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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

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RAILWAY RATES
IN RELATION TO TRADE & INDUSTRY IN INDIA

BY

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EDITOR'S PREFACE

The important part played by the railways in the economic development of this country is well-known. The fact that railways in India constitute a great national industry, and that they have an important connection both with the financial and the industrial policy of the country is, however, not fully appreciated. Though occasionally problems relating to railways attract some attention, a systematic study of railways and their problems is not made. The subject of transport either occupies a subordinate position or often no position in the syllabuses of Indian Universities. Even important commercial bodies who are directly interested in the working of railways, find problems such as those of railway rates, a mystery ordinarily to be avoided. Due to this apathy towards railway problems both among the educated and the commercial public, railway administration in this country has not found that corrective, which enlightened public opinion provides in other countries. In fact the effect has been so stupifying on railway administrations, that it is not unnatural to find some of them considering railway problems such a close preserve, that the entry of the outsider shall be barred. As an illustration of this unfortunate tendency we may point out the fact, which would be unbelievable if it did not occur, that the authorities of the G. I. P. Railway refused access to their published tariffs, for the purposes of comparative study, required for *bona fide* research.

Some interest has been aroused in more recent times in railway problems, chiefly in connection with changes to be introduced under the new constitution. The provision for a Statutory Railway Authority in the Constitution Act opened the eyes of the public in India to this important national industry, the administrative control of which was thus being taken away from the future Federal Assembly. It was only then understood that the Railway Authority of the future will have the control of finances as large in the aggregate as those of the general budget of the Central Government. Though the railway budget was separated from the general budget in 1924, the importance of railway finance, and therefore, of railway policy was not fully

grasped, till this innovation of a Statutory Railway Authority was suddenly sprung on the Indian public.

Additional interest in railway problems grew when it was emphasised by Sir Otto Neimeyer that the financial position both of the Provinces and of the Central Government under the new constitution depended on the improvement of railway finance, which has been involved in large deficits in recent years. Following this recommendation the Government of India have appointed an expert committee to go into the question.

Though railway problems have thus attracted some attention in the country chiefly due to financial difficulties, adequate attention has not yet been paid to the question of co-ordinating the railway policy with the general economic policy of the country. Since 1924, we have adopted the policy of Discriminating Protection, and it is in the fitness of things to expect that the railway policy should be such that it may help the growth of industries. The reports of the Tariff Board are full of complaints regarding the unfortunate tendency of Indian railways in this connection, which may often undo the effect of protective measures passed by the Indian Legislature. Unless effective steps are taken to ensure that the railway rates policy shall be based primarily, in the interest of Indian trade and industry, we may find serious difficulties in our economic progress.

The literature on railway rates is very limited. With the exception of Mr. Ghosh's monograph on this subject there is no other important work which those interested may refer to. Mr. Ghosh's volume was published in 1918; besides being out of date, it does not try to co-ordinate railway rates with the needs of Indian trade and industry. In view of this the present volume is the first systematic attempt to study the intricacies of railway rates as they affect the movement of goods in this country. The treatment followed by Mr. Tiwari is to survey these effects with reference to a few selected articles of trade, because the effects vary according to the nature of the commodities. He has succeeded in establishing the conclusion that the railways follow an individualistic policy to the utter neglect of trade and industry in this country, and that a national policy to control and co-ordinate railway rates consistent with the economic interests of the country should be established without further delay.

This work was submitted in its original form as a thesis for the M.A. degree of this University in 1933, for which it was approved. The work has been considerably revised and abridged before publication. It may be pointed out that the statistics used in the volume refer in some cases to earlier years. Wherever possible later data and information have been given.

School of Economics and Sociology,
University of Bombay
15th January, 1937.

C. N. VAKIL.

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CHAPTER I

Theoretical Basis of Rates and Fares

The purpose of the present chapter is to discuss the theoretical basis of rates and fares and the principles followed in the determination of what constitutes the reasonable charge to be paid by shippers and travellers for the transportation service rendered by the railroad[1]. Notwithstanding the repeated efforts on the part of legislative and judicial bodies, no definite method of rate fixing has yet been evolved, which would do justice both to the public and the carriers. The stage of transition has not yet passed. The momentous inventions of the post-war decade have revolutionised the entire transportation system. The efficiency and economy of the modern commercial automobile service has seriously questioned the monopoly of railroads as carriers of men and merchandise on land and modified their scope. Attempts are therefore being made to co-ordinate these two important agencies and to assign them their proper place in the transportation system. This has affected the practice of rate-making on railroads. The rapid progress in air transport and its increased commercialisation is bound to affect the practice of rate-making in future. Portends of the fast approaching change are not lacking. The task of rate-making has therefore become extremely complex and even embarrassing. Doubtless, there are a few important general principles which guide the authorities entrusted with the task of constructing railway tariffs. But it cannot be denied that this task is essentially a practical one[2], because a railway rate structure

1. The primary function of railroads has been aptly characterised by Mr. Marriott as one of selling transportation. "The business of railways," he points out, "is to sell to the public what the Americans call 'transportation', or in other words they are purveyors of carriage". Vide, "The Fixing of Rates and Fares," p. 15

2. Fixing of railway rates is, according to Sir W. Acworth, in one word, an art and not a science, and it is an art which in Bagehot's phrase, must be exercised "in a sort of twilight in an atmosphere of probabilities and doubt where nothing is clear, where there are some chances for many events, where there is much to be said for several courses, where, nevertheless, one course must be determinedly chosen and fixedly adhered to". Vide, "Elements of Railway Economics." p. 73.

can never be built off-hand : it is a product of gradual growth, ever changing and adapting itself to the growing needs of a dynamic society.

Before entering on a study of the principles determining railway rates, we shall examine the general bearing of railroad expenditure on rate-making, because not until money has been liberally expended can the railway plant be expected to yield appreciable earnings. Huge amounts of capital have to be sunk and sunk for ever ; it is irrevocable. Further, if something is here to be produced at all it must be produced on a large scale.

The expenses of a railroad are primarily of two kinds, 'fixed charges' and 'operating expenses'. The proportion of former to the latter is roughly one to two. Capital costs are independent of the volume of traffic carried upon the line. Of the cost of conducting transportation, no less than half constitutes a fixed charge, irrespective of the volume of business transacted. In short, nearly two-thirds of the railway expenses are constant and only one-third variable[1]. This has been found true of the railways in the leading industrial countries[2]. Working of the Indian railways are no exception to this general rule.

The preponderant proportion of constant costs reveals the essential characteristic of the railway industry which pervades the entire rate policy. Railroad operation is subject to decreasing costs. Doubtless expenses increase with increase in traffic, but not in direct proportion. A part of the total expenses does not increase at all, and the other part increases proportionately with the traffic, while the expenses in the residual category, which form the bulk, occupy an intermediate position[3]. This shows the enormous

1. From the detailed statistics of the American railways Professor Ripley has come to this conclusion. He says, "Thus one arrives at the general conclusion that approximately two-thirds of the total expenditure of a railroad and more than one-half of the actual operating expenses are independent of the volume of traffic. The remaining third of the total expenditure, or what amounts to the same thing, the other half of the operating expenses are immediately responsive to any variation in business". Vide, Ripley, "Railroads", p. 55.
2. Supra p. 56.
3. This feature has been admirably condensed by Acworth : If it costs x to deal with 1,000,000 units of traffic, 5,000,000 units will cost not 5x, but $\frac{1}{2}x \div (\frac{1}{2}x \times 5x) = 3x$.
Vide, "The Elements of Railway Economics". p. 50.

extent of the unused capacity of the railway plant and the consequent scope for absorbing increased traffic requirements with a view to eliminate the waste of the unused capacity of the plant. It is the duty of every traffic manager to see that the railway plant under his management is used to its maximum capacity and that the waste in the capacity of the plant is reduced to the minimum. Therefore in order to utilise this unused capacity of the plant running to waste, the traffic manager attracts new traffic at lower rates, such as would cover the prime costs[1], and leave a share, though not full, to defray the capital costs. The rates thus charged are known as exceptional or special rates, which we shall presently examine. This brings to relief the fact that railway industry is subject to decreasing costs or increasing returns[2] until the maximum operating capacity of the plant is reached.

Exceptional or special rates are inherent in the very nature of the railroad operation. Railway industry being one of increasing returns, with nearly two-thirds of its expenses constant, and only one-third variable with the amount of traffic carried, special rates are offered, as already pointed out, to eliminate the waste of the unused capacity of the plant. But exceptional rates are as well offered for development purposes. When the railway authorities learn of an industry newly started, or to be started, or one suffering under temporary disadvantages, they offer relief in the form of lower freight charges so as to enable the industries already located on its lines, to flourish and to attract new ones, furthering thereby their mutual interests. The impetus is not one due to benevolence but to enlightened self-interest. Special rates thus quoted act in a

1. The term 'prime cost' is here used in the usual sense of the special cost of the traffic, meaning the cost which would have been saved if the traffic had not been carried. In this connection Professor Edgeworth's exposition of the varied implications of prime cost are instructive. Vide, The Economic Journal, 1911, p. 563-64.

2. Professor Ripley thus expresses himself: "The law originates primarily in the fixed conditions attaching to the heavy capital investment—the fact, namely, that fixed charges up to a given point of saturation tend to remain constant absolutely; but become proportionately less as the volume of business expands. From this fact therefore, rather than from any marked economics of large scale production may it be affirmed that railroads offer a notable example of the law of increasing returns". Vide, "Railroads," p. 99.

protective or insurance capacity helping to materialise varied industrial potentialities of a country and lead to a full-fledged many-sided economic development. In fact the effects of lower transport charges on an industry are similar to those of protective fiscal duties and as such in our country only those industries should have a claim to exceptional freight rates which conform to the canons laid down by the Indian Fiscal Commission. That is, the railways concerned should offer special rates for development purposes only to those industries which can stand open competition after the transitional stage is passed. This is significant, because if the railways give special rates with this object, to every industry that is established on its lines, indiscriminately, it would be bad railway economics. Of course exceptional rates, offered (in operating the railroads) with a view to utilise the unused capacity of a plant, can be claimed by any traffic, but it may be submitted that there is no security of continuity in the special rates offered by the railways merely for a better utilisation of the plant, while in the case of lower rates offered for development purposes, there is relative certainty. This is an essential difference, often overlooked, which needs to be emphasised. We have dwelt at length on this aspect of the railway working because India is passing through the Industrial Revolution and her industries are therefore in the transitional stage, and in need of an enlightened and vigorous national railway policy.

Special rates offered on a part of the transportation system, are in the nature of a temporary tax on the rest of the system, and continue to so function till the subsequent increase in the volume of traffic seeking transport makes the rate paying one. The temporary loss suffered by the railroads is more than made good, in the form of increased earnings later, when adequate traffic is built up, and in this we seek the essential justification for the lower rates offered. The loss sustained is essentially a temporary one. For instance, in the development of sugar factories now in progress in this country, if the railways concerned offer reduced station-to-station rates on cane and sugar to and from different factories, both old and new, not only would the expansion of new factories be facilitated but even the old established factories would extend their plant. This will certainly be a profitable proposition to the railways. But, if even after a considerable traffic has been built up, the rate continues to be an unremunerative one, and does

not make reasonable contribution to over-head charges, then it ceases to be a development rate, justified by far-sighted business principles, and becomes a subsidy granted to one industry or group of industries at the expense of, and discriminatory to, the other users of the railways. It would mean artificial fostering of the weak and the inefficient, which would, but for the help, have no chance to survive. Exceptional treatment should therefore be accorded with due consideration and utmost caution. This discrimination should be very sparingly used. Railway authorities should invest only a part of their resources in the development of future traffic which has good prospects but is not immediately remunerative. In fact, no railway can afford to change over a long period of time a freight, the revenue from which does not cover the direct prime costs of its own movement. However, the exceptional rates which cover their prime costs and leave a share to meet the capital costs are becoming more common. In England and America about 80 per cent. of the total traffic is carried at exceptional rate which has thus become a rule rather than an exception.

Another equally important and a yet more controversial feature of the railway industry may now be studied. It is sometimes said that railway industry is essentially one of joint costs. The expenses of the railway service are incurred jointly and most aptly illustrate the production of a number of commodities by a single plant simultaneously at joint and indistinguishable costs.[1] The classical economists illustrated this principle by the example of the joint production of wool and mutton; beef, hide and tallow; calves and dairy produce; coke and coal-gas; etc. Neither commodity could conceivably be produced alone.[2] It behoves us, therefore, to examine in detail the nature of joint costs as operating in railroad industry.

The question of joint costs with special reference to railway transport has been discussed with exquisite refinement and precision by eminent authorities like Prof. Ripley, Taussig, Pigou, Edgeworth, Acworth, and therefore in the pages that

1. Huge railway plant is devoted to the carriage of heterogenous merchandise and differently graded passengers so that the cost of moving a single commodity or passenger is indeterminable.

2. Mill, J. S.: "Principles of Political Economy", p. 510.

follow an attempt will be made to study the problem with the help of these authorities, with a view to a clearer understanding of the issue.

"When any plant is used for diverse products," says Professor Taussig, "the case is so far one of production at joint costs".[1] This is true of railroad transport. In support of the application of the aforesaid definition of joint cost to railroads, Professor Taussig argues: the same roadbed is used for passengers and freight and for the different kinds of passengers and freight. If the outlay for the plant were the only expense incurred in rendering the service the case would be one completely of joint cost. There are, of course, the operating expenses in addition. But the expense of the plant (represented chiefly by interest on the investment) forms an unusually large part of transportation.[2] The operating expenses also, he further adds, represent in large part joint cost. Many of them are incurred for the traffic as a whole and must go on whether or not individual items of traffic are undertaken. At least one-half of the total operating expenses of a railway are impossible of apportionment to any class or item of traffic, and thus stand for joint cost.[3] To him when two or more articles are transported from a railway station 'A' to another station 'B', the transport services rendered by the railway are essentially and fundamentally joint products; and it is immaterial whether the articles are consumed at B or have to be further carried to a place 'C' for consumption. This is so because, according to him, the railway plant in this case is used for varied purposes, that is, the products carried are diverse. Although he admits that when two or more different things and the same thing for different purposes are carried from A to B, the transport services rendered are in one sense homogenous[4]; but in the primary sense concerning the railway they are diverse. In short he has with his characteristic persuasion and ability developed the thesis that joint costs play a dominant part in the industry of railroad transport.

Professor Acworth holds the same opinion and argues on

1. Vide, "Principles of Economics," Vol. II (1924), p. 395.
2. Vide, Supra.
3. Vide, Supra.
4. Vide, Principles of Economics, Vol. I, p. 221.

similar lines. Starting from the universally acknowledged characteristic of railway transport that it is an industry of huge investments, he argues that almost the whole of the constructional capital and the working expenses are incurred on behalf of the traffic as a whole; that even if either the passenger or the goods traffic was absolutely withdrawn the claim of capital to its normal interest would stand unchallenged, reduction in the cost of maintenance would only be trifling, and even the operating expenses incident to *de facto* movement of traffic would fail to record *pro rata* reduction. But the withdrawal of traffic of only certain categories would leave the volume of expenses practically unaltered. He therefore concludes that the expenditure of a railway plant is incurred almost wholly on the joint account of all its customers; the accommodation it provides and the services it renders, it must therefore render and provide at their joint cost. He says, "Railways then are the most extreme instances of business conducted at joint cost; their whole capital outlay is incurred on joint account; almost the entire cost of their services is joint; and the extra expenditure incurred especially for any one item of the joint product is extremely small."[1]

With due deference it may, however, be submitted that the argument as developed by Professor Taussig and Acworth is not so convincing. It is easy to see with the worthy economists that the railway industry is one of large fixed investments, but it is rather difficult to accept the plea of joint supply of railway service in the primary sense. The suggestion that joint costs play a predominant part in railway industry has qualified acceptance; the difference is only one of emphasis.

Joint costs play a secondary part in railroad transport.[2] The most striking characteristic of the example quoted by the classical economists, illustrative of joint production, is that one of the joint products can never be produced alone; the production of one necessarily results in the production of the other. To put it in the words of J. S. Mill, "they are both products of the same operation, or set of operations, and the outlay is incurred for the sake of both together, not part for one and part for the other. The same outlay would have to be incurred for either of the two,

1. Vide, the Economic Journal, (1897), p. 321.
2. This is the considered opinion of Professor Pigou.

if the other were not wanted or used at all.[1] Thus, there is physical joint production in the case of the examples discussed by Mill. The marked characteristics of the joint products is that they have a common origin and one of the joint products cannot be produced alone.[2]

But the application of this principle of joint production, doubtless true of certain industries[3], to transport industry in general, and the railway industry in particular, presents considerable contrast ; the two sets of industries are dissimilar. The marked characteristic of joint production, referred to above, is not universally and not even generally applicable in the case of railway transport. The law of joint cost, says Professor Ripley with reference to the production of transportation, is somewhat different. Compare, for instance, the carriage by a railroad of thousands of passengers and different commodities in every direction, under varying conditions, singly or wholesale, by passenger or express train, over a given set of rails every day, with the operation of a refinery, producing simultaneously kerosene, gasolene, lubricating oils, and greases as well as various odd chemicals. Both are examples of production at joint cost but with various important contrasts. In the refinery all the costs are joint. All the processes are interlocked. Every increase in the output of kerosene produces pari passu an increase of the other commodities. On the railroad not all, but only a part of the costs are joint, in such manner as has been shown. For, from the joint production of its plant—roadway, rails and locomotives—the railroad may produce transportation of different sorts quite independently. It may choose to especially cultivate its passenger traffic or cotton or coal business.[4] For instance, a railway running between any two points A and B may work successfully only with goods traffic, if available in sufficient quantity, and finding that its plant is thus utilised to its maximum capacity, it may not care to develop passenger traffic at all. Again, if a given railway finds that only one variety of traffic, say coal or cement, is sufficient to utilise the capacity of its plant, it may not look for any other traffic. Thus, the Punjab

1. Vide, "Principles of Political Economy", p. 570.
2. Vide, Marshall "Principles of Economics" (1916) p. 388.
3. Refer Marshall: "Industry and Trade," p. 192-93.
4. Vide, Ripley, "Railroads," p. 67.

Mail[1] of the G. I. P. catered only for first and second class passenger traffic, till as late as 1931, and the Frontier Mail follows the same practice even to-day. It follows, therefore that the most essential differentiating characteristic of railroad transport is that the services it provides are not physically inevitable; that is, the production of one service does not necessarily imply the production of the other. The supply of any one kind of railway service is not necessarily connected with the supply of any other kind of railway service. If, for example, facilities for passenger traffic are increased, it does not follow that those for goods traffic are pari passu increased: or if the travelling facilities for first class passengers are increased it does not inevitably follow that those for third class passengers are also increased. As a matter of fact, an increased supply of one kind of railway transport service means, ceteris paribus, decreased facilities for the other kinds of transport. That is, given a railroad establishment, if increased facilities are offered for goods traffic, it would mean decreased facilities for passenger traffic.

Further, the transport services provided by a railroad—unlike the production of several commodities by a single great plant simultaneously, at joint and indistinguishable cost none of which can conceivably be produced alone,—can be varied according to the traffic requirements, and to an extent limited only by the demand, because necessary readjustments can be made in the plant to suit the traffic requirements, and even if the established plant is fully utilised new plant can easily be added to meet the demand. In fact the railway management would be only too glad to make the requisite readjustments because it is to their interest that not only should the existing demand be provided for but a new demand should be created. A successful traffic manager does not wait for the traffic to come, but he creates traffic. For instance, to take an extreme case of readjustment, if a line has been laid down between any two points A and B for carrying primarily a particular kind of traffic, say goods traffic, because, perhaps, when the original survey was carried out the passenger traffic did not present any prospects to the investigator. But, let it be supposed as well that

1. In this connection we should not be understood to convey that the actual working of the line was justified in practice, although there is a theoretical justification for such working provided it pays its way—that is, the full share of capital and working costs.

after the line began to work no goods traffic was offered, but on the contrary, passenger traffic came beyond all expectations of the railway authorities. Faced with this most difficult situation, the railway manager can readily adjust himself to the changed conditions. Necessary readjustments can be made in the plant, and the transport facilities for passengers can be increased without at the same time increasing the facilities for goods traffic. This elasticity would hardly be feasible if the railway facilities for goods and passengers were joint products. In the case of joint production, say mutton, wool and skin, the increase in the output of one necessarily adds to the output of the other joint product, albeit the exact proportion of the different items varies according to the demand and the point of view of the flock masters. For instance, the proportionate share of wool, mutton, and skin of an Australian sheep is different from that of the English or New Zealand sheep, due to the difference in aim with which sheep farming industry is conducted in the respective countries ; but the common fact stands that the rearing of sheep, irrespective of the condition of the farm, means ipso facto the production of wool, mutton and skin. They are joint products and if you want one you must have the others, even if you do not want them ; none of them, to repeat, can conceivably be produced alone.

Again, in the case of joint production, like wool, mutton and skin, outlay is incurred for the total joint output, so that even if one of the joint products fails to fetch a price, there being almost no demand for it, the total cost would remain unaltered. This is of course an extreme case but nevertheless true and is not infrequently met with in the industrial field. For instance, molasses, which is a bye-product of sugar, produced in some of the Hawaiian Sugar Factories, was actually thrown away, there being no demand for it—nay, they had to incur some cost even in throwing it away. Sugar and molasses are joint products and therefore the production of the former necessarily implies the production of the latter. Further, it should be pointed out that the production of molasses does not involve any costs, distinct from those necessary for sugar, and if it did the Hawaiian Sugar Factories, referred to above, would never have cared to incur such expense when there was no demand for it ; per contra, they would have endeavoured to produce sugar without molasses if possible, to eliminate, the cost of disposing of that product.

Even in the common cases, where each of the joint products has severally a value assigned to them, and therefore, some special care and expense is devoted to each of them, which would be diminished or dispensed with if the demand for that product were to receive a serious setback.[1] The margin available is certainly very narrow, except where special expense has been incurred for one or all of the joint products. Thus, for instance, even where molasses fetches a price, no saving worth the name can be made if the demand for molasses falls, because there is no special expense incurred for it. In fact one of the pressing problems before the sugar industry to-day is to find out a means of utilising molasses and thus increase the demand for it. In short, in joint production outlay is incurred for the output as a whole, and the margin for the reduction of costs, if the demand for one of the joint products falls, is narrow, unless there are special expenses incurred for one or all of the joint products. This is not true of the railway plant in the primary sense, as adverted to above. But to the extent that the railway plant is subject to joint costs—in the secondary sense—as will be shown presently, the aforesaid remarks are applicable.

Thus, from the foregoing discussion it is clear that joint costs do not play such a predominant part in the railway industry as Professors Taussig and Acworth expect us to believe. Professor Pigou has offered very instructive and interesting criticism on this point which may with advantage be noted at this stage. He contends that the transport service provided by the railroads is a single homogenous commodity and therefore the element of joint costs plays only a secondary part. According to Professor Pigou, the conjunction of large common supplementary costs with separation between the markets to which they are supplied does not make railway services joint products in this[2]—the only significant—sense. In order that they may be joint products, it is further necessary, not merely that additional investment in plant and so on may be used alternatively to facilitate the supply to either market, but that such additional investment cannot be used to facilitate the supply to one market without facilitating the supply to the other.[3]

1. Refer Marshall, "Principles of Economics", p. 389 and "Industry and Trade," pp. 192-93.
2. Refer to the discussion, "The Economics of Welfare".
3. Vide, "The Economics of Welfare," p. 246.

This view point seems to be more in accord with the true nature of the railway industry, and hence we accept the view taken by Professor Pigou that joint supply does not prevail in railway transport in a fundamental and general way as is supposed by some writers.[1]

In some aspects of railway transport, however, true joint costs do prevail. (i) Back-loading provides complete analogy to the case of joint costs. Thus, an increase of transport facilities from station A to station B carries with it an increase of transport facilities from B to A. (ii) In a sparsely populated country or where railways have been newly inaugurated, if the demand for any one kind of service, say either goods traffic broadly, or passenger traffic, is not sufficient to remunerate even the technically minimum sized railway plant, goods traffic and passenger traffic is jointly produced. Professor Taussig rightly points out that the principle of joint cost in railway industry bears, perhaps, most on the special problems of pioneer regions ; and as these regions advance beyond that stage, it ceases to be all pervading.[2] Similarly, if the increment of demand for either passenger or goods traffic is not individually sufficient to make profitable the technically minimum additions to the railway equipment, then such increments of passenger and goods service are jointly produced. The existence of unused capacity in the railway plant constitutes the basis of the principle of joint costs. If, however, we could adjust our units of productive factors to the size of the units of their products, then this kind of problem of joint supply or joint production would cease to exist. As railways and regions they serve emerge from the pioneer stage, as traffic becomes denser and more regular, as the different regions served become industrially more homogenous, as the railway is able to utilise its entire plant and its whole operating force continuously and systematically, the feature of joint costs become less dominant. But, though less dominant, it never ceases to be important. From the very nature of the railroad industry the existence of unused capacity in the railway plant, albeit there are forces tending to minimise it, is inevitable ; because even if a given railway plant is utilised to its maximum capacity, at a particular

1. Supra, p. 265.

2. Vide, "Principles of Economics" Vol. II pp. 404—5.

time, additional plant has to be installed when fresh traffic comes and a part of this new plant remains for a time unutilised. Thus, it is difficult to so adjust the railway plant as to completely eliminate the waste of unused capacity. In short, the problem of joint costs is less important in countries which are industrialised and where the railway plant has attained sufficient maturity. In industrially backward areas, where the railways have not passed their pioneer stage, joint costs hold dominant sway.

Thus, common costs, rather than joint costs, are the dominant feature of railway industry, especially in an old country where railway transport has fully developed. The element of jointness is of comparatively less significance. "The services provided by the railway companies are, in the main, not jointly produced."[1]

This discussion of the two most important characteristics of railway industry clears the way for a study of the principles on which the rate structure should be based. Now, if railway transport were not made a monopoly by law, (i.e., if free competition were allowed between two points 'A' and 'B') the railway rates would be determined by the separate competitive costs of each kind of service. "It is generally agreed," says Professor Pigou, "that, except in so far as the transport services sold to one set of purchasers are supplied jointly with those sold to another set, simple competition would tend to bring about a system of uniform rates per ton-mile for similar services."[2] The rates for similar services would be so arranged that the demand and supply price would coincide; and a separate charge would be made if the railroad transport were sold in conjunction with some extra service. But in fact railways are monopolies by law. (Behind the fact of legal monopoly there are factors which make a railroad a natural monopoly, e.g., large capital investment, waste involved in duplication of lines, etc.). Hence a railway company is not called upon, and has not the capacity, to determine the separate cost of production of individual transport services. On the contrary, as a monopolist it finds to its advantage to charge different prices for the supply of a common commodity, namely, transport service (of course making allowance for special facilities) to different buyers. It is able to so formulate its rate structure

1. Professor Pigou: "The Economics of Welfare", p. 267.

2. Supra, p. 257.

because the demand for a unit of railway service is not transferable. Where transference is feasible discrimination cannot be effected. Thus, in a regime of competition discrimination can exist only temporarily.

How should, then, the railway rates be fixed ? If the railway company, even though a monopoly, (i.e., even though there are no separate competitive costs of transport) could, by some process of cost accounting, determine the separate costs of transport, even approximately, then from the point of view of national economic welfare the railway rates ought to be generally based on cost of service principle, subject to certain exceptions. Marginal utility and cost of production ought to coincide. The exceptions are in the case of luxuries, which ought to be taxed higher in proportion to their values, and lower rates to be charged in the case of traffic which offers prospects of future gain or confers indirect benefits. In both these cases railway authorities are entitled to charge differential rates.

The authorities should arrange the rates on different commodities so as to earn normal profits on total investments. This, however, is only one of the criteria and not the sole. Broadly, a railway can do this if the rates for the transport of different commodities are related to their values and the elasticity of demand for them. But there is no one arrangement of rates which fits in with this broad method. Therefore the problem of railway rates is not so much one of discrimination in itself as of choice between different kinds of discrimination, i.e., arrangements of differential rates. The problem of rate making being essentially a practical one, experience enables one to seek a proper solution. But whether that practical solution is also justified by theoretical considerations is an extremely obstruse point. So the question before us is to find out the best arrangement which theory would justify.

THE COST OF SERVICE PRINCIPLE

In any commercial or industrial enterprise, the main principle which is taken into account by the manager of the concern in fixing the prices of the commodities manufactured or dealt with is that of what the provision of the commodities or services has cost or will cost him. After calculating his cost and having made due allowance for his own personal remuneration and for

any interest on capital, the manufacturer fixes his prices or rates of charge to his customers accordingly. Therefore, one naturally asks oneself, cannot the railway company fix its conveyance rates, whether for goods or for passenger service, in direct relation to the cost which it has to incur to provide the accommodation and service? It cannot be gainsaid that the cost of service must necessarily loom large in the manager's eyes, because he has to see that not only should the receipts be adequate enough to defray the total expenses incurred in running the undertaking but that sufficient surplus is left to cover the interest charges on the capital invested.

Theoretically considered, the most equitable charges seem to be those proportional to the costs incurred by the railway in performing a given service. It is also approved by the business-men who urge that the rates ought to be based on the cost of the service. "There can be no question," says Professor Ripley, "that for an indispensable service like transportation, conducted under monopolistic conditions, the ideal system of charges would be to ascertain the cost of each service rendered and to allow a reasonable margin of profit over and above the amount".[1] But to basing the rate structure entirely on the cost of service principle, there are several insuperable objections both theoretical and practical. Railway operation, we would like to emphasise, is not analogous to the business of an ordinary manufacturer.

A rate structure based purely on the cost of the service principle, to be just and reasonable, presupposes the existence of perfect competition, precise allocation of transport costs of individual items of traffic carried, and relative stability of the cost; and if all these elements existed in fact the cost of service principle would have rightly deserved the premier place in rate-making. Then the rate structure would have been based on this principle alone. Thus, for instance, if the cost of transport service rendered to two articles, say coal and cotton, are the same, in a state of perfect competition amongst the carriers, and if the cost of these individual services is determinable, then, identical rates should be levied on both the articles; and this would afford maximum advantage both to the carrier and the shipper.

1. Vide, "Railroads," p. 168.

OBJECTIONS: ABSENCE OF PERFECT COMPETITION

But the study of the nature of railroad industry reveals that the state of perfect competition, which is the most essential element, does not exist; and it is difficult to realise in railroad working. If the regime of perfect competition could be realised in railway industry, other objections of mixed roads, indeterminability of costs, etc., would fade into insignificance. But perfection is neither feasible nor is it desirable. It is needless to repeat the reasons which show the impracticability of perfect competition in railroad enterprise. Since the beneficial effects of perfect competition cannot be realised in railway industry, State interference has been invoked for regulating the rate structure of railroads so as to maintain the proportion of rate charged to marginal cost. Professor Taussig aptly remarks: "The railway itself is a vast enterprise, with a tendency to monopoly conditions in its inherent workings; it threatens in private hands to become an *imperium imperio;* it presents most urgently the problems of public control and public ownership."[1] Thus we find that the basic argument of the advocates of the cost theory is unsound.

Further, the cost basis is difficult to lay, because it is impossible to ascertain exactly the cost of any railway service; none of the fixed charges and very few of the operating expenses can be assigned, except rather arbitrarily, to the various services. The costs are incapable of definite allocation. The cargo of a single freight train consists of a medley of commodities. To allocate the costs, thus incurred, to individual articles, from amongst numerous articles carried, which have acquired different place utilities, is at once arbitrary and unjust. Thus, of the total expenditure incurred, only a few items can be definitely allocated to one service or the other; but the greater part of the expenditure is common and does not admit of precise and definite allocation. Allocations of costs, as Professor Acworth says, made on the basis of the rates between goods and passenger train miles are at best no more than a conventional average. And if allocation is impossible between goods and passengers, a fortiori it is more impossible among the various categories of goods and passenger traffic inter se; while as for an allocation to individual

1. Vide, "Principles of Economics," Vol. II, p. 389-390.

consignments of goods, probably even the hardiest of amateur railway statisticians would not attempt it.[1] Railroad costs are indeterminable and highly variable. Costs are variable because the railway industry is subject to the law of increasing returns.

Only a rough estimate can be made of the relative costs. This is especially true of sparsely populated and new countries where the equipment of railway organisation is not fully utilised and the unused capacity runs to waste. But in old and economically advanced countries the demand for railway service is more steady and enables the railway managers to adjust their equipment to the demand, minimise the waste of unused capacity, and by the process of cost accounting ascertain approximately, if not exactly, the cost of different railway services.

COST, AN IMPRACTICABLE BASIS OF RAILWAY CHARGES

Even if the cost of individual railroad service could be determined, it cannot be a true index of the total costs involved in performing that service, because the fixed costs are heavy. Moreover, even after accurately ascertaining the various costs incident to an individual service, to frame a rate schedule based on that cost would be highly detrimental to trade, though, because of its balanced and symmetrical nature, it finds favour with the traders. This is so for reasons more than one. Firstly, the costs would be found to fluctuate violently, from year to year, from month to month, and on different parts of a railway at the same time. Railway costs are uncertain and fluctuating. This would be a source of great annoyance to the traffic manager, and as transport facilities form the basis of the modern industrial organisation, the uncertainty resulting from the frequent changes in rates schedules would paralyse the trade and industries of the country.

Secondly, the rates based on purely the cost of service rendered will have no relation to the capacity of the article to bear it. It would mean favouring the rich at the cost of the mediocre. But as the latter constitute the backbone of the society and bulk of the commodities seeking transport, railways will have to face an opposition threatening their very existence, and so also their total tonnage will receive a serious

1. Vide, "The Economic Journal", (1897), Vol. II, p. 319-20.

set back.[1] Not only would the rigid application of 'the cost of service' principle hinder all transportation of low grade traffic; it would also prevent any development of long distance traffic, and ultimately spell the ruin of the country. Even the equity of the principle, as applicable to railways, is more apparent than real. Cheap things and of common use ought to be charged less than the expensive articles of luxury.

At this stage another difficulty to the sole application of the cost of service principle should be noted. Railway costs cannot be calculated in advance until the volume of traffic is ascertained, and the volume is ever fluctuating. The volume of traffic itself among other things depends upon the rates quoted. The traffic manager can calculate very little in advance with any claim to precision. He makes a tentative and experimental move. It is only after he fixes the rates, and puts them into operation that he is able to watch its repercussions on traffic. The cost of service can only be ascertained after the service has been rendered and that too only approximately, whereas the rates schedule has to be published sufficiently in advance, so as to give to the traders and manufacturers an opportunity to make the necessary readjustments. A trader's ability to pay transport charges depends primarily upon the cost of his goods and the probable market price he would be able to fetch and therefore it is necessary that he should know in advance the freight per unit his goods would have to pay to be able to reach particular markets. In view of the importance of railway freight on the development of trade and industries it is necessary that the rate structure should have a sound basis which pure application of cost fails to provide. Conjectures and estimates as basis are not only valueless but positively dangerous.

Carriers play a very important part in the social organisation of a country. By annihilating distance, they equalise industrial conditions, and act in a protective or insurance

1. To raise the rates largely on the bulky materials of industry would so restrict the amounts transported as greatly to limit industry, to reduce the volume of manufactures to be carried by the railroads, and to impose serious restraints upon social progress. Vide, Johnson and Van Metre, "Principles of Railroad Transportation". p. 341.

capacity[1] to the merchant or manufacturer. This great obligation upon the carriers shows the delicacy of the task of fixing rates. In fact rates have to be constantly modified in order to keep pace with the ever changing conditions of the country. So, on examining the goods or passenger tariffs of railroads in advanced countries we find that they frequently deviate from the cost of service principle. The cost of service favours a part of the traffic at the expense of the rest. Even if by the cost of service is meant average costs, it would be impracticable as well as inequitable to base rates on average cost which fluctuate widely. Moreover, the cost of transport service is the resultant of manifold conditions under which the transport business is done; and hence variable. The rate charged itself affects the cost of transport service. Accordingly to base rates entirely on cost would be attempting to find one unknown quantity by using another.[2] Thus, it is neither possible nor desirable to fix railway charges solely with reference to the cost of service.[3] Cost of service principle is only of secondary importance in practice.

Before we pass on, let us summarise the limitations to the application of the cost of service principle as the sole basis of the rate structure. The regime of perfect competition in the working of railroads is an ideal difficult to realise[4]; cost is indeterminable

1. In a certain sense carrier exercises the function of an insurance company, but with this important difference that while it has the strongest interest in protecting its established industries against ruinous competition from abroad, it may desire to share in some degree in their development and prosperity by way of reward.
   Ripley, "Railway Rates and Regulation."
2. Sakolski, p. 5.
3. The fact that the railroads operate under the principle of joint costs, as well as of decreasing costs, renders difficult the application of cost of production theory to the determination of fair railroad rates.
   See Patterson, "Economic Problems of Modern Life," p. 219.
   "It is indubitable that sole reliance upon the cost of service as a basis for rate-making is theoretically unsound, and impossible of practical application." Ripley.
4. As Professor Pigou says: "It is plain that anything in the nature of extract limitation of single competition is almost impossible to attain" ....."A considerable gap between the ideal and the actual is likely to remain." 'Wealth and Welfare', p. 265.

and variable; the volume of traffic is ever fluctuating and therefore the tariffs based purely on cost would lack in stability; the preparation of tariffs in advance would not be feasible; and above all much of the valuable part of modern commerce would be penalised, which in turn would react upon the stability of the railways. It is because of its impracticability, therefore, that the cost of service principle has been dethroned by the leading economists from the sovereignty which it might otherwise claim.

With all its limitations, the cost of service principle deserves full attention in the determination of reasonable rates, and no railway manager can afford to neglect it. It has a marked value in rate fixing. While the cost of service is never accurately ascertainable, the railway manager knows that ordinarily it costs more to haul a given tonnage of one commodity, e.g. feathers, than of another commodity, e.g., coal; and that ordinarily it costs more to move goods a long distance than a short one; and by different devices he can approximately estimate the cost of carrying different commodities, and of carrying them over different distances. In other words, though the absolute costs are indeterminable, the comparative cost of carrying a particular unit of traffic can be gauged to a considerable extent. Having ascertained the approximate cost, he has to see that the railway rates should be such as to be profitable both to the shippers (or passengers) as well as to the railway company.

The cost of service fixes the lower limit of the rates, below which rates cannot be reduced, for otherwise the railway would cease to be a profitable concern. No carrier, under normal circumstances, can afford to quote rates which do not cover the cost incident to the service. Even exceptional or special rates, which scarcely cover the prime costs of the service, are given with a view to creating more remunerative traffic in the long run. It is a service auxiliary to further service. Thus the cost of service consideration, though by itself inadequate as a basis for determining rates, is extremely valuable in as much as it sets a limit below which the rates should not fall. It checks the uneconomic use of transport service. Railway industry is a commercial undertaking of the first magnitude and hence the capial invested in it must be reproductive; broadly and in the long run it must be remunerated at the normal rate of interest, either out of railway rates or out of

general taxation, perferably the former.[1] If both direct and indirect benefits to the community resulting from a transport service do not cover the cost, it should not be undertaken.

One is apt to overlook the utility of this principle and the protection that it affords against too low transport charges. One may question as to how low rates prove detrimental to public interests. A moment's reflection will clear the misconception. It is too well known in business economics that no concern can for long continue to run at a loss, lest it should go bankrupt. One starts an undertaking with an optimistic outlook and hopes to find the weather ever favourable. As one succeeds in his venture, he delights in enjoying the lion's share of profits, too confident to make it his monopoly. But, competition, and not monopoly, is the characteristic feature of the business world. Therefore, when the competitors, attracted by the highly remunerative nature of the business, enter the field, the vested interests, out of their jealousy of the new adventurer, whom they take as an intruder, resort to unfair competition and price wars. This is especially true of the railway industry, where rates are made under the condition of monopoly, and competition is looked at with great suspicion. The railway plant being immovable, and utterly useless for any other purpose[2], increases the scope for unfair competition. This exclusion of competition and maintenance of monopolistic conditions, by resorting to unfair methods, proves harmful to the shipper and carrier alike. Hence under conditions of monopoly, such as railways are[3], the cost of service principle must be kept in view ; while under free competition it is bound to obtrude itself automatically[4].

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1. "All the rates must among them cover all the expenses and leave, if possible, sufficient margin to pay interest on capital at the normal rate. Inter se, the rates must be so adjusted that each item of traffic bears its fair share of the total cost of the entire railway service." W. M. Acworth, p. 74.
2. So also a large proportion of the expenses of a railway is independent of the amount of traffic carried, and have to be met at all costs if the road is to remain solvent.
3. The monopoly is doubtless conditional but even then the powers of the railway manager are wide and competition restricted.
4. Refer Ripley, "Railroads", p. 176.

The railway traffic manager, however, is interested more in the total receipts and expenditure of his plant, the cost of any individual item of traffic being of little moment to him. The question which concerns him most is that all the services taken together must get remuneration enough to cover the total joint expenses. This leads the railway manager to base his rates on 'the value of the service' principle. He fixes his rates in proportion to the value of the service rendered or the capacity of the article to bear it. Demand regulates price.

But here too the cost of service principle affords an important check upon the value of the sevice principle. If the price of an indispensable public service like transportation, conducted under monopolistic conditions, was to be determined solely by the demand for it, it would prove too costly to the public. The cost of the service principle affords protection against unduly high rates. In limits the scope, which the traffic managers would otherwise be permitted, to manipulate rates to suit their self-interest. In seeking to increase their revenue, they are apt to raise their rates unreasonably high. In certain kinds of traffic the total tonnage moved is no indication of the equity or reasonableness of the rate charged. In the case of necessities of life, the incidence of increased railway freight is shifted to the consumers, and becomes a regular charge without reducing the consumption. It is only in the case of articles having an elastic demand that the volume of traffic would rise and fall with the rates charged.

Importance of Value as an Element in Rate-making

The Value of Service Principle

The value of service, as a basis for rate-making, begins where the cost of service principle ends. It has already been pointed out that the rates should not be based solely on the cost of service principle, because, even if the apportionment of cost incident to individual traffic were possible, it would penalise commerce in articles with a weight or bulk larger in comparison to their value, precluding thereby the traffic which cannot so bear the transport charge. If the ability to bear the transport charge, in the sense of the proportionate share of the total costs, were to be the sole test of the utility of carriage, a very valuable part of modern commerce would not have grown to any considerable magnitude, because the place utility created by transport and measured in direct money

returns would be short of the transport charge levied, and therefore the traffic would not move. The effective demand for transport of low grade traffic would almost cease. On the other hand, the rates charged for the carriage of articles which within small bulk or weight concentrate great value would be absurdly low in comparison with the value of the article and its capacity to bear the transport charge. Thus, for instance, the traffic manager may even double the existing freight on the transport of watches, musical instruments etc., but even a slight increase in freight on articles like salt, sugar, food grains, cement, coal, etc., would seriously restrict the traffic and cause great hardship to the public.

VALUE SUPPLEMENTS THE COST BASIS

The aid of discrimination is, therefore, sought as a supplement to the cost basis for making up its dificiencies ; and it may be noted that this discrimination, if practised with due caution and consideration, helps all the parties concerned, even those against whom the discrimination is practised. A judicious discrimination in rate-making, therefore, helps all the parties, carrier, shipper and the community ; it is essential for extracting the utmost from the "iron horse". It has been rightly said that cost of carriage is a function of the rates, not the rates of the costs. No doubt, discrimination confers very wide powers on the traffic manager, because the gap between a rate which is averagely profitable and a rate which is only just better than no rate at all is a very wide one and therefore the aid of State regulation is sought lest the railway should use the powers indiscretely. "I am therefore confirmed," observed Profersor Edgeworth "in the deduction that discrimination accompanied with a moderate control is likely to be better, both for the customers and the monopolist, than monopoly forbidden to discriminate"[1] The value of service principle is a very important form of discrimination[2],

1. Vide, The Economic Journal (1913), Vol. 23 p. 225.

2. The value of service principle, says Professor Pigou, is a discriminating monopoly of the third degree.

   Vide, The Economics of Welfare, p. 256 and pp. 240-47.

as applicable to railroads, and its utility has long been recognised.[1]

ABILITY TO BEAR THE TRANSPORT CHARGE

The rate structure should, therefore, be based on the relative value of the service rendered by the carrier. This principle implies that the rates should be proportioned to what the shipper can afford to pay, his ability being measured strictly from the economic standpoint. Ability to pay the transport charge depends, as mentioned above, upon the price that the article seeking transport would fetch in the consuming market.[2] If the value of service received by the shipper were made the basis of railway charges, the rates would be fixed with reference to the value added to an article by being transported from one place to another.

Railways pursuing a policy of enlightened self interest, base their rates upon the value of service rendered. We have already seen that the railroad, by transferring an article where it is in abundance and hence less in demand, to a place where it is scarce and the demand for it is high, augments its value by creating place utility ; and it is this added value of the article which forms the basis of rates according to the value of service principle. The considerations are primarily economic. The charge is apportioned to the value of the service. This railways do, not out of any philanthropic motives, but, because it serves their

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1. Professor Acworth says, "Historically this thing has been recognised and approved by English legislation from the time when Adam Smith applauded the equity of statutory turnpike tolls at the rate of 1*s.* for a light carriage series of Canal Acts and Railway Acts down to the elaborately careful revision of the railway company's charging powers.....". Vide, "The Economic Journal" (1897). Vol. 7, p. 317-8.

2. The ability to pay the transport charge, in the case of goods, depends largely upon their value, in the case of passengers it depends largely upon their income. The lower the value of goods, the larger will be the share of transport charge in the total cost, and the earlier will the freight charge restrict their sales ; the smaller the passenger's income, the less the sum he can afford to pay for conveyance. Given the several marked characteristics of the railroads adverted to above, it would be profitable to carry traffic at lower rates up to a point.

interests best. Sometimes managing authorities adopt policies not compatible with long time welfare of the railway company, and it is here that the State has to step in, and to stop them from taking an action detrimental to their own interests and those of the public.

But the principle of charging what the traffic will bear allows a very wide discretionary latitude, which can be used to promote social welfare as well as to retard it. Its social utility consists in the fair distribution of the economic burden which it helps to bring about. The value of service rendered by the railways to different business concerns and individuals varies *ad infinitum*. There are different kinds of traffic and the value of service differs according to the share of time, bulk, weight, distance, speed, safety, etc. There is a kind of traffic which will barely cover out-of-pocket expenses of carrying it; and the second kind will cover both the out-of-pocket expenses and leave a share to meet the general charges ; the third will cover its full costs and still leave a large and disproportionate surplus more than sufficient to fill up the deficit in unapportioned costs left by the low-class traffic which could not bear its proportionate share of capital costs. It is in the interest of both the public and the railroads that all these classes of traffic must be carried, and at the rates which each class can bear if the utmost value is to be elicited from the railway system. Here the rich contribute of their share to help the poor. Public interest is best served under this arrangement and at the same time the railway plant is also fully utilised. The community, therefore, gets more service on the differential rate schedule than from the uniform rates. In short, the value of service principle promotes flexibility of rates, high utilisation of railway plant and economy in its operation.

The value of the service principle as a guide to railway policy is potential of immense benefit to the community, where it is justly and cautiously applied and where the rates are continually adjusted to changing economic conditions. It is best adapted for a dynamic society. It renders wonderful help to the key industries which would have little chance to survive if the rate structure were based on purely cost of service principle. Important industries like salt, iron and coal are flourishing to-day because of the differential rates quoted to them. The articles which these industries cater for are generally light and bulky ;

and even where they are heavy and compact, their value, which is in fact the measure of ability to bear the freight charge, is so low that the important considerations of bulk and weight, cannot be strictly adhered to. These industries being national industries, the total benefit derived by the community is many times more than the concession allowed to them in the railway freight. Moreover, even from a strictly railway man's point of view they are not uneconomic customers. It is an accepted principle of railway economics that even where the charge which the traffic should properly bear is so low as not to provide a proportionte contribution over and above the actual prime cost of handling the traffic, it is *prima facie* advantageous for the railway to get such traffic.[1] Though these industries, as direct shippers, are less advantageous to the railways, the indirect addition that they make to the railroad earnings is considerable. The products turned out by the key industries form the basic instruments of most industries. The Iron and Steel industry itself adds, both directly and indirectly, immense tonnage to the total carried by the railways.

It is idle to oppose the reduction of rates on the plea that the traffic coming to the railways on the existing rates is sufficient. If a railway gets sufficient traffic on a particular scale of rates, it does not conclusively prove the equity of the existing rates schedule, and the undeterminability or impracticability of further reduction. Where the demand is inelastic a slight increase in freight charge may not materially affect the volume of traffic but all the same it becomes a tax upon the community.

It is often argued by the railway men that the sure sign of a rate being unreasonable is that it instantly puts a check upon the traffic. This statement contains a great deal of truth but for a clearer understanding of the issues involved it is necessary that the nature of traffic should be better studied. It has already been pointed out that there are two broad divisions of traffic, the basis of division being value and demand. The effect of rates on different categories of traffic varies. Thus, the low grade article like cement, where the transport charges form a large part of the total cost of production, it is but natural that higher freight rates might so far increase the price as to check consumption.[2] But

1. A far-sighted railway manager should venture the present in view of the potentialities of the future.

2. For detailed discussion see the Ch. on 'The Indian Cement Industry.'

the other basis of division is the elasticy of demand which a given article possesses, and here the effect of rates on the movement of traffic is slightly different from the case noted above. In the case of articles, which are necessaries of life, having inelastic demand, like sugar, coal, food grains, etc., a limited increase in rates will not readily restrict the consumption of the commodity[1], so that whereas the traffic would remain unaltered, the receipts would record an appreciable increase. Thus, in the case of necessaries of life, an increased freight rate is apt to become a charge upon the community, without reducing their consumption. The traffic would remain the same. So, the volume of traffic moving offers only a partial justification of the rate schedule. After studying the nature of the article and the demand for it, a reduction in the rate should be tried, and its effects on traffic observed. In fact the construction of tariffs must be tentative and experimental. If with the lowering of freight rates the total tonnage hauled increases, even without any substantial increase in the total net earnings, the modified schedule has a valid claim for maintenance though it is not a lucrative business to the railway companies, too eager to earn large profits with the least traffic. This justification is strictly economic.

It may be added that to the railroad, being a public carrier, the increase of traffic in the case of essential articles after lower rates have been quoted, should be an adequate justification for the action, even if the total net receipts slightly fall short of the previous figure. No doubt the railway manager should be guided by the cost of service in lowering his rates, but in the fervour for close adherance to costs social welfare should not be sacrificed. An enlightened railway manager concerns himself more with the total receipts and expenditure of his plant than with individual items. He makes the freight charge on high-priced goods more than they would be if made according to the cost or value of the service, and lowers the rates on bulky articles.

This principle has special importance for India, where the railway rates have been regulated on peculiar considerations, not even strictly economic, much less social. The duty of the State has been limited to fixing the maxima and the minima, leaving to

1. Refer to the respective chapters, Infra.

the individual companies to construct actual tariffs as they thought would best suit their purpose. Consequently railway tariffs have been framed primarily with a view to facilitate export and import trade. Now that the nationalisation of railways has become an accepted principle and some of the important lines are owned and worked by the State, the Railway Board can do great service to the country by revising the railway tariffs in the light of the value of service principle which has been worked on English and American railways. It is not intended to convey that the present rates policy ignores in toto the value of service principle, but a readjustment in the rate structure is necessary. This is a very important problem which the Indian railways, the business community and the general consumers have to tackle in close co-operation, with a view to find a solution acceptable to all parties concerned. There are many popular notions current in the public mind which arose from the attitude of indifference kept up by the railway authorities and is to-day being fostered by the interested parties even though a marked change in the attitude is now discernible. This is due to the fact that public opinion on the railway matters is not well informed. Further, the political associations of the railways and the policy pursued in the past have created a great deal of mistrust and suspecion in the public mind.

