conclusion that it was quite possible to develop the industry in India.[1] It can, therefore, be reasonably asked why India should continue to export raw hides and skins when she can easily develop a sound tanning industry. At present the exports are roughly divided half and half between the tanned and the raw material, but it would be far more desirable if we can export the latter as tanned leather.

That the Indian tanning industry should be developed with a view to diverting our exports from the raw to the tanned variety is a proposition which need not be emphasised. But we dispute the advisability and feasibility of developing an industry by imposing an export duty on the raw material, especially when (1) the raw material is not a monopoly of the country; (2) there is no chance of the whole of the arrested export being consumed within the country; and (3) the tanned material is subjected to an

[1] See Report, p. 365.

import duty in the importing countries while the raw material is allowed free.

The case would, of course, have been different if India were an importer of considerable quantities of leather and leather manufactures. The imports are quite inconsiderable and India has undoubtedly a surplus of hides and skins which she can export to her profit. It would, therefore, be improper to check the progress of the trade by imposing an export duty especially on hides which are not a monopoly of India. We may, however, discriminate between hides and skins. It is true that hides and skins are similar articles, and the price of the one is bound to be influenced by that of the other. Nevertheless, as each is used for manufacturing special kinds of leather, and as the exports are taken by different countries, the prices of the two varieties may show divergent movements within certain limits. Besides, if we remember that India occupies a much stronger position in the supply of skins, which are almost a monopoly of this country, an export duty is more justifiable on raw skins than on raw hides. Indeed it is due to this stronger position of India in relation to skins, that while the exports of raw hides have declined heavily after the levy of the export duty, those of raw skins have not only shown no decline but have, on the other hand, progressed considerably.

We are, however, against the imposition of a protective export duty which has been advocated by the Indian Chamber of Commerce, Calcutta.[1] So far as the imports of leather goods are concerned—which are quite small—they may be restricted by the levy of an import duty. But hides and skins are an item of our export trade of which we have a considerable surplus left after satisfying the home demand. The Indian tanning industry has been showing progress and the exports of leather have risen simultaneously with those of raw hides and skins. While

[1] Vide the Annual Report for the year 1926, pp. 21-22.

steps should, by all means, be taken to develop the industry and stimulate the trade in leather, it will be a wrong and positively injurious policy to try to hasten it by levying an export duty on the raw material. Such a policy may mean a fall in the exports of the raw material without showing a corresponding rise in those of the tanned variety, as has indeed happened in the case of hides.

In spite of the unorganised state of the industry and its peculiar nature which leads persons belonging to the higher castes among the Hindus to abstain from it, the tanning industry has shown continuous growth owing to the inherently advantageous position of the country in respect of an easy and ample supply of hides and skins as well as of tanning materials. If the industry could be properly organised, and modern methods introduced, the prospects of development are indeed great. This has been pointed out in great detail by the Hides Cess Enquiry Committee, whose report was published in 1930.

This Committee has recommended that a cess of 1 per cent. *ad valorem* on the export of raw hides and raw skins should be levied, and that this cess should be administered by a statutory committee which should be representative of the trade. Details regarding the constitution, procedure and work of the Committee have been laid down. Among the functions of the Committee, the following may be noted[1]:—

(1) regulation of markets ;
(2) introduction of system of grading and specification ;
(3) arbitration ;
(4) research ;
(5) intelligence work, i. e. collection and dissemination of statistical and other information ;
(6) publication of trade journals and price bulletins ;

[1] Report of the Hides Cess Enquiry Committee, pp. 113-114.

(7) demonstration, advertisement and propaganda on behalf of Indian raw stock, leather, leather goods and allied manufactures.

Regarding the importance of creating such a permanent committee and thereby encouraging the industry, we cannot do better than quote in full the concluding paragraph of the report of the Enquiry Committee, in which they observe :—

"In point of importance this entire industry (the hide and skin trade and the Indian leather-making, leather-working and allied industries) is one of the most important phases of India's economic life. Its annual gross value runs into many—as many as forty to fifty—crores of rupees. It not only gives employment to large numbers of men, but—and this is an important fact to be kept in view—is a factor in the economic well-being of millions of India's depressed classes. Any action taken for its improvement will automatically, though perhaps gradually, help to better their lot. They are among the unorganised and silent submerged strata of the population of India, and have a legitimate claim on Government's active sympathy. The hide and skin trade and the tanning industry have in the past rendered inestimable service to the Government and the country, and it is only right that they should claim that organised efforts should be made to improve their condition. We hope we have succeeded in proving that there is a vast scope for work for the betterment of all branches of the industry and that any improvement effected in them will react favourably on the improvement of the economic conditions of the peasantry of India. Appalling waste is at present undoubtedly going on ; we have endeavoured to indicate the extent of the amount of loss, and the directions in which attempts can and should be made to reduce it. While we fully appreciate the valuable work done by the various interests concerned, we have found little evidence of an organised

effort to visualise and attack the various problems as being organically connected with each other. We are convinced that action more or less on the lines set out in our Report will be in the best interests of India as a whole, including the Indian States. Every link in the chain—the cattle owner, the chamar, the owner of the slaughtered hide or skin, the trader, the commission agent, the tanner, the tanner for export, the shipper both of raw and of tanned stock will, and indeed must, benefit. We have, therefore, recommended the creation of a permanent Cess Committee and are confident that such a Committee with adequate funds at its disposal will be in a position to make a genuine beginning in one of the important directions of India's economic development."