LIMITATIONS OF THE VALUE OF SERVICE PRINCIPLE

Enough has been said about the importance of the value of service principle, and its defects as well have been incidentally pointed out. Before we proceed further, let us state the limitations of the value of service principle. Being based on discrimination, this principle permits very wide discretionary latitude to the railway managers, which if unregulated, is apt to be misused. It fails to protect the consumer against exorbitant rates on several commodities. A traffic manager can successfully impose a tax upon the community by raising rates on the necessaries of life having inelastic demand. The fact that in most cases the cost of transport is relatively insignificant as compared with the value of the goods lends further support to the same view.

In the hands, therefore, of an autocratic traffic manager, blind to all social considerations, this principle will result in great injustice and paralyse the trade and industries. The spirit of the

principle would be violated though its letter would remain unchanged. This is so because of the vagueness and ambiguity of the conception of 'what the traffic can bear'. Being elastic and flexible it can be easily manipulated to suit the purpose of the railway company; and the most suitable interpretation put upon it. Thus, what the traffic will bear may mean anything. If social welfare is disregarded it may be raised very high. It is capable of being raised still higher if the demand for the commodity is inelastic. Even a rate apportioned to the full extent of the ability of the article to bear it is bound to be extortionate. What a railway company compels the shipper to pay, by taking an unfair advantage of his weak position, cannot in fairness be attributed to the ability of the shipper to pay it. For instance, the shipper whose factory is located in a certain place is no longer free to accept or reject a given rate; he is committed to the task. He can afford neither to move nor to abandon his factory. He has to run his factory; and in order to be able to continue in the field he has to sell his products at competitive prices. If, however, he is called upon to pay relatively higher rates, whereas his other competitors, whether in the country itself or outside, remain unaffected by the same, the enhanced rate would become a tax upon the industrialist without any gain to the consumer. The absolute level of rates can likewise be manipulated to suit the purpose of the railway company. This susceptibility to manipulation is inherent because the ability in individual cases cannot be accurately measured. Even when told that a given rate has adversely affected the volume of traffic, the railway manager can turn round and say that the rate is fair and that the fall in traffic is due to extraneous factors, beyond the control of the railway authorities. One familiar with the commercial aspect of railroad operation will readily concede that it is very difficult for a non-railway man to question the authenticity of the statement of the traffic manager, who is the sole custodian of the traffic statistics. As a quasi-monopolist, a railway manager always aims to maximise his monopoly gains, and it is only an accident that the interests of the monopolist and the public get interlaced. The railway, being a quasi-monopolist, by organisation, and much more so when it has a more complete monopoly of carriage by reason of the absence of other competitive routes, can charge a rate high enough to deprive the shipper in toto of the added value created by the transport.

Railroads try to absorb all the place value created. Here charging what the traffic will bear is interpreted as charging all that the traffic will bear. No doubt, this tendency is checked by competition, but it does not offer complete protection to shippers and consumers, against the danger of unjustly high rates. This misuse of the discretionary power of rate-making is undesirable. When so exposed and at the mercy of the strong monopolist, the State comes to the help of the shipper. Here we trace the genesis of State regulation of railways in all advanced countries. The railway companies have to be controlled so as not to abuse their powers. Thus, the use most detrimental to the public welfare can be made of the discretionary power conferred upon the traffic managers, unless checked by State regulation.

THE PROBLEM OF REASONABLENESS OF THE RATES CHARGED

Thus, the determination of what constitutes unreasonable discrimination is very difficult. Between the minimum fixed by the "additional" or "out-of-pocket expenses", and the maximum by the value of service to the shipper, to locate the just charge lying between these two extremes, one must give due consideration to the cost of service to the carrier and the competitive conditions under which the service is performed, the value of the service to the shipper, the value of the article, and its importance to the industrial progress of the society. The interests of the carrier, the individual shipper, and the general public must be properly considered in an attempt to determine the reasonableness of railway rates.

State regulation of railway policy and the reasonableness of rates charged by the railroads are closely knit; in fact, the latter is the result of the former. Therefore, it is convenient to study together these two different aspects of the same problem. Railroad industry, being a public utility indispensable for modern society, has been regulated by the State in every country, though the legal obligations imposed have varied according to local conditions and social needs. Different are the devices resorted to by the State to curb the monopolistic tendencies of the railroads, commonest of all being the control of their tariffs. Rates and fares charged by the railways are strictly regulated. Regulation is the very essence of the efficiency of the transport services and their utility to the community. As transport

industry is the barometer of national activity, so is the State regulation of transport efficiency.

"To arrange railway charges on a just basis," says Professor Taussig, "as is the aim of a government in managing a railway, is a task of peculiar difficulty and complexity."[1] Transport industry, like every other industry, must pay its way. The theory of free provision of transport services at the expense of the State stands exploded as being uneconomic and wasteful.[2] Free transport would increase uneconomic traffic. Therefore it is essential that railroads should levy a reasonable charge for the transport services they render. The huge capital sunk in the railway establishment must earn a fair return.

The necessity for a fair return on the capital expended becomes all the greater when the industry is manned by private capital and enterprise. When a private corporation undertakes the finance, construction and operation of a transport service, it does so with the understanding that its capital and enterprise is seeking a profitable investment, for otherwise it would resort to some other field. In a society based on the institution of private property, railway companies under private ownership and management cannot be called upon to work the lines at a loss or unremunerative return, for otherwise it would mean the expropriation of the private property. This limits State regulation. State regulation then means that the railway companies should get a reasonable return on their capital. Railway rates and fares should be so regulated as to allow a fair and just return on the value of railroad property. "Under the pretence of regulating fares and freights, the State cannot require the Railroad Corporation to carry persons or property without reward; neither can it do that which in common law amounts to a taking of property for public use, without just compensation or without due process of law"[3]. State has to protect the rights of the public as well as the property of the Corporation maintaining the public high way.

The question of reasonable charge is hedged with difficulties.

1. Vide, "Principles of Economics", Vol. II, p. 399.
2. Without any prejudice to the problem of granting transport subsidy to national industries.
3. The discussion of Chief Justice Waite of U.S.A. quoted by Shrinivasan, p. 227.

Railroad being an industry of enormous fixed investments, performing a medley of services, frequently at common and joint costs, the task of allocating costs to individual services, as adverted to above, becomes very difficult; and much more so in the determination of a reasonable charge. It seems that the statutory definition of the constituents of a just and reasonable charge will be impossible in the near future. This is so because with the development of science the social organisation is getting more complex, and the transport service, which caters for these complex wants, has become more complex. However, with the help of scientific methods of cost accounting and more accurate railway statistics it has been possible to make an approximate allocation of costs, and therefore the task of public authorities has become easier, though it will always be an embarrassing question.

In a dynamic society, similar to the one we are living in, there can be no one rate that can be said to be fair in all cases and at all times; it varies in different cases and at different times. Before a reasonable charge for the transport of any article at a given time can be determined, the authorities entrusted with this complex and delicate task have to make a detailed study of the various factors that affect the cost of service to the carrier and the value of service to the trader, and thereafter institute a comparison with rates which have been found reasonable in practice on similar commodities carried on the same railway as also on other railways, under circumstances nearly akin and not dissimilar. The rate thus arrived at will be a near approximation to the rate just and reasonable. But the comparison with analogous rates, either held or presented to be reasonable, must be undertaken with utmost sagacity and caution, because the rate cases of leading industrial countries, like England and America, demonstrate the necessity of a thorough study of the different aspects of the rates to be compared, and the vicious results that a superficial comparison of rates leads to. In all such cases the value of comparison depends upon the degree of similarity of circumstances and conditions attending the transportation for which the rates compared are charged. Rate comparison is a valuable instrument when properly utilised, but a hazardous one in the hands of a novice.

Some of the important factors to be examined in the determination of a reasonable railroad charge may conveniently be

summed up : the cost of service to the carrier ; the value of the service to the shipper: the transportation characteristics of the commodity : the total receipts under the rates in question ; the topographical conditions in the territory served ; the length of haul and the number of participating carriers ; the volume of the traffic ; the direction of movement of empty wagons ; and the financial conditions of the carriers.

Next, we pass on to review the criteria and standards of reasonableness as operating on the railway systems of some more important industrial countries with a view to find out as to how the problem has been tackled in this direction.

CRITERIA OF REASONABLENESS AS APPLIED ON THE AMERICAN RAILROADS

In America we find that courts and Inter-State Commerce Commission have given important decisions, on the cases of unreasonable rates brought before them, from which evolved the standards of reasonableness. The principle thus established regulates the rates and fares charged on the American railways. In America, judicial as well as economic authorities are unanimous in their opinion that the interests of the public as well as carrier need adequate protection ; but in cases where it is found that full justice cannot be done to both the parties, the rights of the public have a preferential claim. Railroad Corporation is given rights and privileges and the power to construct and maintain a public highway for the benefit of the public in return for a just compensation for the services rendered.

What are the constituents of a just compensation and how should it be determined ? The answer to this question can be found in the decisions of the American Supreme Court. Operating costs, depreciation and remuneration for the capital expended are the three constituents. A railroad is entitled to earn a sufficient sum annually not only to keep the value of the property invested unimpaired but also some return for the capital sunk by way of profit. But this problem is closely connected with the efficiency of management. If every public corporation, as a matter of right, was entitled to levy transport charges for its services as would be sufficient to defray normal profit without any condition as to the efficiency of its management it would soon

grow inefficient. Efficiency is the ear-mark of progress. This difficulty has led to complications in the railroad legislation. Stimulus to efficiency is indispensable; profits are a sufficient stimulus to efficiency. They nerve the shrewd and the alert and weed out the inefficient. So the State in America, in order to keep the railroad authorities alert and efficient allows fair profits only to those corporations which are under efficient and honest management. In other words, the State so regulates the rates and fares charged on the railways as would yield a return on the capital expenditure just enough to attract necessary investment under honest, efficient and economical management. This brings to relief one most important characteristic of American railroad regulation. In America failure to produce fair profits on the capital invested in a railroad corporation is not a conclusive proof of the unreasonableness of the tariff in force. "There may be circumstances which would justify such a tariff; there may have been extravagance and a needless expenditure of money; there may be a waste in the management of the road; enormous salaries, unjust discrimination as between individual shippers resulting in general loss."[1]

The determination of a fair return on the aggregate property used for public convenience of a railroad is difficult and presupposes an expert technical knowledge and unbiased judgment on the part of the authorities entrusted with the task. Legislature, by its very nature, being found unqualified for the task, the Inter-State Commerce Commission in 1922 was empowered to fix whatever rate it regarded fair. This action has proved beneficial, both to the public and the carrier, in as much as the rate regulation is free from the gambles of the party-politics and imparts certainty, an essential condition for the progress of trade and industry.

CRITERIA OF REASONABLENESS AS APPLIED ON BRITISH RAILROADS

In Great Britain, railways are regulated by the Railways Act of 1921. The object of the Act is, on the one hand, to protect the public against excessive charges and unfair treatment and give it a share in the benefits arising from amalgamation, and, on the other hand, it purports to secure to the shareholders a reasonable

1. Decision of the Supreme Court, quoted by Shrinivasan. p. 231.

return on the capital. In fact the Act has liberated the railway companies of the State control, yet the change has been little short of full nationalisation of railways. This is explained by the fact that section 20 of the Act establishes a Court styled the "Railway Rates Tribunal", vested with wide permanent jurisdiction in regard to railway charges.

The English Act fixes "the standard revenue", a revenue which a company with efficient and economical working and management would yield, based upon the revenue of 1913.[1] The Railway Rates Tribunal, an essentially judicial body, is made responsible to so fix the standard rates as would yield the standard revenue. In event, however, of the net revenue increasing substantially above the standard, eighty per cent. of the surplus was to revert to the users of the railways in form of reduced rates and fares, and the remaining twenty per cent. was to go to shareholders as an incentive to spur the railway companies to economy and efficiency of management.[2]

It is evident from the foregoing that the problem of reasonableness of rates has been solved in Great Britain in a characteristically English manner ; it is both conservative and practical. Being free from the vicissitudes of property valuation it provides adequate security for private investment. Commercial classes and the travelling public are equally protected, for eighty per cent. of the surplus earned by the railway companies, above the standard revenue, returns to the users of the railways in form of reduced rates and fares. The English method has in its favour increased certainty and simplicity. But on the whole, both the American and the English methods are admirably fitted to meet the growing requirements of advanced and democratic countries.

CONCLUSION

This is, in short, the problem of railway rates. The task of fixing a reasonable rate is at once most delicate and difficult ; those entrusted with the task of rate-making can do no better than make tentative experiments, each step being a milestone in the progressive realisation of maximum satisfaction. We have stated the problem, analysed the nature of the difficulties and noted the

1. Section 58 of the Railway Act 1921.
2. Section 58 of the Railway Act 1921.

experience gathered by England and America in this direction. This experience, doubtless, offers a valuable aid to rates authorities and tribunals, but their task is no less delicate and embarrassing to-day than what it was a decade ago. Rate-making in a dynamic society, presents new problems of ever increasing complexity. Categorical generalisations are impracticable. To repeat, there cannot be any one rate said to be fair in all cases and at all times; it varies in different cases and at different times. Each case has to be studied separately, and both the cost and the value principles have to be continually borne in mind.

CHAPTER II

COTTON

RAW COTTON EXPORTS

The important role of railway rates in the development of cotton industry hardly needs an emphasis. With the development of cotton mill industry in India on the one hand and the rapidly rising imports of cotton fabrics on the other, the necessity of suitable rates to foster the growth of the indigenous industry has acquired an added force. The scope of the study then falls into two broad divisions, raw cotton and manufactures.

CLASSIFICATION OF COTTON IN RAILWAY TARIFFS

Raw cotton for transport by rail, has been sub-divided into cotton full-pressed, half-pressed and loose. Taking up cotton full-pressed, we find that in the General Classification of Goods, it is classified as 4th. class R.R. This, however, is subject to exceptions on different railways to suit their peculiarities of working. The B.B. & C.I. Railway has adopted the general classification subject to the restriction that when cotton, full-pressed, is booked from certain stations to Bombay (B. P. T. Rly.) it is charged 2 pies per maund less than the ordinary rates. But, on the T.V. Railway, cotton, full-pressed, is classified as 6th. class O.R. On the E.I. Railway general classification has been adopted subject to the conditions that when cotton, full-pressed, is booked at O. R. from E. I. Railway stations and via to Howrah, it is charged 6 pies less than the 4th. class rate. In the G. I. P. Railway Tariffs we find that cotton is charged C. schedule rate[1]. C. Schedule rate is 1 pie per maund per mile, for any distance, exclusive of terminal and short distance charges. The N. W. Railway has adopted the 4th. class rate for full-pressed cotton, but when booked to Karachi at O. R. 6 pies per maund less than the R. R. rates are charged.

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1. The Tariff runs: "Over the G. I. P. Section this rate supercedes the general classification, class 4 rate... When cotton, full-pressed, is booked at O. R. charges will be made over the G. I. P. section 6 pies lower per maund than at the C. schelule rate, except where lower station-to-station rate is quoted."

Cotton (raw), half-pressed is placed in 6th. class R. R. in the General Classification. On the B. B. & C. I. Railway it is classed 8th. class O. R. The G. I. P. Railway charges it 9th. class R. R. The E.I. and N.W. Railways have accepted the general classification without exception. Cotton (raw), loose, is put in the 8th. class R.R. in the General Classification, but B. B. & C. I. and G. I. P. Railways charge 9th. class R. R. In the discussion that follows we propose to concentrate our attention on full-pressed cotton and the railway freight charged thereon.

The classification of full-pressed cotton, analysed in the preceding paragraph, was adopted in the year 1922 and has been continued unchanged since then. We have noted in the preceding paragraph that the classification of the G. I. P. Railway is higher than that of the other railways. This comes as an apparent surprise to the student of railway economics. The G. I. P. Railway was the first line constructed to open out the cotton tracts of the country by linking them with the port of Bombay, and to-day it is one of the premier railway lines of the country, owned and managed by the State. Railroad industry is subject to the laws of increasing returns and the lines which are larger in length and traverse over fertile tracts must be able to work more efficiently and economically; they must be able to provide better and more prompt service to the shippers. In this respect the G.I.P. Railway has obvious advantages. But it is unfortunate that this line which hauls the greatest tonnage of cotton should charge higher rates than its confrere. Doubtless, for carrying cotton from C.P., Berar and Khandesh to Bombay, the G.I.P. Railway has to traverse Ghats, which raises the cost of haulage slightly, but it should be the aim of railway authorities to combat the physical difficulties, overcome the disadvantages by scientific improvements and efficient operation of the lines. The action of the Railway Board in authorising a higher scale of rates on this line cannot be justified. A railroad to be efficient must be able to quote lower rates and carry maximum amount of traffic. Efficiency and lower rates help inter se. Efficient working means the utilisation of the maximum carrying capacity of the plant and lower operating rates. Maximum utilisation of the plant and lower operating ratio help the railways in developing traffic and tapping new sources which further help to lower the operating ratio. The G.I.P. Railway which had the good fortune of tapping the most fertile tracts should not have

slept over in lethargy, thinking that traffic will come ; per contra, it should have tried to develop its cotton tracts. This step-motherly attitude is being more resented now that the G.I.P. is owned and managed by the State. It is now supposed to be worked by the State for the benefit of the country and not for profits. We shall therefore, proceed to examine the rates charged on cotton on this line and their effects on the development of the industry. It shall be our purpose to examine the current rates and thereafter institute a comparison with the post-war rates, and indicate their incidence on the traffic. Then we shall examine the assumption on which the higher maxima have been authorised and point out the justification for their continuance in the future or otherwise.

IMPORTANCE OF DIFFERENT RAILWAYS AS CARRIERS OF RAW COTTON

Before proceeding with our discussion it would be interesting to study the relative importance of different railways as carriers of raw cotton because this would help us in our examination of freights charged by individual lines and their effects on the development of industry and trade. The statement in appendix I shows the tonnage of raw cotton carried on more important railways and the earnings derived therefrom as well as the total traffic shipped on all the railways and the earnings thereof. This table is of interest to us for more than one reason. In the first place it precisely sums up the importance of raw cotton traffic in the working of our railways. The last column indicates that in the year 1929-30, Indian railways as a whole carried about 17 lakhs of tons of raw cotton which brought a return of nearly 450 lakhs of rupees. Earnings have recorded an unprecedented increase, though not the tonnage. We find that in the year 1925-26 the total tonnage was 17·1 lakhs of tons, but the earnings were only 416·3. The increase in earnings in 1929-30 is more remarkable when we take into account the recent acute industrial depression, slump in prices and political discontent in the country. Secondly, it will be seen that as carriers of raw cotton the G. I. P., the B. B. & C. I., and the N. W. Railways are more important because they haul nearly three-fourths of the entire tonnage. In 1929-30, these three railways carried nearly 11·4 lakhs of tons out of a total of 17 lakhs. Thirdly, the statement clearly demonstrates the leading position of the G. I. P. Railway as a carrier of raw cotton in this

country. We shall confine our discussion on the rates charged by these three railways, only.

RATES ON THE G. I. P. RAILWAY.

To resume our discussion of the freights on the G. I. P. Railway, we find that a number of special station-to-station rates are quoted for traffic to Bombay. These rates are generally lower than the class rates and facilitate the export of raw cotton. The prices which the Indian cotton grower fetches for his crop, are determined by world competition particularly because a fairly good portion of his crop is meant for export. Needless to say then, that the lower rates quoted by the railways help the agriculturist; the cost of transport forms part of the cost of production and has to be shouldered by the producer. The following are a few station-to-station rates quoted by the G. I. P. Railway for cotton booked to Bombay from the stations mentioned therein :—

Rates for Cotton (raw), full-pressed, from the undermentioned Stations to Bombay for the year 1932.

Distance.	*Station.*	*Rates* per maund.*	*Distance.*	*Station.*	*Rates* per maund.*
		Rs. a. p.			Rs. a. p.
234	Kurdwadi	1 4 0	341	Khamgaon	1 12 11
400	Yadgiri	1 4 9	386	Murtijapur	2 0 8
443	Raichur	1 0 5(R.R.)	441	Dhamangaon	2 0 8
218	Ahmednagar	1 2 8	453	Pulgaon	1 15 11
178	Nandgaon	0 15 4	493	Hinganghat	2 0 1
204	Chalisgaon	1 1 6	353	Khandwa	1 7 0
239	Dhulia	1 2 6(R.R.)	417	Harda	1 12 11
232	Pachora	1 3 10	616	Jubbulpore	1 13 6
261	Jalgaon	1 6 3	521	Bhopal	1 14 10
296	Amalner	1 4 9(R.R.)	635	Ujjain	1 9 7
276	Bhusaval	1 7 6	839	Cawnpore	2 3 8
363	Akola	1 14 9	763	Gwalior	2 8 3
419	Amraoti	2 1 7	838	Agra City	2 8 3
472	Wardha	1 14 4	868	Muttra	2 7 5
520	Nagpur	1 11 5			

*These rates are at O. R. except where mentioned otherwise.

To take up the local rates from Chalisgaon, Dhulia, Pachora and Jalgaon. The rate from Chalisgaon is Rs. 1-1-6 for a distance of 204 miles. It works out at 1 pie per maund per mile, plus 6 pies. Similar are the rates from Pachora and Jalgaon. But the rate from Dhulia for a distance of 239 miles is lower. This is a case of undue preference, and more so when one recalls the condition of risk. Again the rates from Nagpur to Bombay

for a distance of 520 miles is Rs. 1-11-5, but from Akola for 363 miles the rate is Rs. 1-14-9. Again from Kamgaon for 341 miles the rate is higher than that from Akola. Similarly the rates from Amraoti, Murtijapur, Dhamangaon, Pulgaon and Hinganghat, are higher than the rates from Nagpur and Wardha. The rate from Nagpur works out at ·633 pie per maund per mile, inclusive of terminal and other charges and the rate from Wardha at ·77 pie per maund per mile inclusive of all other charges. Therefore, the rates from Murtijapur, Dhamangaon, Pulgaon and Hinganghat deserve a little more scrutiny. From Hinganghat for 493 miles the rate is Rs. 2-0-1, but for a smaller distance of 386 miles from Murtijapur, the rate is Rs. 2-0-8. The rate from Murtijapur works out at 1 pie per maund per mile plus 6 pies. It will thus be seen that the rates on the G. I. P. Railway are always higher than 1 pie per maund per mile except where competition has forced down the rates. Here the competition is with B. N. Railway which carries cotton to Howrah.

Mr. Ghose while studying freight on cotton was confronted with the same anomalies on the G. I. P. Railway in 1917[1]. They have continued unabated, so that to-day after more than 17 years we find the same problem before us. The problem has become more serious now because the rates have been increased and the prices per contra have slipped to the lowest level recorded in the last three decades. This has increased the burden on the cultivators, by increasing the incidence of transport costs. The area under cultivation would have received a serious setback but for the slump in the prices of other commodities. The current prices scarcely give an adequate return to the cultivators, but their circumstances in life are such that despite the unremunerative character of the crop, they are forced to grow it because the prices of other crops have also fallen. Even to-day, notwithstanding the fall in the prices cotton continues to be a most important commercial crop to which the poor cultivator can look with hope.

Having studied the prevailing rates on the G. I. P. Railway we shall now institute a comparison between these rates and those quoted by Mr. S. C. Ghose, and elucidate thereby the difficulties under which the cultivators of cotton are working. It is, however, necessary to mention at this stage the ambiguity of the rates

1. See Mr. Ghose, S. C.—"Monograph on Indian Railway Rates," pp. 215-18.

quoted by Mr. Ghose. He has given rates on cotton (raw) carried on different railways and the traffic carried on those lines from different stations. The tonnage given by him, as he mentions, is of the year 1911, but the rates quoted are, we think, of the year 1917, when he actually wrote the book, or that there have been no changes from 1911 to 1917. We think so because the rates on the B. B. & C. I. Railway, as referred to by him, are of the year 1917. This being the only book dealing with railway rates available to us and the reluctance of the railway authorities to help us in the matter we shall accept these rates for comparative study whenever necessary. Some of the important cotton despatching stations on the G. I. P. Railway and the rates therefrom are given below:—

Rates to Bombay

Distance.	*Station.*	*Rates in 1917.* O. R.	*Rates in 1932.* O. R.	*Percentage increase.*
239	Dhulia	0 11 6	1 2 6	61·0 per cent.
232	Panchora	0 15 1	1 3 10	31·5 ,,
261	Jalgaon	0 14 7	1 6 3	53·0 ,,
280	Erandol Road	0 13 6	1 4 9	47·5 ,,
340	Shegaon	1 4 11	1 12 10	33·8 ,,
363	Akola	1 6 2	1 14 9	38·7 ,,
419	Amraoti	1 4 7	2 1 7	63·2 ,,
472	Wardha	1 2 5	1 14 4	64·7 ,,
453	Pulgaon	1 3 0	1 15 11	68·0 ,,
341	Khamgaon	1 4 11	1 12 11	38·2 ,,
308	Malkapur	1 3 2	1 10 2	36·6 ,,
353	Khandwa	1 2 8	1 7 0	22·2 ,,
520	Nagpur	0 14 1	1 11 5	83·2 ,,
493	Hinganghat	1 0 2	2 0 1	98·4 ,,

The above table shows the rates charged in 1917 and those charged to-day, with the percentage increase in each case. On a review of rates in 1917 we find that the rates from the cotton despatching stations in Berar were—as they still are—relatively higher than those from the despatching stations in C.P. The rate from Akola for 363 miles was Rs. 1-6-2 whereas from Nagpur for 520 miles the rate was Rs. 0-14-1 only. Similarly the rates from Hinganghat, Amraoti, Pulgaon, Khamgaon, were higher than that from Nagpur, though the distance was lower and the conditions of carriage were the same. The railway plea was that the lower rates for higher distances were necessitated by the competition of the B. N. Railway, which joined the G. I. P. Railway at Nagpur,

and carried traffic to Howrah. This was a clear case of undue preference which needed a scientific and impartial enquiry by the Railway Commission as provided in the Railway Act of 1890; but the enquiry was never undertaken. Under the ostensible plea of competition, Indian railways, impervious to public opinion, have perpetrated many sins of commission and omission, and the present case is only one of them.

Mr. Ghose's Criticism of the Policy

Mr. Ghose, the Special Officer with the Railway Board, opined that the practice was undesirable and that it needed a corrective. He advocated three alternative remedial measures:— (i) either the B. N. Railway should cancel its special rate from Nagpur, or (ii) the G. I. P. Railway should raise its rates from Nagpur to the same level as those from the intermediate stations and lose thereby a part of its traffic, or (iii) it should at least reduce the rates from all intermediate stations on the line to the level of the Nagpur rate. He, however, gave up his last, and the most important proposal on the ground that "it is doubtful whether this will effect any reduction in the prices of a commodity like cotton which fetches at the despatching stations in Berar Rs. 20 to Rs. 27 per maund, (if there is any reduction in the price at all the loss in the railway freight will be more than 40 per cent)".[1] He, therefore, advocated the increase of rates on both the G. I. P., and B. N. Railway, as an escape from the impasse.

We submit that the remedy proposed was far from being efficacious. Though it would be idle to deny the fluctuations in the prices of cotton, it cannot be accepted that the reductions in rates would not have been properly availed of by the producers and the consumers. Though the middlemen may speculate, the producers and consumers proper protect themselves against the vagaries of market and unhealthy speculation. The marketing of cotton is highly organised and the big exporting firms as well as the managing agents of the cotton mills have their wide stretched network of agencies which study the conditions and make purchases on the spot, and through the help of hedge contracts eliminate the uncertainty of speculative fluctuations. The Japanese exporting firms, for instance, have a highly efficient marketing organisation

1. Ghose, S. C.—"Monograph on Indian Railway Rates", P. 217.

and it would be unfair to deny that they do protect themselves against fluctuations. Besides, the price of Indian cotton being determined by the American quotation, the shrewd and alert business men hedge themselves and the transport costs are shifted on to the cultivator who never understands the subtle mechanism, though he feels the pinch. We submit, therefore, that the plea that "a reduction of Rs. 0-8-1 per maund will have hardly any effect," is questionable, and whatever little truth it might have had then, to-day it is untenable.

In the light of the foregoing discussion if we study a little further the preceding table we find that there has been an appreciable increase in the rates. The percentage increase as shown in the last column is very instructive. The railway authorities, in pursuance of the suggestions of Mr. Ghose, have raised the rates from those stations which enjoyed a relatively lower rate so as to place the different despatching stations on the same level, apart from the general increase in the rates. Therefore, we find that the increase in rates from Hinganghat, Nagpur, Wardha and Amraoti has been 98·4, 83·2, and 64·7 per cent. respectively. Similarly, the rates from Dhulia, Jalgaon, Amraoti and Pulgaon have been raised by more than 60 per cent. Apart from these high increases we find that the general increase in rates has been more than 30 per cent. except in the rate from Khandwa which has been raised by 23·2 per cent. only. Thus, the rates have been increased varying from about 30 per cent. to 98 per cent.; they are excessive and anomalous.

It is a relief to note that the G. I. P. Railway authorities have taken a more reasonable attitude, have modified their policy portrayed above, and in response to the public opinion reduced in 1934 the rates from some of the more important cotton growing centres to Bombay, as will be seen from the following table :—

Distance.	*Station.*	*Rates per maund.*	*Distance.*	*Station.*	*Rates per maund.*
		Rs. a. p.			Rs. a. p.
239	Dhulia	0 14 2	341	Khamgaon	1 8 6
261	Jalgaon	1 2 1	386	Murtijapur	1 12 3
296	Amalner	0 15 5 (R.R.)	353	Khandwa	1 3 2 (R.R.)
276	Bhusaval	1 3 5	417	Harda	1 8 3
393	Akola	1 10 4	521	Bhopal	1 9 10
419	Amraoti	1 15 0	839	Cawnpore	1 10 11

From the foregoing table it will be seen that the railway authorities have indeed offered very substantial reductions and removed some of the anomalies referred to in the preceding pages. For instance, rates from Akola and Amraoti which were higher than that from Nagpur, for a shorter distance, have been reduced. The rate from Amraoti has been reduced from Rs. 2-1-7 to Rs. 1-15-0. But the anomalous position in some cases still subsists. The rate from Amraoti and Wardha is still higher than the rate from Nagpur. Again the reduction of rates from Jalgaon leaving the rates from Pachora unchanged has created the anomaly of higher charge for shorter distance. These are some of the anomalies which can be easily removed.

Rates on the B. B. & C. I. Railway

The B. B. & C. I. Railway, it will be recalled, also hauls considerable tonnage in raw cotton, because it passes through some of the most fertile cotton growing tracts. The table given below shows the rates of 1917 and those in operation in 1932.

Rates on Cotton (raw) full-pressed to Bombay.

Distance.	*Station.*	*Rates in 1917.*	*Rates in 1932.*	*Percentage increase*
147	Navsari	0 3 11	0 8 7	120%
165	Surat	0 4 6	0 9 6	111%
174	Sanjan	0 4 9	0 10 0	110%
196	Anklesvar	0 4 9	0 11 2	135%
202	Broach	0 4 9	0 11 5	140%
218	Palej	0 6 2	0 12 3	99%
227	Miyangam	0 6 7	0 12 9	96%
334	Itola	0 6 11	0 13 1	89%
348	Viramgam	0 8 10	1 3 0	115%

As can be seen from the above table, the increase in rates has been on the average more than 100 per cent., and in some cases, as from Broach, the increase has been about 140 per cent. If we compare the rates of 1914 as quoted from some of the stations the percentage increase becomes still more glaring. The rate, for instance, from Navsari to Bombay in 1914 was as. 3-3 per maund and the rate quoted to-day is as. 8-7 per maund, an increase of about 164 per cent. If we work out the rate per maund per mile, we find that the rate from Navsari to Bombay was about ·265 pie in 1914, which was raised in 1916 to about ·32 pie. The rate as

quoted at present from Navsari works out at about ·70 pie per maund per mile. The maximum rate authorised for the 4th. class is ·62 pie per maund per mile to which terminal and other charges have to be added. It is clear, therefore, that the maximum rate is being quoted from Navsari. The rate from Broach is still more interesting. In 1914 the rate was as. 4–1 per maund or ·24 pie per maund per mile. It was raised in 1916 to as. 4–6 or ·267 pie per maund per mile and in 1919 to as. 8–2 or ·485 pie per maund per mile. The rate quoted at present is as. 11–5 per maund or ·678 pie per mile. It follows, therefore, that the B. B. & C. I. Railway has raised its rates on cotton to the maximum authorised limit.

Relative Position in the Pre-war Period.

The percentage increase in the rates over those of 1917 or 1919 has been higher over the B. B. & C. I. Railway than that on the G. I. P. Railway. This has been due to the agreement between the different railways to equalise freights. As can be seen from the foregoing examination the rates over the B. B. & C. I. Railway were lower than the G. I. P. Railway rates. The rate from Pachora, for instance, was Rs. 0–15–1 for 232 miles in 1917 over the G. I. P. Railway ; per contra the B. B. & C. I. Railway rate from Itola for 234 miles was Rs. 0–6–11. Thus the difference between the two was more than double. During and after the Great War, railways resorted to agreements and combination so that those lines which quoted lower rates hithereto raised the level of their rates. The B. B. & C. I. Railway, therefore, followed the same policy and raised its rates twice, in 1916 and 1919. The changes in rates from some stations were as follows :—

Station.	*Rates per maund.* (1914) Rs. a. p.	*Rates per maund.* (1919) Rs. a. p.
Broach	0 4 1	0 8 2
Ahmedabad	0 9 1	0 12 7
Cawnpore	1 2 7	1 6 1
Ambala Cantonment	0 15 10	2 5 5
Meerut	1 0 9	2 1 7
Saharanpur	0 15 8	1 10 11

In 1922 the rates were again increased and they continue at the same level to the present day. We have already examined the

present rates and cannot help repeating once again that the increase has been very high. Of course it is difficult to accept that in view of rapid rise in prices during and after the war, which had substantially raised the working expenses, the B. B. & C. I. Railway should, as a matter of justice, have enhanced its rates to maintain its efficiency. If the pre-war level of rates was a paying one, there was no reason why the B. B. & C. I. Railway should have raised the level of its rates so high as to bring it in line with that of the G. I. P. Railway. Albeit, this increase was not felt during the boom period when the prices of cotton were soaring, but to-day the rates are affecting the cultivator adversely and need to be immediately revised. It is clear from the foregoing discussion that the agreements between the railways in India have resulted in raising the general level of rates.

This was the position in 1932. Now the position has radically changed. The railway authorities seem to have been shaken from their traditional conservatism in matters of rate making by the severe trade depression and the consequent necessity for better efficiency and economy in transport costs. Railway rates have, therefore, been substantially reduced as will be seen from the following table:—

Rates on Cotton full-pressed to Bombay in 1935.

Distance.	*Station.*	*Rate (R. R.)*			*Distance.*	*Station.*	*Rate (R. R.)*		
		Rs.	a.	p.			Rs.	a.	p.
147	Navsari	0	7	2	218	Palej	0	8	0
165	Surat	0	5	1	227	Miyangam	0	10	3
196	Ankleswar	0	11	2	234	Itola	0	10	8
202	Broach	0	6	5	348	Viramgam	0	5	11

These rates, when compared with those in operation in 1932, bring to clear relief the nature of reduction offered. That the reduction is substantial and very helpful to raw cotton trade can hardly be denied, but with it there have crept in certain discrepancies which need be noted. The rate from Surat when compared with that from Navsari is lower for a longer distance. Similar discrepancy can be found when the rate from Navsari is compared with that from Broach or Viramgam. This needs be removed.

RATES ON THE N. W. RAILWAY

The rates on the N. W. Railway support the conclusion we have arrived at. The importance of North Western Railway as a

carrier of raw cotton has long been recognised because it links together the irrigated tracts of the Punjab where cotton of superior quality known as the Punjab-American is grown ; but its importance in future, now that the most important irrigation works, known as the Sukkur Barrage or the Lloyd Barrage, have been constructed, is bound to grow. The Lloyd Barrage which is situated about three miles down stream from the Sukkur was opened by the Viceroy in January 1932, with canals, channels and distributaries extending over about 6,211 miles. The Barrage is estimated to command an irrigable area of about 7·5 million acres.[1] Under the new scheme the total area under cotton crop is expected to rise to about 8 lakhs acres. The new area will preferably be devoted to the cultivation of American cotton, which is in demand by the local cotton mills for manufacturing yarn of high counts and is largely imported at present. Therefore, the freights charged by the N. W. Railway on the transport of raw cotton for export as well as local consumption will have to stand better public scrutiny in future. The rates, quoted at present from some important cotton despatching stations on the N. W. Railway to Karachi are given below :—

Rate on cotton (raw) full-pressed to Karachi for 1932.

Distance.	*Station.*	*Rate. (O. R.)*			*Distance.*	*Station.*	*Rate. (O. R.)*		
		Rs.	a.	p.			Rs.	a.	p.
863	Rohtak	2	8	1	833	Gurdaspur	2	11	0
576	Multan City	1	13	9	802	Jullundar City	2	9	6
744	Shahpur	2	6	5	829	Hoshiarpur	2	10	10
685	Lyallapur Jn.	2	3	5	806	Ludhiana Jn.	2	9	8
652	Montgomery	2	1	8	843	Ambala City	2	11	7
727	Ferozpur City	2	5	7	834	Hissar Jn.	2	6	1
788	Gujrat	2	8	6	721	Sargodha Jn.	2	5	3
806	Sialkot Jn.	2	9	8	653	Gojra Jn.	2	1	9
755	Lahore Jn.	2	7	0	711	Sangala Hill Jn.	2	4	9
788	Amritsar Jn.	2	8	9					

It will be seen in the above table that the distance over which cotton has to be carried before it reaches the port of Karachi for export is greater as compared with that from cotton tracts on the G. I. P. or B. B. & C. I. Railways. This obviously increases the

1. " The caprice of the Indus," aptly remarked the Director of Agriculture, " has governed the country like an absolute despot. For the first time in the history of Sind the Indus is to be harnessed. In future it will serve, not rule."

incidence of transport costs on cotton grown in the Punjab. The Railway line is, however, not to blame for this because it is a geographical disadvantage which is being slowly overcome by efficient transport facilities. Railways have rendered admirable help in overcoming these obstacles of distance, but complete elimination of distance is not feasible in the near future. As for the freight charge, the N. W. Railway, like other railways, permits a special concession of 6 pies per maund when cotton (raw) full-pressed is booked to Karachi, at owner's risk, as previously referred to. If we work out the rate from Multan city to Karachi for 576 miles it comes to ·62 pie per maund per mile exclusive of all other charges. The rate from Gurdaspur to Karachi for 833 miles is Rs. 2-11-0 which works out at about ·62 pie per mile exclusive of all other charges. The North Wastern Railway, therefore, charges almost maximum rates, even for long distance traffic. This is undesirable. When the State lays down a maxima for certain class of rates, the intention of the regulating authority is that the actual rates charged should be lower than the maximum prescribed and such as the traffic can reasonably bear. The discretionary powers conferred upon the traffic manager are expected to be exercised in the interests of the community; he should be guided by enlightened self-interest. As the prices of Indian cotton are determined by the American market, and as the Indian crop has to compete in the international market for sale, it is incumbent upon the railways serving the cotton growing areas to help the producers, because both the parties profit inter se. Indian railways, however, charge maximum rates authorised by the Government and if the maxima prescribed were removed as has been recently advocated, it is not improbable that the rates might record a further rise. This problem has become serious to-day because of the heavy fall in prices.

CURRENT RATES COMPARED WITH THOSE IN 1917.

It would be interesting to note at this stage the increase in rates on the N. W. Railway during and after the War. We submit

below a table of rates as quoted in 1917 and 1932, and the percentage increase :—

Distance.	*Stations.*	*Rates in 1917.* Rs. a. p.	*Rates in 1932.* Rs. a. p.	*Percentage increase.*
575	Multan	1 0 9	1 13 9	75·1 per cent.
111	Hyderabad	0 3 7	0 5 9	60·93 ,,
786	Amritsar	1 6 8	2 8 9	76·1 ,,
684	Lyallpur	1 3 9	2 3 5	82·97 ,,
721	Sargodha	1 4 9	2 5 3	79·5 ,,
898	Saharanpur	1 6 5	2 10 0	87·32 ,,
847	Ambala	1 6 1	2 11 7	97·35 ,,
802	Jullunder	1 6 10	2 9 5	81·4 ,,
755	Lahore	1 5 9	2 7 0	79·3 ,,
711	Sangla Hill	1 4 9	2 4 9	77·1 ,,
653	Gojra	1 2 11	2 1 9	78·4 ,,

The increase in rates, as can be seen from the table, has been on the averages about 80 per cent. No doubt this has been a very heavy increase. It could be justified during the boom period, but in normal times, not to talk of the present trade slump and catastrophic fall in prices, it is questionable. The maxima as prescribed by the Government were based in view of the then existing price level and the necessity for rehabilitating the railway system which was starved during the war. Besides, it was the upper limit to be reached only in times of need and not a normal feature of the policy.

From the foregoing discussion it follows that the rates before the War were lower on the B. B. & C. I. Railway as compared with the rates of the N. W. and G. I. P. Railways, but the combination amongst the railways after the outbreak of the War, and the rise of prices led to an increase in rates so that the rate level on all the railways was equalised, except on the G. I. P. Railway which has a higher maxima. The increase in rates were stabilised at a higher level in 1922, and continue to this day. The rates charged are almost the maximum authorised. The Policy pursued needs a radical revision on national lines.

The railway freight on cotton has been examined and the necessity of its revision stressed. We have reserved the discussion of rates on the cotton, both indigenous and imported, consumed by the cotton mills within the country, to which we shall presently turn our attention. The study of Indian cotton industry has for convenience been subdivided into two broad divisions, raw cotton and local mill industry. But the division is primarily one of

convenience and not of any fundamental difference in character. The foregoing discussion has been centred mainly on the marketing of raw cotton in general, and in the pages that follow we shall study the mill industry. In this study, however, we shall concentrate our attention on the railway freights charged to and from some important mill centres on their raw materials and finished products, and then compare the rates charged on competitive imports. Obviously, therefore, we shall endeavour to indicate the nature of rates charged on internal production as well as imports, and the advantage, if any, possessed by the latter over the former. Wherever possible, we shall campare the current railway rates with the pre-war ones and show the change.

Bombay Cotton Mills

The study of the organisation of Indian cotton mill industry shows the predominance of Bombay centre in the localisation of cotton mills, though of late the position is being seriously questioned. Growing importance of the island of Bombay as stronghold of cotton mill industry in India and the subsequent diversion to other internal centres is of special interest to the student of transport economies because it admirably explains, inter alia, the importance of transport facilities in determining the localisation of an industry. Its vicinity to the port of Bombay is an asset as well as a liability, as we shall presently see. This liability coupled with the less favourable geographical position has aggravated the intensity of the depression. For all sorts of imports, like machinery, stores, chemicals, cotton, etc. Bombay mills have nothing to pay by way of railway freight; and therefore, we shall exclude them from our discussion. Railway rates are important on raw cotton carried from the internal centres of production and on the transport of finished goods for consumption in upcountry centres. As for the raw cotton we have already seen that both the G. I. P. and B. B. & C. I. Railways quote special rates to Bombay. This appears to be in favour of the Bombay cotton mills, but the advantage is more apparent than real. Vicinity to the sources of raw material and power and the market for the finished products are the primary considerations in determining the localisation of the industry. The advantage in respect of raw materials which Bombay cotton industry once possessed has been outstripped by the erection of mills in the

very heart of the cotton growing areas like Ahmedabad, Sholapur, etc. Indeed, for the same distance Bombay cotton mills pay lower rates than the upcountry mills but that is true only of a part of the traffic. For the major share of the requirements of raw cotton Bombay mills have to pay higher transport charges because of the greater distance. Nagpur mills, for instance, when purchasing cotton from Wardha, Hinganghat and Dhamangaon pay as. 4-10, as. 6-7, and as. 7-2 per maund respectively by way of freight charge. Similarly, when Sholapur mills purchase cotton from neighbouring cotton growing areas like Barsi town and Pandharpur they pay only as. 3-0, and as. 5-4 per maund respectively. The Bombay mills, per contra, have to pay higher railway freight as can be seen from the study of rates on raw cotton.

Rates on Piece-goods from Bombay

We next turn to an examination of the rates charged on piece-goods manufactured by the Bombay mills as well as the imports. The freights charged from Bombay to upcountry consuming markets are cheaper per maund per mile than those charged from the other mill centres in the interior of the country. A mere casual glance at the tariffs of the G. I. P. and B. B. C. I. Railways will amply justify the statement. The G. I. P. Railway quotes more than a hundred station-to-station rates from Bombay to upcountry markets from which the following have been extracted:—

Mileage.	*Station to.*	*Rate per maund.*	*Mileage.*	*Station to.*	*Rate per maund.*
		Rs. a. p.			Rs. a. p.
239	Dhulia	1 1 6		Sultanganj	2 9 11
261	Jalgaon	1 3 1	476	Hoshangabad	2 1 2
296	Amalner	1 0 4	521	Bhopal	1 15 4
520	Nagpur	1 11 10	646	Lalitpur	2 9 11
417	Harda	1 12 11	702	Jhansi	2 7 0
264	Itarsi	2 0 7	755	Harpalpur	2 4 7
531	Betul	2 6 2	788	Mahoba	2 2 4
616	Jubbulpore	2 3 10	821	Banda	2 0 11
673	Katni	2 2 4	802	Karwi	1 14 8
734	Satna	1 15 11	868	Muttra	2 7 11
746	Jaitwar	1 15 3		New Delhi	2 10 3
806	Bargarh	1 12 5	838	Agra City	2 8 5
840	Naini	1 15 7	839	Cawnpore	2 4 2
	Howrah	1 9 9			
	Bhagalpur	2 9 1			

This table brings out clearly the important features of the rates policy pursued by the G. I. P. Railway. The rates, as can be seen, are anomalous and preferential. Freight from Bombay to Jalgaon for 261 miles is Re. 1-3-1, and to Amalner for 296 miles it is Re. 1-0-4. The higher rate for a longer distance is justified on the plea of alternative rate and the competition of the B. B. & C. I. Railway. Rate to Nagpur for 520 miles is Re. 1-11-10, and to Itarsi for 464 miles is Rs. 2-0-7. Not only is this rate preferential, but it adversely affects the interests of the Indian mill industry by helping the penetration of imports. These rates foster and subsidise foreign competition to the detriment of indigenous industry. This anomaly, however, has now been removed by raising the rate for Nagpur to Rs. 2-2-11. Rates lower than the class rates, as quoted by the G. I. P. Railway from the port, help the imports more than the Bombay industry proper, because, as will be seen later, the cloth produced by the Bombay mills has to face the competition of upcountry mills in the internal centres of consumption, whereas the imported cloth is generally superior in quality and can be despatched to the internal centres from the nearest port. It has been found by the Tariff Board that the competition of upcountry mills with those of Bombay has become very keen in goods of coarser counts of yarn and in this the former have a decided advantage over the latter[1]. Hence the Bombay mills are not able to take the full advantage of the lower rates. The imports, per contra, with the help of lower rates, penetrate in even ordinary towns and compete with the production of Indian mills, as can be seen from the preceding table.

Let us explain this statement in some detail lest we should be misunderstood. The upcountry mills manufacture piece-goods primarily of coarser varieties to supply the general demand of the people, albeit of late the tendency towards the production of finer counts is growing apace. Such mills largely cater for the demand of neighbouring areas of their mills and it should be noted that in these markets they have considerable advantage as compared with the other mills. Bombay mills, therefore, have great disadvantage in the markets and the facilities in the form of station-to-station rates which they get are of little avail to them so far as the

1. Vide, Report, Para 81.

marketing of coarser goods in these centres is concerned. For instance, in a centre like Cawnpore, Bombay mills will obviously find it difficult to sell those goods which are manufactured by the Cawnpore mills, because they have to pay Rs. 2-4-2 per maund by way of railway freight—although it is a concession rate—whereas their rivals are immune from the charge. This freight concession is more useful only on those piece-goods which do not compete with the manufactures of the local mills. Thus, Bombay mills are able to utilise this concession only to a limited extent. But the Japanese and Lancashire piece-goods utilise these freight concessions to the utmost, and penetrate into the internal consuming centres from the nearest port. Of these two, the former, with its cheap manufactures of coarser varieties competes most effectively with the local mills, while the latter with relatively high-priced fabrics of superior quality, escapes the railway transport costs lightly and adversely affects the manufactures of finer counts. Importers do not stand in need of these concessions in railway freight and the traffic would come to the railways even if the concession is withdrawn. Both from the railway and the public points of view, therefore, such freight concession should cease on the import traffic. It will be clear from what has been said above that since other manufacturing centres do not get similar freight facilities, the station-to-station rates quoted from the ports help to neutralise the effects of protective fiscal duties. The right course, it may be suggested, would be to charge class rates on piece-goods despatched from all port towns because the import traffic does not need this concession and would continue to flow in, and increase the railway receipts substantially. This will be unpalatable to the Bombay mill owners, but they should rightly seek tariff protection. This would enable the Indian cotton mills to enjoy the fiscal protection in full.

Pre-war Rates compared

We emphasise at this place the scarcity of the historical material on the railway rates available to us. It would have been interesting to know at this point the percentage increase in railway rates between 1913 and to-day, for that would have enabled us to find out the increase in the incidence of railway freight. However, we quote below a few rates from Bombay to upcountry centres, as

they were submitted to the Tariff Board by the Bombay Millowners' Association [1] :—

Rates from Bombay

To	1913 O.R.	1913 R.R.	1926 O.R.	Percentage increase since 1916	1926 R.R.	Percentage increase since 1913
	Rs. a. p.	Rs. a. p.	Rs. a. p.		Rs. a. p.	
Delhi	—	2 0 7	2 10 3	—	3 7 11	72
Amritsar	—	2 12 6	3 8 2	—	4 10 6	68
Cawnpore	—	1 13 1	2 4 2	—	2 15 3	62
Lucknow	—	1 15 9	2 7 3	—	3 3 1	62
Nagpur	—	1 0 1	2 11 10	—	2 12 4	61
Howrah	—	2 11 11	1 9 9	—	4 12 3	175
Shalimar	1 1 0	3 3 0	1 8 0	41	5 2 11	73
Madras	0 14 0	2 7 9	2 2 3	144	3 14 6	60
Bangalore	—	1 6 7	2 0 1	—	2 10 6	57

It will be seen from the above table that in the pre-war years, the railways rarely quoted Owner's risk rates ; most of the rates were Railway risk. This was a serious drawback of the then rates policy. Fortunately this defect was removed after the rates were stabilised in 1922, and alternative O.R. rates were also quoted. These O.R. rates, however, are generally higher than the pre-war R.R. rates. When we compare the rate from Bombay to Madras which was Re. 0-14-0 O.R. in 1913, and Rs. 2-2-3 to-day, the increase amounts to about 144 per cent. This is indeed a great handicap to the indigenous mill industry. It has to be noted that such a high increase has been effected in spite of the alternative sea route available to Bombay mills. It seems that the railways did not quote a lower rate here because the importers have no interest in this rate ; they directly import at Madras. The study of rates policy fosters the belief that foreign commercial interest still dominate the railway policy. The increase in R.R. rates has also been more than 60 per cent. This was not felt in the boom period. But to-day when the mills are working on an irreducible minimum of profits the reduction in rates would be of great help to the industry. The fall in the prices of cloth further strengthen the plea for reduction in rates. Here, it has to be remembered, that the price of cloth in India being determined by the imported cloth the general reduction in rates would not be helpful to the Bombay mill industry, because the importers would also get the same benefit

1. Vide, Tariff Board, 1927, Evidence Vol. II, P. 154.

and the relative position would remain unaffected. Therefore, the reduction in rates to be helpful to Bombay mills should be preferential to that over the imported goods. The Bombay Millowners' Association urged before the Tariff Board the necessity of preferential treatment for goods of Indian Manufacture over imported goods, but the Board did not favour the proposal in view of the considerable advantage in matters of railway freight already possessed by Bombay over the upcountry mills and the insuperable difficulties in the application of the policy of discrimination[1]. The attitude taken up by the Board is in consonance with the accepted theory and practice of rate-making. Discrimination in rate-making is desirable. Nay, it is a cardinal feature of modern practice.

But discrimination between one shipper and another on a basis purely of difference in nationals is pernicious. It is apt to create complications in the commercial policy. Further, from what follows it will be evident that Bombay cotton mills possess fairly good advantage over uncountry mills in respect of railway freight on imported raw materials and the marketing of finished products. This transport advantage of the Bombay mills is, however, being gradually neutralised by the improvement in the quality of the output of upcountry mills. Bombay cotton mills have an additional handicap because their cost of production is relatively higher due to higher wages, rental, taxes, managing agency charges, etc. Complete rationalisation of the industry, right from the purchase of raw cotton to the marketing of finished products is essential for its survival after the veil of fiscal protection is withdrawn. There is hardly any justification for discrimination in railway rates.

Ahmedabad Mills

Next to Bombay Ahmedabad is the most important centre of cotton mill industry in India. Being situated in the midst of the cotton growing tracts of Gujarat and Kathiawar, it has a distinct advantage in respect of the most important raw material, cotton. Besides, the cotton grown in this surrounding area is of comparatively superior quality, used for spinning yarn of higher counts, and when mixed with Uganda, Egyptian, and American cotton it gives exceedingly fine results. In this respect Ahmedabad possesses greater advantages in procuring cotton of superior quality

1. Vide, Report, Para 103.

to any other upcountry centre. This has proved a great boon to the Ahmedabad cotton mills because the cost of raw material is the largest single item in the cost of manufacture of cotton goods[1]. As regards the markets, the finished products of the mills can be conveniently distributed in Gujarat, Kathiawar, the Punjab, the United Provinces, Bengal, Madras, the Central Provinces, and several other centres according to the seasonal demand and market conditions. The drawbacks, however, from which the Ahmedabad mills suffer are in respect of railway freight on coal and stores[2]. We shall, therefore, now pass on to the discussion of railway freight.

In our discussion of railway rates in relation to the Ahmedabad cotton mill industry we propose to centre our attention on the rates on cotton and finished products mainly, and only a passing reference will be made to rates on other raw materials. The reasons for resorting to this course are obvious. Railway freight on coal, which is the second most important raw material, will be discussed in a separate chapter dealing with the development of coal industry in relation to railway freights. The freight on mill stores will be discussed in the present chapter, but it should be noted that this is relatively of only secondary importance because it affects the cost of production of cotton mills to a very limited extent. Nevertheless, in the modern organisation of the industry and the keen competition which pervades the entire system every item of expenditure is of great concern both for the producer and the consumer. This is especially true of the Indian cotton mill industry, because they are struggling for their very existence to-day, threatened by foreign competition.

Rates on Raw Cotton

It will be recalled that Ahmedabad mills are situated in the midst of the cotton growing districts of Gujarat and Kathiawar, and therefore, cotton is carried from stations like Surat, Broach, Kadi, Viramgam, Wadhwan, etc., to the mills. In addition, cotton is brought from the Punjab, Madras and other cotton growing districts according to the requirements of the mills concerned. Foreign cotton is also imported to a limited extent, for manufacturing

1. Vide, Report of the Textile Tariff Board.
2. Vide the written statement of Ahmedabad Millowners' Association Tariff Board, Vol. II, P. 390.

yarn of higher counts. The imports of foreign cotton, however, have assumed greater importance since the last few years which shows that the tendency of the mills in Bombay and Ahmedabad to produce cloth of superior quality has received a marked stimulus since the year 1929-30. The increase has been especially marked in the year 1930-31 and is attributed to the low level of prices and the impetus given by the nationalist movement to the mill industry. Ahmedabad mills have made the best use of this opportunity. It is clear from the foregoing facts that the growth of Ahmedabad mill industry is closely linked up with the rates quoted on cotton from different centres.

Before proceeding further it should be noted that mills have to bring cotton from different centres stretched far and wide within the country and also import foreign cotton because of the wide difference in the quality of cotton produced in the country and its general low standard. It is hardly necessary to emphasise that unlike jute, which is localised, cotton is a crop which is cultivated in almost all the provinces. But Indian cotton is mainly of short staple, excepting the Cambodian, the Punjab-American and Broach cotton. It would be of interest to note the character and the quality of the different varieties of cotton grown in India because that will indicate the standard of cloth spun in the mills and the consequent necessity of importing foreign cotton for improving the standard of our mill production. The Cambodia cotton creamish in colour, is silky with strong fibre. It is used for 28's warp and 36's weft, and is chiefly consumed in Indian mills. The Punjab-American is silky and bluish white and is used for 20's to 22's warp. This cotton is extensively purchashed by the Ahmedabad mills and Japan. Broach cotton is of two kinds, Broach common and Surti-Broach. They are both silky, clean and very white in colour, but whereas the former has rather big stains, the latter has very few. Broach is used for 18's–20's weft yarn and is bought by Ahmedabad mills and Japan. Bombay mills use this cotton occasionally. Surti-Broach is used for 20's–22's and also for 30's warp and 40's weft. This is chiefly purchased by Ahmedabad and Bombay mills; it is also exported. The quality of other varieties will be discussed later while studying other upcountry mills.

The foregoing explains the necessity of importing cotton into Ahmedabad from different centers within the country and of the

imports from foreign markets. Ahmedabad mills concentrate largely in the production of higher counts; they specialise in dhoties, which are sold throughout the country, especially in the Calcutta market. Dhoties of Ahmedabad mills are the best amongst those made in India and fetch higher prices. It is needless to mention that these dhoties compete successfully with the imports. Other varieties of superior cotton cloth are also manufactured and for all these Ugenda, Egyptian and American cotton is imported in addition to the Indian varieties. The railway freight on Broach-Surat cotton is relatively favourable because the mills are situated in the vicinity of cotton growing tracts. The freights on other varieties are more important of which a few are portrayed below :—

Rates per maund to Ahmedabad

From	*Rate*			*From*	*Rate*		
	Rs.	a.	p.		Rs.	a.	p.
Rohtak	1	15	2	Gurdaspur	2	11	5
Ambala	2	5	5	Sialkot Jn.	2	12	11
Hoshiarpur	2	8	0	Montgomary	2	11	2
Jullundar City	2	6	11	Lyallpur	2	13	0
Ludhiana Jn.	2	5	0	Multan City	3	0	5
Ferozpur City	2	5	8	Gujarat	2	12	0
Lahore Jn.	2	5	1	Gujranwalla	2	10	7
Amritsar Jn.	2	9	1	Shahpur City	3	2	4

The first point brought out by the above table is the relative high level of rates charged. While discussing the rates on raw cotton it has already been referred to that the increase in rates since the Great War has been appreciable and in 1922 when the classification was revised the rates were fixed at a still higher level in consonance with the boom prices which had reached to unprecedented heights. We further pointed out that whatever justification the rates might have had then, their incidence has now become unduly high. The ability of a commodity to bear the transport charge depends, inter alia, upon the market price it fetches and therefore the policy of charging to-day the same freight rate which was fixed during the boom period can hardly be justified when the price level is taken into consideration. Secondly, as can be seen from the preceding table, the incidence of rates charged on Indian industries is higher than that on the importers. It will be recalled that the rates on raw cotton moving to the ports is lower by 6 pies per maund when booked at O. R., but the internal traffic is denied this facility. Besides, the consignments travelling over

more than one line do not get the advantage of the telescopic schedule on the total distance traversed. Railways, in their rate-making follow an individualistic policy and like to be treated as separate entities. This is quite clear from the rates quoted above. We notice that both the railways charge the traffic irrespective of the total distance travelled. Here of course the result of this individualistic policy is not so serious because the rates quoted are not telescopic, but it has to be noted that due to this vicious policy both the trade in raw cotton as well as the cotton mill industry is seriously handicapped. Further, the rates charged are almost the maximum authorised by the Government. This policy is obviously detrimental to the development of long distance traffic ; even purely commercial principles are being overlooked. It may be suggested, therefore, that the railway authorities should quote telescopic rates for long distance traffic and calculate the rates on the total distance traversed by the consignment. Lower telescopic rates should be quoted on raw cotton, both for export and for international consumption.

RATES ON MILL STORES

Ahmedabad mills have to get their stores from Bombay and in this the local mills at Bombay have a decided advantage over the upcountry mills, because they are practically immune from railway freight. The more important of the mill stores are machinery, dyes, lubricating oils, epsum salt, farina, tallow, sago flour, sulphide and soda. The freight charged from Bombay to Ahmedabad is given below, together with the rates as quoted in the year 1913 :—

Rates per maund

	1913.	*1932.*
	Rs. a. p.	Rs. a. p.
Tallow	0 8 5	0 13 3
Farina	0 8 5	0 6 1
Epsum salt	0 8 5	0 8 9
Machinery	0 8 5	0 8 9
Lubricating oils	0 9 3	0 12 3
Sago Flour	0 8 5	0 6 1
Dyes	0 13 4	0 12 3
Soda		0 5 10

These rates appear to be reasonable except in the case of tallow and lubricating oil where the increase has been about 58 and 32 p.c.

respectively. It is hoped that the B. B. & C. I. Railway authorities will reduce the rates in the above two cases as well, so as to bring them on a level equal to, if not lower than, the pre-war level.

The finished goods of the Ahmedabad mills are consumed in Gujarat, but a greater part of the total output is despatched to important towns throughout India. As the consuming markets are mostly at a great distance from the mills the freight charged by the railways comes to play a very prominent part in determining the competitive capacity of the goods. Further, as the piece-goods turned out by the mills are generally of superior quality they have to stand the competition of the imported goods and the cost of railway transport in some cases shuts out the market totally while in others it imposes a heavy tax upon the industry. This foreign competition assumes serious forms in port towns and in markets in the vicinity of ports. Besides, the importers have an advantage over the internal producers in as much as they are able to despatch their goods to the upcountry consuming markets from the nearest port. Apart from the tariff barriers in the form of import duties with which we are not concerned for the present the importers have an advantage in marketing their produce over the internal centres. This statement will be amply explained when we study different internal mill centres. Besides, lower rates quoted from the ports due to railway and port competition act as a sort of subsidy to the imported goods.

"Cost of transport," informs the Secretary of Ahmedabad Millowners' Association, "makes cotton manufactures of Ahmedabad dear, particularly in distant markets, like Calcutta, Cawnpore, Delhi, Madras, Bezwada, etc. Heavy freight to be paid on coal, cotton, yarn and piece-goods certainly makes our articles unduly dear in distant markets[1]." The disadvantages under which the Ahmedabad mills suffer in respect of raw materials and marketing of their finished products is due partly to their location for which the railway policy is not much to blame. But the railway authorities cannot shirk the responsibility of the rates they quote. Ahmedabad, unlike Bombay, is so situated that it has to depend entirely upon the railway transport, and especially on the B. B. & C. I. Railway. The absence of alternative transport facilities partly explain the higher level of freight charge. Following the policy of undiluted commercialism, Indian railways, even when State owned and State

1. The reply sent by the Ahmedabad Millowners' Association to our enquiries.

managed, quote very low rates at the competitive points and recoup their loss by raising their rates from the non-competitive centres, to the clear detriment of the national industries. The most obvious defence put forward by the railways in support of their policy is that they are forced to lower the normal rates at the competitive points in order to attract the traffic which would otherwise have gone by the alternative route and completely lost to the railways. This competitive traffic, it is contended, after meeting the supplementary costs leaves a residue which is utilised in reducing the rates from the internal or non-competitive centres. This plea undoubtedly has some justification, but understood with the nature and characteristics of the railway industry in general and the peculiar development of the Indian railways in particular this argument is short of its apparent justification. Railroad industry is a vast national enterprise calculated to foster the development of the country by providing efficient and economic transport services to its nationals. If the competitive tendency inherent in the railway industry has been regulated in America and in England so as to give better service to the trade and industry of the country the necessity is much more pressing in India where the Indian tax-payer has shouldered the entire cost right from their inception to the present day. The policy needs a corrective on national lines.

We shall attest the truth of the preceding remarks by specific instances. Ahmedabad mills send their goods to following important markets :—

Rates for Cotton piece-goods from Ahmedabad to :—

	Rate (O, R.) Rs. a. p.		*Rate (O. R.)* Rs. a. p.
Bombay	1 1 5	Agra	1 13 2
Cawnpore	1 14 0	Madras	3 5 2
Lucknow	2 0 11	Amritsar	2 9 2
Lahore	2 8 4	Howrah	2 4 0
Delhi	1 13 2	Nagpur	2 6 10

In Calcutta, where Ahmedabad mills send their piece-goods, especially dhoties, they are at a clear disadvantage as compared with the importers who can land their goods directly. Again, the prices of piece-goods being determined by the imports, which pay nothing by way of railway freight, the internal mills have to bear the transport costs which raises the cost of production and restricts their competitive capacity. Undoubtedly, to some extent, this

restriction due to the cost of railway transport is unavoidable, being the result of geographical situation. When we analyse the rate quoted from Ahmedabad to Howrah we find that it is relatively low, because the distance to be traversed is nearly 1300 miles. This low rate is quoted because of the alternative routes available for consignment booked to Howrah. The traffic to Howrah can be routed via Agra East Bank, Amalner and Naini, Ujjain and Naini, and Ujjain and Kanti Marwara. These three alternative routes have forced down the rate from Ahmedabad to Howrah which would otherwise have been decidedly higher. This fact has to be admitted when we take up another rate from Ahmedabad to Amritsar which is Rs. 2-9-2 for a distance of 802 miles. Sea route via Gujarat ports and Bombay port can also be utilised for despatching goods to Howrah. In the Madras market, Ahmedabad goods have a great disadvantage, because, whereas the imports can be landed directly, they have to pay railway freight of Rs. 3-5-2 per maund. When, however, we take up the upcountry markets like Cawnpore, we find that Ahmedabad mills are better placed than their foreign competitors because the latter have to pay higher transport charge.

It will be interesting to record the increase in rates on piece-goods from Ahmedabad to some important markets since the pre-war year.

Rates for piece-goods from Ahmedabad to :—

	Rates in 1913. (O.R.) Rs. a. p.	*Rates in 1932* (O.R.) Rs. a. p.	*Increase per cent.*
Bombay	0 11 1 (R.R.)	1 1 5	51 per cent.
Cawnpore	1 7 0	1 14 0	30 per cent.
Lahore	2 1 3	2 8 4	21 per cent.
Delhi	1 4 0	1 13 2	46 per cent.
Agra	1 4 0	1 13 2	46 per cent.
Amritsar	2 1 11	2 9 2	21 per cent.

It will be seen that the increase in some cases has been very great. The rate to Bombay on piece-goods booked from Ahmedabad was as. 11–1 at R.R., and to-day the rate is Rs. 1–1–5 per maund at O.R. The increase as shown in the above table is further raised when we take into consideration the difference in risk. It is hardly necessary for us to emphasise that Bombay is a very important market for Ahmedabad piece-goods. Further, goods from Ahmedabad have to face in Bombay market foreign as well as local mill competition, and therefore, the freight charged is of

great moment to the industry in determining its competitive capacity. Foreign competition has forced down the prices to almost unremunerative level and hence it is not surprising to learn that the millowners in Ahmedabad are looking with grave concern towards the high level of freight charge which impedes their progress. It is sometimes argued that railway freight, even if reduced, would be so slight that the selling prices would remain unaffected. This argument is unquestionable; prices being determined by the imports a slight reduction in rates will have no reflex effect on the prices and the consumers will not be able to take immediate advantage of the reduction. This argument is, however, true only over short periods; in the long run the community will be amply rewarded. The reduction in the rates will be utilised in the initial stages by the industrialists; they will be better able to stand the foreign competition. This will result in increased production and lower cost per unit and the general prosperity of trade and industry. The industrial competition will filter down the fruits to the consumers in the long run. Internal industries have better claim for lower rates to port towns where foreign competitors have their stronghold.

SHOLAPUR COTTON MILLS

Sholapur is another important centre of cotton mill industry. Being situated in the vicinity of the cotton growing tracts, the mills have an advantage in respect of raw cotton and the nature of their production seems to have been regulated by this most important raw material. The Sholapur mills specialise in "checks" and coloured goods. Cheap labour, low rents and ample water supply further help the mills in lowering their cost of production. But notwithstanding its advantageous location, railroad transport plays an important part and therefore the freight charged needs a critical analysis.

RATES ON RAW COTTON

Cotton is the principal raw material and coal and mill stores come next in order of importance. As regards coal supplies the mills get their requirements from Iksaria and Ballarsha. We shall have to discuss this question in a separate chapter but it should be mentioned here that the railways have lowered rates on coal from

time to time though the policy pursued has been too conservative and the reduction inadequate. Halting and half-hearted maasures have been the sine qua non of the Indian railway policy in general. Apart from this, the rates on cotton booked to the mills have been frequently complained of. We shall, therefore, examine the rates on raw cotton and mill stores in the present chapter. The rates on cotton (raw) full-pressed booked to Sholapur have been as follows[1]:—

From,	*Rate.* 1927	*Rate.* 1928	*Rate.* 1929	*Rate.* 1930	*Rate.* 1931-32
Jalna	1 14 4	1 14 4	1 14 4	1 4 5	1 0 0
Parbani	1 15 1	1 15 1	1 15 1	1 0 0	1 0 0
Purna	1 13 6	1 13 6	1 13 6	1 0 0	1 0 0
Basmatnagar	1 14 10	1 14 10	1 14 10	1 0 0	1 0 0
Dharmabad	1 9 6	1 9 6	1 9 6	1 0 0	1 0 0
Umari	1 10 10	1 10 10	1 10 10	1 0 0	1 0 0
Sailu	2 0 11	2 0 11	2 0 11	1 0 0	1 0 0
Pandharpur	—	—	—	—	0 5 4
Barsi Town	0 3 0	0 3 0	0 3 0	0 3 0	0 3 0
Latur	0 8 0	6 8 0	0 8 0	0 8 0	0 8 0
Nanded	1 12 7	1 12 7	1 12 7	1 0 0	1 0 0
Bombay	—	—	—	—	1 8 1

It will be seen that the Railway authorities have removed anomalies and reduced the rates so that the mills have now been placed in a better position in respect of raw cotton. This action of the authorities is commendable. In face of these reductions the continuance of the rate from Bombay to Sholapur at Rs. 1-8-1 is ridiculous and it is hoped that this will also be soon reduced because it violates the differential clause. The aforesaid reductions are due mainly to the reductions of the N. W. Railway, though the G. I. P. Railway has also reduced its share to Rs. 0-4-7, in case of the traffic booked to Sholapur via Wadi. On the whole, however, the Sholapur mills have more equitable rates on raw cotton.

1. We are indebted to Messrs. Morarjee Gokuldas, the Managing Agents of "the Sholapur Spinning and Weaving Mills", for having supplied us the information.

Mill Stores

The Sholapur mills, as previously referred to, get their stores from Bombay and the freight charged per maund is submitted below :—

	1927	1928	1929	1930	1931-32
Sulphide	0 10 11	0 10 11	0 10 11	0 10 11	0 10 11
Tallow	0 10 11	0 10 11	0 10 11	0 10 11	0 10 11
Farina	0 10 11	0 10 11	0 10 11	0 10 11	0 10 11
Epsom salt	0 15 7	0 15 7	0 10 11	0 10 11	0 10 11
Machinery	0 10 11	0 10 11	0 10 11	0 10 11	0 10 11
Lubg. Oils	0 10 11	0 10 11	0 10 11	0 10 11	0 10 11
Sago Flour	0 10 11	0 10 11	0 10 11	0 10 11	0 10 11
Drums Dyes	0 15 7	0 15 7	0 15 7	0 15 7	0 10 11

As can be seen from the table all the different kinds of stores are treated on the same footing and quoted equal rates. This is indeed anomalous. It would be interesting to examine these rates in detail. The rates in 1927 show that Sulphide, Tallow, Farina, Machinery, Lubricating oils and Sago Flour were quoted equal rates of Rs. 0-10-11 per maund, while dyes and Epsom Salt were charged higher rate of Rs. 0-15-7. To class dyes and Epsom salt together is anomalous. Besides the policy of charging higher rates on Epsom salt than on Tallow is questionable. The difference in value of dyes and Epsom salt is considerable and therefore, the rates charged should differ. In short, it is necessary that the rates should be revised.

Rates to Ahmedabad and Sholapur compared

Further, the rates are absolutely high. This will be evident when we compare the rates charged on different varieties of mill stores from Bombay to Sholapur on the G. I. P. Railway and from Bombay to Ahmedabad on the B. B. & C. I. Railway.

	Rates per maund	
	To Sholapur (283 miles.) Rs. a. p.	*To Ahmedabad* (308 miles.) Rs. a. p.
Tallow	0 10 11	0 13 3
Farina	0 10 11	0 6 1
Epsom salt	0 10 11	0 8 9
Machinery	0 10 11	0 8 9
Lubg. oils	0 10 11	0 12 3
Sago Flour	0 10 11	0 6 1
Dyes	0 10 11	0 12 3

It is clear from the above table that the rates on the G. I. P. Railway for certain articles are higher than on the B. B. & C. I. Railway even though the distance to be traversed is less. We have already seen that the B. B. & C. I. Railway has raised the rates on tallow and lubricating oil considerably over the pre-war level and that they should be reduced. Excepting on a few articles, the G. I. P. Railway is charging very high rates. Farina, for instance, is charged Rs. 0-6-1 in wagon loads on the B. B. & C. I. Railway whereas the G. I. P. Railway charges for lower distance Rs. 0-10-11. Similar is the case with Sago Flour. Undoubtedly the G. I. P. has to carry the traffic over the Ghats, but this does not justify such a difference and the rates need to be reduced especially on Farina, Epsom salt, Machinery and Sago Flour. The Sholapur mills are therefore at a relative disadvantage in respect of mill stores supplies, not only in relation to Bombay but also with Ahmedabad.

Rates on Piece-goods from Sholapur

Sholapur mills send their finished goods, among others, to the following important centres :—

Distance.	*Name of Centre.*	*Rate per maund.* Rs. a. p.
283	Bombay	1 8 1
1,323	Calcutta	3 1 1
1,058	Delhi	3 1 0
1,346	Amritsar	3 15 7
941	Cawnpore	3 8 6
884	Agra	3 8 4

Besides these, Sholapur mills send their goods to other markets like Bangalore, Madras, Poona, Latur, Pandharpur, Ajmer, etc. In Madras, Sholapur cloth has to compete not merely with the imported cloth but also with local produce. In this market Sholapur mills cannot sell certain varieties of piece-goods with profit because of the transport costs. This is indeed unavoidable. Local mills at Madras also specialise in "Checks" and similar varieties and therefore, it is but natural that they should have advantage in local market against the distant competitors. In fact the competition between the Madras and Sholapur mills and the foreign imports has increased considerably and the cost of transport is attracting greater attention of the industrialists.

Sholapur mills sell their finished goods f. o. r. Sholapur, and therefore, the railway freight has to be paid by the selling agents. This selling arrangement has given rise to certain misgivings about the freight position. The Railway authorities have frequently waved the claim for reduction in rates on the plea that Sholapur mills, because of the several advantages they possess, are able to produce goods cheaply and they sell their goods f. o. r. mill site. The selling agents or the middlemen can afford to bear higher freight.[1] This is a very popular fallacy, and one wonders to see this fallacious reasoning being advanced by the railway authorities. They argue that the mills at Sholapur sell cloth f. o. r. Sholapur, the middleman can afford to buy at Sholapur, rail to Bombay at our 'C' schedule and sell in Bombay cheaper, weight for weight, than cloth made in Bombay. Since that is the case, it is apparent that our 'C' schedule is not greater than the traffic can bear. In the first place, the Sholapur mills compete in Bombay market not merely with the local produce but primarily with the foreign imports. Granting that the cost of production of the Sholapur mills is lower than that of the Bombay mills it is no function of the railroad to expropriate the business profits by raising the rates charged. We have already seen that the 'C' schedule rates, which the G.I.P. Railway charges on piece-goods booked from the internal centres of production, are relatively unfair when compared with the lower rates charged from the port town. To an industrialist relative level of rates is of greater concern than the absolute one and more so when the competitor is stronger. The policy of charging higher rates from Sholapur than from Bombay can scarcely have any justification. The defence of higher transport charge on the plea of lower cost of production of the industry is obviously one of taxation. If the Sholapur mills produce at a lower cost they will sell at a lower price due to industrial competition and the benefit will go to the community. This will result in increased demand for piece-goods, especially for Sholapur production, and the mills will be able to lower their cost per unit by adding to their output. This will benefit the railways as well, because they will be able to get better aggregate profits by carrying greater traffic at a lower cost per unit.

We shall now discuss the railway freight on yarn and piece-goods booked from Sholapur to Delhi and Amritsar, the two most

1. Vide, Case No. XVI, Pleading, P. 6.

important upcountry markets. The Sholapur mills specialise in the production of certain cloth well suited to the needs of Northern India, but the freight charge was unduly high. Therefore, the Amritsar and Delhi cloth merchants in conjunction with the Sholapur mills made a representation to the Railway Rates Advisory Committee against the unreasonableness of rates. The complaint in both the cases[1] was that the railway freight on yarn and piece-goods despatched from Sholapur to Delhi and Amritsar was heavier relatively to distance than the freight from Bombay and Madras and that undue preference was being shown thereby to Bombay and Madras against Sholapur, causing prejudice to the cotton mills in Sholapur and to the cloth merchants of Delhi and Amritsar dealing in Sholapur goods. The prevailing rates were :—

From	*To*	*Distance* (miles)	*Rate per maund.* Rs. a. p.
Sholapur	Amritsar	4,346	4 6 2
Bombay	,,	1,245	3 8 2
Madras	,,	1,857	4 4 8
Sholapur	Delhi	1,058	4 0 7
Bombay	,,	957	2 10 3
Madras	,,	1,568	4 0 0

The applicants contended that high railway freight charged from Sholapur restricted the sales in competitive markets because there is no material difference in price quotations of various mills, f. o. r. mill site. Besides, from their business experience they found that the consumers in Northern India preferred to purchase the goods of Sholapur mills when the prices of similar competing goods were equal. Because of the higher freight from Sholapur, cloth merchants in the upcountry markets were forced to make their purchases at Bombay.

The G. I. P. Railway contended, per contra, that they were charging maximum rates except when forced by competition. They said that there are competitive routes from all the three centres—Madras, Bombay and Sholapur—to Amritsar and Delhi, and therefore the rates were adjusted accordingly. Lower rates were quoted because of the alternative sea-cum-rail route and neutralised the geographical advantage of Sholapur being near the market. They further argued that the reduced rates from Madras

1. Vide, Case No. XIV and XVI.

and Bombay were keeping down the rates from Sholapur. If these were not quoted, traffic would pass by alternative routes with the result that the standing cost of the railway would have to be borne by fewer items of traffic. To the extent, therefore, that the rates from Bombay and Madras, after paying the out-of-pocket expenses of carrying the traffic, leave something to contribute towards the standing costs, tend to keep the rate from Sholapur at a lower level than it would be if no attempt was made to attract the competitive traffic[1]. As regards the effect of prevailing rates on traffic booked from Sholapur, the railway argued that considering the size of the industry in Sholapur as compared with that in Bombay, the traffic is moving in reasonable quantities from Sholapur at the existing rates. Besides, the difference in freight from Sholapur to Amritsar, and Bombay to Amritsar amounted only to 2 pies per maund, which could have no effect upon the selling price in Amritsar. For the reasons aforesaid, the G. I. P. Railway contended that the existing rates were reasonable and that any further reduction would constitute undue preference[2].

The Rates Advisory Committee examined the case and made recommendations in favour of reductions. But before reviewing the Report of the Committee we propose to examine the proceedings which are full of valuable information. It was brought out that the earnings per ton derived by the G. I. P. Railway from the tonnage in piece-goods carried were higher in the case of Indian goods than on the European or imported goods. The statistics quoted were[3] :—

Earnings per ton on piece-goods.

Year	*European* (Rs. per ton.)	*Indian* (Rs. per ton.)
1919-20	17	30
1920-21	16	31
1921-22	27	33
1922-23	29	40

These figures clearly indicate that imported traffic is being subsidised at the cost of indigenous traffic. These disparities in the earnings from the two varieties, imported and indigenous, are due, *inter alia*, to higher rates charged on the latter, due to the

1. The Agent, G. I. P. Railway, Case No. XIV, Pleadings, P. 14.
2. The Agent, G. I. P. Railway, Case No. XIV, Pleadings, P. 7.
3. Proceedings, Case No. XIV and XVI, P. 53.

impervious railway policy. On the solemn plea of port and inter-railway competition the Indian railways have kept rates at port towns like Bombay, Calcutta, Madras and Karachi lower, just enough to cover their suplementary costs and leave a residual share to meet the fixed costs, whereas the internal traffic has to bear not only its share of the total costs but also of the total traffic. Thus the internal traffic has to maintain the railway system and the imported traffic reaps the advantage by paying a little over its out-of-pocket expenses. The practice of attracting extra traffic at costs just a little above its supplementary costs is permitted and prevalent in railroad operation, but this is true only to the extent of utilising the unused capacity of the plant which would otherwise run to waste. This, however, cannot and does not hold good of the imported traffic which pours in from every port of India in considerable bulk.[1] The inter-railway competition, especially when most of the railways serving the major ports are both State-owned and State-managed, is highly pernicious and suicidal to Indian trade and industry. A co-ordinated transport policy, embracing all the varied transport agencies, is the proper remedy.

The Committee found that as a matter of fact the G. I. P. Railway rates from Bombay and Madras to Delhi and Amritsar were more favourable than those from Sholapur to those places.[2] The rate per maund from Sholapur to Delhi for traffic booked to Amritsar was Rs. 3-6-6 whereas for Delhi proper it was Rs. 4-7-0. For the same market when goods were booked from Bombay the rate charged was Rs. 2-9-3, whereas Sholapur manufactures paid Rs. 4-0-7. Thus, apart from other advantages the Sholapur mills were handicapped to the extent of 57% as against their Bombay competitors. It was shown that as a result of the present rates policy coarser goods were charged a higher rate than the finer goods. This is attributed to the fact that railways do not distinguish between the two and charge according to weight.

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1. "The whole piece-goods traffic of India in 1926-27 was 8678 million yards of which a little over 1788 yards were imported whether it be to Calcutta, Karachi or Bombay, because there is competition between these three places."
   Vide, Remarks of the President, P. 61.
2. Remarks of the President, 'Proceedings.' P, 51.

The Committee held that 'Sholapur was being prejudicially affected.[1]' After a careful scrutiny of the evidence before them they remarked "every thing, therefore, points in equity to the reduction of the rates from Sholapur so as to place them relatively as near as reasonably possible on the same basis as Bombay."[2] The Committee, therefore, recommended that the rates for piece-goods from Sholapur to Delhi should be reduced from Rs. 4-0-7 to Rs. 3-1-0 per maund and from Sholapur to Amritsar from Rs. 4-5-1 to Rs. 3-15-7 per maund, the reductions in the latter case being confined to G. I. P. Railway's proportion only. The Government of India accepted the recommendation as an experimental measure and the G. I. P. Railway accordingly reduced the rates as aforesaid from 1st February 1930.

The recommendation of the Committee, however, does not go very far. It is at best, to put in the Committee's own words, "a proposal which gives the same relative position which Bombay and Sholapur occupy before the introduction of the increases in the rates which were necessitated by the increased expenditure during the War."[3] It is essentially a compromise and the inequality in rates though reduced still persists.

The Nagpur Cotton Mills

We next turn to the study of the railway freight paid by cotton mills in Nagpur. It need not be emphasised here that Nagpur is an important centre of cotton industry and the Empress Mills are one of the best equipped mills of this country. Started by the late Mr. J. N. Tata in 1887 the Empress Mill of Nagpur has recorded steady progress and to-day it represents the cotton industry of Nagpur. In efficiency it sets a standard to most upcountry centres. If one compared the cotton mills of Cawnpore to the Empress Mill of Nagpur one would notice a great difference between the two. Expert visitors both foreign and Indian have spoken in high terms about the Empress Mill. It can stand comparison with the best mills of Bombay. Therefore the railway transport costs of this Mill will be a good indication of the effects of railway rates on the development of cotton mills in general.

1. Vide, Report of the Rates Advisory Committee, P. 6.
2. Supra. P. 7.
3. Vide, Report of the Rate Advisory Committee, P. 8.

Rates on Raw Cotton

It will be recalled that cotton is grown in the vicinity of the mills but due to the difference in the quality of different varieties grown and their general low staple cotton is brought from distant centres as well. Oomras is purchased from Berar, and Broach and Surti-Broach from Surat and Navsari, Mughlai from Umri, Comptah and Dharwar from Gadag and Hubli, Cambodia from Tiruppur, Punjab-Americau from the stations in the Punjab, and Uganda and Egyption cotton is imported via Bombay port. Thus Nagpur mills use both long-staple and short-staple cotton and the advantage in respect of raw cotton over the Bombay mills is not so great as is popularly made out. It is necessary to clear our position on this point which is often exploited by the foreign interest as well as the impervious railway authorities who exaggerate the geographical advantage of the mills of being in the vicinity of cotton tracts. Whereas it would be idle to deny that the mills at Nagpur get certain varieties of raw cotton in the areas close by, at the same time it should not be overlooked that to meet their total requirements cotton from distant areas has to be brought, and as the cotton prices are determined by the Bombay quotation, wherever transport charge higher than that to the nearest port has to be incurred the difference clearly falls on the manufacturer and to that extent puts the Nagpur manufacturer at a relative disadvantage. Besides, upcountry mills have to purchase the variety of cotton they need during the season and stock the material. This is a clear disadvantage because not merely is the capital locked up but the mills are unable to hedge themselves against the fluctuations in prices.

It will, therefore, be clear that the advantage in respect of supplies of raw cotton is neutralised. We put in appendix II to the chapter a statement of the freight on cotton full-pressed per maund as charged in 1914 and to-day.[1]

In the table we have not included several stations in the Punjab as the rates of freight prevailing in 1913-14 for those stations are not available to us. However, the stations already included in the statement will give us a clear idea of the freight paid

1. For dates of sowing and picking cotton see Pearse, A. S. "The Cotton Industry of India," p. 48.

by the Nagpur Mills for their raw cotton supplies. It will be seen that even from the stations which are in the vicinity of Nagpur, like Wardha, Hinganghat, Dhamangaon, Warora and Amraoti, the rates in the post-war period have been heavily raised, the percentage of increase varying from 50 to 76. While discussing the rates on raw cotton, it will be recalled, we noticed the anomalies in rating in the pre-war period which were removed by raising rates from all those stations where formerly they were lower. This was indeed favourable to the railway authorities and in consonance with the prevalent policy which has been to earn maximum profit with minimum of traffic. The cultivator of cotton has been adversely affected because while the prices of cotton have recorded a steep decline the cost of transport has continued at the pitch fixed during the boom. The cotton mill industry has also been adversely affected because of heavy cost of transport, both of raw cotton and finished goods. The increase of 75 per cent. is indeed very heavy in view of the prevailing prices and puts the indigenous mill industry at a serious disadvantage in competition with the foreign importers.

The increase in freight for other varities of cotton has been still higher as will be seen from the preceding statement. Surti-Broach cotton is brought from Gujarat during the picking season, and the freight on it from Surat and Navasari stations which was Re. 1-0-0 and Re. 1-1-5 in 1914 is Rs. 2-4-5 and Rs. 2-5-0 per maund respectively in 1932, the increase of 129 and 111 per cent. For Mughlai cotton brought from Umri (via Ballarsha) the freight is raised from Rs. 1-7-9 to Rs. 1-15-10, an increase of about 62 per cent. This increase becomes so glaring when we recollect that the rate charged in 1914 was for distance of 602 miles via Manmad, the old route. Now, the shorter route via Ballarsha, which has reduced the distance from 602 miles to 503 miles is being used and still the rate charged is higher by 62 per cent. The Gadag and Hubli rate has been raised still higher in spite of the reduction in mileage to be traversed. From Gadag (via Hotgi and Manmad) the freight charged was Rs. 2-2-4 for 904 miles in 1914, and to-day via Ballarsha for 580 miles the freight charged is Rs. 3-1-1, an increase of about 91 per cent. for the distance lower by about 40 per cent. Similarly, from Hubli for 946 miles (via Hotgi and Manmad) the rate in 1914 was Rs. 1-9-7 and to-day for 616 miles the rate is Rs. 3-2-11, an increase of about 209 per cent. The rate from

Tirrupur, from where Cambodia cotton is brought, was Rs. 1-15-11 in 1914 for 1261 miles (via Jalarpet and Raichur,), and now the rate has been raised to Rs. 3-9-1 for 915 miles (via Jalarpet and Ballarsha), an increase of about 153 per cent. notwithstanding the lower distance over which the tonnage has to be hauled. Thus, not only is the indigenous industry deprived of the advantage of the shorter route in form of lower rate but the rates have been raised to a very high pitch.

Cotton is the most important raw material of the mills and the heavy freight charge levied by the railways is vitally affecting the textile industry. Reduced demand for cloth due to industrial depression, growing unemployment and catastrophic fall in the prices of agricultural produce which has seriously impaired the purchasing power of the agricultural class, and the fall pari passu in the cotton prices press the necessity for the reduction in railway freight lest the indigenous industry should get devitalised, if not actually succumbed, under the pressure of the aforesaid circumstances. The incidence of railway freight on raw cotton has nearly doubled as can be seen from the table submitted below:—

Relative cost of cotton laid down at Nagpur

(Per 392 lbs.)

	1913-14			1930-31.		
	Cost.	*Freight.*	*Proportion.*	*Cost.*	*Freight.*	*Proportion.*
Umri	150	7 2 0	4·8 p. c.	118	9 8 0	8 p. c.
Hubli	153	7 10 0	5 ,,	150	15 3 0	10 ,,
Navsari	164	5 3 0	3·2 ,,	171	11 0 0	6·4 ,,
Hinganghat	136	1 5 0	·9 ,,	126	1 15 0	1·5 ,,
Dhamangaon	153	1 7 0	·9 ,,	113	2 2 0	2 ,,

The increase in the incidence of freight is clear from the columns 4 and 7 and needs no emphasis. A substantial reduction in railway freight is necessary. Strong protests have been raised, first by the Indian Central Cotton Committee and subsequently by the various members in the Legislative Assembly and the Councils, against the unduly high rates and it is very unfortunate that the reduction has been delayed so long even though most of the important railways are owned and managed by the State.

Rates on Mill Stores

Mill stores consumed by the Nagpur Mills are purchased from Bombay and the railway freight for a pre-war and the current year 1932 works out as follows:—

Rates per maund from Bombay

Commodity.	*Current Rate.* Rs. a. p.	*Pre-War Rate.* Rs. a. p.	*Percentage increase.*
Machinery	1 3 2	1 5 7	11
Stationery	2 5 0	1 13 9	24
Dyes (Aniline & Alizarine)	1 11 10	1 2 9	48
,, (Indauthrine)	1 3 2		2
Epsom Salt	1 3 2	0 15 3	19
Magnesium Chloride	1 3 2	0 15 3	19
Acid, Sulphuric	2 5 0	0 15 3	107
,, Hydrochloric	3 7 2	2 12 2	25
China Clay	1 1 6	0 15 3	11
Oil	0 12 1	0 11 0	10
Farina	1 11 10	0 15 3	62
Grease	1 3 2	0 15 3	19
Leather Belting	2 5 0	1 13 9	24
Packing Paper	1 1 2	0 14 9	30
Straw Boards	1 1 6	0 15 3	11
Asbestos Sheets.	1 11 10	1 5 7	29

It will be seen that the rates on certain commodities have been raised to a level which can hardly be justified. Thus, for instance, the rate on sulphuric acid was raised from Rs. 0–15–3, to Rs. 2–5–0. Similar is the case with rates on grease. In the case of other articles the rates do not seem to be excessive. But when these rates are compared with those charged to Ahmedabad and Cawnpore the incidence appears to be rather heavy.

Rates on Piece-goods: Pre-War

From raw cotton we next pass on to the study of freight on yarn and piece-goods. Railway rates as charged in 1914 from Nagpur to some consuming markets are given below:—

Freight to various centres from Nagpur

Mileage.	*Receiving Stations.*	*Rate per maund.* Rs. a. p.	*Mileage.*	*Receiving Stations.*	*Rate per maund.* Rs. a. p.
49	Wardha	0 3 9	553	Poona	1 1 11 O.R.
114	Amraoti	0 7 10	581	Puralia	1 1 5 ,,
158	Akola	0 10 6	589	Chakulia	0 14 0 ,,
188	Raipur	0 6 7 O.R.	592	Buxar	1 15 9 ,,
196	Nandura	0 13 1	639	Bankura	1 3 1 ,,
222	Howbagh	0 7 9 O.R.	639	Midnapur	0 15 2 ,,
257	Bilaspur	0 6 8 ,,	701	Shalimar	0 11 8 ,,
259	Jalgaon	1 1 3	814	Cuttack	0 11 3 ,,
520	Wadi Bundar	0 11 8 O.R.			

Preferential Rates.

In the selection of the above rates the primary object is to demonstrate the disparity in the quotations of freight to different stations. It should be mentioned at the outset that whereas to certain stations rates at owner's risk were quoted others were denied that facility, which helped to accentuate the disparity between the rates quoted to different consuming markets. For instance, whereas to Akola for 158 miles the rate was Rs. 0–10–6, to Raipur for 188 miles Rs. 0–6–7 and to Nandura for 196 miles Rs. 0–13–1 were charged. The consumers at Raipur had advantage over these at either Akola or Nandura. Again the rate to Howbagh for 222 miles was Rs. 0–7–9 and to Bilaspur for 257 miles Rs. 0–6–8, both being at owner's risk. Here the rate was preferential in favour of Bilaspur. Further, to Wadi Bundar for 520 miles the freight was Rs. 0–11–8, to Poona for 553 miles Rs. 1–1–11 and to Puralia for 581 miles Rs. 1–1–5. A higher charge was made for a lower distance. This is not all. Whereas the rate to Cuttack for 814 miles was Rs. 0–11–3, to Shalimar for 701 miles it was Rs. 0–11–8, and to Wadi Bundar for 520 miles Rs. 0–11–8. Instances of preferential rates can be multiplied; rate-making then was replete with anomalies. These anomalies have now been reduced, as we shall presently see, by raising the rates from those stations where they were low.

Increase in rates and the incidence on traffic

It will be seen from the statement appended to this chapter that the increase in rates to some stations has been appreciably greater than to other stations and the reason is not far to seek; rates have been equalised. The general level of rates has risen though preferential rates have been eliminated. Thus, the rates to Bilaspur, Wadi Bundar, Sholapur, Midnapur, Madras, Shalimar and Cuttack have been doubled in some cases and trebled in others. This high increase in freights has restricted the markets of indigenous mills. Besides, the anomalies in rating still persist. Whereas to Wadi Bundar, where ghats have to be traversed, the freight is Rs. 1–11–10 for 520 miles, to Sholapur for 553 miles the rate charged is Rs. 2–11–8. The traffic to Sholapur is therefore blocked. Here, too, it should be noted that the rate to Wadi Bundar is kept at Rs. 1–11–10, though it has been raised by about 137 per cent. over the pre-war level, to meet the

port competition, lest the traffic in raw cotton should get diverted to Howrah. Again, the freight to Poona for 553 miles is Re. 1-14-7, and to Indore for 384 miles Re. 1-14-1; the difference between the two being only of 6 pies whereas the distance is greater by 169 miles. Internal centres have to pay higher rates than those near the port. Further, rates on the G. I. P. Railway are unduly high; for instance, to Shalimar for 701 miles freight is Re. 1-14-4 and to Madras for 682 miles it is Rs. 2-6-9, though there are no ghats to be crossed. In short, the reduction in rates is urgently needed so as to help the expansion of local mills.

It should be mentioned at this stage that internal mills are seriously handicapped in standing the competition of imported piece-goods at the port towns due to high railway freight and the longer distance over which the goods have to be hauled before they reach the port markets. On the contrary, the penetration of imports is fostered by quoting numerous station-to-station rates from the ports to internal markets, so that the local mills find the importer a formidable competitor even in these markets[1]. This baneful stimulation is the offspring, partly of the inter-railway and port-to-port competition and partly of the deliberate railway policy of fostering the inroad of imports in the interior so as to neutralise the effect of protective tariff. We quote below a few from the large number of relatively favourable rates quoted for traffic from Bombay which help to swell the imports of foreign goods to the detriment of local mills:—

Mileage	*From Bombay to:*	*Special O. R. rate* Rs. a. p.	*Ordinary O. R. rate.* Rs. a. p.
476	Hoshangabad	2 1 2	2 8 6
521	Bhopal	1 15 4	2 10 10
353	Khandwa	1 7 6	1 13 11
531	Betul	2 6 2	2 12 9
702	Jhansi	2 7 0	3 4 0
858	Muttra	2 7 11	3 12 6

These reduced station-to-station rates quoted from ports to the internal centres speak for themselves. It may be said that the

1. It should be noted that numerous station-to-station rates are quoted from the port towns, but from the internal cotton mill centres such facilities are considerably restricted. Therefore, the local mills are placed at a serious disadvantage in competition with the importer.

traffic from ports is quoted special rates because the distance is great and the traffic would not come but for that rate, which is undoubtedly a paying rate, and helps to extend the markets of Bombay mill industry. That long distance traffic deserves encouragement in form of reduced rates can hardly be denied. But what needs emphasis is that similar reduced station-to-station rates ought to be quoted from the internal mill centres to important consuming markets, and in calculating the rates total distance traversed, irrespective of the different lines, ought to be taken into account.

The Cawnpore Cotton Mills

Let us now examine the location of Cawnpore cotton mills in relation to railway freight. In the preceding section reference has often been made that Cawnpore possesses considerable advantage in respect of railway freight in comparison with the Bombay cotton mills, and therefore, in what follows we shall critically analyse the railway transport problem as affecting the Cawnpore mills and endeavour to locate the comparative advantage, in respect of different articles, either raw materials or finished products.

Rates on Raw Cotton

The Cawnpore cotton mills manufacture piece-goods primarily of coarser varieties and therefore the new cotton they consume is of medium quality. Hence, their supply of raw cotton is drawn mainly from the Central Provinces and the cotton growing tracts in the Deccan. The railway freight they have to pay works out as follows :—

Miles.	*Station from.*	*Rate.* Rs. a. p.	*Miles.*	*Station from.*	*Rate.* Rs. a. p.
594	Malkapur	2 3 11	676	Amraoti	2 6 8
627	Khamgaon	2 6 8	642	Dhamangaon	2 3 10
626	Shegaon	2 6 8	611	Wardha	2 1 6
649	Akola	2 8 7	632	Hinganghat	2 3 3
670	Dhulia	2 3 3	656	Warora	2 5 0
613	Amalner	2 1 11	685	Chanda	2 0 5
670	Badnera	2 6 2	561	Nagpur	1 12 11
433	Ujjain	1 7 5	839	Bombay	2 4 1

The rates portrayed in the preceding section when compared with those charged from other centres adverted to above

reveal the relative advantage or otherwise possessed by the Cawnpore mills in respect of their most important primary raw material. From the standpoint of railway transport costs, Nagpur mills are most advantageously located, so far as the aforesaid cotton growing tracts are concerned. The price of cotton being regulated by Bombay quotation, the Nagpur mills save a large part of the railway transport cost from the producing tracts to Bombay. But the Cawnpore mills have no such advantage. Per contra, they are at a positive disadvantage when they purchase their raw cotton from Bombay market and pay Rs. 2-4-1 per maund by way of railway freight. This is a very interesting feature of the cotton trade as affecting the railway rates policy and the cost of production of the mills alike and needs to be explained a little further. Bombay mills have an advantage over the other centres in as much as they can get a regular supply of raw cotton at hand, and are immune from the day-to-day fluctuation in cotton prices, with the aid of hedge contracts. Other centres, like Ahmedabad, Sholapur and Nagpur, being located nearer the cotton growing tracts, do make certain economies in railway transport charges by purchasing raw cotton from the tracts in their vicinity during the harvesting season. But at the same time it was also noted that raw cotton can be purchased in these cotton growing tracts in the harvesting season only, and not thereafter, because the primary producers, being in need of money, sell their produce immediately after the harvest, so that by the end of the harvesting season most of the cotton grown is sold out. Amongst the purchasers are the agents of the local mills, and the exporters. Therefore, the local mills have to purchase their annual requirements of raw cotton and stock them in their godowns or else to purchase from Bombay and pay double railway freight. Therefore, the incidence of railway rates on the raw cotton consumed by the Cawnpore mills should be visualised in the light of the aforesaid facts. The practice of purchasing cotton differs with the different cotton mills ; while some of them make their purchases through their agents from the cotton growing tracts during the harvesting season and keep the stock for the whole year, others depend primarily upon the Bombay market for their supplies. There is a considerable difference, therefore, in the *de facto* incidence of railway freight when one or the other of the two systems of cotton purchase are resorted to. If cotton is purchased from the producing centres the railway freights tabulated above are applicable, but if

the mills do not purchase their total requirements during the harvesting season they have to pay higher railway freight. The total freight paid in the latter case is the railway rates charged from cotton growing tracts to Bombay plus the rate from Bombay to Cawnpore. It is clear, therefore, that of these two systems of purchase, the former is preferable from the viewpoint of railway transport, because the incidence of railway rates is lighter. Doubtless, there are considerations other than those of transport which affect the system of purchase but to consider these is beyond the scope of the present work. The statement of the railway problem is sufficient for our purpose. From what has been said above, we may safely conclude that Cawnpore mills are, on the whole, at a relative disadvantage in respect of railway rates on the raw cotton purchased from the Central Provinces and Khandesh.

However, Cawnpore mills are more favourably located as compared with the other cotton mill centres, in respect of railway freight on the Punjab-American cotton. Special station-to-station rates are available from some of the dispatching stations as tabulated below :—

Rates per maund to Cawnpore

Station from	*Rate* Rs. a. p.	*Station from*	*Rate* Rs. a. p.
Jaranwala	2 2 1	Sarodha	2 4 10
Khanna	1 4 6	Sangla Hill	1 15 0
Lyallpur	2 0 6	Barnata	1 6 7
Nabha	1 4 9	Tarn Taran	1 10 11
Dhurri	1 5 8	Warburten	1 13 10
Gojra	2 2 1	Uankana Saheb	1 14 4

The traffic in this case is routed via Ghaziabad. When these rates are compared with those charged to Nagpur or Ahmedabad the relative transport advantage is revealed. Of all these three centres, freight to Cawnpore is the lowest because of the distance. Thus, rates charged from Jaranwala and Lyallpur to Nagpur are Rs. 3-12-0, and Rs. 3-13-3 respectively, but to Cawnpore they are substantially less as will be seen from the foregoing table. Similarly, Ahmedabad has to pay higher freight. For instance, the rate from Lyallpur to Ahmedabad is Rs. 2-13-0, but to Cawnpore it is Rs. 2-0-6 only. But the freight advantage enjoyed by Cawnpore in respect of Punjab-American cotton should not be over-estimated.

Rates on Mill Stores

Stores are purchased at Bombay and Calcutta. Cawnpore is one of the most important railway junctions, and commands unique rates facilities. Furthermore, it is linked directly to two leading ports of the country: the E. I. Railway connects it with Calcutta and the G. I. P. Railway with Bombay. Since the railways serving the different ports compete inter se, Cawnpore gets reduced rates to and from both the ports. We submit below the station-to-station rates quoted from Bombay to Cawnpore on different mill stores.

Commodity	*Rate* Rs. a. p.
Soda	0 10 1
Lubricating oils (Div. C)	1 2 0
Machinery	0 12 4
Farina (bags), Sago-Flour (bags)	0 11 1
Dyes	1 4 0
Sulphuric acid, Hydrochloric acid	2 4 2
China Clay	0 10 4
Packing Paper	0 11 2

The most striking feature of the aforesaid rates is their relatively lower level. When these rates are compared with those charged to Nagpur, we find that even though the latter is nearer to Bombay it has to pay higher railway freight. This is due to the port competition. Here it should be noted that Cawnpore is nearer to Calcutta than to Bombay and the ton-mile costs on the E. I. R. are lower than on the G. I. P. Therefore, the E. I. R. quotes lower rates to Cawnpore from Howrah, and the G. I. P. in order to keep a part at least of the total traffic on its own lines has perforce to lower its rates. Suffice it for the present to note that this sort of policy is questionable, since it puts other centres to a considerable disadvantage.