END

APPENDIX

Note on Indian Trade in 1930-31

The annual review of the trade of India for 1930-31 was published after the text of this book had gone through the press. In a study of the tendencies in trade and industry, the facts of any one year are not of great importance; besides, in publications of this kind, the careful reader will always have to follow up his inquiry under this or that head in which he is interested by referring to original sources of information. An attempt has however been made in this appendix to give in brief a few facts relating to the year 1930-31, particularly with reference to the articles of trade discussed in this volume.

The year 1930-31 was marked by the Civil Disobedience movement in the country. For the time being this did introduce a new factor in the life of the people; existing trade and industry were disturbed on the one hand; new channels of trade and industry were opened out on the other. It is, however, impossible to trace the exact effects of the movement on the economic life of the people so soon.

Combined with this was the effect of the continued fall in the world price level. This fall has been particularly remarkable since October 1929. The fall has been much greater in raw materials in the export of which India is interested. It has been estimated that compared with September 1929, the fall in the price level of exported articles was 36 per cent. by December 1930, and 39 per cent. by March 1931. The corresponding fall in imported articles was 16 and 14 respectively. This means that India had to pay much more than before in exports for her imports. [1]

The following data will reflect these tendencies. For the sake of convenience, the figures have been grouped with reference to the general classification adopted in this volume. The figures of 1929-30 have also been given for the purposes of comparison.

[1] Cf. Review of the Trade of India, p. 5.

Table I. Total Imports and Exports in lakhs of rupees.

	1929-30	1930-31
Imports of merchandise	2,40,719	1,64,82
Exports of merchandise	3,10,80	2,20,49
Imports of treasure	27,83	26,86
Exports of treasure	5,14	4,00

We notice a fall of 32 per cent. in imports and of 27 per cent. in exports. The following tables will indicate the fall in the trade of some of the important commodities, which brought about this remarkable decline.

Table II. Articles of Food and Drink in lakhs of rupees.

	Imports		Exports	
	1929-30	1930-31	1929-30	1930-31
Rice	...	...	31,51	25,97
Wheat	...	...	21	1,95
Tea	64	46	26,01	23,56
Sugar	15,78	10,96	...	...
Salt	1,30	1,18	...	...

It should be pointed out that the decline in the trade indicated above is in value. Because of the great fall in prices, the decline does not mean a corresponding fall in quantity.

Table III. Textiles, in lakhs of rupees.

	Imports		Exports	
	1929-30	1930-31	1929-30	1930-31
Raw cotton	3,42	6,39	65,60	46,73
Cotton yarn and manufactures	59,49	25,26	7,19	5,22
Raw jute	...	...	27,17	12,88
Manufactured jute ...	24	18	51,93	31,89
Raw wool	52	19	4,42	2,51
Woollen goods ...	3,77	2,13	91	72
Raw silk	1,23	88	30	9
Silk goods	3,35	2,11	2	1

The most remarkable fall is in the imports of cotton yarn and manufactures. The increase in the imports of raw cotton shows the activity of the local mills in the production of goods of higher count. The production of Indian mills increased from 242 crores of yards in 1929-30 to 256 crores of yards in 1930-31. Besides, the year 1930-31 started with large stocks on hand, and these were reduced by more than 16 crores of yards by the end of the year. Part of the local demand was met by goods produced on the handloom.

Table IV. Minerals in lakhs of rupees.

	Imports		Exports	
	1929-30	1930-31	1929-30	1930-31
Coal	41	28	72	49
Iron and steel and manufactures thereof...	17,20	10,87	2,62	1,74
Other metals	6,38	5,02	4,15	3,62
Machinery and millstores	19,35	15,13		
Hardware	5,00	3,60		
Motor cars	3,76	2,57		
Kerosene	5,89	5,34		
Petrol	38	73		
Cement	64	55		

This table shows that the first place occupied by the textile group of articles in our imports, was taken by the metal group in 1930-31. This was due to the relativcly greater decline in the former.

Table V. Other Articles, in lakhs of rupees.

	Imports		Exports	
	1929-30	1930-31	1929-30	1930-31
Matches	11	4		
Paper	3,72	2,87		
Oilseeds	...	...	26,47	17,86
Hides and skins, raw	31	14	7,98	5,46
Hides and skins, tanned and leather ...	68	48	8,16	6,39

The protection afforded to the Match and Paper industries is partly responsible for the fall in imports of these articles. Oilseeds and Hides and Skins are our chief articles of export next in importance to Raw Cotton and Jute. The low value realised for these products in 1930-31 is visible in the figures.

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