RATES ON PIECE-GOODS

Piece-goods manufactured by Cawnpore mills are sold largely in the markets in the vicinity of the mills, but a portion of the total output is despatched to distant markets as far as Howrah.

The statement submitted below portrays the marketing facilities.

Rates per maund on Piece-goods from Cawnpore

Mileage.	*Station to.*	*Rate.*	*Mileage.*	*Station to.*	*Rate.*
		Rs. a. p.			Rs. a. p.
120	Allahabad	0 6 5	87	Etawah	0 4 9
202	Benares	0 10 4	187	Farukhabad	0 9 11
46	Lucknow	0 2 11	157	Agra City	0 8 4
127	Fyzabad	0 6 10	192	Aligarh	0 10 2
351	Patna	1 2 5	271	Delhi	0 14 3
240	Gaya	0 13 6	248	Moradabad	0 13 1
481	Bhagalpur	1 9 1	277	Meerut City	0 14 4
631	Howrah	2 1 10	551	Amritsar	1 13 3

It will be seen that Cawnpore mills have to pay class rates on their piece-goods, very few station-to-station rates being available. But, being located at a distance from the port and nearer to its markets it gets substantial transport protection against the foreign competition in form of lower railway freight. However, the precise amount of advantage differs in different markets in proportion to the distance of the market from the mills and the nearest port. Let us take the concrete instances. The freight to Allahabad from Howrah is Rs. 1-11-1 per maund, and therefore, Cawnpore mills have an advantage of about Rs. 1-4-8. On the contrary, in some markets Cawnpore mills have a positive disadvantage, like Bhagalpur, Howrah, etc.

The foregoing study of railway rates, to and from some of the more important cotton mill centres, conveys a fairly adequate impression of railway policy as affecting the development of cotton industry in India. Let us now put down the conclusion of the survey in brief outline.

1. Indian Railways are not so planned as to meet adequately the requirements of internal trade and industries, because, while the port towns are directly linked with the more important internal centres by single railroad system on the same gauge, the lines connecting internal centres commonly belong to different systems and involve more frequent break of gauge and consequent higher freight charge.

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1. We have been informed that on wagon loads Rs. 1-8-0 per maund is charged, from Cawnpore to Howrah.

2. Railways pursue individualistic policy in rate making with the result that when a consignment travels over more than one railway system,—this being more frequent in the case of internal traffic than to and from the port towns—the telescopic schedule rates, if any, are calculated, not on the total distance traversed, but, on the distance of the individual railroad system.

3. The general level of rates which was raised in 1922, during the boom period, is now restricting the movement of traffic because the steep fall in the price level has substantially raised the incidence of rates.

4. The cotton mills should re-organise their sales departments and reduce the competition between the internal mills, so as to eliminate the waste in transport costs. Centralisation of marketing arrangements would, doubtless, yield more profitable results.

APPENDIX I

Raw Cotton carried on Class I Railways & the Earnings therefrom (in lakhs.)

Year.	B. B. & C. I. Rly.		G. I. P. Rly.		N. W. Rly.		Total on all Railways.	
	Tonnage.	Earnings.	Tonnage.	Earnings.	Tonnage.	Earnings.	Tonnage.	Earnings.
1913-14	...	...	...	...	—	—	15.35	216.5
1914-15	3.55	36.7	3.8	86.0	1.3	14.2	13.34	175.8
1915-16	3.8	46 4	5.3	113.9	1.1	12.9	14.82	214.2
1916-17	3.5	48.0	3.7	80.1	1.1	14.7	12.43	178.0
1917-18	3.6	47.2	3.2	65.6	0.85	7.9	12.34	164.4
1918-19	3.8	55.6	3.3	74.5	1.3	13.6	12.97	188.6
1919-20	2.9	59.0	4.9	129.1	1.6	23.4	15.1	272.3
1920-21	3.2	55.5	4.2	122.2	1.2	28.3	13.4	258.0
1921-22	3.3	62.0	5.2	159.5	1.3	34.0	14.7	317.1
1922-23	3.2	88.4	4.9	185.6	1.5	39.4	13.3	375.7
1923-24	3.2	85.3	4.3	161.0	2.5	59.3	13.7	360.8
1924-25	2.6	82.0	4.1	155.2	2.9	73.2	12.85	361.6
1925-26	5.1	108.6	4.3	140.6	3.63	107.8	17.1	416.3
1926-27	3.5	58.4	3.9	144.1	2.25	68.0	13.0	328.5
1927-28	2 9	60.8	4.11	156.3	2.51	86.8	13.4	355.4
1928-29	3.9	70.4	4.49	172.9	2.61	80.8	15.0	379.9
1929-30	4.3	90.11	4.77	187.5	3.29	155.0	17.0	450.2
1930-31	3.1	67.0	4.4	174.2	2.4	90.8	13.7	382.
1931-32	2.5	54.1	1.8	65.1	1.7	75.6	8.6	229.
1932-33	2.8	55.7	2.6	94.6	1.9	75.1	10.2	264.
1933-34	3.6	65.9	2.7	92.3	3.1	134.7	12.6	337.

APPENDIX II

Comparative Statement of Railway Rates of Freight on full-pressed Cotton from various centres to Nagpur in 1914 and 1931.

Mileage from Nagpur.	Forwarding Station.	Rate per maund.						Rate per maund, per mile in pies.		% of increase.	Remarks.
		1914.			1931.			1914.	1931.		
		Rs.	a.	p.	Rs.	a.	p.				
49	Wardha ...	0	2	9	0	4	10	.67	1.18	76.12	
70	Hinganghat...	0	4	4	0	6	7	.74	1.13	58.70	
80	Dhamangaon	0	4	9	0	7	2	.71	1.07	50.70	
94	Warora ...	0	5	4	0	8	4	.68	1.06	55.88	
114	Amraoti ...	0	6	6	0	10	0	.68	1.05	54.41	
158	Akola ...	0	8	2	0	13	8	.62	1.04	67.74	
454	Surat ...	1	0	0	2	4	5	.42	.96	129	
467	Navasari ...	1	1	5	2	5	0	.45	.95	111	
469	Kim ...	1	2	3	2	5	1	.47	.96	104	
(621*)	484 Dharmabad (Via Ballarsha)	1	8	7	2	0	6	.47	.81	72.34	*Old route via Manmad.
(602*)	503 Umri (Via Ballarsha)	1	7	9	1	15	10	.47	.76	61.70	*Old route via Manmad.
	520 Bombay ...	0	14	2	1	11	5	.33	.63	90.91	
(904*)	580 Gadag (Via Ballarsha)	2	2	4	3	1	1	.46	1.02	121.74	*Old route via Hotgi and Manmad.
	596 Asarwa ...	1	4	2	2	11	8	.41	.88	115	
(946*)	616 Hubli (Via Ballarsha)	1	9	7	3	2	11	.32	.99	209.38	*Old route via Hotgi and Manmad.
(1261*)	915 Tiruppur (Via Ballarsha)	1	15	11	3	9	1	.30	.76	153.33	*Old route via Jalarpet and Raichur.

APPENDIX III

Comparative Statement of Railway Rates on Piece-goods from Nagpur to various Centres in 1914 and 1932

Mileage.	Receiving Station.	Rate per maund.		Rate per maund, per mile in pies.		% of increase.
		1914	1932	1914	1932	
		Rs. a. p.	Rs. a. p.			
49	Wardha ...	0 3 9 R.R.	0 10 6 R.R.	.92	1.31	42
114	Amraoti ...	0 7 10 R.R.	0 10 6 R.R.	.82	1.11	35
158	Akola ...	0 10 6 R.R.	0 14 2 R.R.	.80	1.08	35
(432)* 186	Itarsi ...	1 2 1 R.R.	1 0 0 R.R.	.50	1.03	106
188	Raipur ...	0 6 7 O.R.	0 11 1 O.R.	.42	.71	69.05
(385)* 234	Harda ...	1 2 1 O.R.	1 4 0 O.R.	.56	1.03	84
(432)* 243	Bhopal ...	1 4 8 O.R.	1 3 2 O.R.	.57	.95	67
257	Bilaspur ...	0 6 8 O.R.	0 14 7 O.R.	.31	.68	119
278	Burhanpur ...	1 2 1 O.R.	1 7 8 O.R.	.78	1.02	31
(321)* 297	Khandwa ...	1 2 1 O.R.	1 9 3 O.R.	.73	1.02	40
(408)* 384	Indore ...	1 5 10 O.R.	1 14 1 O.R.	.64	.94	47
520	Wadi Bundar ...	0 11 8 O.R.	1 11 10 O.R.	.27	.64	137
553	Poona ...	1 1 11 O.R.	1 14 7 O.R.	.39	.66	69
(622)* 553	Sholapur ...	1 1 11 O.R.	2 11 8 O.R.	.35	.95	171
596	Ahmedabad ...	1 10 2 R.R.	2 14 8 R.R.	.53	.94	77
639	Midnapore ...	0 15 2 O.R.	2 2 4 O.R.	.28	.64	129
(794)* 679	Delhi ...	1 15 3 O.R.	2 9 6 O.R.	.47	.73	55
(1133)* 682	Madras ...	1 4 4 O.R.	2 6 9 O.R.	.22	.68	209
701	Shalimar ...	0 11 8 O.R.	1 14 4 O R.	.20	.52	160
814	Cuttack ...	0 11 3 O.R.	2 11 5 O.R.	.17	.64	276
967	Amritsar ...	2 11 3 O.R.	3 7 9 O.R.	.48	.69	44

* Old Routes.

CHAPTER III

WOOLLEN INDUSTRY

The study of the Indian woollen industry is important from both the agricultural and industrial points of view. In many respects it resembles the cotton industry, and yet has distinctive peculiarities of its own. In its agricultural aspect, unlike cotton, the production of raw wool is carried on primarily by lower class Hindus, having scanty resources. Looking to the conditions of the primary producer, one is not surprised to note the decadent position in which the sheep-rearing industry has fallen to-day in this country. The role, that improved sheep-rearing and sheep-breeding industry could play in the economic reconstruction of this country, can hardly be exaggerated. It will make a substantial contribution in revitalising Indian agriculture. On the industrial side, an improvement in the quality of Indian raw wool will give a much needed stimulus to the cottage and mill industry alike.

BASIS OF RAILWAY RATES

The important articles with reference to which the following study of railway rates is to be undertaken are wool, carpets, blankets and woollen piece-goods. This will give us a fairly good idea of the effect of railway rates on the development of the Indian woollen industry as a whole. Wool is the primary raw material, and therefore, the rates charged are very important, especially because the distance over which the article has to be carried is generally great. Rates charged on auxiliary raw materials used by the woollen mills will also be studied. As regards the finished products, blankets and piece-goods are manufactured by the woollen mills, while carpets are turned out by the hand-looms and some factories. In what follows, therefore, we propose to study the basis of railway rates, which will be followed by a detailed review with reference to more important centres of production and consumption.

Wool, full-pressed, is classed as 4th. class R. R. in the Indian Railways General Classification of Goods. This classification is followed on all the railways. On the G. I. P. Railway, however, ' C ' schedule is applied, the basis of charge being one pie per maund per mile. Wool, half-pressed, is classified as 6th. class R. R. This rate is subject to certain exceptions on the G. I. P. Railway. The general rate over the G. I. P. Section is 9th. class R. R. Over the I. M. and A. D. C. Sections 8th. and 6th. class rates are charged, and on loads of C/81 6th. class R. R. and 4th. class O. R. rates are charged, the minimum distance of charge on these sections being 26 miles. Wool, loose, is classified as 8th. class R. R. in the General Classification. This rate is subject to the undermentioned exceptions on certain railways. On the B. & N. W. R. C/D schedule rate is applicable at O. R. on wagon loads. On the G. I. P. 9th. class R. R. rate is applied.

Carpets are classed in the General Classification of Goods as 6th. class R. R. and 4th. class O. R. This classification is followed on all the railways without exception. Blankets, (Cumblies) are classed as 4th. class R. R. Woollen piece-goods like cotton, are classified as 6th. and 4th. class R. R. and O. R. respectively. With this brief statement of the bases of freight charge, we now pass on to review in detail the rates policy as pursued to-day.

ANALYTICAL STUDY OF THE RAILWAY RATES POLICY

CAWNPORE

Cawnpore is the most important centre of Indian woollen mill industry, having two woollen mills, one known as the Cawnpore Woollen Mills (Lalimli) employing about 2,416 persons, by far the largest woollen mill in the country, and another known as Baijnath Balmukund Woollen Mills employing about 250 men daily. Further, the Cawnpore Woollen Mills turn out several varieties of goods consumed in distant parts of the country. The production of wool being scattered and the output inferior in quality, the mills have to import wool of superior quality from distant centres both by sea and land. Needless to mention, therefore, that railway rates play an important part both in the cost of production of the manufactured articles and in their marketing.

PRIMARY RAW MATERIAL : RAW WOOL

As regards the supplies of raw wool, in addition to what is available locally, Cawnpore being a very important mart and a collecting centre, the mills draw their supplies from Tibet, Persia, Afghanistan, Central India and Australia[1]. Australian wool is imported by sea, because both the Indian wool as well as that imported by land from Persia and Afghanistan is inferior in quality. Obviously, therefore, it can be rightly said that there is no competition between the two; 'they being altogether two different things[2]. Finer varieties of goods are manufactured with Australian wool and coarser varieties with Indian wool. Coarser varieties are larger in quantity. "If you take the quantity that is made out of the Indian wool," added Mr. Lilley, " it is between 80 and 85 per cent. as compared with 20 are 15 per cent. Australian wool."[3] Making allowance for the improvements within the last 15 years, and the tendency towards the increased production of finer qualities, it may be said that the consumption of Australian wool is about 25 per cent. of the total raw wool consumed by the Mills[4]. The consumption of imported wool is therefore fairly large, and the tendency is unmistakably towards an increase.

Australian wool is carried from the ports, either Calcutta or Bombay, preferably the former, and as such has to pay a substantial amount by way of railway freight. The railway rate from Howrah to Cawnpore, on wool full-pressed is Re. 1-9-1 per maund at O. R. in wagon loads, and Rs. 2-0-10 at R. R. on actual weight. This is, however, a special station-to-station rate which is considerably lower than the class rate which works out to be Rs. 2-1-3 per maund at R. R. In this connection it will be noted that the E. I. R. quotes lower rates only at O. R. because at R. R. the difference between the actual and the class rate is almost negligible. Looking at the superior quality of the imported

1. In this connection evidence of Mr. Lelley before the Indian Fiscal Commission is very important. Vide, Evidence, Vol. I. P. 255-56.
2. Ibid. P. 255 a.
3. Ibid.
4. Anticipating this tendency Mr. Lilley remarked: "Probably the greater portion of the imports will be in the finer qualities. We confine ourselves to making low qualities with Indian wool". Ibid.

wool and its higher price, the rate of Re. 1-9-1 per maund at O. R. facilitates the consumption of imported wool, because from the other more important internal centres, like Fazilka, Beawar, Yaru, etc., the rates work out at a relatively higher level. The incidence of railway rates from the more important centres on the N. W. R. works out as follows:—

Miles	*Station from*	*Rates per Maund.*		
		N. W.	*E. I.*	*Total*
		Rs. a. p.	Rs. a. p.	Rs. a. p.
886	Sukkur	2 0 8	0 13 7	2 14 3
768	Multan City	1 5 8	0 15 4	2 5 0
592	Lahore	0 12 7	0 15 4	1 11 11
859	Daryakhan	1 10 4	0 15 4	2 9 8
1151	Yaru	2 14 5	0 13 7	3 12 0

The higher railway rates from the internal wool collecting centres are due partly to longer distance and partly to lack of special station-to-station rates at O. R. The question of distance, however, is important only in some cases, because generally the distance between each of the internal centres from which purchases of wool are made and Cawnpore, is not longer than that between Cawnpore and Howrah. Wool markets in the U. P. are, as a rule, located at shorter distances. The lead from some centres in the Punjab and the N. W. F. P. are in some cases longer. Therefore the plea of distance is not very material to the issue in hand. The important fact which seems to explain the position is that the Indian railways pursue an individualistic policy, and therefore, do not quote special station-to-station rates at O. R. from internal centres, because generally the total distance traversed is over more than one line, and in rating the lines take into account only the distance traversed on their individual lines. This puts a serious handicap in the marketing of indigenous wool as well as the woollen manufactures. The production of raw wool is thereby affected because higher railway rates restrict the marketing area and curtail the consumption of wool. It may be argued at this point, that the difference in railway rates is not so substantial, as to affect the output of raw wool, and more so because in India sheep flocks are not maintained primarily for wool; it being only a bye-product. This argument, doubtless, emphasises the remarkable feature of the production of raw wool in this country, but it

seems to neglect the fundamental truth that wool is a most important bye-product of Indian sheep, and that anything which helps to raise the cost of marketing is sure to have its repurcussions on the primary producer in the long run. The difference is only in respect of time. Woollen manufactures are also affected because the cost of primary raw material being raised, the selling price of the finished product is obviously higher, which affects the consumption generally. Here, too, it should be remembered that the effects of higher railway rates charged on wool on the selling price of the manufactured products differ with individual mills, because the cost of production depends upon several factors. But it cannot be denied that higher railway rates, so far as they are due to the individualistic policy of the railways, are a serious handicap in the development of the wollen mill industry in this country. It should, however, be noted that the E. I. R. has recently withdrawn[1] the concession rate quoted from Howrah to Cawnpore at O. R., so that to-day the actual rate charged is Rs. 2-0-10 per maund at O. R. on actual weight. This removes the disparity in rating which had hitherto favoured the imported stuff to the detriment of internal produce.

The natural disadvantage in respect of the primary raw material, wool, should not, however, be overlooked. The distance over which raw wool has to be carried is a great disadvantage because it raises the prices of the raw wool. This can be overcome by offering reduced rates from the wool markets to internal mills. The railway authorities, especially the N. W. R., should see that the rates are suitably adjusted, so as to stimulate manufacture of wool within the country as far as possible, without, at the same time, adversely affecting their own interests, for the aim of all transportation is annihilation of distance.

When we consider the position of Cawnpore as a centre of woollen manufactures, we find that it enjoys more advantageous location, and therefore, can get its necessary supply of raw wool at rates lower than those paid by some other mills, like those of Baroda, Mysore, etc. Besides, the Cawnpore Woollen Mills have an efficient system of purchase of raw wool, which helps the mills to

1. Vide, E. I. R. Tariff, Part I, (1934), P. 294.

get their wool supplies at cheaper prices than those of other mills[1]. Furthermore, in the markets in Northern India they have acquired a virtual monopoly both in the purchase of raw materials and the marketing of finished products, so that the railway rates are easily shifted over to the consumer. Again, the goods manufactured by them, being of superior quality as compared with those of other Indian mills, the incidence of railway rates is still lower. Besides, the railways give better response to their requests for suitable adjustments, because they are a big customer. Hence when we analyse the evidence tendered by the representatives of the British India Corporation before the different commissions, we find no serious complaint made against the rates policy. In short, therefore, their organised purchase of raw wool and better selling system, coupled with the varied and relatively larger output, enables them to compete better alike with the importers and the internal producres, and the railway authorities have helped them throughout by making suitable rate adjustments whenever a proper case has been made out for the same.

AUXILIARY RAW MATERIALS

Let us then carry our analysis further. In addition to wool, which is a primary raw material, certain auxiliary raw materials are consumed, some of which are imported from foreign countries while others are locally purchased. Railway rates charged differ according to the conditions of carriage and the size of the consignment. This is significant because the Cawnpore Woollen mill, being the largest woollen mill in India and the second largest in the world[2], is able to avail itself of lower railway rates due to larger size of the consignment. Furthermore, Cawnpore being linked directly both with Calcutta and Bombay, the local mills get lower railway rates on imported raw materials due to port

1. Cawnpore Woollen and the New Egerton Woollen Mills at Dhariwal are both managed by the British India Corporation and as the two mills together consume the better share of wool raised in Northern India, they have come to acquire better hold on the markets in U. P., the Punjab, N. W. F. P., and even Central India. They, however, maintain very strict control over their officers, lest the matters which they consider as secret should be divulged. No officer, therefore, dares to speak anything of the organisation.
2. Vide, Indian Industrial Commission, Evidence Vol. I. P. 285.

competition, to which frequent references have been made in the foregoing chapter. An idea of the rates charged on auxiliary raw materials can be had from the statement submitted below :—

Rates per Maund from Bombay to Cawnpore

Description of Material	*Rate*	
	Rs. a. p.	Rs. a. p.
	1932.	*1935.*
Soda ash (alkali)	0 10 10	0 10 10
Glauber Salt and Caustic Soda	0 12 9	0 12 9
Machinery parts	0 12 4	
Colours, paints and dyes, Div. 'B'	1 4 0	1 4 0
Acids : hydrochloric, Sulphuric or Nitric	2 4 2	2 4 2
China Clay	0 10 4	0 10 10
Farina and Sago Flour	0 11 1	0 13 4
Packing Paper	0 11 2	0 11 2

These are special reduced rates and when the distance and value of respective articles are taken into account the nature of concession offered becomes clear. The rates are quite reasonable. As regards the conditions of wagon loads it has already been pointed out that the British India Corporation, having the managing agency of both Cawnpore Woollen Mills and New Egerton Woollen Mills at Dhariwal, is able to take full advantage of these wagon load conditions. Some instances will better explain the advantage conferred by the reduced rates offered by the railway authorities. For example, the rate on soda ash (alkali) at O. R. (W/300 ; L ;) is Re. 0-10-10, whereas at R. R. on actual weight it comes to Re. 1-6-5[1]. On colours, paints and dyes, (Div. B.) rate charged at R. R. is Rs. 2-4-2, but at O. R. reduced rate of Re. 1-8-5 per maund is offered[2]. A still lower rate is quoted on wagon loads which, as referred to above, works out at Re. 1-4-0 per maund. Similarly, on machinery parts the R. R. rate is Rs. 2-4-0 per maund, but the reduced rate at O. R. is Re. 1-8-5. A still lower rate is offered on wagon loads at Re. 0-12-4 per maund. Thus it is clear that substantially lower rates are available to woollen mills at Cawnpore, especially at wagon loads. But it has to be noted that these reduced rates are offered only from the port towns, and similar station-to-station rates are not available from internal centres where some of the aforesaid

1. Vide Letter of the G. I. P. R. No-R. Q. 3/13, dated 9/9/32.
2. Ibid.

auxiliary raw materials are produced. This helps the consumption of imported goods even when similar goods are available within the country.

FINISHED PRODUCTS

It has already been mentioned that the Cawnpore Woollen Mills Co. has a well-organised sales department and efficient agency system. Railway rates on woollen piece-goods to some more important centres work out as follows :—

Rates (O. R.) per Maund from Cawnpore

Miles	*Station to*	*Rate* Rs. a. p.	*Miles*	*Station to*	*Rate* Rs. a. p.
198	Gwalior	0 11 3	773	Ahmednagar	3 5 0
319	Bhopal	1 1 6	872	Poona	3 5 6
561	Nagpur	1 13 5	551	Amritsar	1 13 3
314	Jubbulpore	1 1 3	570	Lahore	1 14 3
840	Bombay	2 4 2	630	Howrah	2 1 8
941	Sholapur	4 3 0			

These rates are similar to those charged on cotton piece-goods from Cawnpore, and as enough has already been said on this point in connection with the cotton mill industry, it is needless to repeat the same here. But, it should be pointed out that woollen goods command relatively higher prices than cotton piece-goods and are consumed by the well-to-do classes, and therefore, the railway rates do not materially affect the consumption of these goods, even if they are slightly higher. Per contra, if the rates were to be lowered, they would go to swell the dividend of this Company and the consumers would not get any share of the reduction. Therefore, rates on woollen piece-goods from Cawnpore are quite reasonable.

BLANKETS

A reference has been made before to the effect that blankets are also manufactured at Cawnpore. In fact, Messrs. Baijnath Balmukund Woollen Mills concentrate largely on the manufacture of blankets, and supply blankets to the Government and Public bodies[1]. The Cawnpore Woollen Mills also manufacture blankets.

1. Vide, Report of the Director of Industries, United Provinces 1924-25.

Therefore railway rates charged on blankets are important. We quote below rates to a few more important markets.

Rates per maund for Cawnpore (Blankets)

Miles	*Station to*	*Rate (R. R.)* Rs. a. p.
198	Gwalior	0 11 3
319	Bhopal	1 1 6
561	Nagpur	1 13 2
314	Jubbulpore	1 1 3
840	Bombay	2 4 2
941	Sholapur	3 1 7
773	Ahmednagar	2 8 11
872	Poona	2 14 1

NEED FOR LOWER RATES ON BLANKETS AT O. R.

It will be seen that these rates are similar to those quoted on piece-goods adverted to above. Blankets are heavier in weight and lower in value than woollen piece goods, and therefore the injustice of charging equal rates on both the articles is obvious. This is due to the fact that whereas in the case of piece-goods rates quoted are at O. R., those in the case of blankets are at R. R. This is indeed an important condition, and it is reasonable that there should be a difference in rates between O. R. and R. R. But here we find that while piece-goods are permitted alteranative rates at O. R. and R. R., in the case of blankets there is no such alternative. This is against the widely accepted practice of rate-making, which recognises the difference in charge between O. R. and R. R. and permits the alternative to the shippers. It cannot be gainsaid, therefore, that the higher railway rates charged on the transport of blankets have adversely affected the manufacturing industry, especially those mills which depend primarily on the manufacture of blankets and of coarser variety. The majority of the woollen mills concentrate more on the production of blankets, and as the rates charged are higher, the cost of transport is substantially raised, and the marketing area is thereby limited. Higher railway rates, therefore, offer a partial explanation of the difficulties with which the Indian woollen mills have been faced in the last few years. "The condition of the woollen industry", says the Report of the Director of Industries, Bombay Presidency, "continued to be unsatisfactory during the year. In 1920 there were five woollen

mills in the Presidency. In 1929 there were only three such mills working in the Presidency. During the latter period of 1929 one of these mills with a paid up capital of Rs. 13 lakhs went into liquidation. No new mills were started. Thus, in the year 1931 only two mills were working as they were in 1930[1]." The industry is passing through difficult times, and with the exception of a few, almost all the woollen mills are incurring heavy losses. In view of these conditions, it is incumbent on the railway authorities to revise their rates on blankets. Besides, offering reduced rates at O. R., special station-to-station rates should be quoted from different mills to more important consuming markets. We shall presently discuss the marketing facilities of the other mills.

DHARIWAL WOOLLEN MILLS

We have seen that the Dhariwal woollen mills and Cawnpore Woollen mills, or 'Lal-Imli', are under the same managing agents, the British India Corporation, and hence their purchase of raw materials and the marketing of finished products is more or less centralised. This helps to lower the cost of production of the mills by eliminating waste in transport costs. Here, however, it should be noted that since these two mills are located in two different centres, the incidence of railway rates, both in respect of raw materials and finished products, varies. Therefore, it has been felt that the railway freights as affecting the Dhariwal Mills should be separately studied.

RATES ON WOOL

Rates on wool from the more important collecting centres, to Dhariwal are given below :—

Station from	*Rate* Rs. a. p.	*Station from*	*Rate* Rs. a. p.
Karachi	2 8 4	Bikaner	1 3 9
Sukkur	1 12 0	Beawar	1 13 7
Fazilka	0 8 3	Marwar	1 15 10
Delhi	1 0 2	Adoni	3 6 3
Multan City	0 14 9	Naini Tal	2 7 6
Lahore	0 4 1	Tanakpur	1 9 9
Daryakhan	1 0 9	Ramnagar	1 5 6
Yaru	2 9 8	Haldwani	2 7 4
		Kalimpang	4 8 4

The freight situation as portrayed in the foregoing statement does not convey a favourable position ; it demonstrates the natural

1. Vide, Report—1931-32 ; P. 3.

disadvantage under which the Indian woollen mills labour in respect of this primary raw material. With the exception of a few centres, the rates in general seem to be high, due to longer distance over which the traffic has to be carried. Furthermore, in some cases the traffic has to pass over several railway systems and the total freight charged, therefore, becomes higher. This is especially true of traffic from Marwar, Adoni, Nainital, Tanakpur, Ramnagar, Haldwani and Kalimpong. It is interesting to analyse the rates charged from some of these stations, so as to know the nature of the freight charged on different systems, and the rates policy as affecting the through traffic. Traffic from Adoni, for instance, is routed via Raichur and New Delhi and crosses over the M. & S.M., the G. I. P., and N. W. Railways, the proportionate share of the rate being Re. 0-3-1, Rs. 2-8-7, and Re. 0-10-6 respectively. Similar is the case with the traffic from Tanakpur, Ramnagar, and Haldwani :—

	R. & K.	*E. I.*	*N. W.*	*Total.*
Tanakpur	0 4 6	0 9 4	0 11 11	1 9 9
Ramnagar	0 3 2	0 6 5	0 11 11	1 5 6
Haldwani	0 5 0	0 6 5	0 11 11	2 7 4

In this case, the traffic passes over three railways. In the case of Kalimpong the traffic is routed via Kishenganj, Katihar, Bara Banki and Saharanpur and the proportionate share of rates works out as follows :—

	Rs. a. p.		Rs. a. p.
K. R.	0 4 0	B. & N. W.	1 8 7
D. H.	0 10 7	E. I. R.	1 1 10
T. C.	0 0 4	N. W.	0 11 11
E. B.	0 3 1		
		Total	4 8 4

In such cases, railways find it difficult to quote reduced station-to-station rate and the freight perforce has to be higher. These details clearly bring out the fact that the Indian mills are not very suitably located as regards the supply of their raw materials. This disadvantage is accentuated by the individualistic policy pursued by the railways. They do not quote reduced station-to-station rates in the case of through traffic from the more distant centres. Doubtless there are some station-to-station rates, but they are mainly for local traffic. Therefore, the Dhariwal Mills draw their supplies primarily

from the areas in the Punjab, North Western Provinces, U. P., and the Central India. Further, in respect of imports by land from Tibet, Afghanistan, etc., this mill is more favourably located. Hence, as compared with other woollen mills it gets a better supply of raw wool and at relatively cheaper railway freight.

The post-war increase in rates on wool adds to the difficulties of the situation as will be seen from the statement given below :—

Station from	*Present Rate*	*Rate in 1914*
	Rs. a. p.	Rs. a. p.
Karachi	2 8 4	1 7 2
Sukkur	1 12 0	0 15 0
Fazilka	0 8 3	0 5 3
Delhi	1 0 2	0 9 0
Multan City	0 14 9	0 7 11
Lahore	0 4 1	0 2 2
Daryakhan	1 0 9	0 9 7
Yaru	2 9 8	1 6 5

The increase in rates has been considerable and the incidence becomes still heavier when the price level is taken into consideration. The need of revision, therefore, cannot be too strongly emphasised.

RATES ON STORES

Karachi being the nearest port, the rates on stores and other auxiliary raw materials used by the mills work out as follows :—

Articles	*Present Rate*	*Rate in 1914*
	Rs. a. p. (O. R.)	Rs. a. p. (O. R.)
Lubricating Oil	1 13 4	1 7 2
Caustic Soda	0 13 0	0 14 1
Glauber Salt	1 13 4	2 2 10 R. R.
do	2 8 4 R. R.	
Soda Ash	0 13 0	0 14 1
Machinery parts	1 13 4	0 14 1
Belting Leather	3 9 6	2 14 3
Colours, etc. (Div. B.)	1 13 4	1 7 2
Iron and Steel (Div. A.)	2 11 1	2 2 10
do. (Div. B.)	1 13 4 R. R.	0 12 3
		1 7 2 R. R.
Hardware	3 9 6	2 14 3
Hessian Cloth	1 13 4	1 7 2
Soap	1 13 4	1 7 2

With a few exceptions, these rates convey a favourable impression. Rates on Machinery parts should, however, be reduced and reduced rate at owner's risk be quoted on Iron and Steel (Div. B).

RATES ON PIECE-GOODS

Let us now review the rates on piece-goods manufactured by the Mill. In the preceding section it was pointed out that the Dhariwal Mills is one of the most important mills in India and distributes its products throughout the country. The railway rates charged to some more important markets are tabulated below :—

Station to	*Rate*	*Station to*	*Rate*
	Rs. a. p.		Rs. a. p.
Amritsar	0 2 7	Patna	2 14 7
Ambala	0 10 1	Howrah	3 7 1
Lahore	0 4 4	Bhopal	2 7 9
Delhi	1 0 9	Nagpur	3 9 8
Agra	1 8 0	Ahmedabad	2 10 11
Cawnpore	1 14 9	Baroda	2 14 2
Lucknow	1 13 7	Bombay	3 1 10
Allahabad	2 3 0	Madras	6 6 6
Benares	2 5 3	Bangalore City	5 10 3

The rates quoted above also apply to blankets at railway risk. These are class rates and discourage long distance traffic. To stimulate long distance traffic the railways in their own interest should quote telescopic schedule rates.

The extent of increase in rates during the post-war period will be gauged from the statement submitted below :—

Station to	*Present Rate*	*Rate in 1914*
	Rs. a. p. (O. R.)	Rs. a. p. (O. R.)
Rawalpindi	0 13 4	0 10 10
Peshawar City	1 2 9	0 15 3
Amritsar	0 2 9	0 2 0
Ambala City	0 10 1	0 8 3
Lahore	0 4 4	0 3 5
Delhi	1 0 9	0 13 7
Karachi	2 11 1	1 7 11

The foregoing increase in rates when compared with that on wool tones down and does not seem to be unreasonable. The rate to Karachi, however, seems to have been raised substantially and needs to be reduced.

BARODA

At Baroda[1] there is a woollen mill known as the Maharani Woollen Mills, manufacturing woollen cloth and blankets. This mill was started in 1922 and during the decade it had to pass through several adverse circumstances. The problem of transport costs has attracted the attention of the Managing Agents and strenuous endeavours are made to economise in this direction. We shall, therefore, review in brief the position in respect of railway rates affecting this concern.

RAW MATERIALS

It will be recalled that the more important centres of raw wool trade are Fazilka, Haldwani, Multan, Delhi, Yaru, Karachi, Sukkur, Bikaner, Marwar, Beawar, Rajkot (Kathiawar), Bombay, Bangalore, Adoni, Kalimpong, etc. The Indian Woollen Mills draw their supplies of raw wool from these centres, the proportion of the individual mills differing with their qualitative requirements and the distance from the mills. Rates per maund to Baroda from some more important wool markets are as follows :—

Markets from	*Rate*			*Markets from*	*Rate*		
	Rs	a.	p.		Rs.	a.	p.
Bombay	0	14	3	Bikaner	1	12	3
Beawar	1	2	6	Sukkur	2	11	5
Fazilka	2	10	7	Rajkot	0	12	8
Multan	3	3	9	Yaru	3	9	1
Karachi	2	7	5	Ramnagar	2	8	5
Bangalore	2	9	4	Adoni	2	6	11

Before discussing the foregoing rates it may be mentioned that on raw wool, like Blankets, there are no O. R. rates and therefore only R. R. rates have been given. A rapid glance at the rates will show that in respect of railway rates, the importance of different centres varies considerably. Thus, for instance, whereas from Beawar the rate is Rs. 1-2-6 per maund, from Yaru it is Rs. 3-9-1. The difference between the two is indeed substantial. If, therefore, the Baroda Mills have to purchase wool from Yaru, it seems that the supply of wool from the nearer sources is not sufficient for their requirements, or that other factors like prices, quality of the material, etc. have a better sway. Similarly, the rate

1. Now in liquidation.

charged from Multan is Rs. 3-3-9 per maund. These rates seem to be prohibitive.

RATES RELATED TO PRICES

Let us then study these rates in relation to the prices of raw wool. The position may be summed up as follows :—

Stations from	*Approximate price of Wool Per maund*	*Rate*
	Rs.	Rs. a. p.
Multan	16	3 3 9
Yaru	10	3 9 1
Kalimpong	20	5 0 2
Karachi	14	2 7 5
Beawar	18	1 2 6
Ramnagar	18	2 8 5
Adoni	7	2 6 11

The foregoing table strikingly demonstrates the importance of raw wool prices, as also of the railway rates, in determining the actual quantity of raw wool purchased by the mills from the respective centres. Prices at Yaru and Adoni are lower, and therefore, even though higher railway rates are charged, the mills seem to find it convenient to make their purchases in these markets. But after studying the situation a little deeper, we find that the mills require wool of relatively lower quality for manufacturing blankets and hence they have of necessity to purchase wool from Adoni and Yaru because of the lower prices. Thus, it seems that the mills have to carry their raw wool supplies over very long distances, and consequently pay higher transport charges, which vary from 25 to 40 per cent. of the cost of raw wool. This is a serious drawback in the organisation of the industry in general, and this mill in particular. It cannot be gainsaid that the Baroda Mills have to work under a great handicap of higher transport costs, in respect of their sole raw material, "wool". No doubt, other mills are working under similar disadvantages, but from what has been adverted to above, it will be seen that the Cawnpore Woollen Mills are relatively in a better position, and, as it will be shown later, even the Bombay mills enjoy some advantages in this respect. It seems, therefore, that Baroda works relatively under greater disadvantages, and we shall try to see how far this handicap can be reduced.

So far as the higher rates are due to longer distances over which the traffic has to be carried, it may be said that the handicap is natural and therefore permanent. But here, too, it has to be pointed out that in conformity with the general practice of rate-making, lower rates at O. R. need to be quoted as an essential alternative to the shippers. Furthermore, reduced rates should be offered in the form of special station-to-station rates from the important collecting centres to woollen mills, because they being by far the largest and more regular shippers, have a right to claim more favourable treatment at the hands of the carrier, than small and casual shippers. Such rates are in fact quoted from some centres to Dhariwal on the N. W. R. and to Cawnpore on the E. I., B. B., and G. I. P. Railways. But unfortunately we find no such rates to Baroda. This handicap should therefore be removed by offering similar station-to-station rates to Baroda as well. The mills on their part should endeavour to purchase raw wool from the nearer markets, and transport the same in larger consignments, so as to get better transport facilities from the railways concerned.

Further, it seems that when wool is purchased at Adoni in Southern India, and booked directly to Baroda, it costs more than to book it to Bombay, and then get it re-booked to Baroda. If so, this is anomalous. A similar question was raised before the Railway Rates Advisory Committee in the Sholapur Mills Case, and the decision given in that case is very useful here. In the light of that decision it can be maintained that the Baroda Mills have a right to get the present rate from Adoni reduced to that from Adoni to Bombay plus Bombay-Baroda rate. But we do not possess the details, and therefore it may suffice to suggest that the railway authorities should look into the case and remove the anomaly.

The rates from Karachi should be further investigated and revised, if needs be. The current rate from Karachi is Rs. 2-7-5 per maund, but the sea-cum-rail route from Karachi to Bombay, and thence to Baroda is considerably cheaper, the charge in the latter case is nearly 50 per cent. less.

Similarly, if Kalimpong wool is taken to Calcutta from Kalimpong, and is carried by steamer from Calcutta to Bombay, and thence by rail from Bombay to Baroda, the total freight charge is less than that when the traffic is carried by all rail route from Kalimpong to Baroda.

The rate from Rajkot is another instance to the point. The sea-cum-rail route is cheaper. If wool is taken from Rajkot to Mahuwar (Bhavnagar) and is taken to Bombay by steamer, and then railed to Baroda, the total rate is cheaper than the rate charged on the entire rail route from Rajkot to Baroda. All these cases should be investigated.

The impression left from what has been detailed above is that the Baroda mills have some transport disadvantage in respect of raw wool supplies, part of which is natural and part is capable of being removed with the co-operation of the Managing Agents of the mill and the railway authorities.

AUXILIARY RAW MATERIALS

Auxiliary raw materials or stores are purchased by the Baroda mill authorities from Bombay. Some minor purchases are also made at other places in the neighbourhood like Ahmedabad. We have already stated that railway rates on the stores or auxiliary raw materials are not such as may materially affect the cost of production of the finished products. Nevertheless, in a study like the present they cannot be ignored. We may tabulate the rates on the more important articles as under :—

Rates per Maund from Baroda

Description of articles	*Rate* Rs. a. p.
Lubricating oils	0 10 1
Acetic acid and other liquids	1 2 6
Caustic Soda	0 10 1
Glauber salt	0 9 10
Soda Ash	0 9 3
Small machinery parts	0 10 1
Leather goods such as, Belting, Pickers, Bobbins, Shuttles, etc.	1 2 6
Dyes and Colours	1 2 6
Hardware and Iron	0 10 1
Hessian Cloth.	0 10 1

The Baroda mills have an advantage over the Cawnpore mills when the freight paid on the stores is considered. The advantage is due to the location of the Baroda mill, being nearer Bombay. On a closer examination it appears that the advantage enjoyed by the Boroda mills over the Cawnpore mills is not as great as it may appear. The advantage is partly neutralised by the fact that the

Cawnpore mills purchase their requirements in greater quantity and therefore get the advantage of lower wagon load rates.

FINISHED PRODUCTS

The Baroda mills manufacture largely woollen cloth and blankets. Their markets extend throughout the country, such as Cawnpore, Agra, Amritsar, Delhi, Ahmedabad, Bombay, Karachi, Nagpur, Jubbulpore, Sholapur, Akola, Amraoti, Bangalore, Calcutta, Tinsukia, Diburgarh, Gauhati (Assam), Muzzaffarpur, Patna, Ranchi, etc. Railway rates, therefore, play a very important part in their sales. In markets nearer at hand rates are not felt so much and hence we give below a few rates to some distant centres of consumption with a view to show the longer distances over which the goods have to be transported, which entails substantially heavy transport costs.

Rates per Maund from Baroda

Stations to	*Rates on Blankets at R. R.*	*Rates on Woollen Cloth at O. R.*
	Rs. a. p.	Rs. a. p.
Amritsar	2 12 5	2 12 5
Delhi	2 0 5	2 0 5
Karachi	2 7 6	2 7 6
Cawnpore	2 2 7	2 14 0
Peshawar	3 10 6	3 10 6
Bangalore	3 1 5	3 15 5
Madras	3 7 2	3 1 11
Muzzaffarpur	3 6 10	3 3 1
Tinsukia	5 15 9	5 11 6
Dibrugarh	5 14 5	6 9 10
Howrah	4 2 6	2 5 11

The most striking feature of the foregoing schedule rates is the relative high level, especially in the case of the last three markets. In view of the length of the haul, it is not proper to attribute injustice to the railway authorities. Under the circumstances, one cannot help saying that in case Baroda mills think it advisable to cater for these distant markets in Assam, they should be prepared to pay higher freight. From the standpoint of the railroad manager, it is economic to carry goods from the port of Calcutta, or from any other port as a matter of fact, to upcountry consuming markets, like Dibrugarh, Tinsukia, etc., than from Baroda, because of the size of the consignment,

break of gauge, even if the distance is the same in both cases. Railways have been planned and constructed in this country, primarily with a view to facilitate the movement of the export and import trade, and therefore, students of the Indian transport system have perforce to advocate changes, to which pure transport economics may seemingly fail to lend support. Let us explain the statement further. The more important internal centres of trade have been linked up to ports by a broad gauge railway system while the internal towns, in their turn, are linked together with lines on varying gauges, broad, metre, and narrow. The result is that when a consignment has to pass from one internal centre to another, linked with railway lines of more than one gauge, it has to pay freight higher than if the same consignment were to travel on the same gauge. Thus, break of gauge, which is a besetting sin of the internal traffic, involves higher costs. On pure economic principles, therefore, lower freight on port traffic is apparently justified. Besides, in the present case, the distance from Baroda to Bengal and Assam is very great. In short, in these markets the Baroda mills have a great transport handicap and it may be suggested that tariff protection should be tried.

But it behoves us to examine the extent to which railways can offer a remedy, or, in other words, as to how far the railway rates are capable of suitable adjustment. In the first place, the railways may help to ease the situation by introducing a uniform classification. At present as adverted to above some railways have higher classification. Secondly, for woollen blankets lower rates at O. R. should be offered. Further, station-to-station rates ought to be quoted to some distant important markets to help the long distance traffic. Above all to facilitate long distance traffic in matters of rate making, the total distance traversed by the consignment, irrespective of the distance on the individual lines, should be taken into consideration. That is, in rate-making, the entire railway net of the country should be taken as one system.

THE BOMBAY WOOLLEN MILLS

The position of the Bombay Woollen Mills in respect of railway rates is similar to those of the cotton mills. They can more easily procure the supplies of their raw materials, especially the auxiliary raw materials or mill stores and imported wool. In the case of imports the question of railway rates does not arise at all.

RAW WOOL

For indigenous wool also Bombay is a good market, because here gravitates wool right from Bikaner in the North, and Kathiawar in the West, to Khandesh and Mysore in the South. Railway rates do affect the price of raw wool, but it is very difficult to precisely evaluate the effect. The mills, it is learnt, make their purchase of raw wool in the city itself, and have no agency system of purchase as is the case with the Cawnpore and Dhariwal Woollen mills. The mills can get adequate quantities of raw-wool, because as aforesaid Bombay attracts raw wool from distant centres for export. A rough idea of the nature of railway rates can be had from the figures given below :—

Rates per Maund to Bombay

Miles	*Station from*	*Rate* Rs. a. p.	*Condition*
527	Marwar	1 8 11	R. R.
581	Beawar	1 12 0	„
697	Jaipur	2 1 7	„
885	Hissar	2 6 7	„
1059	Fazilka	2 8 9	„
840	Cawnpore	2 4 2	„
840	„	2 3 8	O.R.
838	Agra	2 8 9	R.R.
443	Raichur	1 11 5	O.R.
443	Via Raichur	1 6 0	„ W/300 L.

FINISHED GOODS : PIECE-GOODS AND BLANKETS

The marketing of finished goods is, however, more interesting from the railway point of view. One important feature of the G. I. P. Railway tariffs, which strikes most in this connection is the contrast in facilities offered for piece-goods and blankets. Whereas numerous reduced rates, as special station-to-station rates, are available for the former class of goods, the latter is denied all such facilities. Seemingly, this differentiation is due to the fact that traffic in blankets is far less than that in piece-goods. But this differentiation is justified only when the traffic is offered in wagon loads, that is, if the lower rates were offered on wagon loads, there need be no adverse comments. But that is not so. Even on actual weight there is a marked difference in the treatment and the rates quoted. How the industry is affected by the rates policy thus pursued will, perhaps, be better understood

by taking up the actual rates. In the statement given below an attempt is made to summarise the position.

Rates per maund from Bombay

Miles	*Station to*	*Piece-goods Rates O. R.*	*Blankets Rates R. R.*
		Rs. a. p.	Rs. a. p.
520	Nagpur	1 11 10	1 11 10
353	Khandwa	1 7 6	1 3 3
616	Jubbulpore	2 3 10	2 0 10
1223	Howrah	1 9 9	1 9 9
521	Bhopal	1 15 4	1 11 11
702	Jhansi	2 7 0	2 5 3
839	Cawnpore	2 4 2	2 4 2
763	Gwalior	2 11 10	2 8 5
838	Agra	2 8 9	2 8 9
868	Muttra	2 7 11	2 7 11
957	New Delhi	2 10 3	2 10 3

The position portrayed above is sufficiently clear to need any elaborate comments. Blankets and piece-goods are charged almost the same rates with the difference of the conditions of risk. It will be recalled that the G. I. P. has an exception to the general classification, and charges 'C' schedule rate on piece-goods, which is substantially higher than the 4th. class rate. From Bombay centre, however, many station-to-station rates are quoted, which are lower than the 'C' schedule rate. This will be evident from the foregoing table. It will be seen that the rates on piece goods, subject to minor exceptions, are similar to the 4th. class rates on blankets. Thus, whereas there are good facilities offered to the piece-goods traffic, blankets have to pay the class rate, and no special station-to-station rates are offered.

The G. I. P. Railway authorities may argue that they have not made any exception to the general classification rate on blankets, which is 4th class, as has been the case with the rate on piece-goods, and therefore, in practice the rate on woollen piece-goods and woollen blankets are practically similar, as is the case with the other railways. This can be a very strong and plausible argument in defence of the status quo. But, then the policy of the G. I. P. lends itself to criticism from the other side. One may ask if the G. I. P. can afford to charge the same rates on woollen blankets as the other railways do, why should they not charge

similar rates on piece-goods as well? That is, why should they not make the 4th class rate at O. R., to which in fact the special station-to-station rates work out, a general rate applicable from all the mill centres to important consuming centres? In other words, the G. I. P. should charge 4th class rate at O. R. on piece-goods from all cotton and woollen mill centres, and 'C' schedule rate should be applied on piece-goods traffic other than that from the local mills. Therefore, with reference to the G. I. P. the charges should be two-fold; firstly, that reduced station-to-station rates should be quoted on blankets from the mill centres to important markets, as those quoted at present on piece-goods from Bombay; and secondly, the special station-to-station rates on piece-goods be extended to other internal mills as well.

Thana Woolen Mills

There is another woollen mill known as the Reaymond Woollen Mills at Thana, about 20 miles from Bombay. The position of this mill in respect of railway rates is essentially different from the Bombay mills as will be presently seen. In respect of raw wool and stores, however, there is only a slight difference of which a passing reference is sufficient.

RAW MATERIALS

The Thana Mills purchase their raw materials at Bombay and import direct from foreign countries and hence their position is similar to those of the Bombay Mills, except that they have to pay transport charges from Bombay to Thana. The mills transport their raw materials from Bombay to the mill site at Thana through their own motor lorries. Therefore, the question of railway transport does not arise.

FINISHED GOODS: (1) PIECE-GOODS

Railway rates, however, play a more important part in marketing the finished products, piece-goods and blankets. The mills sell their products to the agents f. o. r. mills, and therefore, they seem apparently indifferent about the rates charged. But the effect of railway rates in determining the prices at different markets, in competition with the output of other mills or even of imports cannot be so lightly dismissed, as the mill authorities seem to

think. Rates on piece-goods to more important markets ar tabulated below:—

Rates per Maund from Thana[1].

Miles	*Station to*	*Rate*			*Miles*	*Station to*	*Rate*		
		Rs.	a.	p.			Rs.	a.	p.
183	Chalisgaon	0	15	9	500	Bhopal	2	0	3
241	Jalgaon	1	4	7	290	Burhanpur	1	8	8
142	Manmad	0	12	4	819	Cawnpore	2	13	7
276	Amalner	1	2	9	99	Poona	0	8	9
333	Khandwa	1	12	3	417	Hyderabad	2	6	5
263	Sholapur	1	6	5	673	Bangalore City	2	3	7
197	Ahmednagar	1	0	11	681	Jhansi	3	1	9
218	Dhulia	1	2	8	177	Surat	0	10	9
500	Nagpur	2	10	2	320	Ahmedabad	1	2	2
595	Jubbulpore	3	2	1	257	Baroda	0	14	11
1200	Shalimar	1	11	3					

Before making a comparative study of rates on piece-goods from Thana and Bombay, it is necessary to analyse the foregoing rates. Some apparent discrepancies need to be pointed out. It will be seen that the rate to Nagpur for 500 miles is Rs. 2-10-2, but for a similar distance to Bhopal the rate of Rs. 2-0-3 per maund is quoted. It seems strange that the rate should be so high in the case of Thana, when from other centres like Bombay and Cawnpore the rate comes to be Rs. 1-11-10 and Rs. 1-13-5 per maund, for 250 and 561 miles respectively. Similarly the rate to Jubbulpore is unduly high, because when the rate is Rs. 2-3-7 to Bangalore for 673 miles, it is unfair to charge Rs. 3-2-1 for 595 miles. The Shalimar rate is adjusted according to Bombay rate.

But the more important question is to examine the relative transport position of Bombay and Thana as affecting the marketing facilities. When the two foregoing tables are brought together the situation becomes clear. One is impressed with the striking contrast between the two tables, and the relative advantages enjoyed by Bombay over Thana in matters of railway freight. It will suffice to take a few illustrations to substantiate this statement. For instance, the rate from Bombay to Nagpur is Rs. 1-11-10 for 520 miles, whereas from Thana it is Rs. 2-10-2 for 500 miles. Similarly, to Jubbulpore the rate from Bombay is Rs. 2-3-10 per

1 Vide, Letter of the G. I. P. R. No. R. Q. 3/13 dated 9-9-1932.

maund for 616 miles, but from Thana the rate is Rs. 3–2–1 for 595 miles. These instances show how higher rates are levied for shorter distances. Again to Bhopal, Jhansi, Cawnpore, etc., the rates from Thana are higher than those from Bombay, even though the distance in the former case is lower than that from the latter.

FINISHED PRODUCTS: (2) BLANKETS

Rates on woollen blankets may now be examined. We cite below a few rates which will give us the important trends of the rates policy, as effecting the marketing of woollen blankets manufactured by the Thana Mills.

Rates per Maund from Thana

Miles	*Station to*	*Rate*	*Miles*	*Station to*	*Rate*
		Rs. a. p.			Rs. a. p.
183	Chalisgaon	0 10 5	819	Cawnpore	2 11 4
241	Jalgaon	0 13 5	99	Poona	0 6 1
276	Amalner	0 15 3	471	Hyderabad	1 9 8
333	Khandwa	1 2 2	673	Bangalore	2 3 7
263	Sholapur	0 14 7	177	Surat	0 10 9
197	Ahmednagar	0 11 2	320	Ahmedabad	1 2 2
500	Nagpur	1 10 10	257	Baroda	0 14 11
500	Bhopal	1 10 10			

Fortunately, the rates on woollen blankets, as quoted above, do not show so many discrepancies, as is the case with piece-goods, and seem to be more reasonable. Thus, for instance, the rates on blankets to Nagpur and Bhopal are equal, the distance being the same in both the cases, but in the case of piece-goods, as already pointed out, the rate to Nagpur is higher than that to Bhopal. Again, unlike the case of piece-goods, rates on blankets from Thana are not higher than those from Bombay. This is so because there are no special station-to-station rates on blankets from Bombay.

PORT COMPETITION

But it is not meant to convey that these rates (on blankets) are free from all blemishes which have been noted in other cases. There are certain most conspicuous anomalies which may be pointed out at this stage. When rates paid by the Thana mills are compared with those charged from Bombay certain interesting instances present themselves. Thus, for instance, the rate charged

from Bombay to Cawnpore is Rs. 2-4-2 per maund, but from Thana Rs. 2-11-4 are charged. Why this apparent discrepancy? Here is an explanation. The rate from Bombay to Cawnpore is adjusted according to the rate from Howrah to Cawnpore and therefore as the distance in the latter case (Howrah-Cawnpore) is shorter the actual adjusted rate charged in the former case (Bombay-Cawnpore) has of necessity to be low, if the import traffic passing through Bombay to Cawnpore is to be maintained. The apparent anomaly is therefore explained, and justified on the plea of port competition. The effect of this policy on the indigenous industries is manifestly adverse as can be seen from the present case. The import traffic gets better facilities at the cost of internal traffic. Under the circumstances one may well question the continuance of this port competition. As imported traffic can be carried more economically to Cawnpore through Calcutta port, it is undesirable that the same should be diverted to Bombay. Even on pure economic grounds, this is unjustified, because it costs more to carry a given load to Cawnpore through Bombay port due to the longer distance and the ghats to be traversed. Further, both the E. I. R. and the G. I. P. R. are owned and worked by the Government of India, and therefore such competition is undesirable. Even when the railways concerned are not owned and worked by the Government, they can be forced to accept a scheme worked out by the State, which attempts to restrict the competition between the railways.

To sum up, the relative position of the Thana Woollen Mills (Reaymond Woollen Mills) in respect of railway rates, it should be noted that the mills have a slight disadvantage as compared with the Bombay mills with which they have to compete. This disadvantage is off-set by certain advantages in other respects which the Thana mills have over those at Bombay, and therefore does not restrict the sales of the output in the market in competition with the Bombay mills. In respect of raw materials, the Thana mills are almost in the same position as those at Bombay, except the motor truck charges which they have to bear in transporting their goods from Bombay to the mills. In marketing blankets also they have reasonable rates, except that Bombay has an advantage in certain markets due to port competition. But the anomalies are more common in rates quoted on woollen piece-goods and here Bombay has better facilities.

BANGALORE WOOLLEN MILLS

Bangalore City, in Mysore State, is another important centre of the woollen industry. This is a very important centre of woollen mills in Southern India, but we are unable to do full justice to it because of the scarcity of the requisite data. With reference to the location of the mills, in respect of the supply of raw materials, it may be noted that raw wool is generally purchased from the neighbouring districts, because Madras Presidency turns out a large quantity of wool, and has a large annual surplus for export. Wool of superior quality is imported. Bellary is one of the important districts, known for its output of raw wool, and the rate per maund charged to Bangalore City is Re. 0-11-7. Wool is also brought from distant centtre like Kalimpong, and the rate per maund works out at Rs. 5-9-7. Therefore, the actual rates paid from different centres vary between these two figures in general. Doubtless, there are some neighbouring towns which supply raw wool, and consequently lower freight is charged from these despatching stations, but our general conclusions remain unaffected. It can fairly be said that the Bangalore mills have no disadvantage in respect of raw wool as compared with other mills.

The auxiliary raw materials or mill stores are imported through Madras, and the position in respect of rates on different articles is as follows :—

Materials	*Current Rate* (1932.) Rs. a. p.	*Pre-war Rate* (1912) Rs. a. p.
Lubricating Oil	0 8 9	0 6 7
Caustic Soda	0 8 0	0 9 8
Soda Ash	0 4 10	0 6 7
Machinery parts	0 8 9	0 6 7
Leather goods	1 0 4	0 12 8
Colours, paints & dyes (Div. A)	0 12 6	0 9 8
„ „ „ (Div. B)	0 8 9	0 6 7
Hardware, N. O. C.	1 0 4	0 12 8
Gunnies	0 8 9	0 6 7
Soap	0 8 9	0 9 8

In respect of auxiliary raw materials also, as the foregoing rates indicate, the Bangalore mills have no disadvantage when compared with centres like Cawnpore, Dhariwal or even Baroda, albeit Bombay and Thana mills have an advantage in as much as

they have to pay almost nothing by way of railway freight. Further, from the pre-war rates, it will be seen that on an average there has been an increase of about 30 per cent. There is nothing particular about this increase in rates, because it is common with other woollen mills and other industries. It is not our intention to justify this increase, but we do not wish to dilate upon this issue because enough has been said about this question on several occasions.

But a more interesting part of the enquiry is the marketing of finished products. The case of Bangalore Woollen mills offers a good illustration of the particularist proclivities of the Indian railways, as affecting the woollen industry. It would be better, therefore, to analyse a few rates from Bangalore, to some more important consuming markets, so as to precisely understand the nature of railway facilities offered to the mills.

Rates per maund on piece-goods from Bangalore

Station to	*Route*	*Rate (O. R.)*
		Rs. a. p.
Jalarpet		0 5 7
Guntur		1 0 0
Bezwada		1 8 1
Nellore		0 15 11
Poona		2 1 4
Shalimar	Waltaire	2 0 0
Ahmednagar	Via Raichur	2 9 2
Bombay	,, Poona	2 0 1
Ahmedabad	,, Hogli and Dadar	2 12 7
Baroda	,, ,, ,, ,,	2 9 4
Ajmer	,, Poona and Dadar	4 7 8
Cawnpore	,, ,, ,, ,,	5 6 0
Delhi	,, Bellarshah	4 4 10
Nagpur	,, ,,	3 3 8
Amritsar	,, Bellarshah and New Delhi	5 1 2
Peshawar	,, ,, ,, ,,	6 0 11
Madras		0 12 6

TRANSPORT DRAWBACKS OF LOCATION ANALYSED

It will be seen that the Bangalore mills have relatively higher rates to pay. This is due partly to the railway policy and partly to the location of the mills. So far as the markets in the vicinity

of the mills are concerned, the question of rates obviously does not come to the fore; but it does assume a relatively greater importance, when more distant markets are catered for. It may be pointed out that woollen goods are largely consumed in cold climes, and therefore the mills, of necessity, have to cater for distant markets. Woollen goods are not in great demand in the Madras Presidency, because of the climate, and whatever demand exists is generally for finer classes of goods which is supplied by the imports. Therefore, in the first place the demand for woollen piece-goods in the Presidency, such as are manufactured by the Indian Woollen mills, is considerably limited, and secondly, there is the competition of the other mills and of the imports as well. This competition increases in intensity in more distant markets as noted in the foregoing statement. In more important towns in the Bombay Presidency, the Bangalore mills have to face the competition of the Bombay mills and of the Cawnpore and even Dhariwal Woollen mills. As for the markets in Upper India, they are almost bolted against the Bangalore mills because of the increased internal competition. It is needless to say that the Cawnpore mills are more important both in respect of the quantity and quality of the output, and therefore, it is difficult for the internal mills to compete in the Upper India markets. In short, in marketing the output, the Bangalore mills have advantage only in neighbouring markets, and in the Madras Presidency, but in other markets, as aforesaid, they have to face the serious competition of other mills. This shows that the potentialities of the Bangalore woollen mills are considerably limited. At this point, it may not be irrelevant to suggest that in future no new woollen mills should be established in the Mysore State, and fears, not altogether unwarranted, are entertained that if a woollen mill is floated in Madras, the condition of at least some of the Bangalore woollen mills would in fact become precarious. One may question the economic justification of the number of woollen mills actually working to-day in Bangalore City. It may be suggested that if one of the three woollen mills located at Bangalore shifts its plant to Madras, the step would prove beneficial to the Indian woollen industry in general and the mill so shifting in particular. The present difficulties of the Bangalore woollen mills are therefore due to the location of the mills, the limited extent of the markets and the internal competition.

But, the railway situation is no less to blame. Being located on the M. & S. M. Railway, the Bangalore Woollen mills in catering for more important markets have to despatch their consignments over two or more lines. But in matters of rate-making, Indian railways generally follow an individualistic policy, and therefore, when the consignment passes over more than one line, no special station-to-station rate, lower than the class rate, is available, which would have been obviously provided, if the entire distance had been covered by a single line. This is a common feature of the railway policy, as adverted to above, and not peculiar to the case in question. It has already been pointed out, while discussing the transport facilities of other mills, that through station-to-station rates are rarely quoted, that railways even when they are under common management want to be treated as separate entities. The case of Bangalore mills has been singled out, because of the greater transport disadvantage under which they have to labour. The G. I. P. has special classification for piece-goods, which is higher than the general classification, and therefore when the consignments from Bangalore have to pass over the G. I. P. Section they are charged the class rate, while from Bombay special station-to-station rates are quoted. The effect of this policy is that internal trade suffers and the import trade gets an undue advantage over the internal trade. That ends our survey of the Indian Woollen Mill industry. We shall now briefly outline the important features of Cottage Manufactures.

COTTAGE MANUFACTURES

BLANKETS

The Manufacture of blankets is scattered over the whole country because it is admirably adapted to the needs of the agricultural population, and it is from them that the demand primarily comes. The process of manufacture being simple, generally the village shepherd himself manufactures the blankets, either with his own wool or that purchased from the neighbouring areas, in leisure hours when he is free from his field, and the product he thus turns out is readily purchased by the villagers, often at the cottage of the producer. Rightly has the 'Cumbli' been characterised as an article of great utility at a small cost[1]. In short, Cumbli is a great source of solace and service to the

1. See the Provincial Mono raphs.

rural masses, toiling under proverbial poverty. Cheapness is the secret of the popularity of this industry, which has enabled it to survive so long. In view of the strong position of the industry, it was thought that "the blankets will not be affected by either rise in wool prices or foreign competition"[1]. But history has shown that science can serve alike the rich and the poor, and therefore, we find to-day, that the blankets, turned out with the help of machinery, have successfully attacked the citadel of the Cumbli, hitherto thought to be impregnable. The industry shows unmistakable signs of decay. It will be recollected that railway transport has hardly anything to do with this aspect of the woollen industry, except that it has given added stimulus to mill competition referred to above. Here it should be noted that the blankets which compete in the rural areas are generally made of waste cotton, which would otherwise be thrown away. The price of the raw material, therefore, being almost negligible, the finished product is sold obviously at a low price. These blankets are mostly manufactured in the cotton mills within the country and cater for the markets in the vicinity.

CARPETS

The manufacture of carpets is carried on at different centres in private factories as well as jails, and is relatively more important from the standpoint of railway transport. The carpets thus turned out are generally exported to Europe and America, albeit there is some internal demand from the upper and higher middle classes. It may be noted that the jail competition has adversely affected the manufacture in private factories, because of the unfair advantage in labour costs enjoyed by the former over the latter. A few more important centres may be noted in brief.

Agra is a very important centre for the manufacture of carpets of superior quality in the United Provinces. "The carpets produced in the Central Jail and Messrs. Otto's Factory possess a world-wide reputation as regards quality and durability."[2] There are four factories, in addition to the Central Jail,

1. Vide, A. W. Pim's Monograph.
2. Vide, Report on the Industrial Survey of the Agra District.

manufacturing carpets. The Otto Factory has its branches in centres like Gwalior, Amritsar and Shrinagar[1]. Wool of finest quality is used which is either purchased locally or imported from the Punjab and Rajputana.

Mirzapur is another important centre where carpet weaving is largely carried on, as an occupation subsidiary to agriculture by both Hindu and Muslim inhabitants. The number of looms thus working in the district have been estimated to be about 3,000[2]. In the city proper there are some factories as well, of which the firm of Messrs. E. Hill & Co., is more important. Wool is imported from Agra and Jhansi in addition to the local produce. The imports of wool in the year 1920–21 have been roughly estimated on the railway returns as 2158 maunds. European firms import their raw meterials of superior quality from Woolen mills at Cawnpore and the Punjab. Railway returns show that in 1920–21 carpets weighing about 11,352 maunds were exported. Manufactures are specially suited to European tastes and the designs are accordingly executed. About 90 per cent. of the carpets made in Mirzapur are exported to Europe, Australia and America.

There are several other centres like Jhansi, Jaunpur etc., in the United Provinces. In the Punjab we have centres like Multan, Amritsar, Lahore and Montgomery. From these centres carpets are largely exported to the United States of America. In Madras the principal centres are Muslipatam, Ellore, Ayyampet and Walanjar. But here the industry is declining.

From the foregoing survey it will be seen that Cumblies or blankets manufactured on handlooms are generally sold in the neighbouring markets, and therefore the railway rates do not play any part either during the stages of manufacture or of marketing. Carpets are however important from the railway point of view, but the article being generally classed in the category of luxuries, and higher in price, the railway rates do not affect either the production or consumption of goods. Besides, as these articles are primarily manufactured for export, favourable rates are almost

1. Ibid, P. 132.
2. Vide, Report of the Industrial Survey of Mirzapur District, p. 21.

invariably available. It is needless to dilate on this any more, because the rates tabulated below speak for themselves:—

Rates per Maund on Carpets to Howrah

Miles	*Station from*	*Rate (O.R.)*	*Rate (R.R.)*
		Rs. a. p.	Rs. a. p.
631	Cawnpore	2 1 0	2 12 0
465	Jaunpur	1 8 8	2 0 10
549	Fyzabad	1 13 0	2 6 8
458	Mirzapur	1 8 4	3 0 4
818	Moradabad	2 10 11	3 9 3
788	Agra City	3 8 9	3 6 5
879	Najibabad	2 14 1	3 13 6
429	Benares	1 6 10	1 14 4
616	Lucknow	2 0 6	2 11 3

RESUME: THE TRANSPORT POSITION OF WOOLLEN MILLS RECAPITULATED

Of the Indian Woollen Mills by far the most important are the Cawnpore and Dhariwal Woollen Mills in respect of the quality as well as the quantity of their output. They have been able to carry on specialisation to a limited extent and their products find markets throughout India. In respect of railway transport, as adverted to above, these mills are able to eliminate considerable waste in transport costs, which otherwise creeps in, with the aid of well-organised arrangements, both for the purchase of their raw materials and the sale of their finished products. The quantity of raw wool purchased from the respective markets is delivered to the nearest of the two mills, and thus substantial savings are effected in transport costs. In marketing again, the overlapping of the marketing area and the waste in transport costs resulting therefrom, in respect of goods which are manufactured in both the mills, is eliminated with the aid of an efficient marketing organisation, which has gradually developed and has been improved from time to time. The location of these two mills is well selected, especially for marketing the finished products. Being located at a considerable distance they have a substantial protection from the competition of imports. Besides, due to severe winter in the Northern India, woollen goods are largely consumed there, and these markets are relatively nearer to the mills. In fact, in

certain varieties of goods, these mills enjoy almost a quasi-monopoly in Northern India, because other Indian woollen mills do not manufacture these goods, and even if they do, they are not able to compete, firstly, because of the railway rates to be paid, and secondly, the high cost of production. Due to large scale production and specialisation, which these two mills have been able to carry out, their cost of production per unit has fallen, and it is to-day lower than those of other mills.

The Bombay Woollen mills have some advantage in railway freight on raw materials, both on raw wool and the mill stores. In respect of railway rates on finished goods as well, they have some advantage in the form of special station-to-station rates, which are quoted from Bombay to the more important consuming markets, especially on the G. I. P. But, notwithstanding these special station-to-station rates, the Bombay mills suffer under a serious handicap, due primarily to their location, distant from the more important consuming markets, and the consequent higher railway freight. Again, the numerical strength of the mills in this part of the country is great, and it has been doubted as to whether India needs a large number of small units of woollen mills or a small number of large units. The economic factors are unequivocally on the side of the latter alternative, and the soundness of the status quo has been seriously challenged. From the transport standpoint a large number of the woollen mills in this part of the country has created unhealthy competition and waste in transport costs, not to speak of other factors. Therefore it is the defective organisation of the woollen mills in this part of the country, which largely explains the plight in which they have fallen to-day.

It is due to the defects in organisation outlined above that the burden of railway rates is more severely felt. Higher cost of production, resulting from the lower output of most of the mills in this part of the country, coupled with the higher transport costs and the reduced purchasing power of the consumers, account for the increased anxiety among the mill authorities, to examine the incidence of railway rates with a view to get them reduced. But the approach of a student is radically different. Finding one of the most important industries of the country in an unfortunate plight, he makes a disinterested study of the organisation of the industry, both its past and present,

and attempts to offer a scientific explanation of the difficulties the industry is faced with. Enough has been said about the defects in the organisation of the industry as an important cause of the present difficulties with special reference to railway rates. It cannot be gainsaid that this question needs a more detailed examination which the limited scope of the present chapter could not permit.

But, the rates policy has several defects which we have pointed out in the foregoing pages, and its effects on the woollen mills severally have been dealt with. These defects in the rate structure, which were ignored when the industry was relatively prosperous, are more seriously felt now that the industry has fallen on evil days. To-day even a slight relief which could be offered to the industry would have its own value. We shall, therefore, outline in brief the suggestions which may be helpful to the industry.

SUGGESTIONS

(1) Rationalisation of woollen mills, especially those in Bombay and Bangalore, should be attempted.

(2) Marketing arrangements should be improved so as to eliminate the waste in transport costs.

(3) The present rates policy should be modified as follows:—

(a) Special station-to-station rates should be fixed for woollen piece-goods and blankets, from the mills to important consuming markets.

(b) Station-to-station rates should be quoted for raw wool from the more important collecting centres to mills.

(c) On blankets a separate classification for owner's risk and railway risk should be applied.

CHAPTER IV

CEMENT

EVOLUTION OF THE INDIAN CEMENT INDUSTRY

The Indian Portland cement industry is of recent growth. Up to 1912 there were no cement factories in India and the magnitude of the imports of cement from foreign countries, like the United Kingdom, other European countries and Japan, showed the extent of market available and the scope for future growth. The rise of imports from about 116 thousand tons in 1911-12 to about 160 thousand tons in 1912-13 was in fact tempting to Indian industrialists. Naturally several companies were floated thereafter, and during 1912 to 1916 the following cement companies were started:—

Name of the Company	*Capacity*
Indian Cement Co. Ltd.	20,000 tons.
Katni Cement & Industrial Co. Ltd.,	30,000 tons.
Bundi Portland Cement Co. Ltd.,	26,000 tons.

As a result of the outbreak of the world war, the output of the above companies came under the control of the Indian Munitions Board in 1915, and very little cement from these factories was available for works other than Government during 1915 to 1919. Besides, due to the shortage of shipping facilities the imports of foreign cement also received a setback and the prices began to mount up, and rose as high as Rs. 250 per ton. The prices paid by the Government to the Indian cement factories, whose output they had controlled, ranged from Rs. 42-8-0, to Rs. 70 per ton, while during the same period imported cement cost from Rs. 80 to Rs. 250 per ton. It will, therefore, be seen that the establishment of this industry, just at the beginning of the war, saved the country an enormous sum in the cost of an essential item of war supplies.

The control of cement production in the country and the resulting scarcity of cement available for general consumption led to the belief that the productive capacity of the Indian factories was far short of the actual and potential demand for cement in the country. This belief was fostered by pronouncements from

official circles.[1] The existing cement companies therefore took steps to increase their output, a number of fresh companies in addition were floated, and works constructed to meet the anticipated enhanced demand, so that in 1923 the productive capacity rose approximately to 600,000 tons, with a capital investment of about 4/5 crores of rupees.[2] Thus, the industry recorded a very rapid development and the productive capacity outstripped the demand for cement in India. The Indian Cement Company whose managing agents are Messrs. Tata Sons, Ltd., opened another factory at Banmore, known as the Gwalior Cement Company, and under the same managing agency a third cement company was floated under the name of the Shahabad Cement Company. Therefore Tata Sons alone have three cement factories working at different centres which will come for detailed reference later. Thus, the growth of the cement industry during the post-war boom, during 1919 to 1923, was at once rapid and remarkable.

THE ORGANISATION OF THE INDIAN CEMENT INDUSTRY WITH SPECIAL REFERENCE TO TRANSPORT

From the foregoing brief review of the early growth of cement factories we now pass on to the study of the organisation of the industry. Due in no small measure to the peculiar distribution of the various raw materials requisite for cement production, railway transport has come to play a very prominent part both in the production and marketing of cement. The location of a factory is determined by the vicinity to raw materials, coalfields and markets. Indian cement factories are faced with peculiar difficulties, they have to carry their coal from distant coalfields, and their markets are primarily centred in ports, distant from the factory sites, necessitating heavy railway transport charges. Besides, in port towns the importer has a considerable advantage which increases the intensity of competition and makes

1. "After the war when the works at present in abeyance will be continued the requirements will be greater than ever.....the output of these factories being very much short of the present demand even, it will obviously not suffice for future requirements and there is still room for additional works in other parts of India."
Vide, the "Indian Munitions Board Handbook."

2. Figures of capital investment quoted in the Evidence Volume of T. B.

the question of transport vital for the very existence of the indigenous industry. The problem is primarily one of railway transport, which we now propose to analyse.

THE C. P. GROUP OF FACTORIES

For the convenience of the study of the cement industry in its relation to railway transport, we have tried to group the several factories according to their geographical situation wherever possible. It has, however, been found that grouping has been possible only in two cases, Katni and Kathiawar groups, because most of the factories are scattered over the wide range of the country form Wah in the Punjab to Dwarka and Porbundar in Kathiawar, Shahabad in the Deccan and Japla in Bihar and Orissa. Apart from the advantages or otherwise of this distribution, what is intended to convey here is that a convenient grouping of all the factories is impossible.

The Katni group comprises three cement factories, the Katni Cement and Industrial Company, the Central Provinces Cement Company and the United Cement Company of India. The Central Provinces Portland Cement Company was registered under the Indian Companies Act in 1919 and started working in 1923. The shares of the Company are held by Indians as well as Europeans resident in India. The factory is situated at Kymore near Jukehi, on the G. I. P. Railway, and the capacity of the plant was 100,000 tons of cement every year.[1] As for raw materials, lime-stone and clay are available in good quantities on the Company's own property within a mile. Gypsum is brought from the Punjab and Rajputana by rail, and the freight paid is fairly heavy. It varies from about Rs. 20 to Rs. 23 per ton. Rajputana is nearer and the freight is about Rs. 18 per ton, but the quality of the Rajputana gypsum is inferior.[2] The vicinity to coalfields is a clear advantage which has helped to reduce the costs appreciably. Burhar coal

1. The plant of the Company is being constantly brought up-to-date consisting of a clay mill, crushing house and saw mill, three rotary kilns, coal plant, cement grinding mills and three silos for storage of cement and is electrically driven. The present capacity of the factory therefore has risen to 180,000 tons per annum, the largest cement works in India.

2. Vide, Evidence of Mr. Captain, Evidence Volume, p. 67.

from C.P. is used for boilers, but its quality being low Jharia coal is brought from a distance of about 500 miles for kilns. The factory therefore, is relatively better situated in respect of coal supply. The more important markets of the factory are Bombay and Calcutta both of which are equidistant from the factory, about 650 miles.

The Katni Cement and Industrial Company was floated in 1912 as a public limited company and the capital invested is primarily Indian. All the Directors are Indians. The factory is situated at the village Tikuri about 2 miles from Katni junction of the G. I. P. and B. N. Railways and commenced working from January 1915. Both cement and fire bricks are manufactured. Limestone and clay are obtained mainly from the quarries in the neighbourhood of the factory and only a small portion has to be railed from another quarry at a distance of about 20 miles. Gypsum is brought from Marwar. As regards the coal supply C. P. coal is used in the boiler which has to pay a freight of about Rs. 2-6-3, and kiln coal is brought from Bengal over 450 miles and Rs. 8-8-0 per ton is paid for the railway freight. The markets are the same as those of the C. P. Cement Company. The maximum capacity of the plant rose to 85,000 tons in 1930.[1] The cement is manufactured by "wet" process, and in addition to the ordinary cement the factory turns out a rapidly hardening cement known as "Katnicrete".

The United Cement Company of India has its factory situated at Mehgaon, about 6 miles from Jukehi station on the G. I. P. Railway, to which it is linked by a siding running from the Works. This company was originally floated as the Jubbulpore Portland Cement Company in 1920 and commenced working in 1922, having a maximum capacity of 60,000 tons. In 1927, however, the Company was reconstituted under the present name and the capacity of the plant is at present about 45 to 50 thousand tons per annum. As for the raw materials, limestone and clay are found in large quantities near the factory and gypsm is brought from Marwar. Coal supplies are brought from Burhar (C. P.) and Bengal coalfields. The principal markets of the factory are in the eastern parts of the country.

1. "Capital", December 1931.

THE KATHIAWAR GROUP OF FACTORIES

The Kathiawar cement factories are situated near the ports and thus have an advantage in marketing their produce. The factories are two in number, the Indian Cement Company and the Okha Cement Company. The Indian Cement Company was registered as a public company in 1912 with a capital of Rs. 12,25,000 which was raised in 1916 to Rs. 19 lakhs, and the authorised capital was raised from 20 lakhs to 60 lakhs in the same year. This increase in capital was brought about with the object of extending the company's works at Porbundar and also the extension of the company's undertaking by the formation of a subsidiary company for the manufacture of cement in the Gwalior State in Hyderabad. The Works are situated in Porbunder State. Limestone and siliceous stone deposits are situated on the Porbundar State Railway, about 7 miles from the Works, sidings connecting the same ; and the requisite clay is obtained from the alluvial deposits adjoining the works site. It has to be noted that though the Porbunder qarries are situated only at a distance of about 10 miles from the Works, the cost of transport rose to Rs. 5-0-0 per 200 maunds of limestone in 1924, because of the transference of the railway line from the Porbunder State to the Gondal State. When, however, the line was re-transferred to the Porbunder State, the Company made representation to the State authorities for a reasonable reduction in rates and the request was granted. One important fact that emerges out of this consideration is the importance of transport costs which can make and unmake industries. The fate of our cement industry depends vitally upon the attitude of the railway authorities. Gypsum is the only other raw material needed but the deposits of needle-shaped pieces of gypsum mixed with clay occur on the marshes within a few miles of the Works ; besides, the total consumption of gypsum does not exceed 5 per cent. of the output of cement. Coal is not within easy reach of the factory and has to be brought from a distance of about 1442 miles. The cost of transport here becomes very important. Thus, when the company was started it was estimated that Bengal coal would not cost more than Rs. 15 per ton at the Works. Subsequently, however, due to freight difficulties the railway rates were enhanced[1], so that in 1914

1. Vide Evidence recorded by the Tariff Board.

the actual cost of coal rose to Rs. 30 per ton delivered at Works.[1] This was because the coal which formerly used to have rail-cum-sea route to Porbundar was forced to the alternative rail route for the entire distance. With the resumption of rail-cum-sea route the transport charges have fallen again and to-day the freight is about Rs. 14-8-0 per ton from Bengal. It is clear, therefore, that the freight on coal is a heavy charge, more so because about half a ton of coal is required for every tone of cement produced; coal forms the principal item in the cost of production of the cement industry. Of the total amount of coal consumed, a part is brought from C. P. coal collieries, viz. Parasia, and Iklerah and the railway freight paid is Rs. 11-12-6 per ton.[2] In view of the great distance between the factory and the colliery the freight on coal is not heavy, but the surcharge of 15 per cent. which the Railway Board has now levied is sure to increase the cost of production of cement.

Another cement company in Kathiawar is the Okha Cement Company, situated at Dwarka, a sea-port. This Company was floated in 1928 for the purpose of acquiring and re-starting the cement factory of the Dwarka Cement Company. The factory was originally constructed in 1919 by the Dwarka Cement Company and commenced working in 1922, with a capacity of 100,000 tons. The capacity of the works as reconstituted at present is 80,000 tons per year. The site of the Works at Dwarka is about 18 miles from the all-weather port of Okha and is also on the Junagadh and Dwarka Railway. It is therefore in a good position to serve Western India with cement by rail and to export to other ports. The raw materials used are limestone, clay and gypsum. The first two are drawn from local quarries situated within 2 miles; limestone is blasted by means of gunpowder and then loaded by hand into the trucks, the truck being drawn to the factory by steam locomotives; and clay is dug from the pits and transported to the factory in a similar manner. Gypsum is obtained from Navanagar State which is situated from the factory at a distance of about 40 miles. The relative cost per ton of the raw materials in the year 1923 was as follows :—

Stone	...	Rs. 1 7 5
Clay	...	Rs. 1 13 0
Gypsum	...	Rs. 21 10 2

1. Vide Chapter on the Coal Industry.
2. Vide, Coal Tariff, G. I. P. Railway.

This shows the relative importance of the different raw materials in the cost of production of this factory. In the case of gypsum the freight is a bit high but the consumption of gypsum is only about 4 per cent. Mr. Acharya of Dwarka Cement Company stated before the Tariff Board that "whereas stone and clay were about 125 and 40 thousand tons respectively, gypsum consumed was about five thousand tons only in 1923."[1] As for the coal requirements of the factory, it is just similar to that of its confrere, the Indian Cement Company, because coal used in boiler is brought from C. P. and for kilns from Bengal. During 1923 and 1924 even Bengal coal was brought by rail due to freight difficulties as previously adverted to, and therefore the railway rates charged then were about Rs. 14 per ton for C. P. coal and Rs. 20 to Rs. 21 per ton for Bengal coal. Later, however, the rail-cum-sea route and the reductions in railway rates on coal lowered the cost of transport.

BUNDI PORTLAND CEMENT COMPANY

Now we shall review the position of cement factories other than those of the foregoing two groups. The Bundi Portland Cement Company, or as it was then called the Bundi Hydraulic Lime and Cement Company, was registered in 1913 and manufactured both cement and lime; it assumed its present name in 1916. The Company has a capital of Rs. 40 lakhs in shares of Rs. 10 each, and the factory is situated at Lakheri in Bundi State, Rajputana, on the main line of the B. B. & C. I. Railway, Nagda-Muttra section, about 600 miles from Bombay, the capacity of the plant being 160,000 tons per annum. The important raw materials are limestone and gypsum. Clay is not required because the limestone available in the Company's quarries contains silica and aluminia in the requisite proportion. The limestone quarries are situated about a mile from the Works. The mining lease is obtained from the State on the payment of a royalty. From the evidence recorded by the Tariff Board we gather that 'the mining lease entered into with the Bundi State stipulates a royalty of Rs. 2-8-0 per 100 cubic feet of limestone, and extends to a period of 30 years with option of

1. Vide Evidence recorded by the T. B.
2. Supra, p. 231.

renewal.' Gypsum is partly obtained from Jodhpur and Marwar and partly from the Salt Range of the Punjab. Coal for kilns is obtained from the Bengal coalfields from a distance of about 800 miles, and for boilers from C. P. over 500 miles. The freight on Bengal coal was Rs. 8-8-0 per ton in 1916 which gradually rose to Rs. 12-0-0 in 1924. From C. P. the freight was about Rs. 9-0-0 per ton. Now it has again been reduced, but it cannot be denied that the distance from the coal fields is great and hence the railway freight presses heavily, though it is lower per mile.

THE GWALIOR CEMENT COMPANY

The Gwalior Cement Company was registered in 1919 as referred to above; it is controlled by the Indian Cement Company. The factory is located at Banmore, on the G.I.P. Railway, 12 miles north of Gwalior City Station, close to the main broad guage line, from which sidings enter the works to facilitate the receipt of coal and stores, and the despatch of cement direct from the warehouses to stations anywhere on the broad guage lines of India without any transhipments. The output is 45,000 tons of cement per annum, and the entire plant has been so designed as to permit of doubling the output at an expenditure of about 20 lakhs; the present buildings being large enough to contain the additional plant, while several sections of the existing plant already have a capacity sufficient for twice the present production.

As regards raw materials, limestone is obtained from the hill of limestone situated at a distance of about 32 miles from the Works on the Gwalior State Railway. Clay is obtained from deposits within a mile of the Works. The limestone is quarried and transported in 16 tons capacity high-sided bogie wagons on the Gwalior Light Railway running from the quarries to the crusher in the factory. Clay is transported by means of donkeys. A cess of Rs. 1-4-0 per ton of cement going out of the Works is levied by the Gwalior Durbar in lieu of royalty on raw materials, concession charges, etc. Thus railway freight on raw materials is not very material; even gypsum which is brought from Marwar does not affect the cost appreciably. Freight on coal is an important item. Coal is obtained from the Bengal coalfields and from the Central Provinces collieries, half to half, being used in kilns and boilers respectively. The cost of coal in 1925 was Rs. 12-0-0 per ton for

C. P. and Rs. 20–0–0 per ton for Bengal coal, f.o.r. Banmore. Of this cost, the railway freight was Rs. 6–11–0 and Rs. 10–8–0 per ton respectively. Now, of course, both the prices of coal and freight thereon have been reduced, but it would be idle to deny that the factory, in common with others, suffers from the natural disadvantage of being distant from the coalfields.

THE PUNJAB PORTLAND CEMENT CO.

The Punjab Portland Cement Company was established in 1920 and the factory started working from 1923. The factory is situated at Wah, Attock district, on the main line of the North Western Railway, about 30 miles north of Rawalpindi, with sidings into the Company's property the plant consists of two rotary kiln units with a capacity of 80,000 tons, the power being driven from the steam turbo-alternater. The raw materials used are limestone, clay and gypsum; the first two being available in the vicinity of the factory, and the last is brought from Dandot in the Salt Range about 250 miles away. The coal requirements of the factory are drawn primarily from the Bengal coalfields, at a distance of about 1250 miles and the freight paid amounted to about Rs. 15 per ton in 1925. A small quantity of coal is also obtained from the Makerwal collieries which are only about 125 miles off entailing freight of about Rs. 5 per ton, but high floods of the river Indus coupled with other circumstances make the supply of the coal from this source uncertain. This factory, therefore, has a great disadvantage in coal supply due to its remote location from the Bengal coalfields.

THE SHAHABAD CEMENT COMPANY

The Shahabad Cement Company was registered in 1921, with the object of exploiting cement making raw materials in the Nizam's Dominions, and supplying the markets of Southern India, where other factories were at considerable disadvantage due to long distance and consequent heavy cost of transport. The factory commenced production in 1925. It is situated at Shahabad, Deccan, on the G. I. P. Railway mainline from Madras to Bombay, with sidings into the works. The equipment is up-to-date, having an annual capacity of about 100,000 tons.

Limestone and clay are brought from the Company's own quarries about 3 miles from the factory on a Light Railway, by the

Company. Gypsum is obtained from Badwari in Jodhpur State. Coal requirements of the factory are met largely from the Singarini collieries (Nizam's Dominions), and the balance from the Bengal coalfields. The distance from the Bengal coalfields is great and therefore the freight on Bengal coal is an important item in the cost of production of cement. No doubt Singarini coal, being available nearby, relieves the burden of freight charge, because for power production Singarini coal is used, and a mixture of Singarini and Bengal coal is used in kilns. But due to the longer distance over which Bengal coal has to be carried from the field to the factory, we are informed that "the average rate of freight paid on coal per ton of cement amounts to Rs. 4-4-0".[1] This is interesting because it indicates the importance of coal in the production of cement and the serious handicap under which our factories work as compared with their foreign rivals. It should be noted, however, that the existing rates for carriage of coal from the Bengal coalfields are not heavy compared to the freight rates charged on other commodities and work out at ·069 pie per maund per mile as against ·152 pie per maund per mile on the Singarini coal.[2]

THE SONE VALLEY PORTLAND CEMENT COMPANY

The Sone Valley Portland Cement Company was started in 1922 and its works are situated at Japla, on the E. I. Railway. The raw materials used are limestone and shale, the former being supplied from Rohtas quarries, about 5 miles from the works on the other side of the river being transported by a ropeway. Clay is available in the vicinity of the factory. Gypsum is brought from Jodhpur. For generating power, Bengal coal is used and is brought over a distance of about 200 miles, the freight charge being about Rs. 5, per ton. Thus, the comparative proximity to coalfields, which this company possesses, brings to relief the strength of the factory and its lower cost of production. One more fact should be noted in the organisation of this factory which affects the cost of production. It is furnished throughout with automatic appliances so complete that from the time the raw materials enter the mill until the finished cement is filled into the sack they are untouched by hand, the manual labour being

1. Information received from the Agents of the Shahabad Cement Co.
2. For a detailed discussion refer to the Chapter on Coal Industry.

required only to tie the sack. The factory has cost more than Rs. 80 lakhs to build and equip and the plant has recently been doubled. This company manufactures "Rohtas" cement and "Rohtacrete rapid hardening cement".

We may now summarise the conclusions regarding the cement factories in India. Indian cement industry possesses appreciable natural advantages in respect of raw materials, because limestone and clay of excellent qualities are available in the vicinity of the factories. Gypsum, another raw material, has to be carried over long distances and the cost of transport is a little high; it is not, however, a very heavy burden as it forms only 5 per cent of the final product. In respect of coal supply the cement factories are working under great disadvantages and the freight on coal raises the cost of production unduly high. Again, from the location of the factories, it has been shown that port towns are distant. Thus, the whole situation in regard to organisation and production seems to be encouraging. The freight on coal, which the Tariff Board recorded as a very serious item in the cost of production, has also been lowered subsequently, though the plea for special concession on coal freight has not as yet received due consideration at the hands of the Government of India or the Railway Board, the industry has recorded a steady progress and further progress may be expected in the near future.

THE MARKETING OF INDIAN CEMENT

Having done with the production of cement we may now turn to marketing. We propose to study the marketing of Indian cement and the freights charged thereon before 1925 and the altered arrangements after the inauguration of the Cement Manufacturers' Association. This broad division in our survey is necessary, because the inefficiency, the reckless and cut-throat competition, inter se, of the cement factories, which characterised the period before 1925, came to an end soon after, and the era of stabilisation of prices commenced. In the stability of internal prices of cement and the re-organisation of the marketing system, we trace the seeds of the present prosperity of the industry. The interesting contrast between two different stages in the development of the industry will bring to relief object lessons, for other industries to learn.

THE ERA OF COMPETITION

In this pre-consolidation era, or the era of competition as we have characterised it, the policy pursued was one of undiluted and self-seeking individualism. This defect was natural in the early growth of the industry and was noticed by the Tariff Board, who observed, "that the period of intense internal competition cannot be of long continuance".[1] This epoch of unrestricted competition is of interest, because it brought home the baneful effects of mutual mistrust and misunderstanding, the escape from which lay in making combination and consolidation the watchword of the policy to be pursued. The remedy lay within; the ending of "internecine conflicts" was the proper course to resort to. It was pointed out that "the primary remedy for the complaint from which the industry is suffering lies in the hands of the manufacturers themselves. Costs are high, and prices are low, simply because there are two many factories, and it is within the power of cement companies to reduce this state of affairs to-morrow if they choose to do so. If they are unable to come to an agreement and prefer to pursue a policy of mutual extermination, the remedy will automatically be applied by economic forces."[2]

In order to realise the nature of the problem before the industry, we shall in the first place outline the wastes in transport costs involved, and the higher railway freights which the cement factories had to pay in marketing their output in the competitive areas. The ports are the competitive areas. They are the largest consumers of cement. Both the imported and the local cement try to obtain a market in the ports. The local factories were situated at a distance from the ports. Besides the factories which were situated nearest to the ports like Bombay and Calcutta, even others, which were at a much greater distance tried to sell their products in these ports, and thus paid heavy railway freight. In this effort, sometimes, they quoted prices below cost of production.

FREIGHT PAID BY THE C. P. GROUP OF FACTORIES ON CEMENT

We now pass on to the detailed discussion of the railway freight paid by the cement companies. The C. P. group of

1. Vide, Report of the T. B. Para. 81.
2. Vide, Report of the T. B. Para 62.

factories, have common markets, and it was admitted[1] before the Tariff Board that the intense internal competition deprived them of reaping the advantages of geographical position in markets naturally protected from foreign competition. Prices being reduced to an irreducible minimum even lower railway freight would not have helped the industry. Transport advantages were neutralised. In the port markets, too, the position was no better. From the evidence placed by the Central Provinces Portland Cement Company before the Tariff Board, we get an idea of the railway freight which the Company had to pay in placing its cement in different port markets[2] :—

Market	*Freight*	*Price*
	Rs. a. p.	Rs.
Bombay	15 8 0	66
Calcutta	11 0 0	62
Madras	30 0 0	81
Karachi	28 4 0	79
Rangoon	25 0 0	76

The markets shown in the above table are important port towns, which taken together consume about three-fourths of the total cement consumed in India. But the freights tell a very interesting tale, varying as they do from Rs. 11-0-0 per ton in the case of Calcutta to Rs. 30-0-0 per ton for Madras. It brings to relief the importance of freight charge in relation to the distance between the factory and the port towns. It is needless to point out that an article like cement cannot bear a freight of Rs. 30 per ton; it is uneconomic. This is due not to the higher freight per mile but to the longer distance over which cement had to be carried to reach these markets. It is clear, therefore, that markets like Madras, Karachi and Rangoon are not within the reach of C.P. cement factories. This fact is further explained when we look to the column of prices. These are the prices at which the company could place its cement in the respective markets. But the actual selling prices as quoted from day to day in the markets were far below these figures. The highest price which Indian cement could then fetch was Rs. 64 per ton. Sometimes the price realised was

1. Vide, Evidence recorded by the Tariff Board, P. 101-102.
2. Compiled from the evidence of C. P. Portland Cement Co.

far below this.[1] But even assuming that the highest price could be realised, the figures indicate that the factories would have to suffer loss in almost all the markets, except Calcutta, varying from Rs. 2 per ton in Bombay to Rs. 17 per ton in Madras. Except Calcutta, other markets were therefore uneconomic for this group of factories. Besides, the relative disadvantage in respect of freight charge, under which the factories worked as compared with their foreign competitors, becomes manifest when we recollect that British cement paid only Rs. 12 per ton by way of freight charge to Indian ports, as against the heavy freight paid by the Indian factories.

We have thus established the fact that the freight charge was a serious item, due partly to the geographical location of the factories and partly to the internal competition.

The anomalies in rates policy may now be analysed. The freight from C. P. Cement companies to Bombay worked out as under:—

Factory	*Freight per ton* Rs. a. p.
The Central Provinces Portland Cement Company ...	15 8 0
The Katni Cement & Industrial Company	13 8 0
The Jubbulpore Portland Cement Company	15 8 0

While it would be idle to deny that ocean transport is cheaper than land transport, one cannot help thinking that railway freight on cement was high and restricted the marketing area of Indian factories. One of the reasons for the high freights can be traced to the individualistic tendencies of the Indian railways already raferred to. In quoting telescopic rates Indian railways take into consideration not the total distance over which the consignment has to travel, but the distance of each individual line covered separately. Thus, for instance, the cement despatched from the C. P. Portland Cement Company's siding to Bombay had to pass, before 1925, on the E. I. Railway over 67 miles, and thereafter on the G. I. P. Railway over 616 miles, the freight charge being Rs. 4-13-0 in the former case and Rs. 10-0-0 in the latter. The G. I. P. Railway rate was based on 'G' telescopic

1. On a tender of the Stores Department the price quoted by the Jubbulpore Portland Cement Company, which got the order was Rs. 28-12-0 per ton f.o.r. Works, a price lower than that of the imported cement by Rs. 15.

Vide, Evidence, Vol. T. B.

schedule[1], and if the rate quoted to Bombay had been calculated on the total distance, the freight would have been substantially lower. With the transference of this line to the G. I. P. Railway in 1925, this handicap has disappeared but the policy of quoting schedule rates on the entire distance travelled, irrespective of the individual railway lines, has not as yet been adopted, even on those lines which are owned and directly managed by the State. The Indian manufacturer is in most case at a great disadvantage, owing to the great distance from the factory to the markets and the number of railway lines over which the consignment has to travel.

KATHIAWAR GROUP OF FACTORIES: FREIGHT ON CEMENT

The Kathiawar group of factories is situated near the sea ports, and as such they have a relatively favourable situation for marketing. Their principal markets are the port of Karachi, Bombay and Madras, Kathiawar and Gujarat.[2] As regards the two important markets, Karachi and Bombay, the factrories enjoyed de facto advantageous location, being at a distance of 300 and 260 miles respectively. The freight charge, therefore, which they had to pay to these two markets was Rs. 6-0-0 per ton to either market. The relative advantage as compared with other Indian cement companies is obvious; the other factories which despatched their output to Bombay were C. P. cement companies, which had to pay Rs. 15-8-0 per ton as railway freight, and the Bundi Cement Company at Lakheri paid Rs. 12-10-8 per ton to Bombay.

INTERNAL AND EXTERNAL COMPETITION

In Bombay and Karachi the Kathiawar companies had to face the competition of internal factories as well as the foreign importers. The C. P. factories and the Lakheri Works competed with Kathiawar factories in Bombay and paid relatively

1. 'G' telescope schedule was as follows:—

	Pie per maund per mile.
1 to 100 miles	0·24
101 to 200 miles	0·20
200 to 400 miles	0·175
over 400 miles	0·10

But the rate quoted from Katni was special which worked out at as. 7-10 per maund as against as. 9-9 per maund which was the schedule rate.

2. Vide, Evidence Volume, T. B. Report on Cement.

higher freight charges. This was economically feasible[1], because, as we saw before, the Kathiawar factories were, and to some extent still are handicapped by higher railway freight on coal which they have to get from Bengal, the entire journey being on the railways. This diversion of traffic from rail-cum-sea route to entire land rout had doubled the cost of coal. In the Karachi market, however, their position was more secure in respect of competition from internal factories, because in this case they could secure cheap coastal shipping facilities in marketing their output.

Besides the competition of internal factories, there was the competition of importers in the port towns, because they could land their cargo directly from the ship without having to pay any railway freight. We shall analyse this point later. The importers undoubtedly had to pay an import duty of 15 per cent. ad valorem, which worked out at about Rs. 9 per ton, but this disadvantage was neutralised by the cheaper sea freight they had to pay, which for British cement, was about Rs. 12 per ton landed at port. The Indian factories per contra had to pay higher freight, except in the case of a few which were better situated. Further, due to lack of adequate coastal shipping facilities, the factories could not exploit the natural advantages of their location. The irregular shipping facilities and relatively higher freights limited the markets of these factories.[2]

1. Mr. Captain in his evidence deposed, "There is the Dwarka Cement Company situated on the coast quite close to Bombay. They bring their coal by water and yet we under-sell them quite easily. Their cost is higher and we have got no difficulty in competing with them in Bombay." Vide Evidence Volume of T. B.

2. The Indian Cement Company pointed out before the Tariff Board:—

"Places like Singapore, Java, Sumatra, Aden Persian Gulf and Mesopotamia would be the most natural outlets for the output of this Company, as the distances from the port where this factory is situated to the markets named are shorter than for other competing countries, provided reasonable freights are granted by the Shipping Companies. This Company is annually importing 1,500 tons of cement from its factory to Persian Gulf by country crafts. Exports to other places mentioned above is not possible by country crafts, but it is very probable with reasonable ocean freight, the present steamer freights being prohibitive. Japan is able to export cement to Singapore, Java and Sumatra owing to low freights given by its State subsidised steamship companies, whilst India is unable to do so." Vide Evidence Volume of T. B. Report on Cement.

RAILWAY TRANSPORT FACILITIES

When we turn to railroad transport facilities, the seemingly favourable location of Kathiawar factories receives a further shock and the marketing area is obviously restricted. The most important railways over which the traffic passed are, the Porbundar State, the Gondal State, and the Morvi State, the Bhavanagar State, the B. B. & C. I. Railways and the G. I. P. Railways. The Kathiawar Railways were, and still are worked as separate systems, and frequently pursued block-rate policy which handicapped the cement factories in marketing their produce in internal markets. Besides, other Railways too, like B. B. & C. I. and G. I. P., quoted telescopic rates only on the distance travelled on their own lines. A rough idea of the freight position can be had from the particulars given below :—

Freight Rates:[1] *pie per maund per mile*

Kathiawar Railways	*B. B. & C. I. Railway*			*G. I. P. Railway*		
The rate is Rs. 0-4-0 per mile per one metre gauge wagon of 7 tons and 7 cwts. which comes to 0·24 pie per maund per mile.	The rate is based on 'H' telescopic schedule:-			The rate is based on 'G' telescopic schedule :—		
	Miles		*Pie*	*Miles*		*Pie*
	1 to 75	-	0·30	1 to 100	-	0·24
	76 to 300	-	0·17	101 to 200	-	0·20
	301 to 500	-	0·15	201 to 400	-	0·75
	Over 500	-	0·10	Over 400	-	0·10

The facts outlined above give only a rough indication of the real position. In respect of Kathiawar railways the freight of 0·24 pie per mannd per mile is apparently moderate, but becomes a little pressing when we remember the number of railways over which the traffic has to pass, each having a different rate basis. The schedule rates of the B. B. & C. I. and the G. I. P. Railways similarly fail to reveal the real difficulties of the industry because the lower freights quoted on long distance traffic, say of 400 miles and over, could not be enjoyed by the consignment shipped from Porbundar destined to some station on the G. I. P. Railway in C. P. or Berar, because the total distance travelled was on numerous lines, each charging the freight for the distance travelled on its own line irrespective of the other lines. No wonder then,

1. Vide Evidence of the Indian Cement Company before the T. B.

if the cement factories had to pay a higher freight. Let us clear the position by a few illustrations[1]:—

Markets to	*Freight from Porbundar* (per ton)	*Freight from Bombay* (per ton)
	Rs. a. p.	Rs. a. p.
Ajmer	15 12 0	14 12 0
Ahmedabad	11 8 0	9 1 0
Nagpur	26 8 0	13 4 0
Surat	13 4 0	5 10 10
Poona	14 4 0	4 4 0

The table clearly shows the peculiarities of railway rates policy and the advantageous position of the import traffic. Cement despatched from Porbundar to Ahmedabad has to pay higher freight than that from Bombay to Ahmedabad because in the former case the consignment has to travel over the Porbundar, Gondal and Bhavanagar State Railways before it reaches Wadhwan, from where it is taken over by the B. B. & C. I. Railway to be carried over to Ahmedabad, while in the latter case the consignment is carried direct to Ahmedabad by the B. B. & C. I. Railway alone. Similar is the case with reference to traffic to Surat and Ajmer. In the case of Poona the number of railways over which the consignment has to pass is increased further, apart from the long distance to be traversed. The case of Nagpur traffic is in no way different. A consignment of cement from Bombay can be shipped directly to Nagpur on the G. I. P. Railway, without any transhipments, whereas in the case of Porbundar traffic, there are as many as five different railway systems.[2]

This policy of treating different railway systems separately as isolated units in through booking is highly detrimental to the

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1. Compiled from the Evidence recorded by the T. B.
2. Here are some other figures which further explain the above remarks:—

Distance	*Route*	*Freight per maund* Rs. a. p.	*Freight per mile per maund* (pie)
862	Bombay to Delhi	0 10 0	·148
819	Porbundar to Delhi	0 11 11	·175
466	Bombay to Ujjain	0 7 4	·188
586	Porbundar to Ujjain	0 9 4	·191
567	Bombay to Khandwa	0 8 3	·174
687	Porbundar to Khandwa	0 10 7	·184

industrial development of the country and neutralises the effects of the protective policy. Though the rates quoted above refer to the period before 1925, the general principles of railway rates policy continue to be the same till the present day, as we shall show in the following pages. The Railway Tariff should be so framed as to foster Indian trade and industries and help the protective fiscal policy of the country.

RATES ON CEMENT FROM BUNDI

Having discussed the marketing arrangements of the above two groups of cement factories, we shall now describe in brief the position of other factories. The broad features underlying the railway policy are true of these factories also. Kathiawar factories sent their cement by rail to markets in Gujarat and Central India. The Bundi Portland Cement Company also competed in the same markets as will be seen from the facts given below:—

Important Markets of Bundi Cement Compnay

Mileage	*Markets*	*Freight per ton*	*Mileage*	*Markets*	*Freight per ton*
		Rs. a. p.			Rs. a. p.
253	Delhi	6 10 9	409	Ahmedabad	11 3 5
383	Cawnpore	7 3 9	365	Baroda	10 5 9
439	Lucknow	11 3 4	355	Surat	10 8 0
551	Lahore	15 12 0	718	Sukkur	23 15 9
251	Indore	7 10 7	960	Calcutta	17 7 3
194	Ajmer	6 6 2	1148	Secunderabad	29 12 10
616	Bombay	12 10 8			

It will be seen that in markets like Ajmer, Ahmedbad, Baroda, Surat and Bomby, the Bundi Portland Cement Company competed with Kathiawar companies, as well as with the imported cement. When railway freight is considered, Bundi cement was at an advantage in Ajmer as compared with either Kathiawar or imported cement, because whereas in the former case railway freight was Rs. 6-6-2, in the latter two cases it amounted to Rs. 15-12-0 and Rs. 14-12-0 per ton respectively. It is obvious, therefore, that competition entailed waste in the form of higher freight charges. Per contra, in a market like Calcutta, Bundi cement was handicapped by higher railway freight as compared with the Sone Valley and C. P. cement companies. Above all, the most formidable competition was that of imported cement. It was

wasteful for Bundi factory to despatch its cement to Calcutta. To Delhi markets, Gwalior cement works could despatch their cement at a relatively cheaper freight, because whereas from the Bundi works the charge was Rs. 6-10-9, from the Banmore works it was Rs. 4-15-8 per ton only. To Cawnpore, likewise, the Banmore works could despatch at Rs. 6-13-0, while the Bundi had to pay Rs. 7-3-9. In Lahore, the Punjab Cement Company had great freight advantages, because it is nearer. The freight from Wah to Lahore was Rs. 6-10-8 per ton for 209 miles, and from Bundi Cement Works for 551 miles the rate was Rs. 15-12-0. Such instances can be multiplied. Each company had its own naturally protected market, but the lack of proper division of the marketing area led to waste.

The other important fact which emerges out of this study is that in upcountry markets foreign competition was marked by total absence. This was due to the high railway freight from the port towns to upcountry markets. In these markets Indian cement factories have enjoyed greater protection from foreign competition. In fact, the Punjab Portland Cement factory, but for this natural protection[1], would not have been able to survive, because the transport of coal is a very serious item in its cost of production. To some extent its markets are free from internal competition as well, and this helps it appreciably in selling its output. The more important markets of this factory are Rawalpindi, Peshawar, Bannu, Khirgi, Sialkot, Lahore, Phirozpur, Amritsar, etc. All these towns are within 300 miles of the factory. Due to this advantageous location the Punjab Portland Cement Company did not suffer much from the wasteful internal and foreign competition to which other factories had fallen prey.

RATES ON CEMENT FROM GWALIOR FACTORIES

The Gwalior Cement Company despatched cement to Delhi, the Punjab, U. P., C. P., Rajputanas and a few outlying ports of

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1. Railway freight to Lahore and Peshwar, two most important markets of this factory from Karachi and Wah worked out as follows :—

From Wah to.	*Per ton.* Rs. a. p.	*From Karachi to.*	*Per ton.* Rs. a. p.
Lahore	6 10 8	Lahore	18 2 8
Peshawar	2 14 10	Peshawar	21 2 4

Gujarat.[1] Some of these markets were certainly immune from the inroads of the imported cement, but, as already adverted to, the internal competition was more important. The railway freight to some of the important markets of the factory may be noted with interest.

These freights show the advantage or otherwise under which the factory worked in respect of its market. This handicap, as has been pointed out more than once, was due mainly to internal competition, although the rates policy cannot be entirely free from the blame. The defects of the latter were completley clouded by the former. In Delhi and Cawnpore, the Gwalior factory had a decided advantage over its compeers ; Ahmedabad and Surat were the centres of strong competition between factories in Western and Central India as well as imports ; Nagpur and Poona were beyond its zone ; and in Khirgi, the Punjab Cement Company could successfully compete with any other importer. But as it was, the Banmore factory despatched cement to the aforesaid markets, and prices being fixed by competition, the heavy freight charge fell upon the producers. Consumers of cement could easily pitch one producer against the other and exploit the situation. Here is a specific case to the point. In 1923-24 the Indian Stores Department invited tenders for cement for the Military Stores Department at Khirgi[2], and the Gwalior Cement Company, which got the order, quoted Rs. 60-0-0 per ton f. o. r. destination. The railway freight from Banmore being Rs. 22-2-3 per ton ; the price f. o. r. Banmore worked out to be Rs. 37-13-9 per ton. This price was in fact unremunerative,

1. Vide Evidence recorded by the Tariff Board.

Markets	*Freight from Banmore* (per ton.) Rs. a. p.	*Freight from Ports* (per ton.) Rs. a. p.	
Sukkur	20 11 6	9 4 0	(From Karachi)
Khirgi	22 2 3	20 13 9	,, ,,
Ahmedabad	15 14 4	9 1 4	(From Bombay)
Surat	17 0 6	5 10 10	,, ,,
Nagpur	16 4 0	13 4 0	,, ,,
Poona	12 5 0	4 4 0	,, ,,
Cawnpore	6 13 0	17 12 0	,, ,,
Delhi	4 15 6	19 4 0	,, ,,

2. Vide, Evidence Volume of Tariff Board Report.

but it was quoted in competition with the Punjab Portland Cement Company. It can be seen that this was an unwise policy for the Gwalior Cement Company to pursue, because Khirgi being nearer to the Punjab factory it could despatch cement at a freight of ab out Rs. 9 per ton, whereas from Gwalior the freight paid was about Rs. 22 per ton. It involved a waste of Rs. 13 per ton by way of freight, apart from other losses, without benefiting either party. In short, the problem before the industry was primarily one of a better marketing organisation, which would eliminate the wasteful competition, combined with a more sympathetic rates policy.

POSITION SUMMARISED

To sum up the position of the Indian cement industry in relation to railway freight before 1925, we find that the freight on coal is a heavy item in the cost of production; in the upcountry markets, which are protected from foreign competition due to high railway freight from the ports, competition inter se, of the internal factories, affects them adversely; port towns, which form the most important markets, are a centre of cut-throat competition between the different indigenous cement factories on the one hand and the importers on the other. The freight from factories to the ports is as a rule high, due partly to longer distance to be traversed. As against these hardships in their way, the cement factories have a great future. Great natural advantages, the productive capacity of the factories and a large present and potential markets can remove any scepticism as to the future. To get over their immediate difficulties, the cement companies thought of seeking some relief at the hands of the State and applied for protection. The application was referred to the Traffic Board.

THE REMEDY PROPOSED BY THE TARIFF BOARD

The Tariff Board found that the claim of natural advantages possessed by the industry has been made good and noted the causes of the unfortunate condition the industry had fallen in.[1] The remedies proposed by the Board, therefore, deserve a detailed consideration; we propose to review them seriatim in so far as they concern us in the present study. As regards the coal supply to the cement factories, a subsidy on railway freight was at first

1. See Report of the Tariff Board.

thought of, but it was rejected on the plea that this would mean a special favour to this industry when other industries were equally in need of a reduction in coal freight. The necessity of a general reduction in railway freight on coal was pressed in unequivocal terms. The Board was convinced that the question of the cost of coal was vital if the end in view was a rapid industrial development in India. Over a large part of the country progress must be seriously retarded unless the freight on coal could be reduced substantially. We believe that no one would challenge the proposition that coal freights on the Indian railways should be kept at the very lowest point which is commercially possible. But more than this may be required in the interests of industrial development. Sooner or later, the country may have to face the question whether it would not be worth while to secure a substantial reduction in coal freights at the cost of sacrificing a part of the contribution which the railways made to general revenue.[1]

BOUNTY SUGGESTED

Reviewing the internal competition between the cement factories, the Board held that it was essentially a temporary phase. We have already discussed this point in the earliar portion of the chapter, and therefore we pass on to another issue. The problem of foreign competition was examined and it was held that the industry can hold its own in upcountry markets, where the railway freight adversely affects the importer, and the main question was whether it could do so in the great ports.[2] We have seen that the importers enjoyed great advantages in markets near the ports, due to cheaper see freight which they could command, and the high railway freight per contra that Indian cement had to pay to reach the ports. The competitive area was isolated, and it was held that it extended as far as Bhusaval on the G. I. P., Asanol on the E. I. R., Panposh on the B. N. R., Baroda on the B. B. & C. I., and Khanpur on the N. W. R., from the respective ports served by the railways. There were two alternative schemes for capturing these markets at the ports, either freight subsidy or fiscal protection. But the former scheme was brushed aside on the plea that " it would not be possible apparently to restrict the

1. See Report of the Tariff Board, Para. 68.
2. See Report of the Tariff Board, Para. 53.

subsidy only to consignments to the nearest port"[1], and bounties were advocated, subject to certain conditions.[2] These recommendations of the Board were, however, not accepted by the Government.

THE SCHEME OF RATIONALISATION INITIATED BY THE FACTORIES

True, the State did not give any direct help to the industry; but the move for the improvement and re-organisation of the industry, which started from within, after the publication of the Report, has transformed the industry with the result that even in the present depressed times the industry continues to maintain steady progress. As has been noted in the foregoing discussion, the problem before the industry was primarily one of transport, and this has been tackled with success.

THE MARKETING OF INDIAN CEMENT AFTER 1925

Indian cement factories had realised the baneful effects of intense internal competition even prior to the enquiry of the Tariff Board, and attempts from time to time were made to form a combine, though they proved abortive due to lack of an intelligent understanding of the problem on the part of a few members. Nevertheless, the gravity of the situation was being constantly felt all the time, and by all the producers, because of the unremunerative prices which usually did not cover even works costs. The importance of concerted action was thus coming to the fore. Mr. Captain, of the C. P. Portland Cement Company, while giving evidence before the Tariff Board, remarked that in their self-interest the Indian Cement manufacturers should stop cutting each other's throat and come to some understanding.[3] The Board had also pointed out that the primay remedy for the malady lay in the hands of the manufacturers themselves. In due course, the manufacturers realised their interests, and entered into a combine known as the Indian Cement Manufacturers' Association in 1926, to husband

1. *Vide*, Tariff Board Report, Para. 69.
2. Supra, Paras. 70 to 72.
3. "I say frankly that the sensible thing would be for the manufacturers to come to some understanding and not cut each other's throats." Vide Evidence Vol. P. 102.

their hitherto frittered resources, and to present a united front to their common rivals.

One of the most outstanding achievements to the credit of the Indian Cement Manufacturers' Association is the elimination of the internecine competition and waste involved in the form of high railway freight. In the absence of definite marketing agreements between the cement factories, apart from the price-wars, they made inroads in distant markets within the geographical limits of other cement factories and paid high railway freights. The attempts of the Gwalior Cement Company to capture the Khirgi market, referred to above, is an instance to the point. Several instances of the type have been quoted in the foregoing pages showing the extent of uneconomic waste which this practice entailed. This deficiency was made good by the allocation of certain geographical areas to different factories, and the definite demarcation of the marketing limits. This move has been fruitful, and substantial economies in freight have resulted. Besides, the standardised prices of cement, and the stability resulting therefrom have proved beneficial both for the manufacturers and the consumers, and the consumption of cement has increased.

THE CEMENT MARKETING COMPANY OF INDIA

This marketing arrangement continued till 1930 when the necessity of a further improvement was felt, and therefore a new association was formed known as the Cement Marketing Company of India, Ltd. In this Company are centralised the marketing functions of its constituent members. To be clear, all the eight factories which had formed the Cement Manufacturer's Association in 1926, now centralised the marketing of their output. The constituent factories carry on their production and the total produce is marketed by the Cement Marketing Company. This Company studies the conditions of demand and the nature of foreign competition, and regulates the production of the factories accordingly.

Let us consider now as to how this new institution marks a stage in the evolution of the cement industry, and how it solves the problem of high freight charge. Hitherto the cement factories, after the formation of the Cement Manufacturers' Association, used to market their output within the allocated geographical limits and made their own arrangements with the railway companies for

freight charges. But the wastes involved in marketing, thus conducted by individual factories, was soon realised. It was felt that in order to be able to face foreign competition, which was increasing in strength, further economies should be effcted and the prices lowered. Therefore, under the new arrangements the two most important functions of modern industries, production proper and its marketing, have been separated and the latter has been centralised and entrusted to the Cement Marketing Company. The Cement Factories under the pool are mere producers and nothing more; they produce for the pool. The expected annual outturn of the individual factories is provisionally predetermined at the commencement of the year, and it is purchased f.o.r. works by the pool at a fixed price. This price is equal for all constituent factories, subject to a specified coal allowance proportionate to the distance from the coalfields. The prices of the produce are realised by the Marketing Company, which meets the bills drawn upon it by the constitutent companies on the basis of aforesaid arrangements and after defraying expenses of the establishment, the residue is distributed between the companies in proportion to the tonnage supplied.

The Marketing Company, having cement at its disposal at the different works, on the receipt of an order arranges for the despatch from the nearest centre. Now, there are no marketing zones fixed for the constituent factories, except for those which are outside the pool, and the marketing company manages the sales as it thinks best. Take a few instances. If the demand for cement in Bombay increases above the normal, the pool would adjust its supplies by diverting the total output of Kathiawar factories and of C. P. cement factories to Bombay and the internal demand would be met by other factories. Again, if some new constructional project is started in Sind, the output of Kathiawar factories and of Lakheri would be supplemented from other factories in the vicinity. These are the instances of abnormal demand ; in normal times orders are supplied from the nearest works without any unusual effort. But the fact of great import to be noted in this connection is that the reorganised selling arrangements have substantially curtailed the transport costs; long leads are eliminated, as far as possible, by delivering cement from the nearest factory, and the Marketing Company succeeded, within a short period of two years, in reducing the prices of cement.

From the foregoing remarks it will be evident that the Indian Cement Industry has by its own efforts, eliminated the high transport costs, entailed in delivering its produce over the distant parts of this vast country, by centralising its distribution. This central institution, obviously strong in position, commanding as it does the output of eight out of ten cement factories of India, is in a better position in negotiating with the railways concerned for concessions in freight. We are informed by the Cement Marketing Company that railways have granted special station-to-station rates from time to time when urgent necessity was shown therefor. For instance, whenever new constructional works commenced and the Marketing Company approached the railways concerned for a special station-to station rate from the nearest factory the request was complied with and the special rate operated till the works were finished. This is done for larger orders. Even for smaller orders we are informed that they are able to make suitable arrangements with the railways for wagon load consignments.

The freight schedules, pari passu, have also recorded some changes. Indeed these changes are not very material; nevertheless, they are important in the evolution of the Industry, more so because when the Tariff Board conducted the investigation the railways expressed their reluctance to make any reductions in the then existing freights.[1] The mild and diffident attitude taken up by the Board reflects the ultra-conservative freight policy of Indian railways, to which even an expert body could fall prey. An active move on the part of Indian railways to foster internal

1. The Board recorded their findings on the freight question in the following terms:—

"We enquired from the railway administration concerned whether anything could be done in this direction, but all of them have expressed their inability to reduce either coal or cement rates in existing circumstances below their present level. The railways have already given special concession rates on cement booked through from the factories to the ports, and these rates are lower by from Rs. 3 to Rs. 4 a ton, than the ordinary rates calculated by distance. That being so, we are not in a position to impugn their refusal to do anything more. If anything is to be done in this way, it must be subsidising the freights on coal and cement at the expense of general revenue."

Report of the Tariff Board, Para. 67.

traffic has been an exception rather than a rule. Subsequent events have falsified the position taken up by the Indian railways to which the Board offered a willing acquiescence. As regards the freights on coal, with every reduction the traffic and the earnings pari passu increased, as can be seen from our survey of the coal industry. The freights on cement, with which we are more concerned for the present, have not been reduced to the same extent as those on coal, nevertheless, they have hepled the industry materially in its present transitional stage. Let us then review the present freight position.

RAILWAY TARIFFS EXAMINED

The General Classification of cement continues to be second class railway risk, but on most of the railways special schedule and station-to-station rates are quoted, so that the general classification has been reduced to a mere paper classification. In actual practice schedule and special rates are of greater moment. We shall therefore examine the changes on the more important railways.

The G. I. P. Railway[1]

Former Freight based on 'G' telescopic schedule:—		Present Freight based on C/O telescopic schedule:— *1932*	
1 to 100 miles	0·24 pie	1 to 75 miles	0·30 pie.
101 ,, 200 ,,	0·20 ,,	75 ,, 400 ,,	0·170 ,,
200 ,, 400 ,,	0·175 ,,	Over 400 ,,	0·10 ,,
Over 400 ,,	0·10 ,,		

The schedules mark a very minor change. But the rates to port town and some other more important markets are lower than warranted by these schedules, some of which are given below :—

	From Katni Cement Siding Rate per maund	*From Jukehi* Rate per maund	*From Banmore* Rate per maund
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Bombay	0 7 11	0 8 0	0 7 10
Allahabad	0 2 6	0 2 4	0 6 7
Cawnpore	0 4 0	0 3 10	...
New Delhi	0 6 2	0 6 0	0 7 9

1. The freights are in pie per maund per mile. The conditions for carriage are the same in both the cases, viz., in full wagon loads at owner's risk, charges calculated on the carrying capacity of the wagon used, loading and unloading to be done by senders and consignees.

The rates reveal that, though below the schedule basis, they have not been reduced below the level of 1925. We have selected these few stations to show that so far as the railways are concerned, except a few minor changes, the position continues to be the same. But for the reorganised marketing arrangements the industry would have made little progress and the freights do not give any encouragement. Improved marketing, however, has helped materially, as the above figures indicate, because for instance, a market like Allahabad would be supplied from Jukehi at a freight of as. 2-4 per maund instead of from Banmore which would cost as. 6-7 per maund, and thus affect a substantial saving.

THE E. I. RAILWAY

To take up the freight on the E. I. R. we note the following alterations in the schedule :—

Former Schedule 'C' :			*1932 Present Schedule C/N:*		
	1 to 75 miles ...	0·38 pie.		1 to 75 miles ...	0·333 pie.
Plus	76 to 300 ,, ...	0·18 ,,	Plus	76 to 150 ,, ...	0·20 ,,
,,	301 and above ...	0·10 ,,	,,	151 to 300 ,, ...	0·17 ,,
		,,	,,	301 to 400 ,, ...	0·125 ,,
			,,	Above 400 ,, ...	0·10 ,,

As will be seen, the position of long distance freight has been little affected, except that the lowest freight of 0·10 pie per maund per mile which was formerly available over 300 miles is now for the distance over 400 miles. Short distance traffic, however, has received some concession. This has special significance to-day because long leads have been as far as possible eliminated. Special station-to station rates to Howrah below these schedule rates are quoted from the cement factories and they continue to be at the same level with a few minor alterations. For instance, cement booked from Katni to Howrah was charged a special rate of Rs. 0-7-0 per maund in 1925 and the present freight is just the same. This freight is for the E. I. R. section only : for the G. I. P. section Rs. 0-2-3 per maund is to be added, so that the total freight is not affected. The E. I. R. share of the traffic booked from Lakheri, via Agra East Bank to Howrah is Rs. 0-7-11 per maund as against Rs. 0-7-1 in 1925, an increase of pies ten per maund. The traffic from Banmore to Howrah on the E. I. R. section via Naini is charged to-day Rs. 0-5-9 per maund, whereas in 1925 the rate via Mankipur was Rs. 0-6-5 per maund. From Japla to Howrah

the freight is Rs. 0-5-0 per maund as against Rs. 0-4-0 per maund in 1925. The Japala factory has thus been materially affected in the Calcutta market in which it has the greatest stake. Apart from this what we want to show is that there has been no material change in freight since 1925, and that to port towns rates below the schedule are quoted as usual.

THE B. B. & C. I. RAILWAY

On the B. B. & C. I. Railway alterations in freights have been as under:—

Former Freight Schedule 'H':			*1932* *Present Freight Schedule 'C/O':*		
	1 to 75 miles ...	0·30 pie.		1 to 75 miles ...	0· 30 pie.
Plus	76 to 300 ,, ...	0·17 ,,	Plus	76 to 400 ,, ...	0·170 ,,
,,	301 to 500 ,, ...	0·15 ,,	,,	Over 400 ,, ...	0· 10 ,,
	Over 500 ,, ...	0·10 ,,			

When the two schedules are compared no bold changes appear. The lowest freight is now available over 400 miles, and the rate of ·17 pie is applied for the distance over 76 to 400 miles. However, for traffic from Lakheri factory and via Wadhwan for traffic from the Kathiawar factories, special rates below the schedule are quoted. For instance, from Lakheri to Bombay a special rate of Rs. 0-7-5 per maund, equivalent to Rs. 12-9-0 per ton is charged and from via Wadhwan and Dhandhuka a rate of Rs. 0-5-4 per maund equivalent to Rs. 9-0-0 per ton is quoted. These freights are substantially below the schedule rate. But it is clear from the Goods Tariffs of this railway that there have been no changes in the special station-to-station rate since 1925.

THE B. N. RAILWAY

The changes in the schedule rates on the B. N. Railway may be briefly reviewed. We quote below the schedules :—

Former Freight Schedule.			*1932* *Present Freight Schedule.*		
	1 to 100 miles ...	0·30 pie.		1 to 75 miles ...	0·38 pie.
Plus	101 to 300 ,, ...	0·20 ,,	Plus	76 to 300 ,, ...	0·20 ,,
,,	301 to 600 ,, ...	0·18 ,,	,,	301 and above ...	0·10 ,,
,,	Over 600 ,, ...	0·15 ,,			

On the B. N. Railway, therefore, long distance traffic has received some assistance but the freight for the first 75 miles is raised from ·30 pie to ·38 pie which neutralises some part of the

benefits for long distances and imposes heavier charge for the short distance shipments. Nevertheless the reduction has proved helpful to the industry in its huge task of popularising the use of cement in the country.

THE N. W. RAILWAY

The N. W. Railway has adopted C/N schedule as in the case of the E. I. Railway. But for the Punjab Cement Works situated on its line, special station-to-station rates, lower than the schedule rates, are quoted.[1] We submit below freights to a few important stations to show the nature of concession granted to the factory:—

Railway Freight ex Works to the undermentioned stations.[2]

Mileage.	*Station.*	*Schedule Rate per ton.* Rs. a. p.	*Class Rate per ton.* Rs. a. p.
·389	Ambala City	11 3 5	23 15 9
239	Amritsar Junction	8 1 5	15 1 6
264	Ferozpur City	8 10 6	16 9 8
288	Jullunder City	9 3 7	18 0 3
79	Peshawar City	3 15 7	5 8 7
345	Multan City	10 5 9	21 6 11
207	Lahore	7 6 1	13 3 2
241	Lyallpur	8 1 5	15 3 0

The schedule rate is thus a substantial concession over the class rate. But there is nothing particular about this concession because a similar concession is granted by other railways too. In fact the N. W. Railway seems to be more conservative in quoting special station-to-station rates, than even a company-managed line like the B. B. & C. I. Railway, which quotes rates lower than the schedule rates to some important markets both from the cement factory on its lines and from Kathiawar Works via, Wadhwan and Dhandhuka, as referred to above.

THE B. & N. W. RAILWAY

On the B. & N. W. Railway, which is important for internal distribution, schedule rate C/Q is quoted.[3] The basis of this

1. Vide Goods Tariff, Part I, P. 442.
2. Schedule C/N rates are applied when the weight for charge is the carrying capacity of the wagons used ; loading and unloading to be done by the consignments and consignees ; and the goods are booked and accepted on Risk Note From "H".
3. Subject to the condition, O. R.; C. C ; L.

schedule may be noted as under :—

	1	to	100	Miles	...	0·20	pie	per	maund	per mile
Plus	101	to	200	,,	...	0·17	,,	,,	,,	,, ,,
,,	201	to	500	,,	...	0·14	,,	,,	,,	,, ,,
,,	above		500	,,	...	0·10	,,	,,	,,	,, ,,

The point to be noted in the above schedule is that for the first 100 miles the freight is lowest on this railway as compared with other railways. This is especially significant because the traffic on this railway is generally over short distances, and as such the lower freight helps the better distribution of cement.

These are the more important railways with which the Cement Marketing Company has to deal; they carry the major part of the cement traffic of the Indian factories, except the Shahabad Factory which caters for the markets in Southern India, as we shall presently see. The reduction in rates over those of 1925 have been only nominal, and the facilities for the marketing of cement, so far as railways are concerned, are on a par with the conditions when the Tariff Board enquired. But the de facto marketing arrangement of Indian cement has been overhauled, and the reductions in rates wherever offered has been better availed of by the industry. Under the reorganised system, however, the lack of proper co-ordination between the different railways is very keenly felt, and it is imperative in the interests of Indian industries that in through booking the entire distance over which the consignment travels, should be taken into consideration in calculating the telescopic rates, irrespective of the number of railways concerned.

FACTORIES OUTSIDE THE POOL

Before we pass on to the general discussion of the effects of reorganised marketing on the cement industry, we should trace in brief the marketing facilities of cement companies outside the pool, namely, the Sone Valley Portland Cement Company and Shahabad Portland Cement Company, especially the latter. The Cement Marketing Company has working arrangements with these companies, whereby they have been allotted geographical areas within which they are immune from internal competition except in port towns. Price agreements have also been entered into which have helped the stabilisation of prices, and increased the effective strength of the factories against foreign importers. The Sone Valley Company markets its output primarily in Calcutta

and in Bengal generally. This company is apparently in a stronger position, and being located in the vicinity of Calcutta, one naturally expects that this factory should be able to drive out the imports; but the results do not come up to expectations, as the imports in Calcutta are still higher than those in Bombay. Nevertheless the situation is improving.

The Shahabad Cement Factory is, however, in a slightly different position in respect of its markets, for its capacity is higher than that of the Sone Valley Factory. It is unable to exploit the full advantages of its location due to the multiplicity of different railway systems over which the traffic has to pass before reaching the consuming markets. The principal markets of the factory are in Southern India, right from the Deccan and the south of Bombay to the Nizam's Dominions, the Mysore State and the Madras Presidency. The Principal railways with which this factory has to deal are the Nizam's State Railway, the M.& S.M. Railway and the South Indian Railway. Each railway has a different basis of freight charge. The N. G. S. Railway formerly quoted a class rate but now they have adopted a Schedule rate, based on the following:—

	For first	75 miles	...	0·38	pie	per maund	per	mile
Plus	76 to	300 ,,	...	0·20	,,	,,		,,
,,	Above	300 ,,	...	0·10	,,	,,		,,

The M. & S. M. Railway has adopted C/G schedule on the following telescopic basis:—

	For first	300 miles	...	0·38	pie	per maund	per	mile
Plus	301 to	400 ,,	...	0·30	,,	,,		,,
,,	401 ,,	500 ,,	...	0·20	,,	,,		,,
,,	501 ,,	600 ,,	...	0·125	,,	,,		,,
,,	601 ,,	700 ,,	...	0·115	,,	,,		,,
,,	Above	700 ,,	...	0·10	,,	,,		,,

The South Indian Railway have adopted C/K Schedule rate which is noted below:—

	For first	100 miles	...	0·38	pie	per maund	per	mile
Plus	151 to	250 ,,	...	0·250	,,	,,		,,
,,	251 to	400 ,,	...	0·125	,,	,,		,,
,,	Above	400 ,,	...	0·115	,,	,,		,,

Thus, on a comparison of the above schedules, it appears that the schedule rates quoted by the N. S. Railway is more favourable than those allowed by other railways. But, the more important and outstanding fact to be noted in this connection

is the individualistic policy pursued by the different railways, which charge freight on the distance over which the traffic has to be hauled on their lines, irrespective of the total distance travelled. This has raised the incidence of freight appreciably. To take an instance, cement when despatched from Shahabad to Masulipatam, will have to travel over three railways, G. I .P., N. S., and M. & S. M. Railway. The total distance to be travelled is 395 miles and the freight charge works out as under :—

	Pie per maund per mile.			
The G. I. P. Railway would charge at	0·38	for	7	miles.
The N. S. Railway would charge at	0·38	,,	150	,,
	0·20	,,	188	,,
and M. & S. M, Railway ,, ,,	0·38	,,	50	,,

Per contra, if all these railways were considered as a single unit, the freight would have been charged either on the basis of the G. I. P. Schedule, or on that of the N. S. Railway, which would be appreciably lower than the present freight. Thus, the advantage of telescopic schedule rates, meant to foster long distance traffic, are not availed of by the industries on internal traffic due to this pernicious practice pursued by railways impervious to public opinion. Therefore, the telescopic schedule far from helping our factories discount ipso facto the transport facilities, because the internal traffic has to pass over more than two railway systems in most cases, and the freight on each system is higher for the lower distance travelled. In some cases, in readjusting the telescopic schedules, the freight for lower distance has been raised[1], in order to give better facilities to long distance traffic. The fostering of long distance traffic is indeed in the interests of the country, but the particularistic proclivities of our railways, insisting as they do on being treated separately, transform what is obviously a very desirable action into an evil, and thereby help the penetration of the imports. The imports can avail themselves of the telescopic freight charge on the total distance, and get into the interior of the country through main trunk lines running from the ports ; the industries in the internal centres have to pay higher

1. On the G. I. P. Railway which had 'G' schedule rate formerly, the freight for the first 100 miles was at 0·24 pie per maund per mile, but in the present schedule the freight for the first 75 miles is at 0·30 pie per maund per mile.

freight per mile and subsidise[1] their rivals. The root cause of despair is the glaring lack of co-ordination in our railway policy; the entire railroad net should be one entity, functioning in the interests of Indian trade and in lustries.

From the foregoing brief account of the re-organised marketing arrangements based on the agreements of the cement companies *inter se*, either within or outside the pool, and the freight quoted on different railways it seems safe to conclude that the industry, on the whole, has succeeded in eliminating the disadvantages in the distribution of cement. The more obvious difficulties which still persist, in spite of the energetic and intelligent efforts by the industry to remove them, are due to defects in the railway policy of the country.

EFFICIENCY RESULTING FROM REORGANISATION

As a result of the aforesaid reorganisation of the Indian cement industry and the centralised advertising and propaganda conducted, *pari passu*, by the Cement Marketing Company, the efficiency of production and with it the consumption of cement has recorded a marked increase. The consumption of cement has increased from about 378 thousand tons of Indian cement in 1925-26 to 762 thousand tons in 1934-35. As regards the increase in the efficiency in production we have not been able to get the figures of the cost of production, but a rough indication can be had from the increase in the productive capacity of the factories given below, because the industry is subject to the laws of increasing returns and consequent lower costs per unit as the aggregate output increases.

	Present Capacity (Tons). 1935	*Former Capacity (Tons)*
C. P. Cement Company ...	2,50,000	100,000
Bundi Cement Company	2,00,000	60,000
Shahabad ,, ,,	1,40,000	40,000
Katni ,, ,,	1,30,000	72,000
Punjab ,, ,,	1,00,000	33,000
Okha ,, ,,	1,25,000	100,000
Sone Valley ,,	1,50,000	50,000
United Cement Company	60,000	60,000
Gwalior ,, ,,	70,000	40,000
Indian ,, ,,	40,000	30,000
Coimbatore ,, ,,	65,000	

1. Ports being linked more directly with the internal centres importers can better avail of the telescopic rates and the indigenous industries have to bear the brunt.

Another indication of the efficiency of the industry is the reduction, in addition to the stability, in prices. The prices on an average have been reduced by about Rs. 3 per ton since 1929 due to the efforts of the Cement Marketing Company of India, as can be seen from the figures given below :—

Market.	*Prices in 1929 F. O R. Destination*	*Prices in 1933 F. O. R. Destination.*
	Rs. a. p.	Rs. a. p.
Bombay City ...	52 0 0	50 0 0
Bombay Suburbs ...	55 0 0	50 to 52.
Gujrat ...	55 0 0	52 0 0
Central India ...	55 0 0	52 8 0
Rajputana ...	55 0 0	52 8 0
Sind ...	57 0 0	55 0 0
Karachi ...	50 0 0	48 0 0
Baluchistan, Quetta ...	67 8 0	62 8 0
Delhi ...	55 0 0	52 8 0

GROWTH IN CONSUMPTION

This efficiency in the organisation of the industry and the resulting reduction in prices augurs well for the future. In India the consumption of cement being very low, only about 5 lbs. per head as against 600 lbs. per head in U. S. A., 400 lbs. in U. K. and about 350 lbs. in France, the prospects for further growth in the market are immense; the field only needs a proper ploughing, which is being carried on by the Marketing Company. The Tariff Board, while discussing the growth in India's demand for cement, remarked that if consumption continued to grow at the same rate as it did between 1919 and 1924, it would not be long before the demand again overtook the productive capacity of the works. In that case by 1928 or 1929 India would be using 600,000 tons of cement a year and the position of the industry would be greatly improved.[2] Later developments have proved the prognostications of the Board, because since 1929 the consumption of Indian-made cement has increased to about 762 thousand tons in 1934-35. The consumption has been fostered, inter alia, by the price factor, as referred to above. This price factor as affecting India's demand for cement was emphasised in unequivocal terms

1. Prices supplied by the Cement Marketing Company on a personal interview.
2. Vide Report, Para, 15.

by the Board[1], and it has been strictly borne in mind by the Indian cement factories.[2] Profiting by the investigations of the Board, the startling revelations made and the warnings sounded, the industry has strenuously strived to effect every possible economy alike in production and distribution, and consequently the consumption of cement has been stimulated considerably. The baneful prejudice against Indian cement has now been completely removed and if the imports persist to-day, it is primarily due to transport difficulties in the way of Indian factories, and the insistence on barrel packings in districts with heavy rainfall. In fact the quality of Indian cement as supplied by the Indian Cement Marketing Company is said to be far superior to British cement. The remarkable advance made in the production of rapid hardening cement and the coloured concretes, marks the efficiency of production and the scope for its future growth. The difficulties of transporting cement through wet districts are being increasingly overcome, and the adoption by the Cement Marketing Company of new twill bag with a waxed crepe paper lining, marks a step further in this direction. As regards the transport difficulties, especially to the ports in the South, considerable relief would be afforded if the consignment, travelling over more than one line, gets the telescopic rate on the total distance travelled. The policy of co-operation between the railroads and the industry, and a proper appreciation of the mutual difficulties may be suggested as the proper remedy.

1. It is a mistake to assume that the growth of consumption of cement will not be affected by the price at which cement can be bought. For certain purposes, it is true, cement is indispensable, and will continue to be used almost at any price. But for many other purposes cement enjoys no monopoly, and is in constant competition with other methods of construction and other materials, which already hold the place and must be displaced. A rapid extension of its use can hardly be expected under the prices continuing to be relatively low. This is particularly true of up-country markets like the Punjab where, on account of the distance from the sea, imported cement has always been expensive and consequently little used. A marked rise in the price would probably retard the growth of consumption and as very substantial increase might for the time being stop it altogether. In view of the excess of productive capacity over demand industry needs a rapid expansion and consumption. Report of the T. B. Vide, Para, 20.

2. The cement factories have recently adopted a merger scheme.

SUMMARY OF CONCLUSIONS

(1) The Indian Cement Factories possess great natural advantages; raw materials are in the vicinity of the factories and also the markets to some extent.

(2) In respect of coal supply, which is the primary source of power, the factories are situated at a great distance from the coalfields with the result that the freight on coal is a very large item in the cost of production. So also the remoteness of the factories from the port towns, by far the most important markets, is a serious handicap, because it entails high railway freight.

(3) The freight disadvantage in respect of markets has been eliminated by the centralisation of distribution. Reductions in coal freights have given some relief in power costs too.

(4) Reorganisation of the industry has resulted in efficient production and consequent lower costs; consumption of cement therefore has recorded a marked increase. These progressive elements augur well for the future of the industry.

(5) Railways are quoting special station-to-station and schedule rates, lower than the class rates, to help the development of the industry, but the individualistic proclivities of the railways impose a serious handicap. In other words, if a co-ordinated rate policy was pursued and telescopic rates were quoted on the total distance traversed by a given consignment, irrespective of the number of different railways, the local manufacturers would have no cause to complain.

CHAPTER V

COAL

IMPORTANCE OF COAL TRANSPORT IN INDIA

In India coal has been and is even to-day by far the most important source of power, though gas and electricity are also of late attracting increasing attention. The consumption of electricity and gas is rapidly increasing, but they have not as yet assumed a very serious competitive character so as to impair the importance of coal as a source of power. They generally supplement rather than supplant the consumption of coal. It is, however, not intended to convey that electricity cannot or does not compete with coal as a source of generating mechanical energy. Far from it. In some of the more advanced countries the process of substitution has gone far, so as to dispel any doubt as to the precise province of coal and electricity. What is meant to convey is that notwithstanding the growth in the consumption of electrical energy, coal continues to function as an important source of power.

The most striking peculiarity of the Indian coal industry is that coalfields, unlike those of England, are centred in a part of the country far removed from the industrial areas. The result is that the distance over which coal has to be carried is fairly long and therefore the incidence of railway rates is very important. Since the possibilities of substitution are very limited, the demand for it is inelastic and the railway authorities can successfully add to their receipts from coal traffic by higher rates without any substantial diminution in the traffic carried. But in this event the higher rates would act as a tax and raise the cost of production of the industries consuming coal. Thus, for instance, the Ahmedabad

1. Since the coal traffic passing to Ahmedabad has to pass over more than one railway—from the coal-fields to Howrah there is one line and from Bombay to Ahmedabad there is another railway, taking the sea route—it does not get the benefit of the through calculated on the total distance traversed on the railways, The case is similar even when the total distance is traversed on land alone. Tariff Board, Evidence Vol. II, P. 148-49.

Cotton Mills have to pay heavy transport charge on their coal requirements, due to the longer length of haul. Of course, there are other handicaps as well[1] which help to raise the rates above the normal level, but, distance is by far the most important. The same is the case with other centres like Cawnpore, Agra, Delhi, Amritsar, etc., which have to depend solely on railway transport for the whole lead. It should be noted that when coal is transported from Bengal coal-fields to centres like Amritsar and Lahore, and the traffic has to pass over the E. I. R. and the N. W. R., a through rate calculated on the total distance from the coal-fields to the consuming market is not quoted, even though both the lines are under State ownership and management, because railway authorities do not like to give up their old practice to which they have been accustomed since long. This was admitted by the railway authorities before the Tariff Board in its enquiry on Salt.[1] This is a very sad commentary on the Indian Railway policy. The burden due to this individualistic policy presses heavily upon the movement of internal trade, especially coal, because the internal traffic has frequently to pass over more than one railway system, and on the different gauges over the same railway. This obviously adds to the cost of transport. In what follows, therefore, we shall examine the organisation of the Indian coal industry with special reference to railway transport.

RAILWAY RATES IN THE PRE-WAR PERIOD

(*a*) *Nineteenth Century*

The necessity of charging a lower rate on coal was realised by the Government of India from the commencement of railway development in this country. The Government of India quoted exceptional rates on coal, food grains, salt, etc., and reserved to themselves the authority to regulate these rates, which was exercised from time to time. The prevalent opinion was that the lowest rates should be charged for the necessaries of life, and coal was included in this classification. But the policy of classifying food grains and coal together ignored the fundamentals of railway economics; rates seem to have been fixed arbitrarily. In this system of rate making the capacity of the article to bear the transportation charge seems to have been ignored. Taking the issue

1. Vide, Report of the Indian Tariff Board, Vol. of Evidence.

strictly from the standpoint of railway economics, it cannot be denied that foodstuffs can bear higher transportation costs than coal, though both of them are necessaries of life. The place utility or added value created by the transport of coal is much less than that in the case of food grains.[1] The Government of India, however, soon realised this disparity, and hence in 1891 the rates on coal were fixed on a lower basis.[2] The wagon-load conditions attached to the carriage of coal were very high, and hence small-scale industries were prevented from reaping the benefit of lower rates. Indian industries, especially in the nineteenth century, were only in their adolescence, so far as the factory system is concerned, and therefore they could not afford to purchase their coal requirements ex-colliery in larger wagon-loads, so as to avail themselves of the lowar rates. In actual practice, therefore, the manufacturers generally had to pay substantially higher rates. It seems that the reduced rates and rebates were at the time mainly intended for the benefit of State railways, the object being to reduce the cost of operation of such railways. It may be suggested that if the wagon load conditions were relaxed a little, other industries would have enjoyed similar advantages and their cost of production would have been lowered.

In 1895, the Government of India revised the rate schedule of coal of 1891, and the reduced rates for large quantities were made applicable on lower wagon-loads, so that the load of one wagon too could claim the reduced rates and rebate, like the consignments comprising a number of wagons. The rates were calculated as follows[3] :—

For all distances up to 400 miles—0·18 pie per maund per mile.

For distances above 400 miles—for the first 400 miles—0·15 pie per maund per mile.

For distance in excess of 400 miles—0·10 pie per maund per mile. In addition the rebates formerly allowed were continued.

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1. For a detailed theoretical discussion on this point refer to Chapter. 'Theory of Railway Rates.'
2. Vide, S. C. Ghose—"Monograph on Railway Rates."
3. S. C. Ghose, "Monograph," P. 368.

These rates were intended to be the maximum rates that the railways could charge, the minimum being one-tenth pie per maund per mile which was in force since long. The rates between two points were to be calculated by the shortest route. As the Government could not compel all the railways to accept this schedule, it provided that the through rates on the traffic booked over the railways which did not accept this schedule shall be the sum of the local rates. These lower rates proved highly beneficial to the coal trade, and therefore the traffic increased considerably; the output nearly doubled itself within the next five years. This closes our survey of the coal industry in the nineteenth century.

RATES IN THE TWENTIETH CENTURY

(*b*) *Pre-War*

The twentieth century heralded a new era in the history of the development of Indian coal industry and the output of coal began to multiply. The transport facilities could not keep pace with the rapid growth of the industry and the traffic congestion on the E. I. R., which was the only line serving the coal fields, drew the attention of the Government as well as the business community. It was found that the E. I. R. could not provide adequate facilities for the traffic, which had increased and was promising to increase further. Therefore, the B. N. R. was allowed an independent access to the Jharia coalfields by the construction of their branch line from Midnapur to Jharia. The entrance of the B. N. R. into the Jharia coalfields gave a good stimulus to the Indian coal industry, because the sole monopoly of the E. I. R. was checked and the much needed competition came in. As the demand for coal was increasing, the Government made a further reduction in rates in 1902.[2] The following reduced rates were introduced:—

	Pie per maund per mile.
For all distances up to 75 miles inclusive ...	0·14
Plus—	
From 76 miles to 200 miles	0·12
„ 200 „ „ 450 „	0·10
„ 451 „ „ 1000 „	0·09

1. Vide, Ghose's Monograph, P. 123.

But this reduction too, could not suffice the needs of growing Indian industries, which pressed the Government and the railways for further reduction in rates. Industries situated in centres distant from the coal areas of Bengal, Bihar and Orissa found the high cost of coal a distinct handicap in their cost of production. This was the beginning of the industrial evolution in India, and the Indian industries found it difficult to meet the competition of imported goods. Besides, the export trade in coal had increased considerably, and in the year 1906 the peak of the pre-war period was reached, for the export of coal amounted to a little more than a million tons valued at about 8 lakhs of rupees. The appeals of the Indian industries and trade, were, therefore, sympathetically considered by the Government of India and revised rates for coal were introduced in November 1906. The consignments in full wagon loads were charged on the following basis :—

	Pie per maund per mile.
For all distances up to 75 miles inclusive ...	0·14
Plus for any distance in excess of 75 miles up to 200 miles inclusive	0·12
Plus for any distance in excess of 200 miles up to 500 miles inclusive	0·06
Plus for any distance in excess of 500 miles	0·05

SUBSTANTIAL REDUCTION IN RATES FOR LONG DISTANCE TRAFFIC

Thus, we find that there was a substantial reduction in rates, which benefited both the railways as well as the public. The extent of actual reduction effected can be gauged if we take up the de facto rates to some important centres. The following are the rates charged per ton of coal from the Jharia field to some important places :—

	1901	*1902*	*1907*
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Benares	8 1 0	6 2 0	4 2 0
Cawnpore	11 1 0	8 15 0	5 15 0
Delhi	14 14 0	12 5 0	7 15 0
Lahore	19 5 0	16 9 0	9 13 0
Bombay	21 4 0	21 7 0	11 4 0
Karachi	27 13 0	25 2 0	12 10 0

It will be seen that the reduction in rates was appreciable. The rates to Cawnpore were reduced from Rs. 11-1-0 in 1901 to Rs. 5-15-0 in 1907; for Karachi Bombay and Lahore the reduction was 50,48 and 41 per cent. The railways profited both as the consumers and carriers of coal. The quantity of coal used on railways increased by about 40 per cent., within three years after 1905.[1] Besides, the traffic gave a prompt response to every successive reduction in rates, thereby augmenting the net earnings of the railways.

Though transport costs play a more prominent part in the coal industry, by themselves they do not reveal the true nature of the industry, because there are other factors no less important which affect the cost of production. Efficient production measures the true strength of the industry. It may be noted that the colliery owners exploited to the full the advantages of reduced rates offered to them. As shrewd and alert business men, they improved in the meantime their methods of raising coal and reduced their pithead costs. Fortunately, the economic conditions of the country were also favourable to the advancement of the coal industry. As the demand for coal, both for internal consumption and for export, was rising, the colliery owners, being assured of the market for their output, increased their production and made huge profits. We have already noted that the peak of export of coal was reached in 1906 ; this was so because the f. o. r. prices of coal were gradually falling and also the railway freight.

RISE IN PRICES RESTRICTED THE DEMAND FOR COAL

The prices of coal which fell gradually from Rs. 4-0-0 per ton in 1899, to Rs. 3-8-0 in 1905 record a sudden and substantial rise in 1906 from Rs. 3-8-0 to Rs. 4-10-0, a rise of about 30 per cent. This rise in prices, recorded in the year 1906, increased further in the following year, and in the year 1909 the average price was Rs. 6-12-0, nearly double of that in the year 1905. The growth in the coal industry, which was fostered by low prices, was checked by this rise. Indian industries suffered from the scarcity of coal, and foreign markets, in which India was one of the several suppliers of coal, were lost. Markets in the Far East and Ceylon took to Australian and Natal coal. In order to appreciate the extent of rise in prices at

1. Vide, Ghose, "Monograph," P. 356-57.

the consuming centres it is of interest to note that Bengal coal, which was available in Bombay at prices varying from Rs. 10-0-0 to Rs. 12-4-0 per ton in 1905, was being sold in Bombay at Rs. 17-0-0 per ton in 1908. The Cotton Mills of Ahmedabad, which had been taking Bengal coal, were found to resort to wood fuel for power, due to this rapid rise in prices. Industries in the up-country centres like Cawnpore, Amritsar, etc., suffered seriously and curtailed their requirements.

LOSS OF CONFIDENCE IN THE BENGAL COAL

During this abnormal period, under the stimulus of high prices, several small colliery owners, doubtful of their safety on the return to normal conditions, tried to make most of the opportunity. Being anxious to make as much profit as possible, they unscrupulously failed to supply the right quality of coal. This attitude of the Bengal colliery owners, conscious or unconscious, placed great obstacles in the way of the future development of the industry, because the consumers of coal, both home and foreign, lost confidence, and Bengal coal got a stigma which it has taken long to remove; and in spite of the ceaseless efforts of the colliery owners as well as the Government, even to this day the former confidence has not been restored. No doubt, the blame of this suicidal measure cannot be thrown upon the respectable miners, but in the long run the interests of the country have been jeopardised. It is since this time that foreign rivals obtained an upper hand over the Indian miners, in markets external as well as internal. Further, whereas Bengal coal was sold at Rs. 17 per ton in Bombay in 1908, the English coal was selling at Rs. 12-8-0 to Rs. 18-6-0 per ton. Naturally the consumers turned to foreign coal. The average imports of foreign coal which amounted to about 2 lakhs of tons valued at Rs. 38 lakhs between 1901-1905, increased to about 34 lakhs of tons valued at Rs. 62 lakhs between 1906 and 1910. It is the quality as well as the prices of Bengal coal prevalent then which account for the substitution of foreign coal for Bengal coal.

From 1910 production as well as consumption recorded a marked increase. Production increased from 120 lakhs of tons in 1910 to 165 in 1914, while consumption increased from 118 to 163 during the same period, as the figures of consumption indicate. The import trade in coal has been more fluctuating, as also the

export, but the change has been to the disadvantage of the Indian industry. The imports of foreign coal which were 3·2 lakhs of tons in 1910 doubled themselves in 1913, whereas our exports of coal dwindled from 9·9 lakhs of tons in 1909 to 7·6 lakhs of tons in 1913. This was a very serious feature of the coal industry. The imports of coal were shared by South Africa, Japan Australia and the United Kingdom, but the most noteworthy fact was that African coal acquired a strong hold in the Indian market, its imports having increased from about 18 thousand tons in 1910 to about 246 thousand tons in 1913, due primarily to rebates on the export coal granted by the African Government, which we shall discuss in detail later. The imports of the bounty-fed African coal later assumed a far more serious character and became a menace to the Indian industry. Further, the fall in the export trade from about 10 lakhs of tons in 1910 to about 6 lakhs of tons in 1914, and the consequent loss of foreign markets placed a very formidable obstacle in the growth of our coal industry. Indian collieries found it difficult to regain their hold on these markets. The increase in the demand of coal in the home market was of course met primarily by internal production, but the loss of foreign markets was detrimental to the interests of the coal industry. This weakness, however, was not seriously felt, because of the increasing demand for coal in the internal markets. "An increase in the absorptive capacity of the Indian market, however, fully compensated for the decline in exports and the increase in imports". With the progress of industrialisation in India the demand for coal was increasing rapidly, because the alternative sources of power were limited. The use of electricity for industrial purposes was almost unknown. Foreign competition, therefore, caused no serious injury for the time being. The average prices of Bengal coal f. o. r. at mines had risen to Rs. 6-8-0 in 1913, and Rs. 7-5-0 in 1914. But the adverse effects of the loss of foreign markets, in long run, cannot be denied.

With the outbreak of the Great War conditions became abnormal. Communications between the countries were cut off resulting in the dislocation of trade and commerce. In the belligerent countries national resources were pooled together and directed towards the military operations; India had also to share the burden. The prosecution of the war meant considerable strain on transport facilities, both internal and external. The insufficiency and insecurity of ocean transport hindered her import and export

trade, and the inadequacy of railroad facilities restricted her internal trade. This insufficiency of railroad transport for commercial purposes was due to the concentration of the major portion of the plant for military requirements.

Notwithstanding the general shortage of railway facilities, the Indian coal industry, due to protective influence exerted by the war, recorded a steady growth; both production and consumption increased during the period.

The figures of production show a steady rise, a production of 226 lakhs of tons having been recorded in 1919. The sudden fall in the output is still more significant, and helps to bring out the beneficial effects of the War on the coal industry. The production which had steadily risen during the war received a setback immediately after the cessation of hostilities. If the railway transport facilities had been adequate, the production of coal would have perhaps increased still more. The decline in imports was due to the shortage of shipping facilities. The case of exports is similar to that of imports. The figures of consumption bear an eloquent testimony to the beneficial effects of War upon the coal industry. Consumption shows a steady but remarkable increase during the War and a sharp decline thereafter.

The gradual expansion of the coal industry was interrupted for the first time in 1920, when production recorded a fall of about 20 per cent over the record of the previous year. There is no gainsaying, therefore, that the war accelerated the production of coal in India. The War, in fact, gave the long cherished protection and stimulus to Indian industries, which the Government of India had been too reluctant to accede. Under the stress of war and pressing military requirments, several new industries were set on foot, and the old ones were given adequate help by the Munitions Board. The Munitons Board admirably carried out the task entrusted to it and demonstrated India's potentialities for Industrial production.

The imports of coal, due primarily to freight difficulties received a sudden check and fell from 190 thousand tons in 1915 to 34 thousand tons in 1916, and it is only once between 1916 and 1920 that the imports increased over 50 thousand tons. With the elimination of foreign competition in the entire industrial field, and not merely in the coal trade, the scope for expansion

increased. There was an extensive and growing demand for coal in India during these years at first for munitions, and later for the new industries, which endeavoured to establish themselves during the boom period, and prices moved steadily upwards. The rising demand for coal was met by increased home production. Let us now revert to the position of railway facilities.

ENHANCEMENT IN RATES

The Government of India being called upon to finance the Eastern theatres of war, the finances of the country were heavily strained, and the inflation of currency, which was its inevitable concomitant, brought about a rapid rise in prices. Thus, the rise of prices and the marshalling of railway facilities for military requirements necessitated a general enhancement in railway rates and fares and no exception could be made in the case of coal traffic. In 1916 we find an enhancement in rates for coal, so that the rate from Jharia coalfields to Bombay, which was Rs. 11-4-0, was increased to Rs. 12-2-0.[1] In a similar way other rates were also increased. So also, with effect from 1st of October 1916 the rebates on the shipments for Indian ports excluding Burma were abolished. In 1917 all first class coal was requisitioned and controlled by the Government and prices were fixed by the Controller. This action was taken because of rising prices and frequent adulteration in coal which affected its quality. The demand for coal on Government account and for industries was increasing, which called for a steady supply of first class coal. This control re-acted on the suply of second grade coal also, and its prices began to soar high, because better grade coal was not available in the open market. Due to scarcity of coal and the consequent substitution of lower grade coal for superior, the supply of second grade coal was also controlled in 1918, but this was soon given up. Control on first class coal continued and was removed in March 1920.

GROWTH IN TONNAGE AND EARNINGS

These enhancements in rates could not check the rising tide of Indian coal traffic due to growing demand and we are not surprised to note an increase in the shipment as well as production of coal. In fact, the increase in the production of coal after these

1. Ghose, "Monograph", pp. 373-74.

enhancements in rates were more rapid so that in the three years following, production soared high, being nearly 21 million tons in 1918 and 22½ million tons in 1919.[1]

As the figures show, both the tonnage and the earnings therefrom have increased; the increase in the total tonnage in 1918–19 over the year 1913–14 was about 53 per cent., whereas the increase in earnings over the same period was about 60 per cent. We also note that after the increase in rates in 1916, the traffic received a setback, and the rise in tonnage which had been gradual and steady right from the year 1913–14, was interrupted and fell from about 224 lakhs of tons in 1916–17 to about 218 lakhs of tons in 1917–18. But the earnings recorded a rise from about 800 lakhs in 1916–17 to about 827 lakhs in 1917–18. Thus we find that the railways got higher earnings with lower tonnage. This was prejudicial to the interests of the industry. But the difficulties of the industry did not end here, and in the year 1919–20, after the cessation of the war, we find both the tonnage and earnings falling considerably. The production dropped to 18 million tons in 1920. This was, however, a post-war year and hence several other factors which crept in after the cessation of the hostilities have to be given due consideration, which we shall discuss later.

INADEQUATE RAILWAY FACILITIES RESTRICT GROWTH

During the War, the Indian coal industry, due to intensive and growing home demand and the absence of foreign competition, developed appreciably. The expansion of the industry, in spite of the high rates, was great, and to-day we take the production of 1919 as a record one. But in spite of this increase in

1. Coal traffic on India railways during the war was as follows:—

Year	*Total Tonnage* (lakhs of tons)	*Earnings* (lakhs of Rs.)
1913–14	171·1	497·8
1914–15	184·7	564·5
1915–16	190·6	630·9
1916–17	223·9	799·6
1917–18	218·2	827·4
1918–19	232·5	880·4
1919–20	214·0	790·8

Compiled from the Reports of the Railway Board, Vol. II.

production and consumption of coal, we find that some industries were starved of their coal requirements and had to curtail their activities. Even with the higher rates, railways failed to provide adequate facilities for the transport of coal. Lack of transport facilities curtailed the raising of coal. The Coalfields' Committee has collected very valuable evidence which proves beyond doubt that the railways failed to provide adequate transport facilities even at the higher rates. The Committee remark: "The want of a steady and sufficient supply of suitable railway wagons is most important. It is generally admitted that not only the number of wagons available, but also the facilities for moving them have been inadequate. No improvement can be effected in the industry until this outstanding defect of inadequate transport is radically and permanently rectified. The lack of transport is itself a direct cause of waste."[1] The Acworth Committee recorded similar finding. "There is a rapidly increasing demand for Indian coal, and output could keep pace with it, but is blocked by the limitation of the railway capacity."[2] Thus the development of coal industry was restricted by the absence of adequate transport facilities.

RAILWAY RECEIPTS FROM COAL TRAFFIC ANALYSED

The development of the Indian coal industry, notwithstanding the inadequacy of transport facilities, proved beneficial alike to the carriers, the producers and the consumers. The earnings of all the railways from coal traffic, increased, as will be evident from the following table :—

Earnings on Coal Traffic[3]

(in lakhs of Rs.)

Year	*B.N.R.*	*E.I.R.*	*G.I.P.R.*
1914-15	94·5	334·5	42·7
1915-16	105·4	334·4	76·5
1916-17	120·8	408·3	110·1
1917-18	125·2	387·9	97·3
1918-19	119·7	437·1	112·2
1919-20	121·1	408·8	99·7

1. Coalfields' Committee Report, Para. 74.
2. Mr. Church, Mining Engineer to Railway Board, Acworth Report, p. 7.
3. Compiled from the Reports of Railway Board, Vol. II, 1913-14 to 1920-21.

We cannot, however, fail to note that war had offered an unique opportunity to the Indian coal industry, which could not be fully utilised due primarily to lack of transport facilities, because the heavy strain of military transport, so much so that by the end of the war the Indian railway system stood thoroughly paralysed. Repairs and renewals had been postponed indefinitely. " There is a large demand for Indian coal for export, but in the absence of adequate transport facilities for meeting it, India is missing an exceptional opportunity of establishing itself in the foreign markets, where its coal is in great demand. If adequate railway facilities are provided the production of coal could be increased."[1] Inadequate railway facilities restricted output. In 1918 and 1919 mines raised far more coal than the railway could transport and led to rapid accumulation of stocks in the collieries.[2]

THE POST-WAR POSITION OF THE COAL INDUSTRY

The treaty of Versailles heralded a new era in the industrial history of the world. The abnormal conditions having been removed, the field was prepared for reorganisation and reconstruction. The re-habilitation of the country after the ravages which war had wrought was the watch-word of the day. While the belligerent countries were thus engaged in their task, the neutral countries tried to increase their commercial activities. This meant increased demand for goods and services. Huge debts were incurred for reconstruction of trade and industries. India's task was no less difficult.

Railway facilities in India had fallen short of the requirements long before the close of the war, and, as we have noted above, large quantities of coal accumulated at the collieries, especially during the years 1918 and 1919. After the cessation of hostilities, it was incumbent upon the Government of India to take up immediately the rehabilitation of the railway plant so as to supply the growing transport requirements of trade and industries. But the Government of India failed to make any immediate provision and took actions which marred the future of the country. Instead of helping the industries, which had been set up during the war, due primarily to the necessities and circumstances created by the war, it either withdrew the former help or did not give additional help

1. Sir C. Innes: Acworth Committee Report, P. 7.
2. Tariff Board, Para. 11.

which the post-war conditions called for. Natural protection which was afforded to Indian industries by the elimination of foreign competition ceased after the cessation of hostilities. Under the adverse post-war conditions and step-motherly treatment of the state, the infant but essential industries which war had fostered soon gave way before their foreign rivals. This vitally affected the interests of the coal industry, which we shall have occasion to discuss later.

THE CONDITION OF COAL INDUSTRY EXAMINED

In 1919, Mr. Treharne Rees, a Mining Engineer was engaged by the Government of India to investigate and report on the conditions of coal mining industry with a view to increase the efficiency of the industry. He visited the coalfields of Raniganj and Jharia and in August of that year submitted his report on the best means of securing greater economy in the production and consumption of coal. Thereupon the Government of India appointed a Coalfields' Committee in January 1920, under a resolution which indicated that the Government of India had for some time under consideration the question of devising means of reducing the large avoidable waste of coal known to occur at the Raniganj and Jharia coalfields. This was due mainly to difficult methods of extraction, resulting in the total loss of a large amount of coal, to inefficiency in the generation and use of power, and to extravagant methods of coke making.[1] The Majority Report advocated the necessity of State control to exercise a controlling authority with powers designed to ensure conservation and economic extraction. The Committee stated, inter alia, that a steady and sufficient supply of wagons, with the requisite facilities for moving them is the most urgent need of the industry.[2] Thus, adequate provision of Railway facilities for the transport of coal was found to be the primary need of the industry.

ENHANCEMENTS IN RAILWAY RATES

The prices of coal had soared high. The average price f. o. r. at the mines, of the best quality of Bengal coal (Dishavgarh) was Rs. 8-12-10 per ton for 1920 compared with Rs. 5-1-4 per ton in

1 From the resolution quoted by the Geological Survey of India, Vol. LVII, p. 97.

2. Coalfields Committee

1916. In view of the rising prices working costs of the railways had risen, and hence the Government of India thought of enhancing the railway rates. This seemingly prompt action on the part of the Government was due to the pressure of the railway companies. The railways contented that in the post-war schemes of rehabilitation, and especially in view of the reorganisation of railway equipment, the raising of the rates for the carriage of coal is one of the most important issues. The existing rates were fixed some 15 years ago, when the working expenses were very much lower than they are now. They were barely remunerative and at the present time do not cover cost of carriage. Moreover, the absence of shipping in the first instance and later the high cost of sea freights has forced nearly the whole of the trans-Indian coal to rail, with the result that nearly half the broad-gauge goods stock of the country is locked up in this traffic. The existing rates, therefore, amount to a tax on the public for the benefit of one section of the trading community, and an enhancement of the rates to a figure, which will give a fair return for the services rendered, seems inevitable. This, in short, was the line of argument adopted by the railway companies in advocating an enhancement in coal rates. It is clear that the railway companies wanted to raise their earnings, not by developing the traffic, but, by restricting it. In fact, as adverted to above, the receipts of the railway companies had already risen considerably during the war and would have risen still more if the railways had provided adequate facilities. But instead of endeavouring to increase their plant, the railway companies, in their usual short-sighted policy, thought it advantageous to enhance the rates as a preliminary to future reorganisation.

The Government of India yielded to the wishes of the railway companies. The Railway Board in their Communique stated, "It is unanimously agreed amongst railway companies that the existing rates for coal from Bengal coalfields are distinctly low and can bear enhancement, and they accordingly propose to increase the freight charges for this commodity by approximately 5 per cent. for long distances varying to 7½ per cent. for short load traffic"[1]. The Communique clearly shows the pressure which was brought to bear upon the Government. But the attitude of the Government

1. Railway Board Letter No. 345/T/16 dated Simla, the 12th of November 1919.

towards this most important issue is indeed surprising and unfortunate for the industry. Instead of the meek and submissive attitude, as portrayed in their aforesaid communique, the Government of India, in the interest of the national industry and the general consumers, should have made the increase in rates conditional on the provision of adequate transport facilities. This would have been convenient to all the parties. Given better transport facilities the traders would not have grudged the proposed enhancement in rates. But, that was not to be. The rates were raised from the first, April 1920, as summarised below :—

Present and proposed rates

Present Scale	*Pie per maund per mile*	*Proposed Scale*	*Pie per maund per mile*
Up to 75 miles ...	0·14	Up to 100 miles ...	0·15
Plus from 76 miles to 200 miles ...	0·12	Plus from 101 miles to 700 miles ...	0·125
Plus from 201 miles to 500 miles ...	0·06	Plus from 201 miles to 700 miles ...	0·06
Plus from 501 miles upwards ...	0·05	Plus from 701 miles upwards ...	0·05

The incidence of the increase in rate on the movement of traffic will be better understood when the actual rates are worked out on the aforesaid basis. An attempt is made to portray the precise nature of charges introduced by taking up a few concrete instances as given below :—

Rates per maund from Jharia

Mileage	*Station to*	*Old rate* Rs. a. p.	*New rate* Rs. a. p.
469	Cawnpore	6 1 0	6 6 0
739	Delhi	7 15 0	8 6 0
978	Amritsar	9 10 0	10 3 0
1011	Lahore	9 15 0	10 8 0
1407	Karachi City	13 5 0	13 14 0
173	Howrah	3 4 0	3 8 0
164	Titaghur	3 2 0	3 6 0

It will be seen from the foregoing table that the distant consuming markets had to bear a higher incidence. Thus, whereas markets like Howrah and Titaghur had to pay an increase of only 4 as. per

maund, Delhi, Amrirsar and Lahore, etc. had to pay 9 as. per maund. The burden of the increased rates is better realised when it is remembered that these markets usually have to pay substantially high rates, due to their location, distant from the coalfields. In fact, as can be seen from the foregoing statement, the industries at Amritsar and Lahore have to pay the railway freight, treble of that paid by those in Calcutta. The capacity to bear the transport charge of an article like coal, as discussed elsewhere, is strictly limited. Doubtless, in the absence of a suitable substitute for coal in India, especially in the up-country centres, railways can successfully levy a tax upon the industries; but this is detrimental to the interests of the country.

Not being content with the increase in rates introduced in April, 1920, the railway companies pressed for still higher rates. It should not, however, be understood that the Government willingly and readily granted these enhancements. A communique issued after the increase in rates, referred to in the preceding paragraph, states: 'The Government of India are most reluctant now that the war is over to embark upon further schemes involving restrictions on trade, but they are aware that the general trade of the country is being gravely hampered by the difficulty of moving produce and that many of the industries of India, especially the small industries, have suffered severely from the difficulty of obtaining coal'.[1] But the Government is to be blamed for yielding to the dictations of the railway companies, even though apparently against their will, because the rates were increased a second time in 1921. "After a careful consideration," runs the letter of the Railway Board, "the Government of India have approved of the introduction of the following revised scale for the carriage of public coal with effect from the 1st April 1921:

Miles		*Pie per maund per mile*
For the first 200 miles	...	0·15
Plus for 201 to 300 miles	...	0·13
Plus for 301 to 700 ,,	...	0·07
Plus for 701 miles and beyond	...	0·06 ,,

1. The Government of India Press Communique, dated, Simla, the 9th, July, 1920.

INADEQUATE RAILWAY FACILITIES

Even with these enhanced rates the railways could not meet the requirements of the trade and the complaints from traders increased. In fact, the development of the industry was throttled for want of adequate railway facilities. This fact was admitted on all hands. Mr. Peat says, "Because of the lack of railway facilities for the carriage of coal seven large Jute Mills, employing 40,000 workers had completely stopped on the 14th January 1921."[1]

This inadequacy of railway facilities affected other industries no less. The entire industrial system of India was starved. This was admitted by Mr. Hindley, the Agent of the E. I. R., before the Acworth Committee. He said, "It is impossible to estimate the loss to trade which would be brought about by the delay in providing essential facilities, and the persistent failure to keep the capacity of the lines up to the demands for transportation. The position is already so bad that at times the railway has to restrict and even to entirely close down the acceptance of goods traffic. Only one-half of the demand for wagons for merchandise could be met. For the past 26 years there has always been an inability to provide transportation to the extent demanded, and the position is getting worse day by day. At times, when the demands for coal reach their maximum, the capacity available for ordinary goods is considerably less than required; large quantities of merchandise offered for transportation have frequently to be refused. Improved facilities are necessary, not only on the E.I.R., but especially on the adjoining lines and junctions."[2]

Working under these difficulties it is but natural that the expansion of the coal industry should receive a setback. "For the first time since the year 1882 the expansion in the coal mining industry has been interrupted, the record production of 22·6 million tons in 1919 falling by over 20 per cent. to 17·9 million tons in 1920."[3] This reduced production was due to the shortage of railway wagons for loading. Large stocks of coal had accumulated at the collieries in 1918 and 1919 due to lack of wagon supply, and the loss which the colliery owners had incurred thereby was a

1. Mr. Peat, Chairman, Indian Jute Mill Association,—Acworth Committee Report, Chapter, I, p. 10.
2. Report of Acworth Committee, Ch. II, p. 8.
3. Records of Geological Survey of India, Vol. LVII, p. 26.

sufficient warning to them to reduce their output. With the cessation of the war, it is said, at a time when the various collieries were in a condition to meet increased demands, there were all the potentialities of a slump. This slump in coal trade, which paralysed the industry, was brought about by shortage of wagon supply and the malady was aggravated for want of proper diagnosis. The Tariff Board says, "In 1919 and 1920, the E. I. and B. N. Railways despatched only 30 million tons of coal though 37 million of tons had been raised in Bengal Bihar and Orissa in these two years".[1] Not only could the depression be averted but even the pace of development could be maintained, if the State had followed the right industrial policy. With adequate protection to industries, old as well as new, which were started during the war, and efficient and adequate wagon supply, both internal and external markets for coal could be maintained. The post-war fall in prices would have been neutralised by efficient working of the mines and elimination of waste.

AN EMBARGO ON COAL TO RELIEVE RAILWAYS

The Government of India, however, thought otherwise. Instead of providing for the deficiency in railway facilities, which had restricted the output of coal and caused scarcity in the internal markets, the Government of India placed an embargo on the export of coal. This was a policy suicidal to the interests of the coal industry, which lost a most opportune time for expansion. At this time the demand for coal, both at home and abroad, was rising and the collieries were in a condition to meet this demand if only a prompt and adequate wagon supply was forthcoming. In fact the exports of Indian coal had risen from 75,000 tons in 1918 to 1,200,000 tons in 1920, when export restrictions were imposed to relieve the strain on the railways.[2] This rise in export was a happy augury for the future development of the industry but was nipped in the bud by the restrictions on the export trade. The embargo lost us our foreign markets, which we have not been able to recover as yet.[3]

1. Tariff Board, Para. 11.
2. Records of Geological Survey of India, LXV, p. 63.
3. The Indian coal export trade was cut off at a moment when it reached its highest point, and it is the effect of this severe plight which is still writ large on the present depressed state of the trade.
See Minute of Dissent, Report of the Indian Coal Committee, P. 138.

Thus, it is the shortage of wagon supply rather than of stocks which was the root cause of the ban on coal trade and its consequent decline.

The Majority Report of the Indian Coal Committee of 1925 referring to the embargo on the export trade says, "The rapid expansion in the demand for coal after the war resulted in a very heavy strain on the capacity of the railways in 1919 and 1920. So large a proportion of the wagon supply of the country was taken up by coal traffic that trade in general was greatly hampered and many, especially the smaller industries of India were suffering severely from the difficulty of obtaining coal."[1] It is obvious that as a large proportion of wagons was being taken up by the coal trade to the detriment of general commercial interests, and that even with this supply the total requirements of coal trade were not met, it was all the more necessary for the Government to increase the wagon supply and afford thereby an adequate accommodation. Transport facilites ought to have kept pace with the growing needs of trade and industries. But this was not to be. The Coal trade was denied all justice.

PROGRESS FROM 1920 TO 1925

We have referred at length to the embargo on the export trade, because it is a key to the subsequent post-war developments in the Indian coal industry. The following statement summarises the development of the industry till 1925 when the Coal Committee submitted its report :—

Supply of Coal in India[2]

(in lakhs of tons.)

Year	*Production of Indian coal.*	*Exports of Indian coal.*	*Available supply of foreign coal.*	*Total available supply.*
1920	180	1·2	·39	168
1921	193	2·7	10·9	201
1922	190	·77	11·5	201
1923	196	1·4	5·8	201
1924	212	2·0	3·98	214
1925	209	2·2	4·3	211

1. Indian Coal Committee, p. 7.
2. Compiled from the Supplement to the Indian Trade Journal, 1929, p. 27.

Coal mining shows signs of recovery, as the foregoing table brings out. But the recovery has been very slow and unsteady, so that the output of even 1925 lagged behind that reached in 1919. It failed to recover in full the lost ground. This has been attributed to several causes : reduction of the post-war demand in the earlier part of the period ; unremunerative selling prices ; an acute shortage of railway wagons for loading ; inadequacy of the labour supply and decreased output per person ; the prolonged strike on the the E. I. Railway during 1922 ; floods caused on the Jharia coal-fields by an exceptionally heavy monsoon in 1922 ; fires caused by the spontaneous combustion, necessitating the closing of mines towards the end of the period ; and the importation of foreign coal in increasing quantities[1]. The cumulative effects of these adverse circumstances coupled with the world-wide depression in trade explain the reduction of the coal output.

Export figures tell a very sad tale. In view of the crisis in the coal trade, the Government of India in July 1920 stopped the export of Indian coal, except under license. A little later the preference given to bunker coal was also taken away. In April 1922, all restrictions on the export of cargo or bunker coal by sea to ports in India was removed, but sending coal as cargo out of British India was still prohibited. The embargo was entirely removed from January 1st, 1923. The effects of embargo were immediate and the exports were checked and dwindled to an insignificance, amounting to 77 thousand tons in 1922. The export markets in the absence of Indian coal took their coal requirements from other countries. The Indian Coal Committee admitted that the quality and price of the supplies obtained by these markets from other sources, and especially from Africa, after the embargo was imposed, proved so satisfactory that the pre-war relationships has been reversed, and established business relationships are an obstacle to the re-introduction of Indian coal even in a market like Colombo, where it once held a commanding position[2]. It is no wonder then if Indian exports have been unable to regain their former position ; the two most important markets, Ceylon and the Straits Settlements were lost. After the removal of the embargo,

1. Records of the Geological Survey of India, Vol. LVII, p. 26.
2. Report of the Indian Coal Committee, p. 9.

however, the export trade has recovered to some extent. The export figures of 1925 show a decided increase, but they are far below the pre-war average. It has been rightly remarked that "Indian coal miners can adequately supply the home market and keep up a flourishing export trade. There can be no doubt that a healthy export trade may be a sure indication of satisfactory internal conditions, betokening alike the existence of efficient transport system, and the satisfaction of the demand of the consumer first. It is to be hoped that the removal of the restriction on the export of coal, the grant of railway rebates, and the opening up of new fields in India, will help this country to recover the position she formerly held in these important outside markets, during the near future[1]."

The imports of foreign coal which had dwindled to insignificance during the war, from nearly 645 thousand tons in 1913 to 40 thousand tons in 1920, rose to more than a million tons in 1922. This is a sad commentary on the Government policy. To have prohibited export and at the same time to have arranged for the coal supplies from the foreign market was a double wrong on the Indian coal trade[2]. The coal industry lost its hold on foreign markets, and the embargo fostered the penetration of foreign rivals in her internal markets, which it is now finding difficult to oust out. In port towns like Bombay, imports of foreign coal have re-placed Bengal coal. The action which was taken as an administrative expediency, because the provision of increased railway facilities, as an alternative to embargo, would have been comparatively difficult, and not a deliberate move to hinder the progress of an indigenous industry, has wrought damages difficult to repair. Thus, the embargo, transport difficulties in form of scarcity of wagons and high rates, the rise in pit-head prices, and the quality of Indian coal, all conspired to encourage foreign imports.

Under the stress of the shortage of wagons, the rise of prices and consequent rise in the cost of operation of the railways, the Government of India had effected an all-round general increase of railway freight in 1922, which was continued till 1926. The

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1. J. C. Brown, Records of Geological Survey of India, Vol. LVII, p. 29.
2. Vide, Minute of Dissent, Indian Coal Committee, p. 138.

rates prevailing during the period 1922-26 were generally high, as will be seen from the following statement :—

Comparative statement of Railway Freights

Rates per ton from Jharia Coal Fields

To	*Pre-war* (in 1907)	*Post-war* (in 1922-26)
	Rs. a. p.	Rs. a. p.
Cawnpore ...	5 15 0	8 1 0
Delhi ...	7 15 0	10 10 0
Lahore ...	9 13 0	13 2 0
Bombay ...	11 4 0	14 14 0
Karachi ..	12 10 0	16 15 0

High railway freight, coupled with the scarcity and irregularity of wagon supply and higher raising costs of coal, restricted the consumption of Indian coal and helped the imports of foreign coal. The average pit-head value of Bengal, Bihar and Orissa coal had risen from Rs. 4-5-0 to Rs. 7-10-0 in 1922 and Rs. 7-1-0 in 1924[1]. The total consumption of coal—local as well as imports—has been rising gradually, but the progress lagged far behind reasonable expectations. Several causes have operated to restrict this growth, of which the railway problem is very important. By 1924, the production of Indian collieries had risen to nearly 212 lakhs of tons, but could not be disposed of, due to causes already mentioned. Thus, by 1924, the Indian coal mining industry manifested the signs of over-production a formidable menace to its future. Indian railways, on the one hand, had increased their freight considerably, and on the other, they failed to supply sufficient wagons of the right kind.

THE ANALYSIS OF RAILWAY TRAFFIC AND RECEIPTS

During the period under review the traffic in coal, coke, and patent fuel carried and the earnings therefrom were as follows :—

(Both tonnage and earnings in laks)

Year	*B.N. R.*		*E. I. R.*		*Total on all Rlys.*	
	Tonnage. tons	Earnings. Rs.	Tonnage. tons	Earnings. Rs.	Tonnage. tons	Earnings. Rs.
1920-21	37·7	127·3	111·7	447·7	218·6	821·4
1921-22	35·9	126·5	89·6	377·2	187·9	730·0
1922-23	38·5	140·0	102·6	471·5	203·7	853·0
1923-24*	38·6	125·0	106·1	480·4	198·5	822·3
1924-25*	44·1	125·0	120·8	554·4	228·5	916·5

* Figures after 1923-24 are of traffic carried on Class I Railways only.

1. Geological Survey of India, Vol. LXIV, p. 35.

As the figures show, both tonnage and earnings received a setback in 1921-22, but soon rose in 1922-23. Thereafter, there has been a steady rise. Because of the rise both in tonnage and earnings, after the general enhancement in rates, the railways grudged to accede to any reduction in rates on the plea that the rates in force were such as the traffic could bear. But the position taken by the railways had very little justification as the subsequent events proved. Whenever any plea for reduction of coal rates was made out it was vehemently opposed ; but every reduction justified itself. The increased coal traffic was due to rising internal demand for coal.

THE INDIAN COAL COMMITTEE

Under these circumstances, an expert Committee, known as the Indian Coal Committee, was appointed in September 1924, "to enquire and report (i) generally what measure can be taken by Government, by the coal trade, by the railways and by the ports, whether singly or in combination, to stimulate the export of suitable coal from Calcutta to Indian and foreign ports, and (ii) in particular, whether effective measures can be taken for the pooling and grading of Indian coal for export and for bunkering and how the costs of such measures should be met."

From the terms of reference of the Committee it is clear that the Government of India having realised the gravity of the conditions of export trade was anxious to remedy it. Accordingly, the Indian Coal Committee made a full investigation into the whole subject of export trade and issued their report in March 1925. Later in September 1925, the Government of India referred to the Tariff Board for investigation the question whether a protective duty should be imposed on imported coal generally or coal imported from any particular country or countries. and, if so, at what rates. The recommendations of these two bodies had far-reaching effects on the coal trade. But it is clear from the references of both the enquiries that the Government of India, being pre-occupied with the dangerous condition of the export trade, neglected the demands of internal markets. As the statistics of the internal trade were discontinued, we are unable to gauge accurately the internal movements of coal, but the growing complaints of Indian traders and industrialists against excessive railway rates and inadequate supply of wagons bear an eloquent testimony to the unhealthy

state of affair. Needless to say that improvements in this branch of our trade were equally necessary.

The most striking feature of the coal industry by the end of 1924 was the excess of available supply of coal as compared with the demand, both internal as well as external. It will be recalled that some very important foreign markets were lost while the embargo was operating which could not be recaptured. Therefore, even though the actual output was much below the figure of 1919, the available supply could not be disposed of, and the surplus stocks began to accumulate. Higher railway rates on the internal traffic intensified this tendency.

This over-production, either actual or potential, led to severe depression in the coal industry, by the beginning of 1926, with heavy falls in the prices of coal and the closure of many mines.[1] After a full investigation it was found that the quality and prices of Indian coal were at the root cause of this situation. The demand for Indian coal did not show proper response because both quality and prices acted against it. If proper precautions were taken and improvements effected, demand, both external and internal, was sure to rise. The problem before the industry, therefore, was one of price and quality.

THE INDIAN COAL GRADING BOARD

As for the improvement in quality, the Indian Coal Committee recommended that a Grading Board should immediately be established, which would grade collieries, which produce coal for export and arrange for the issue of certificates for each consignment of coal exported. The Committee indicated the general outlines on which all Indian coals were to be classified, and it was suggested that a grading list should be published by the Grading Board, as soon as possible, classifying the different collieries and seams on this system. Those collieries included in the grading list were to be eligible for the special concessions from the railways and from the Calcutta Port Commissioners but only on certified coal. The Coal Grading Board was, accordingly appointed in March 1926.

The Grading Board has rendered useful service to the collieries and the consumers alike, for whereas the former have been able to increase their sales, the latter are assured of a better and more

1. Records of the Geological Survey of India, 1925, p. 249.

uniform quality. In September 1929, the Board addressed the various Chambers of Commerce inviting them to express their views on the work performed by it during the past three years. The replies received bear an eloquent testimony to the achievements of the Board.[1] The Board has done much to ensure confidence in the shipments of Indian coal. The recovery of the reputation of Indian coal, says Mr. Bray, has been a lengthy process, but there can be no doubt that the supervision and the certification of the cargoes by the Indian Coal Grading Board have been of the greatest assistance to the industry, and the system, which now seems to be very firmly established, has proved to be acceptable both to the buyers and the consumers.

The price disability of Indian coal was also properly attended to and efforts in the right direction were made. Higher prices of Indian coal were due to inefficient production and the lack of adequate and cheap transport facilities. Immediate and simultaneous improvements in both the directions was necessary, with the close co-operation of colliery owners, railway authorities and the Government. Raising costs could be reduced by the increased use of mechanical appliances for coal cutting accompanied by improved railway facilities, adequate enough to handle the increased output and to avoid stocking and pilferage.

Before discussing railway rates on coal it would be fruitful to analyse the problem before the industry in greater detail. This problem presents peculiar difficulties to the colliery-owners, railways and the consumers alike. Railways are confronted with peculiar difficulties due to the wide seasonal fluctuations in the wagon requirements of the Indian coal trade, congestion of the collieries, and the low average output. Labour employed in the coal-fields being primarily agricultural, the colliery raisings are the

1. "A very large user of Bengal coal states that there has been marked improvement in the quality of the Bengal coal supplies since the Board came into being." Burma.
"The shipment certificate and the supervision of your Board have given satisfactory results." Singapore.
"The coal received from India is found to be highly satisfactory in every way." Hongkong.
"In the opinion of the Chamber your Board is fulfilling an important function in a most efficient manner." Northern India.

highest between February and May, when the agricultural operations are at a stand still. As the storing and stocking of coal is wasteful, it needs to be despatched immediately after it is raised. The result is that the demand for wagons on the coalfields reaches its maximum, at a time when the demand for wagons to move all other traffic is at its heaviest. It is during the busy season that inadequacy and irregularity of wagon supply is more acutely felt. This is the most difficult problem that the railways, especially the E. I. and B. N. Railways, have to solve.

This inadequacy in wagon supply affects the cost of production of coal. Over-head costs can be reduced by the introduction of mechanical coal cutters which increase the output and reduce the cost per unit. But the wagon supply being inadequate and intermittent, the collieries have to resort to wasteful stocking. This uneconomic stocking has materially affected the output of the colliery, with the result that the machines have not led to that saving in overhead costs, which the companies concerned had every right to expect. In short, a suitable and regular supply of wagons is a primary necessity of the coal industry.

INCREASE IN WAGONS AND THEIR EFFICIENT UTILISATION

The evil, therefore, has to be removed. To procure enough new wagons to enable a full supply to be given to the collieries throughout the year would be uneconomic ; and it would raise the freights unduly high. The shortage of wagon supply should be removed partly by additions to the wagon stocks of the railways, and partly by a better and more efficient utilisation of the existing stock. It should be admitted that the efficiency in wagon supply has been increased by the introduction of the pooling system since 1921. So also there has recently been a marked improvement both as regards the wagon supply and other railway facilities, and yet it must be noted that the railways are not in a position at present, especially during the first half of the year when the demand for wagons all over India is heavy, to meet the wagon requirements of the coal trade.

INTRODUCTION OF SEASONAL RATES

The improvement in the number of wagons and their speed should be supplemented by the introduction of seasonal rates. Events subsequent to the publication of the report of the Indian

Coal Committee have amply demonstrated that however efficient wagon supply may be, it is bound to give way some time in the busy season. The seasonal character of the demand for coal and its greater intensity in the first half of the year makes a proper adjustment and manipulation of the wagon supply as well as demand all the more necessary. Mere manipulation of wagon supply is not enough ; both must be manipulated. The Railways in their own interest must remove this tension of seasonal traffic, necessitating additional equipment which cannot be employed all the year round. We concur with Mr. Banerjee that seasonal rate should be tried so as to stimulate the demand for coal in the slack season, when a large number of wagons lie idle throughout the country. This will be beneficial to the shipper, carrier and consumer alike.

PUBLIC DEMAND REDUCTION IN RATES

Let us now review the freight position. The higher rates introduced after the war, as adverted to above, had proved excessive and the growth of trade was being restricted. This gave rise to complaints and repeated requests were made to the authorities concerned to reduce the rates which were pressing heavily upon the industry. The Associated Chamber of Commerce, for instance, adopted the following resolution on the 16th December 1924: "In view of the fact that the present high rate of railway freight on coal has prejudicially affected the maintenance and development of industrial concerns in Northern India, and those situated at a great distance from Bengal and Bihar coalfields, this Association strongly urges the Government of India to take immediate action substantially to reduce the railway freight on coal carried over long distances." Similarly, the Hon. Rai Bahadur Lala Ramsaran Das moved the following resolution in the Council of State on the 15th September 1925: "This Council recommends to the Governor General in Council that special concession rates be granted by the different railway systems for railway freight on coal when booked in full wagon loads at owner's risk—(i) for long distance of 500 miles and over; and (ii) during the slack season over various rilways." This resolution, notwithstanding the opposition of the official benches, was carried without being taken to a division, but it failed to receive Government assent. Needless to mention that this high-

handed policy of the Government was subjected to vehement criticism both from the platform and the press.

REDUCTIONS IN RATES OFFERED IN 1926

In due course, Sir Charles Innes, while introducing the Railway Budget for 1926-27, announced that the railway freight on public coal carried for distances exceeding 400 miles would be reduced to the level of rates in force for locomotive coal. This meant a reduction of about 10 per cent.[1] The reduced rates were put into force from 1st April and worked out as follows :—

RATES PER MAUND FROM JHARIA FIELD

	Former Rates Rs. a. p.	*Reduced Rates* Rs. a. p.
Cawnpore	8 1 0	7 3 0
Jubbulpore	9 1 0	8 5 0
Delhi	10 10 0	9 7 0
Lahore	13 2 0	12 0 0
Bombay	15 6 0	13 12 0
Karachi	16 15 0	15 13 0

THEIR EFFECTS ON COAL TRAFFIC

It behoves us now to examine the effects of these reduced rates on the movement of traffic so as to be able to understand the attitude taken up by the authorities and the justification thereof.

Coal Traffic carried on Class I Railways

Year	*B. N. R.*		*E. I. R.*		*Total on all Class I Railways*	
	Tonnage tons.	*Earnings* Rs.	*Tonnage* tons.	*Earnings* Rs.	*Tonnage* tons.	*Earnings* Rs.
1923-24	38·6	125·0	106·1	480·4	198·5	822·3
1924-25	44·1	125·0	120·8	554·4	228·5	916·5
1925-26	49·0	146·2	113·3	548·3	220·1	895·5
1926-27	56·4	144·1	117·6	539·6	239·1	903·8
1927-28	65·3	155·7	124·5	560·8	257·8	950·4

It will be seen from the foregoing statement that both the railway tonnage and the receipts have maintained an upward

1. He said, "Our actual proposal is that on distances exceeding 400 miles, the rates of freight for public coal should be reduced to the rate now in force for locomotive coal. This means on long distance traffic, a reduction of freight roughly amounting to 10 per cent."
Vide, Budget Speech, P. 9, 1926-27.

trend notwithstanding the higher rates. This fact was taken up by the railway authorities as an indication of the reasonableness of the rates charged. As discussed elsewhere, the increase in traffic by itself does not offer full justification of the reasonableness of the rates charged. In such cases the nature of the article transported and the demand for it should be carefully scrutinised. But the railway authorities frequently ignore this important consideration. In the case of the commodities which are necessaries of life and have an inelastic demand, the railways can easily impose a tax upon the commodity without affecting the movement of traffic. Indian railways, being impervious to public opinion, have never failed to exact their utmost from the community, whenever they could get an opportunity. Here, we have the fact before us. The public continued to consume coal and paid the tax, in spite of the higher railway freight, because there was no other substitute for coal available. Besides, with the development of industries, the demand for mechanical power was increasing, and therefore, even though the railway rates on coal were high, people could not help using it. In those cases, however, where they could find some suitable substitute they tried to do away with coal. For instance, in the Bombay Cotton Mills, the substitution of electric power for coal proceeded apace during this period. This curtailment of the actual and potential demand for coal under the stress of high railway rates is often overlooked. But it becomes more clear when we examine the traffic statistics after the reduction of April 1926. It will be seen from the foregoing table that the development in traffic was more rapid after the reduced rates were put into force; both the traffic and the earnings increased. The grant of rebate on export coal further stimulated the traffic.[1] This prompt response of the traffic to much-needed reduction in rates falsified the assumption of the Government that the rates formerly quoted were such as the traffic could reasonably bear. This obstructionist attitude of the authorities has failed to stand the test of times more than once. It cannot be gainsaid that the ultra-conservative rates policy pursued by the railways has done considerable harm to indigenous trade and industries.

1. On grade coal shipped under certificate from the Coal Grading Board, a rebate of 37½ per cent. on actual freight paid was granted, while on coal non-graded and not covered by any certificate from the Coal Grading Board the rebate was 25 per cent. of the actual freight paid.

DEMAND FOR FURTHER REDUCTION

But these reductions proved inadequate and the public demand for further reductions increased. It was contended that the reduction of 10 per cent. did not go far enough towards the removal of the very considerable previous increases in freight. The pithead price of coal was back to the pre-war level, and therefore, keeping the railway freight at a figure substantially higher than that of the pre-war rate was unjustified. In fact, the railway rates were disproportionate and imposed a great handicap on the industries, particularly because the industrial depression had set in. The Associated Chambers of Commerce of India and Ceylon unanimously carried the undermentioned resolution in its annual general meeting in 1928; "That in view of the importance of cheap coal in the industrial and economic life of the country and in the interests of the Indian coal trade it is imperative that there should be a substantial reduction in the present rates of railway freight on coal and coke."[1] They also demanded a reduction of railway freight on fuel and oil and the resolution ran as follows: "That in view of the fact that liquid fuel, Furnace and Diesel Oil are largely used in industrial concerns and public utility undertakings equivalent with coal, it is reasonable that railway freight on such oil should be reduced correspondingly with any reduction that may be made in the freight on coal and coke."[2]

REDUCTION IN RATES

The Railway Member introducing the budget for 1929-30 announced a further reduction in rates for long distance traffic to be put into force from 1st June 1929. In this connection, it is interesting to note his remarks on the traffic results after the reduction of rates in 1926. To quote him in extenso: "the last reduction in our coal rates was made in 1926, and the results have been such as to encourage us to take another step in the same direction. On the E. I. R., the tonnage carried for distances over 400 miles was 31 per cent. more in 1927-28 than it was two years earlier, and the earnings 33 per cent. more. It is a very significant fact that the earnings on long distance public coal should show a

1. Vide, Annual Report.
2. Supra.

greater increase than the tonnage, notwithstanding the reduction in charges, for it means that the average distance over which the coal was hauled must have increased substantially."[1] This admission of the Railway Member is significant, in as much as it clearly brings out the true nature of the railway policy, which we have characterised as ultra-conservative. Our railway policy lags far behind the industrial requirements of the country. The Government of India flouted the sober public opinion of the Upper House, which had expressed itself in unequivocal terms by carrying the resolution of Hon. Rai Bahadur Lala Ramsaran Das without being taken to a division, and refused to give its assent. The Government confessed its mistakes when later developments made it too self-evident to be concealed. The increase in the earnings greater than the increase in traffic, as referred to by the Railway Member, further proves the short-sighted policy adopted by the Government in not having announced the reduction earlier as per resolution of the Council of State referred to above.

The long distance traffic, as adverted to above, had shown greater response to the reduction in rates, and therefore in 1929 the concession in rates were confined to traffic carried for distances exceeding 400 miles. The precise extent of the reductions made is portrayed below :—

The then existing scale of rates for coal, coke, and patent fuel carried for distances exceeding 400 miles were :—

			Pie per maund per mile
From	1 to 200 miles	...	0·15
Plus ,,	201 to 500 ,,	...	0·07
,, ,,	501 miles onwards	...	0·06

The reduced scale of rates for coal, coke and patent fuel carried for distances exceeding 400 miles was :—

			Pie per maund per mile
From	1 to 200 miles	...	0·15
Plus ,,	201 to 400 ,,	...	0·06
,, ,,	401 miles onwards	...	0·05

1. Vide, Budget Speech, 1929-30.

On this new basis the rates from Jharia field work out as follows :

Market to	*Old Rates.* Rs. a. p.	*New Rates.* Rs. a. p.
Cawnpore ...	7 5 0	6 10 0
Agra ...	8 8 0	7 12 0
Delhi ...	9 7 0	8 10 0
Bombay ...	13 12 0	12 6 0
Karachi ...	15 13 0	14 0 0
Ahmedabad ...	13 2 0	11 11 0
Lahore Cantonment ...	12 0 0	10 12 0
Amritsar ...	11 12 0	10 7 0
Madras ...	12 11 0	11 7 0

The reductions are substantial and have been gratefully received by the public, especially the business community. The traffic has also given response so that we find that the total tonnage on all Class I Railways which was 254·1 lakhs of tons in 1928-29 rose to 271·9 lakhs of tons in 1929-30, and the earnings therefrom rose from Rs. 945·3 lakhs of Rupees to Rs. 951·6 lakhs.

But the community in general and the coal industry in particular have not been able to reap in full the fruits of this most desirable reduction in railway freight, due to the world wide industrial depression which subsequently set in. Commencing from 1929, it gathered momentum and its intensity increased. The Indian coal industry, like other industries, has fallen a prey to this trough of depression and is passing through the most troublesome times. We do not propose to study the causes of the industrial depression ; it would be enough for our purpose to note the general features of the coal industry during the period and state the new problem with which the industry is faced.

PRESENT POSITION OF INDUSTRY

There are certain features peculiar to the coal industry which have accentuated the difficulties, as we shall presently see. Prices have steadily slipped back with the result that mines with seams of anything below the first quality coal are finding it unprofitable to work. Some of them have been actually closed down. This is not all. Even coal mines producing the best qualities of coal, those working on older methods, are somehow managing to remain in existence ; those which are equipped with modern plant and

organisation are the only one which find it possible to pay dividends, though dividends are getting less.

The present depression in coal industry is due to, firstly, the steady increase of output from the railway-owned mines; secondly, the increasing surplus output from many large company-owned first class and selected mines, owing to the introduction of efficient coal cutting machines; thirdly, general slackness of industries, strikes and closing down of factories for long periods: fourthly, application of electricity in mills and railways; and lastly, the growing use of improved coal burning methods, leading to reduced consumption of coal per unit in factories and railways.

As a consequence of the present depression, the upward and downward coal traffic on the E. I. and B. N. Railways during 1929 and 1930 did not show the expected rise. The total output of coal in India increased from 23·4 million tons in 1929 to 23·7 million tons in 1930, but the increase in consumption could not keep pace due to several causes noted above. Hence the Indian Coal Industry to-day is suffering from over-production. This is especially true of the Bengal coal-fields which have to face internal as well as external competiton. Internal competition is due to lack of organisation amongst the colliery owners of Bengal, and Bihar and Orissa; they compete amongst themselves and quote unremunerative prices. As regards the external competition, Natal coal competes with Indian coal in India, and other coalfields such as Singareni and C. P. coal-fields compete with Bengal coal in certain areas. The output of Singareni and C. P. collieries has increased appreciably in the recent years.

Bengal coal is being displaced in some of its most important markets like Bombay and Ahmedabad. The consumers of coal have found that to produce the best combustion results, it is necessary to mix Bengal coal with C. P. coal half-to half, and this practice has become a rule. C. P. coal being cheaper, this mixture has led to considerable fuel economy in large industrial establishments, especially in those which are distant from the Bengal coalfields. It is obvious threfore that Ahmedabad is taking a large quantity of coal from the C. P. collieries.

In short, the Indian coal industry is suffering from over-production; the symptoms of the disease were manifest as early as 1925, but now it has become chronic. This serious situation is

due to internecine competition of the collieries, the inefficient and unenterprising managing agents who have failed to utilise modern methods of pushing their sales and neglected the needs of their consumers, and the prevalence of uneconomic methods of extraction. All these factors have conspried to increase the intensity of the depression and complicated the problem before the industry.

THE SURCHARGE ON COAL FREIGHT

To add to the difficulties of the situation, the Government of India decided to levy a surcharge of 15 per cent. on coal freights with effect from January 1932. This most inopportune move seems to have been dictated by purely revenue considerations, but it has affected the industry adversely. It may be pointed out that the authorities have with one stroke neutralised the reductions both of 1926 and 1929, acceded to after strong public agitation, so that today the freight position is not very dissimilar to that during 1922–25. This action of the Government must be deplored, more so because it came at a time when the industries in general and the coal industry in particular were in the grip of the most serious depression the world has ever witnessed. The arguments advanced by the Railway Member in support of the enhancement in rates—a de facto outrage on Indian trade and Industries—are instructive. He argues, "On the revenue side we have endeavoured to alleviate our difficulties by making certain increases in rates and fares, where it seemed likely that by this means additional income could be obtained. The increases made have been only in connection with coaching traffic, including both passenger fares and parcel rates, but about six weeks ago a surcharge of 15 per cent. was imposed on coal freight apart from shipments and bunker coal, and this is by far the most important change in goods rates. I refer especially to this increase, because I should have been most unwilling to agree to it, had the financial position of the railways been less serious than it is. I have long held the view that it is in the interest of the railways to keep coal freights at the lowest level commercially possible, because cheap coal is essential to industrial development, and the industrial development means increased traffic for the railways. But on this occasion circumstances left no alternative. It cannot be doubted that a higher charge, to the extent imposed, could in fact be realised without diminishing traffic,

and even with the addition made, our coal freights still remain at a very low level."[1] The Railway Member admits that 'it is in the interests of the railways to keep coal freights at the lowest level commercially possible; per contra, the policy pursued is a most striking negation of the admission recorded. He seeks relief in the old argument, exploded long since, that the traffic flows on and therefore the rates are such as the traffic can bear, or in other words, the rates are reasonable. The volume of traffic offers only a partial justification of the rate schedule. We have discussed this issue at length elsewhere, and therefore to avoid repetition it would be sufficient for the present to note that there was no justification for this sort of railway policy. On the contrary, the traffic statistics from 1926-27 to 1929-30, referred to above, prove the hollowness of this argument. It will be recalled that the Government had offered strong opposition to the public demand for reduction in rates after 1922 on a similar plea and the subsequent developments falsified the underlying assumption. A repetition of the same mistaken policy and the unwillingness to learn from the past experience, hardly leaves any doubt as to the nature of the railway policy pursued and its effects on the development of our trade and industry.

The figures of production for the last few years given below clearly show that the condition of the coal industry grew from bad to worse.

Production of Coal

Year.	*Tons.*
1930	23,803,048
1931	21,716,435
1932	19,679,154
1933	20,153,387
1934	19,789,163

It will thus be seen that the output has steadily declined. But notwithstanding this fall in the output, the producers have failed to realise what may be termed a fair selling price, as the pitsmouth prices of all grades of coal have recorded a steep fall. For instance, super Jharia coal prices have fallen from Rs. 4-12-0 in 1932-33 to Rs. 4-2-0 in 1933-34, and Rs. 3-0-0 in 1934-35. Prices of other varieties have likewise declined and become unremunerative to the producers. The critical condition of the industry has caused a great deal

1. Vide, Budget Speech, 1932-33, p. 5.

of concern to those at the helm of the industry and the public alike. Measures taken by the colliery-owners to meet this unprecedented economic depression have included drastic reductions in the scale of salaries and wages of all persons connected with the industry, the stoppage of important developments, the whittling down to a dangerous margin of safety of all measures required for the care and maintenance of the mines and voluntary curtailment of output on the part of some of the larger owners. Labourers have suffered most from these attempts at economy and the wages now being paid in the coalfields are below the economic minimum which can enable them to live up to their average standard. Thus, there is no scope for further economies in this direction. Many mines have already succumbed and have been forced into liquidation, and many others have a similar fate staring them. For instance, in 1924-25 there were 253 joint-stock companies engaged in the industry with a paid-up capital of Rs. 12,63 lakhs, whereas in 1932-33, the number of companies was reduced by 41, and the paid-up capital reduced by Rs. 1,83 lakhs. To this must be added the loss in the capital employed by private individuals and syndicates.

In view of the conditions protrayed in the preceding paragraphs, it behoves us to examine the causes responsible for this critical condition of the industry. The primary cause which can help to explain the situation is the fall in the demand for coal. Indian railways are by far the most important consumers of coal. They have developed their own collieries, and though the output of their collieries has been reduced to help the private producers of coal, railways' demand for private coal has not recorded an increase it was expected to. In 1931, railways took 6·6 million tons of coal, and in 1933 about 6·7 million tons, notwithstanding the restriction in the output of the railway-owned collieries. This is partly due to the electrification schemes. The Bombay Cotton Mill Industry, which is another important consumer of coal, is now increasingly taking to oil and electricity. Apart from the present danger of this tendency, it is a grave potential threat to the future of the coal industry. To this should be added another important danger. In Bombay, Indian coal has to meet with the powerful competition of bounty-fed South African coal, a standing menace to our industry. The imports of South African coal have increased recently, for whereas in 1932-33 the imports were only about 13,516 tons, in 1933-34 they rose to about 34,740

tons. The total imports of coal have also increased from 34,800 tons in 1932-33 to 56,315 tons in 1933-34. Iron and brass foundries consumed about 4·8 million tons of coal in 1931, but in 1933 they took only about 4 million tons, apart from the usual expectations of increase in demand. The demand for bunker coal has also fallen. Similarly, jute mills, inland steamers, brick and tile manufacturers, etc., also reduced their purchases during the aforesaid period. This is not all. In the foreign markets our coal trade has suffered the worst vicissitudes. Our total exports have declined from 515,117 tons in 1931-32, to 372,894 tons in 1933-34. Indian coal has suffered most in Strait Settlements, Phillippine Islands and Hongkong ; the first two markets seem to be completely lost, for whereas Strait Settlements took 23,431 tons in 1931-32, the demand has fallen to 5,391 tons in 1933-34, and Phillippine Islands reduced the demand from 37,007 tons to 6,242 tons during the same period. Exports to Hongkong have fallen from 162,265 tons in 1931-32 to 99,286 tons in 1933-34.

The imposition of the surcharge of 15 per cent. on coal freights, referred to above, is partly responsible for the present plight of the industry. Bengal coal has suffered most in this respect. Public opinion was decidedly against this pernicious measure. The Government of India have fortunately reduced the surcharge from 15 per cent. to 12½ per cent., subject to a maximum of Re. 1 per ton irrespective of distance from 1st April 1934. This half-hearted measure has satisfied nobody. The traffic carried has recorded marked fluctuations as will be seen from the following table :—

Coal traffic carried on Class I Railways

(Tons and Rs. in lakhs.)

Year.	*B. N. R.*		*E. I. R.*		*Total.*	
	tons.	Rs.	tons.	Rs.	tons.	Rs.
1930-31	63·1	1,49	1,22·3	5,20	2,51·0	8,82·0
1931-32	59·8	1,40	1,00·0	4,78	2,30·3	8,12·6
1932-33	57·7	1,32	1,01·5	4,87	2,19·0	8,16·5
1933-34	64·6	1,61	1,02·9	4,98	2,37·8	8,81·9
1934-35						

Another important fact responsible for the present deplorable plight of the coal industry is the prevalence of cut-throat competition amongst the producers, particularly those in Bengal, and Bihar and Orissa. In their keen struggle for existence, many of

the smaller colliery owners are quoting prices much below the real cost of production. In their attempt to push the cost of production still lower, they are increasing their output and exploiting only the upper seams of the mines. This method of working the mines is obviously wasteful and against the true national interests, because the most valuable seams are thus being permanently lost to the country. The present ruinous policy, therefore, needs an immediate check.

The question next in importance is as to how the check should be made to operate, for opinions differ regarding the method. Efforts made by the coal producers in this direction may be noted. After protracted and delicate negotiations the colliery owners in Bengal and Bihar and Orissa formulated a scheme of compulsory restriction of output, and placed it before the Government of India for legislative sanction. The scheme was to remain in force for a period of three years, and its operation restricted to collieries in British India, in Bengal, Bihar and Orissa and the Central Provinces. The total output was to be restricted by the control of wagon supply, and assignments of quotas to individual collieries on the basis of standard tonnage. The administration of the scheme was to be entrusted to a Committee of nine, eight members being representatives of the coal trade with an independent chairman. The decisions of the Committee were to be final and binding. The Coal Grading Board Act, 1925, was proposed to be amended to allow of all expenses in connection with the working of the restriction scheme to be met from the funds at the disposal of the Coal Grading Board.

The Government of India, however, did not think it advisable to give legislative sanction to the scheme outlined above for obvious reasons. Firstly, the costs for working the scheme were proposed to be met from the funds at the disposal of the Coal Grading Board. As the Board was established with the primary object of stimulating the exports of Indian coal, the Government of India were right in pointing out that they "could not ask the legislature to agree that its funds should be diverted to an entirely different purpose in the manner proposed." The Board has a very important and difficult function to perform, more so at present bacause our exports have fallen heavily during the past two years. Therefore, every pie at the disposal of the Board should essentially be ear-marked for promoting export trade.

Another serious defect in the scheme was the lack of adequate representation of the interests of the consumers in the proposed constitution of the Committee, composed exclusively of representatives of the coal industry, except for an official chairman. Besides, the Committee thus constituted was to be invested with very wide powers including the power to regulate production. Legislative recognition to such a scheme would in effect have amounted to the creation and continuance of a monopoly under the protection of the state to be worked primarily for private profit. The function of the State is to control rather than create private monopolies.

The improvement in future of the industry will depend essentially upon the collective action of the colliery owners. Unhealthy competition is the greatest sore of the industry and this can be successfully eliminated only by a concerted action of the producers based on mutual understanding and good will. Fortunately, the producers have their associations which will facilitate common action, if only the members could realise that future progress apart, if they are to survive the strain of acute economic depression, coupled with the mistaken attitude they have hitherto taken, they should immediately clear up their misgivings and resort to self-help. What miraculous cure of industrial ills voluntary concerted action can provide may be easily seen from the success achieved by the Cement Marketing Co., of India.

Having harmonised the divergent interests, the right action to take would be to centralise the marketing of coal and entrust the task to a distinct body composed of the representatives of colliery owners. This institution should have full power in marketing the output of the members in the way it thinks best, and quote prices determined by the conditions in the market. Besides, it should have working arrangements with the producers outside the group, so as to eliminate unhealthy competition.

The success achieved by the Marketing Board, if properly worked, would be a sufficiently strong inducement to other colliery owners to give up their conservatism and apathy, and join the board in their own self-interest. The board would thus immediately gather strength and soon become a strong force in the industry. Thus rationalised, the coal industry would rank amongst one of the most efficient industries in the country.

SUGGESTIONS

This finishes our study of the Coal Industry in relation to railway rates. Let us now summarise our suggestions for the improvement of the industry.

(1) Internal re-organisation is the prime necessity of the Indian coal industry and it should proceed on the following lines :—

(a) To form a Central Marketing Association on the line, similar to that of the Cement Marketing Company of India[1], which would eliminate interenecine competition, improve the quality of coal raised, regulate over-production, minimise the waste in transport costs, and push on the sales with the aid of publicity.

(b) This Association should have as its members the colliery-owners of Bengal, Bihar and Orissa as well as of the Central Provinces. In short, it should be an all-India Institution.

(c) Definite working arrangements should be made with the collieries remaining outside the pool.

(2) The production of coal should also be rationalised. Methods of extraction should be improved and the collieries which cannot be economically worked be closed down, because the strength of an industry is measured by its weakest unit. Bengal collieries should extract only first class coal ; second class coal should be produced to a very limited extent to supply those markets where it is economically possible to do so.

(3) A more liberal rates policy should be pursued and the surcharge be removed.

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1. Refer to chapter on " The Cement Industry."

CHAPTER VI

SUGAR

The national importance of the Indian sugar industry has been generally accepted. It has two aspects, agricultural and industrial. India being primarily an agricultural country, the cultivation of sugar holds a very prominent place in its economy. It is the most important and perhaps the only cash crop in the sugar-cane belt, and is profitable both to the agriculturist and the Government. In its industrial side, the Indian sugar industry holds an unique position replete with potentialities, because India, while one of the largest growers of cane, has also been till recently an importer of about a million tons of white sugar. Besides, the recent expansion in the sugar industry has placed it in the fore-front of other Indian industries, so that to-day it ranks second only to the cotton industry. A critical study of its transport problems therefore needs no apology.

RAILWAY RATES POLICY

Sugar traffic carried on different railways varies according to the density of population in the areas served, economic conditions of the people, the nature of their diet and the cultivation of sugar-cane in the locality. The importance of the aforesaid factors as determinants of sugar traffic will be seen from the statement submitted below.

Sugar (Refined & Unrefined) carried in class I Railways 1930–31.

Railway	*Originating* on Home Line (tons).*	*Total* (tons)*	*Earnings* Rs.*
North Western	2·08	2·74	76·69
B.B. & C. I. R.	·33	2·54	35·99
E.I.R.	1·27	1·59	25·62
G. I. P. R.	1·13	1·46	22·31
B. & N. W. R.	1·03	1·15	12·42
B. N. R.	·35	·44	6·47
M. & S. M. R.	·28	·57	6·27

* The figures represent lakhs.

The foregoing figures reveal some of the most striking features of the sugar traffic on Indian railways. It will be seen that the traffic is mainly carried by a few of the more important lines, which pass through thickly populated areas, where sugar-cane is largely cultivated and sugar factories have been established. Therefore the total tonnage hauled by the railways serving these areas is by far the largest. A still more important tendency revealed by these figures is about the nature of the traffic carried by the different lines. It will be seen that whereas the N.W., G.I.P., E.I. and B. & N.W. depend mainly upon the traffic originating on their own lines, the B.B. & C.I. has to depend upon the traffic it gets from other lines. This fact is important as it vitally affects the rates policy. Again, the traffic carried and the earnings therefrom, as indicated in the table, show the importance of the traffic to the line concerned.

We may therefore proceed to analyse the rates policy pursued by these railways, the nature of the traffic carried and the effects of the freight charged on the development of the sugar industry. Before, however, we take up the study of the movement of sugar traffic from the more important sugar factories to the premier consuming markets, it is necessary to have a general but definite idea of the basis of the rates charged. This method of approach will enable us to have a comprehensive view of the rates policy, affecting the entire industry in its varied aspects.

BASIS OF RAILWAY RATES ON SUGAR

On the E.I.R., sugar traffic in general is charged at second class railway risk, that being the accepted rate in the general classification of goods, but when the traffic is booked from Howrah (including other Calcutta stations) to E.I. Railway and via distant 601 miles and over, 1st class O. R. rate is charged, subject to the operation of the differential rule. The E.B.R. charges 2nd class R. R. rate in general, but when the traffic is booked in wagon loads, C/ 300, at O.R., the C/J schedule rate is charged. The basis of the schedule is as follows :—

1 to 150 miles	...	·380	pie	per	maund	per	mile.
Plus 151 to 250 ,,	...	·333	,,	,,	,,	,,	,,
,, 251 to 500 ,,	...	·200	,,	,,	,,	,,	,,
,, 501 to 700 ,,	...	·130	,,	,,	,,	,,	,,
,, Above 700 ,,	...	·100	,,	,,	,,	,,	,,

In addition to the above schedule rates the terminal and transhipment charges are levied, varying from 4 to 8 pies. The S.I.R. charges 2nd class rate, R.R., the basis of charge being 0·42 pie per maund per mile, subject to additional transhipment and terminal charge. The M. & S.M.R. charges 2nd class rate at R.R. The B.N. & A.B. Railways charge similar rates on actual weight, no special facilities being offered to traffic in bulk or over longer distances. On the B. B. & C. I. Railway, 1st. class rate at O. R. is applicable, if traffic is booked from Bombay, Agra Fort, Belanganj, Cawnpore, Rawatpur, Muttra, Muttra Cantonment, and Delhi Lahori Gate. The basis of charge of the 1st. class rate is 0.38 pie per maund per mile. The N. W. R. charges 2nd. class rate at R. R. on actual weight, but when the traffic is booked from Karachi for distances over 750 miles, 1st class rate at O. R. is charged. This rate is subject to terminal and short distance charge. The B. & N. W. R., in the absence of special rate, charges 2nd class rate at R. R. But here it should be noted that the bulk of traffic is carried at special rates in force over this line. We shall discuss these rates in detail at a latter stage, but for the present, suffice it to note the nature of the special rates and the concession granted as against the class rates, as can be seen from the following rates :—

Miles	*Station From*	*Station To*	*Class Rate per maund*	*Special Rate per maund*
			Rs. a. p.	Rs. a. p.
251	Ghugli		0 9 9	0 7 4
230	Sardarnagar		0 9 1	0 7 2
431	Samastipur,	Cawnpore	1 0 1	0 11 7
178	Basti		0 7 3	0 5 5
261	Padrauna		0 10 2	0 7 8
184	Ghugli		0 7 5	0 5 10
163	Sardarnagar		0 6 8	0 5 4
364	Samastipur	Barabanki	0 13 9	0 9 5
111	Basti		0 4 11	0 3 8
194	Padrauna		0 7 9	0 6 1

We thus find a striking change in the rates policy, distinct from the policy pursued by the other railways. The B. & N. W. R. quotes rates lower than class rates even on shorter hauls, as for instance, over a distance of 111 miles, from Basti to Barabanki. It may be said that the B. & N. W. R. quotes special rates for shorter distances because generally the journey over this railway is

not long, and especially the receiving stations referred to above are junctions, from where the traffic is passed on to other railways. To this it may be said that because the B. & N. W. has only short leads or comparatively shorter leads, the justification for charging higher rates is all the greater. But the B. & N. W. R. does not do so, and the action of the railway authorities is commendable in the interests of both the shippers and the railway. The B. & N. W. R. has the greater number of sugar factories on its lines, both in the U. P. and Bihar, and it is to the advantage of the railway to foster these concerns by giving cheap and efficient transport facilities. These rates will be discussed later, but at this stage from the review of the general basis of rates charged on sugar on the different railways, it can be said, without fear of contradiction, that the B. & N. W. R. charges relatively lower rates even over shorter distances. This statement can be further illustrated by comparing the rates charged on the G. I. P. R., which charges 2nd. class rate at R. R. on sugar, irrespective of the size of the consignment or the distances traversed.

THE BASIS OF RATES CHARGED ON JAGREE AND MOLASSES

Jagree, which includes Molasses and Shukkur (ground or powdered jagree, not sugar), is classed as 2nd class R. R. in the Indian Railways General Classification of Goods.[1] This general class rate has been adjusted by different railways to suit their individual requirements. The E. I. R. charges 1st class rate when the consignment is booked at O. R. and C/L Schedule rate at O. R. when the traffic is booked to certain sugar works, in wagon loads, the loading and unloading being done by the consignor and the consignee. Molasses, when booked in tank wagons at O. R., is also charged C/L schedule rate. The basis of this C/L schedule is as follows:—

	1 to 100 miles.....	0·38	pie	per	maund	per	mile
Plus	101 to 300 „	0·220	„	„	„	„	„
„	301 to 600 „	0·130	„	„	„	„	„
„	Over 600 miles.....	0·110	„	„	„	„	„

The E. B. R. also charges the same C/L schedule rate at O. R.; L. The S. I. R. levies C/G schedule rate at O. R.; L; S/15,

1. Vide, p. 386.

the basis of charge being as under :—

	1 to 300 miles.....	0·380	pie per maund per mile
Plus	301 to 400 „	0·300	„ „ „ „ „
„	401 to 500 „	0·200	„ „ „ „ „
„	501 to 600 „	0·125	„ „ „ „ „
„	601 to 700 „	0·115	„ „ „ „ „
„	Above 700 „	0·100	„ „ „ „ „

The above rates are exclusive of a transhipment charge of one pie per maund at each local junction involving a change of gauge, a terminal charge of 6 pies per maund for each end (viz. one anna per forwarding and destination station), and a short distance charge of 3 pies per maund leviable in cases when booking for stations within a distance of 75 miles.

The M. & S. M. Railway charges 2nd class rate at R. R. when the consignment travels only for 150 miles or lower, but if the distance traversed is over 150 miles, C/G schedule rate, referred to above is levied. But in addition to these rates terminal charge of 12 pies in local booking and 8 pies in through booking is charged. A short distance charge of 3 pies is levied if traffic is booked between stations with a distance of less than 75 miles.

On the B. N. R., on actual weight at R. R., 2nd class rate is charged, subject to a terminal charge of 16 pies per maund in case of local booking, and of 8 pies per maund in case of through booking, in addition, but when the same consignment is booked at O. R., C/H schedule rate, lower than the class rate is levied, the basis of which is shown below :—

	1 to 300 miles	O·380	pie per maund per mile.
Plus	301 to 700 „	O·130	„ „ „ „ „
„	Above 700 „	O·100	„ „ „ „ „

The following extra charges are to be added both in local and through booking :—

Up to 600 miles	8	pies per maund per mile.
601 miles and beyond	4	pies „ „ „ „

These rates are subject to differential rule as to distance. Further, the Shalimar Special Terminal charge of 3 pies per maund and Kalaghat (goods) and Cuttack Special Terminal charge of 2 pies per maund are to be levied in addition in local booking only, except where otherwise specified. Again, the C/H schedule rate

does not apply to jagree and molasses when booked from or to station on the B. N. R., Asansol, Gomoh, Chandrapura, and via Barkakana, to and from stations on the (i) E. I. R. between Naihati and Howrah both inclusive, (ii) E. B. R. between Naihati and Calcutta (Sealdah) both inclusive (including all stations south of Naihati on the main line and branch lines.)

The B. B. & C. I. R. charges lst class rate when the consignment is booked at O. R. and 2nd class rate when the consignment is booked at R. R. On the N. W. R., jagree is charged at C/L schedule rate at O. R. referred to above. On the B. & N. W. R., in the absence of special rates, this traffic is charged at 2nd class rate, R. R., but there are a large number of special rates, and the bulk of this traffic is carried at these special rates. The idea of the special rates, lower than the class rates, can be had from the following statement:—

Miles	*Station From*	*Station To*	*Class Rate per maund*	*Special Rate per maund*
			Rs. a. p.	Rs. a. p.
363	Begu Sarai		0 13 8	0 6 2
387	Darbhanga		0 14 7	0 6 11
184	Ghughli	Barabanki	0 7 5	0 4 9
111	Lakshmiganj		0 7 4	0 4 8
395	Tara Sarai		0 14 10	0 7 0
430	Begu Sarai		1 0 1	0 7 10
454	Darbhanga		1 0 11	0 7 9
251	Ghugli	Cawnpore	0 9 9	0 5 11
248	Lakshmiganj		0 9 8	0 6 0
462	Tara Sarai		1 1 2	0 7 10

It should however, be noted that the B. & N. W. R. has made a distinction between jagree and molasses in respect of rates quoted thereon. The rates quoted on jagree have been adverted to above. On molasses the C/D schedule rate, having a uniform basis of charge of ·25 pie per maund per mile, is levied. In addition to this certain special rates are also in force as under:—

Miles	*Station From*	*Station To*	*Class Rate per maund*	*Special Rate per maund*
			Rs. a. p.	Rs. a. p.
243	Balia		0 6 1	0 3 10
291	Barhaj Bazar		0 7 1	0 5 0
354	Basti	Kathiawar West	0 8 5	0 5 9
271	Bhatni		0 6 8	0 4 10
328	Ghughli		0 7 10	0 5 5

In the case of class and scale rates the following additional charges are also levied :—

(i) *Terminal:*—One anna per maund in local booking, and 6 pies per maund in through booking with foreign railways.

(ii) *Transhipment:*—3 pies per maund at junctions involving a break of gauge, e.g. Benares Cantonment, Barabanki, and Mokameh Ghat.

(iii) *Ferry Charges:*—10 pies per maund where there is a ferry, e.g. Mokameh Ghat.

The G. I. P. R. charges C/J schedule rate at O. R., the basis of charge being as under :—

1 to 150 miles	.....	380 pie per maund per mile.	
Plus 151 to 250 ,,	.....	0·333 ,, ,, ,, ,, ,,	
,, 251 to 500 ,,	.....	0·200 ,, ,, ,, ,, ,,	
,, 501 to 700 ,,	.....	0·130 ,, ,, ,, ,, ,,	
,, Above 700 ,,	.....	0·100 ,, ,, ,, ,, ,,	

In addition to the rates thus arrived at the terminal, transhipment and short distance charges are levied wherever due.

THE BASIS OF RATES ON SUGARCANE

Before turning, however, to the analysis of the effects of rates charged on the movement of sugar traffic, we must consider the basis of rates charged on sugarcane on diffierent railways, as has been done in the case of sugar and jagree. The freight on sugarcane is important in the case of sugar factories. The detailed study of the railway freight with special reference to Indian sugar factories will be undertaken at a later stage, but before such a study is taken up, it is essential to review in brief, the basis of rates on sugarcane which is the primary raw material of the central factories.

Sugarcane is classified as 1st class R. R. in the Indian Railways General Classification of Goods, but the basis of actual rates levied on different railways varies. On the E. I. Railway C/R schedule rate is charged having the following basis :—

1 to 150 miles	... ...	0·14	pie per maund per mile
Plus Over 150 ,, ...	... ...	0·11	,, ,, ,, ,, ,,

These rates, however, do not apply in the following cases :—

(a) Over the Hardwar-Dehra Railway.

(b) To, from and via Cawnpore (B. B. & C. I. R.), except when booked from Rawatpur.

(c) From and via Allahabad city, for traffic from stations on the Benares-Allahabad section of the B. & N. W. R. to Howrah.

The B. B. & C. I. R. charges C/D schedule rate, having a uniform basis of charge of 0·25 pie per maund per mile, at O. R., applicable in through booking with foreign railways only, is subject to a minimum charge of Rs. 20, Rs. 10, and Rs. 7, per 4-wheeled Broad, Metre, and Narrow Gauge Wagons respectively. Re. 0-6-6 per mile per 4-wheeled B. Gauge Wagon, plus Rs. 3 terminal charge, at O. R., is levied in local booking between B. Gauge stations and from B. Gauge to M. Gauge stations only. Re. 0-3-9 per mile per 4-wheeled M. Gauge Wagon up to 300 maunds carrying capacity of the wagon plus a terminal charge of Rs. 2 per wagon, at O. R., is charged in local booking between M. Gauge stations and from M. Gauge stations to B. Gauge stations.

The N. W. R. charges C/J schedule rates on wagon loads, having the following basis of charge :—

	1 to 150 miles	0·380	pie per maund per mile.
Plus	151 to 250 miles	0·333	,, ,, ,, ,, ,,
,,	251 to 500 ,, ...	0·200	,, ,, ,, ,, ,,
,,	501 to 700 ,, ...	0·130	,, ,, ,, ,, ,,
,,	Above 700 ,, ...	0·100	,, ,, ,, ,, ,,

The aforesaid rates for sugarcane in wagon loads are subject to the following conditions :—

(i) That the consignments are booked at O. R. (under the Risk Note Form B or H) ;

(ii) That loading and unloading are done by the owners.

(iii) And that minimum weight for charge is 300 maunds per 4-wheeled wagon.

In the case of consignments of sugarcane in wagon loads, booked by or for the Agricultural Department, provided that a certificate granted by a gazetted officer of the Agricultural Department, to the effect that the sugarcane is intended for agricultural purposes and not for consumption as food, is produced at the time of booking, the minimum weight for charge will be 120 maunds instead of 300 maunds per 4-wheeled wagon.

On the B. & N. W. R., when the consignment is booked at O. R., loading and unloading being done by the consignor and the consignee, from any station to any station in local booking, except in the case of booking to link stations, is charged at the following vehicle miles rates :—

Description of wagons	*Rate per mile* Rs. a. p.	*Minimum Charge* Rs. a. p.
Low sided truck fitted with cases	0 3 9	7 0 0
16 and 16 feet special cane wagon open proof	0 2 6	5 0 0
4-Wheeled covered goods wagon	0 3 9	5 0 0

The other railways charge 1st class rates at R. R., as provided in the Indian Railways General Classification of Goods referred to above. This, in short, is the detailed data about the basis of railway rates charged on sugar, jagree, molasses and cane.

This introduces us to the study of the incidence of railway rates on the movement of traffic, and the extent to which the internal and external competition is affected by the railway rates policy. This question has been the centre of keen controversy in the public as well as academic circles and has led to no less heated debates in the Assembly. Obviously, therefore, the issue has come to acquire a political colour, and its more important economic significance is often ignored. Albeit the question can hardly be completely divorced of its political associations, the very nature of railroad enterprise being opposed to any such severance.[1] But it can with advantage be studied in its purely economic bearings, the welfare of both the shipper and the carrier being kept in view. In any such enquiry the needs of the public should predominate, and especially so in India, because the burden of the railway development in this country has been shouldered by the tax-payer.

It has been pointed out that the imported sugar received special rates right from the beginning of the present century. The credit of studying this problem with scientific accuracy and precision rests with Mr. S. C. Ghose, who analysed the rates policy in detail, and forcibly brought out the defects of the policy with suggestions for its improvement. Therefore, before we take up the analysis of

1. Railroads are primarily public utilities and as such they of necessity have to be worked in the interests of the public, and be subject to popular control, exercised through responsible representatives.

the present rates, it behoves us to have a succinct survey of the rates policy as it operated before the war.

RAILWAY RATES IN THE PRE-WAR PERIOD[1]

The railway rates on sugar from the ports to the interior were for the first time reduced during 1904, just a year before the Calcutta and Bombay competition started. They were further lowered in 1905. These low rates helped the heavy imports of foreign sugar and thereby hastened the decay of the indigenous white sugar industry. Mr. Ghose has rightly argued that in view of the lower cost of production of the foreign importers it was not a right move on the part of the railways to have lowered the rates on the imported traffic, which could very easily bear the ordinary rate. By charging lower rates on the imported sugar, railways not merely reduced their earnings, but also added to the profits of the foreign importers. The railway authorities may contend that but for the reduced rates they would have lost the traffic. This viewpoint is untenable, because the cost of production of the importers was sufficiently low to bear higher railway rates, and even if it was not so low, the fact that they urgently needed a market for their surplus output of sugar, which was fast increasing as a result of large-scale production and the integration of sugar industry in foreign countries, like Cuba and Java, they would have economised in other directions and paid a higher railway freight. So also, the importers would not have been able to shift this burden to the Indian consumers, because of the competition between the importers. Besides, if the price of the imported sugar was raised it would have seriously restricted the consumption of imported sugar in competition with the indigenous sugar. Therefore, it is idle to deny that the importers were in a position to bear higher railway rates, and that the reduced rates quoted by the railways in fact subsidised the imported sugar traffic. Mr. Ghose[2] rightly contended

1. This section is based on Mr. S. C. Ghose's "Monograph on Indian Railway Rates."
2. It is questionable, says Mr. S. C. Ghose, whether this traffic ever needed further subsidy in the way of cheap railway rates that were quoted from the ports to the interior. Even if the rates for Java sugar were maximum rates the railways would not have lost the traffic, but the profits of the Java producers would have been less.
   Vide, "Monograph on Indian Railway Rates.", p. 230.

that the burden of the rates would have fallen upon the profits of the importers, and the Indian railways would have thereby added to their receipts. Thus, not only was the railway income lost, but the position of the foreign industry in the Indian market was also strengthened. This is a further instance of the penalty which India has had to pay for company management of railways, because the companies, being assured of their financial stability, cared but little about the effects of their rates policy upon the railway revenues and the development of indigenous trade and industries.

The possible argument in support of the rates policy thus pursued, is that the railways are able to quote relatively lower rates for the imported traffic from the ports, which is said, as a rule, to be carried over long distances in full wagon loads, and therefore it is cheaper for the railways to carry than the indigenous sugar, which is carried over shorter distances in less than wagon loads. A similar argument is used in support of the present railway rates policy, which we shall presently examine. But as it was advocated in the pre-war era, we shall have to study it in the light of the conditions then prevailing. Mr. Ghose pointed out that the claim for a lower cost of transport of the imported traffic, which formed the basis of the whole argument, was more apparent than real. He stated emphatically that the special rates for sugar, from the ports of Bombay and Calcutta, were not for wagon loads, but for actual weight, i. e. carried in any weight however small or however large. He observed that condition as to weight was waived in many cases, in order to enable despatches in imported sugar being made from the ports to small stations, which could not afford a wagon load.

The further argument, which could be brought forth in support of the prevailing railway policy, is that as the railways got return load, after discharging the traffic carried from the interior to the port, it was in the interest of both the shippers and the carrier that the return traffic should be fostered with the aid of special rates. This argument has apparently the support of scientific principles of railway operation. But it should be pointed out that this principle pre-supposes that the return load would not be forthcoming unless the reduced rates were offered, or in other words, that the traffic would be diverted to some alternative transport agency, which does not seem likely in the

present case, looking at the nature of the traffic and the transport facilities available. Indian imports being primarily of manufactured products, their ability to bear the transport charge is ipso facto higher, and therefore, there is no necessity for offering lower rates on the imported traffic which would come to the railways automatically. It may be said that the higher railway freight which the importers would pay might be shifted to the consumers, and thus the burden of rates would ultimately fall upon the Indian consumers of the imported manufactured products. This is doubtless true, but only in the long run. This, however, should not deter the Indian railways from levying the necessary transport charges upon the imported traffic. The detailed discussion of this issue is beyond the purview of the present thesis, but it may be pointed out that the railways can and should with adequate justification levy higher transport charges on the imported traffic, wherever it can bear the charge, because this would bring adequate revenue to the railways, and at the same time afford much needed protection to the indigenous trade and industry against foreign competition. In other words, in the case of imported traffic, the ability to bear the transport charge must be requisitioned to the maximum. This should be done particularly because the imported traffic enjoys better railway facilities in numerous other ways, as compared with the internal traffic ; besides, it is relatively higher in value, and competes with the Indian industries. These are the most important considerations from the stand-point of pure railway economics, and it is in the light of these facts that the validity of particular rates has to be examined. In view of this, the aforesaid railway argument falls flat; the very basis of the argument can be questioned.

It is, however, surprising to find the above argument receiving apparent support at the hands of Mr. Ghose, for he says; "The imported traffic helps the railways to fill up wagons, which would otherwise return empty, and such traffic is thus carried practically at a nominal cost and therefore at a large profit to the railway[1]". This support is, however, more apparent than real, as is evident from his further discussion when he says that the imported traffic did not need these low rates, and that the low rates were introduced merely on account of competition, as admitted even by the

1. Vide, "The Monograph on Indian Railway Rates," p. 230

railway authorities themselves.[1] For a clearer understanding of the nature of the concession granted on the imported traffic, a concrete case may be taken up. At the scale rate applicable on the E. I. R., the charge on sugar from Howrah to Sutna for 615 miles would have been Rs. 0-12-0 per maund, but a special rate of Rs. 0-8-11 was quoted for the same on actual weight, whereas if locally produced sugar was carried to this station in wagon loads at owner's risk from say 557 miles, the rate would be Rs. 0-9-10 per maund.[2] The concession, therefore, was substantial. It is obvious that these reduced rates must have affected the receipts of the railways because the traffic in white sugar was moving mostly from the ports. Its effects on the Indian white sugar industry is mostly shrouded in obscurity. Thanks are due to Sir Vithaldas Thakersey, who, in his memorable speech in the Council, demonstrated the serious handicaps under which the indigenous sugar industry laboured in respect of railroad transport facilities, and the invidious distinction in rate-making fostered by the railway companies. He drew attention to the sugar rates to and from Cawnpore. For instance, while the G. I. P. rate from Bombay to Cawnpore, for 840 miles, was Rs. 0-13-8 on the imported traffic, the rate from Cawnpore to Khandwa, on the same line for 486 miles only was Rs. 0-13-8; whereas at the same time the rate from Bombay to Jubbulpore, for 616 miles, was Rs. 0-8-10 per maund on the same line against Rs. 0-12-10 to Sohagpur, for 494 miles. Thus, the truth is that railway companies fostered imported sugar traffic contrary to all rational principles of rate-making. The policy was suicidal both to their own revenues and to the indigenous industry. These are, in short, the striking features of the rates policy as pursued in the pre-war era.[3]

CURRENT RAILWAY RATES

Having reviewed the broad features of the rates policy in the past (pre-war), it is necessary to examine the incidence of current rates on the movement of traffic from the ports to the centres of consumption, and from the internal sugar factories to the more important consuming markets. Therefore the geographical

1. Vide, "The Monograph on Indian Railway Rates", pp. 230-31.
2. Supra.
3. For detailed discussion of the rates position in the pre-war era, see Mr. Ghose's "Monograph on Indian Railway Rates" pp. 411-21.

divisions to be followed in the subsequent discussion will be according to provinces and the ports serving them.

CALCUTTA PORT

Let us start with the Calcutta port and study the movement of imported sugar traffic. It may be pointed out that the hinterland of this port extends from Assam on one side, to the Punjab and the Central Provinces on the other. It serves as a gate for inward and outward movements of merchandise of this vast territory. The movement of traffic to and from Calcutta port shows that the hinterland extends on the north-east to Assam, to C. P. on the south-west, the eastern parts of the Punjab and the whole of the Gangetic plain comprising the Provinces of Bengal, Bihar and Orissa and the U. P. The imports of the port, which are so disproportionate to its exports, consists, mainly of cotton goods, iron and steel, machinery, sugar and oil. For the present, we shall be concerned primarily with the import trade in sugar.

Import statistics reveal interesting peculiarities. There has been a steady growth of imports of sugar up to 1929–30, except for the year 1927–28 when they received a slight set back. When the figures of 1913-14 are compared with those of 1929–30, the increase recorded comes out to be more than double, for, whereas in the former year Calcutta imported 177,941 tons of sugar, in the latter year imports rose to 368,969 tons. The value of imports, however, shows a slightly different tone, due to fluctuations in the price level. But after 1929–30 the imports have gradually dwindled, due to the increase in the output of local sugar factories, under the scheme of discriminating protection. This should not be taken to mean that the imports have ceased, for even to-day, notwithstanding the heavy protective import duty, the imports have some hold on the markets in the vicinity of the ports. At the same time, it cannot be denied that the growth in the output of internal sugar factories has changed the nature of distribution and of the transport problem. Therefore, in the pages that follow we shall review the distribution of sugar traffic with special reference to railway rates, and note thereafter the changes recently made in the rates structure.

The Gangetic plains are linked to the Calcutta port by the E. I. R., which serves the more important parts of the fertile and thickly populated territory, which has been rightly adjudged as the

richest in India, both agriculturally and industrially. The consumption of sugar therefore, is by far the highest in this tract. Of the total sugar thus consumed, the greater portion is that of the indigenous sugar or jagree, because the United Provinces and Bihar are the centres of sugarcane cultivation. Besides, it will be remembered that the white sugar manufacture, both from the cane and by refining gur on large-scale in the modern sugar factories, has come to be centralised in the U. P. and Bihar. Therefore, so far as the consumption of white sugar in this tract is concerned, indigenous white sugar competes with the imported sugar in the local markets, as well as in the more important distant centres, the area being limited by the cost of railway transport to be determined presently. Doubtless the competitive capacity is determined by varied factors of which railway transport cost is only one, and therefore the following analysis of railway rates and the competition inter se of imported and indigenous white sugar has to be taken with this limitation. It will also be recollected, that the analysis of the rates policy in respect of sugar traffic is proposed to be limited to the more important railways, like the E. I., G. I. P., B. B. & C. I., N. W., and B. & N. W. Railways, which will give a fair idea of the general rates policy.

CALCUTTA MARKET

The city of Calcutta with its suburbs, which consume the largest amount of white sugar, and the area of about 150 miles in the vicinity, is monopolised primarily by the imported sugar, because of the cost of railway transport which works against the indigenous white sugar. Indigenous white sugar can be imported into Calcutta from the sugar factories in Bihar on the B. & N. W. R. via Mokameh Ghat. From the Ganga Deshi Sugar Mill siding at Buxar to Howrah, the E. I. R. quotes a special rate of Rs. 0-10-6 per maund at O. R.[1], which works out at ·36 pie per maund per mile, less than first class rate.[2] Therefore, in Calcutta and its suburbs the imported sugar has the advantage of 10 annas per maund over the indigenous sugar. But the Ganga Deshi Sugar Mill in fact does not export to Calcutta, because it finds it advantageous to sell in the vicinity of the factory, which is a sort of

1. This rate applies to sugar actually manufactured by the Company at their factory.
2. 1st class rate works out at Rs 0-13-9 per maund.

protected market. The extent of protection which the factory gets in the local market varies with the location of the market, its distance from the port and from other local sugar factories. Imported sugar has to pay second class rate, which works out to Buxar at Rs. 0-15-1 per maund. Needless to repeat therefore, that the Buxar Sugar Factory finds it advantageous to sell its output in the local markets. The sugar factories on the B. & N. W. R., which are more numerous and have a larger output, have to pay a still higher freight to Calcutta.

It is well known that indigenous white sugar did not till recently seriously compete with the imported sugar in the Calcutta market, and if it was consumed there, the fact can be explained by reasons other than purely economic, which do not concern us for the moment. However, in order to estimate the disadvantage under which the Indian sugar factories labour in respect of railway transport in the Calcutta market, it is necessary to find out the rates from the more important of these factories, which despatch sugar to markets in Bengal and Bihar in the same direction. The rates charged to these other markets will be studied later; for the present it would be interesting to note the freight to Howrah. On the B. & N. W. R., on which most of the factories are situated, the traffic moves via Mokameh Ghat, and thereafter it is transhipped and carried by the E. I. R. to Howrah. Let us have a table portraying the rates charged on the B. & N. W. R. for sugar traffic via Mokameh Ghat from the important sugar factories. That would give us a clear idea as to the relative position of the different factories, both in respect of the Calcutta market and other markets in Bengal and Bihar via Mokameh Ghat.

Rates per maund via Mokameh Ghat

Factory Stations From	*Rate* Rs. a. p.	*Factory Stations From*	*Rate* Rs. a. p.
Basti	0 10 3	Savan	0 6 4
Sardarnagar	0 8 6	Tamkuhi Road	0 7 9
Gawribazar	0 8 2	Padrauna	0 8 4
Bhatni	0 7 4	Laksmiganj	0 8 10
Mairwa	0 6 9	Ghughli	0 9 5
Pachrukhi	0 6 2	Chakia	0 5 1

To these rates must be added the charge from Mokameh Ghat to Howrah on the E. I. R. which works out at Rs. 0-8-3 per

maund.[1] Thus, the E. I. R. share being added, the total freight gives us a clear idea of the competitive field, not so much between the imported and the indigenous factory sugar, as of the competition of the Indian sugar factories inter se. This does not mean that there is any competition between the Indian factories for the Calcutta market. Nor should we be understood to imply that the rate structure considerably helps any such internal competition. These rates merely show the relative transport disadvantage of the different factories. It will be seen from the table that of all, the Champaran Sugar Factory at Chakia is most favourably located for supplying the Calcutta market, because it has to pay only Rs. 0-5-1 per maund, which comes to Rs. 0-13-4 to Howrah, when the E. I. R. share is added to it. Next comes the Bihar Sugar Works, Pachrukhi, in the Saran district, which pays Rs. 0-6-4 to via Mokameh Ghat, or Rs. 0-14-5 per maund to Howrah. Third comes the New Savan Sugar Factory, Savan, Chapra district, which pays Rs. 0-15-0 per maund to Howrah. Other factories have to pay a very high freight charge. The point to note is that with the development of the production of white sugar within the country, by the erection of new factories under the present scheme of protection, unless some new sugar factories are established nearer Calcutta, the aforesaid factories will be relatively in a better position to supply the Calcutta market, which, needless to add, is most important for white sugar in that part of the country. We do not forget that this sort of planned distribution, which the aforesaid statement implies, will be feasible only after the distribution of the total sugar production of the country has been centralised. This is a very important point which will be discussed at a later stage; suffice it to note for the present that the supply of sugar to Calcutta market should be carefully studied.

This much for the Calcutta market. The catering of the Calcutta market by the Indian sugar factories is a problem of immediate and immense importance; we have attempted to indicate the difficulties to be overcome, which, we may be permitted to add, are not unsurmountable. The suggestions as to the method in which the question should be tackled will follow later.

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1. Vide, B. & N. W. R., Letter No. R/4/2/32 p. 1.
This is a special rate lower than the class rate which is Rs. 0-10-6 per maund.

The North-east of Bengal and Assam are served by the E. B. and A. B. Railways. The Western parts of Bengal and Bihar served by the E. I. R., consume indigenous as well as imported white sugar. Here is a table showing the traffic carried by the B. & N. W. R. from the sugar factories on its lines to via Mokameh Ghat in 1930-31 :—

Factory Stations	*Tonnage carried Maunds*	*Factory Stations*	*Tonnage carried Maunds*
Bhatni	395	Ghughli	1,362
Mairwa	33	Marhowrah	1,494
Saran	174	Gudah Siding	3,986
Pachrukhi	84	Chakia	21,381
Tamkohi Road	874	Lohat Siding	8,910
Padrauna	102	Tarsari	4,286
Lakshmiganj	4,280	Minor Stations	8,391

The traffic from different stations varies with the distance and also the freight charged. These traffic statistics substantiate the statement about the relative position which the factories occupy in respect of railway rates in supplying the Calcutta market, made in the preceding section. For instance, the suggesion that the Champaran Sugar Factory at Chakia is most advantageously located for supplying the markets in question, is strikingly demonstrated by the above statistics, the despatches amounting to 21,381 maunds. A similar advantage is enjoyed by this factory in respect of the other markets in the same direction. This is not enough. We have to analyse the position of imported and internal sugar in this part of the country. This issue is somewhat complicated. In the following table an attempt is made to present the position in respect of some of the more important markets.

Rates per Maund on Sugar

Stations to	*From Chakia (Via Mokameh Ghat)*	*From Howrah*
	Rs. a. p.	Rs. a. p.
Patna Junction	0 7 8	0 12 6
Gaya	0 8 10	0 10 11
Gomoh	0 12 1	0 7 3
Bhagalpur	0 8 2	0 9 11
Asansol	0 10 7	0 5 3
Nalhate	0 12 4	0 5 9
Burdwan	0 12 10	0 3 0

These rates conclusively prove that Indian sugar factories, being located at a distance from the Calcutta and the South-Western Bengal markets, have to pay higher railway rates, which seriously impedes the sales of Indian factory sugar in these markets. It will be seen that markets from Calcutta to Gomoh, on the one side, and Naihati and further up to Shahebganj, on the other, are more favourably situated for imported sugar. In markets further up, like Bhagalpur, Gaya and Patna, Indian factories have some sort of transport protection. Thus, the conclusion we come to is that the Bihar Sugar Factories, due to their location, will find it rather difficult to supply the Calcutta market for some time to come in competition with imported sugar, unless they either lower their per unit cost of manufacture or succeed in getting lower rates from the railway authorities or both. Another expedient that they should try is to centralise the marketing of sugar so as to eliminate unhealthy internal competition and waste in transport costs. The area of about 200 miles round about Calcutta has become a sort of protective belt in favour of the imported sugar.[1] In the market outside this belt the transport advantage operates in favour of the indigenous factories.

MARKETS IN THE FACTORY ZONE

In the 'factory zone', Indian sugar has obviously an advantage due to the proximity of the consuming markets to the respective factories and the greater distance per contra from the Calcutta port. It is indeed difficult to precisely mark out the limits of this zone, in the absence of the requisite data, but in the following pages an attempt will be made to understand the extent of this zone, and the transport advantages possessed by the Indian factories against the importers. To have a precise idea of the transport position for our purpose, it is necessary to co-relate internal traffic and the rates charged thereon, with the rates charged on the import traffic from Howrah. Therefore, of the

1. Similar is the situation about the supplies of cement from the Indian Cement Factories to Calcutta market, but the problem of distribution has been successfully solved by the industry.
See, the Chaptar on Indian Cement Industry.

consuming markets detailed in the statement referred to above, a few typical ones will be selected for further analysis. The supply of sugar to Benares may be summarised in the following statement:—

Mileage	*Stations from*		*Quantity despatched* (maunds)	*Rates per maund*
				Rs. a. p.
182	Basti	...	25	0 7 5
131	Sardarnagar	...	141	0 5 8
99	Bhatni	...	9,719	0 4 6
117	Mairwa	...	3,040	0 5 2
135	Pachrukhi	...	1,555	0 5 10
130	Savan	...	612	0 5 7
170	Tamkuhi Road	...	278	0 6 11
173	Lakshmiganj	...	321	0 7 2
225	Chakia	...	419	0 8 11
429	Howrah	...	...	0 15 8

It portrays a comparatively favourable position, the only deficiency being the lack of statistics of the sugar traffic carried from Howrah. Nevertheless, the statement gives us very interesting conclusions. It provides us with a commentary of the present general position and gives us a line of thought for the future. Rates charged are in a way a good index of the volume of traffic, but when coupled with the statistics of actual tonnage hauled, unmistakably demonstrate the importance of the incidence of rates on the movement of traffic and its potentialities of future development. Rates are de facto regulators of traffic. The illustrations to this apparently epigramatic statement are supplied by the preceding table. As Bhatni has to pay only Rs. 0-4-6 per maund, being only 99 miles from Benares, it supplies the largest amount of sugar. Mairwa comes as a very bad second, partly because it has to pay a slightly higher rate. As against the imported sugar, the sugar factories at Sardarnagar, Bhatni, Mairwa Pachrukhi and Savan have freight advantage of about 10 to 11 annas per maund.

The position of the Allahabad market may in brief be tabled as under :—

Mileage	*Stations from*		*Tonnage maunds*	*Rate* per maund*
				Rs. a. p.
	Basti	...	1,761	0 9 0
	Sardarnagar	...	4,335	0 7 5
	Gauribazar	...	5,495	
	Bhatni	...	17,151	
	Mairwa	...	14,546	
	Savan	...	5,054	0 7 5
	Pachrukhi	...	22,571	0 7 7
	Tamkukhi Road	...	378	
	Padrauna	...	838	0 9 1
	Lakshmiganj	...	1,750	0 8 9
	Ghughli	...	2,352	0 8 10
	Marhowrah	...	14,489	
	Chakia	...	7,126	
	Lohat Siding	...	1,366	0 11 3
	Howrah	...	...	1 2 7

* These are special rates at O. R.

Next may be taken up Thomsonganj. The summary position in respect of factory sugar traffic and the rates thereon is as follows :—

Stations from	*Tonnage Maunds*	*Rate per Maund*
		Rs. a. p.
Basti	1,945	0 6 8
Sardarnagar	1,000	0 7 4
Gauribazar	339	0 7 8
Bhatni	139	0 8 4
Mairwa	566	0 8 11
Pachrukhi	3,419	0 9 4
Tamkuhi Road	419	0 8 11
Padrauna	3,783	0 8 4
Lakshmiganj	395	0 7 11
Ghughli	1,071	0 8 0
Marhowrah	1,329	0 10 7
Chakia	1,275	0 12 5
Lohat Siding	1,448	0 13 2
Tara Sarai	1,196	0 12 11
Howrah	...	1 6 2

Basti, as the foregoing statement indicates, has the greatest advantage in respect of railway rates, and yet it is not able to make use of this advantage in supplying the market in question. This is probably due to the fact that the despatches from Basti are mostly directed to Cawnpore and via Barabanki, via Anwarganj, etc. Be that as it may, the despatches from Pachrukhi and Padrauna are larger, although the railway freight paid is higher. This market is also supplied by distant factory stations like Tara Sarai, Chakia, Marhowrah, and Lohat Siding. Needless to say that it savours of unhealthy internal competition for which rationalisation of distribution is the only efficacious remedy. Above all, it will be noted that the sugar factories have a freight advantage, which varies from Rs. 0-9-0 in the case of Lohat Siding to Rs. 0-15-6 in that of the Basti, as against imported sugar.

Another important station that may be taken up is Bahraich. The sugar supplies received from sugar factories and the railway rates paid thereon as also the rate paid on imported sugar are summarised in the table put in below :—

Mileage	*Station from*	*Tonnage maunds*	*Rate per maund*
			Rs. a. p.
93	Basti	601	0 4 3
145	Sardarnagar	649	0 6 1
154	Gauribazar	1	0 6 5
176	Bhatni	139	0 7 2
193	Mairwa	...	0 7 9
212	Pachrukhi	180	0 8 5
196	Tamkuhi Road	522	0 7 10
206	Savan	153	0 8 3
176	Padrauna	4,355	0 7 2
163	Lakshmiganj	6,059	0 6 8
166	Ghughli	448	0 6 10
344	Chakia	...	0 13 0
	Howrah	...	...

In this case also, the indications of internal competition are discernible, because the despatches of sugar from Basti, which has the greatest transport advantage, amount only to about 601 maunds, whereas from Padrauna and Lakshmiganj about 4 and 6 thousand maunds of sugar are shipped. A further point of note is a clear absence of shipments from Chakia, which shows that the market is not profitable due to very high railway rates, nearly treble of those from Basti. It follows therefore, that the widest marketable area for the Indian sugar factories is about 400

miles.[1] The above four illustrations, selected from the factory zone, and the sugar traffic carried from the different sugar factories demonstrate the transport advantage possessed by the internal sugar factories, as against imported sugar, and the part indigenous factory sugar plays in the supply of white sugar in this area. In the light of the statistics adverted to above, it would be no exaggeration to say that imported sugar does not find a market here, and if it does, the market must be very restricted and specialised. It should be noted that the 1st class rate on sugar quoted by the E. I. R. when the consignment travels over more than 600 miles, adversely affects the Indian white sugar industry by stimulating the penetration of imported sugar at reduced rates. It has often been suggested that the imported traffic does not need any such inducement in the form of reduced rates, and therefore, to help the deficit budgets and depleted railway finances these needless concessions must be the first to be removed.[2]

Before we close our review of the E. I. R. rates policy, it would be interesting to examine a few more typical markets like Cawnpore and Barabanki. These markets are important for several reasons. Cawnpore is recognised as the central sugar mart of the country. Being located in the centre of the United Provinces, which is also the premier sugar producing province, it is not surprising if Cawnpore has become the most important distributing centre of the indigenous as well as imported white sugar. It will

1. Mr. Dale's evidence before the T.B., as the Manager of Savan Refining Company, may be noted with interest in this connection. He says; "People who use sugar manufactured in India are not very keen on buying imported sugar because they think there is animal charcoal in it. They would rather buy gur, if the price of Indian made sugar goes up. *The imported sugar comes in generally when the mill sugar is over.* Take Savan or Pachruki for instance. While we have our sugar for sale there is no Java sugar coming into Savan. We keep our prices at the Calcutta rate plus freight and we sell as far as we can locally."
   Vide T. B. Evidence, Vol. II, P. 119.
2. It can hardly be doubted that the imported traffic in white sugar would continue unabated even after the concessions in question are withdrawn. Therefore the continuance of these needless concessions, in face of a surcharge of 15 per cent. on coal freights, refute the contention of the Railway Member advanced in support of his action, that "on this occasion circumstances left no alternative."
   Vide, Budget Speech of the Railway Member, 1932-33.

therefore be fruitful to examine the rates position of this centre. The statement submitted below shows the supply of sugar from some important sugar factories to Cawnpore and the rates charged thereto.

Station from	*Tonnage maunds*	*Rate per maund* Rs. a. p.	*Station from*	*Tonnage maunds*	*Rate per maund* Rs. a. p.
Basti ...	22,439	0 6 5	Padrauna ...	12,223	0 9 0
Sardarnagar ...	22,439	0 8 1	Lakshmiganj ...	20,658	0 8 8
Gauribazar ...	6,843	0 8 4	Ghughli ...	27,187	0 8 9
Bhatni ...	11,351	0 9 0	Marhowrah ...	7,781	0 1 2
Mairwa ...	664	0 9 5	Chakia ...	24,851	0 2 9
Savan ...	17,030	0 9 9	Lohat Siding ...	36,288	0 13 6
Pachrukhi ...	9,190	0 9 11	Tara Sarai ...	2,581	0 13 4
Tamkuhi Road ...	15,319	0 9 6	Howrah ...	—	1 4 8

The point to note is, as has already been referred to, that the freight advantage in the sale of their sugar, which the Indian factories have as against the imported article, varies with the distance between the factory and the consuming market[1], and the same conclusion is further re-inforced by the foregoing table, wherein, as in the case of the preceding ones, the quantity of sugar despatched and the railway rates charged are related to one another. There are other factories nearer Cawnpore, not included in the aforesaid table, which pay still lower rates.[2] In fact the success of the Refineries, in the vicinity of Cawnpore and Allahabad, is in no small measure due to the most extensive and reliable market that they have, in these cities, with the consequent advantage in transport charges. The general belief seems to be that the sugar factories supplying the Cawnpore market avail themselves to the full extent of the advantage due to the freight paid by the imported article from Howrah to Cawnpore. But this is not so[3], because the factories at Cawnpore or in the immediate neighbourhood, like the Unao Sugar Works at Unao, are unable to meet the total demand, and the imports are pouring from the distant factories, as has been shown in the preceding table. Besides, the traffic railed

1. Compare with the Indian Tariff Board Report on Sugar, 1931, Para 65.
2. Refer to the List of modern sugar factories and refineries working in India.
3. In this connection evidence of Mr. W. Sayer before the T. B. may be read with interest. Vide, Evidence Vol. II, p. 318.

from these factories to more distant markets via Cawnpore is considerable, and this obviously has to bear a higher freight, albeit, in the absence of requisite data, no precise estimate of the total charge can be attempted. In fact a good part of the total output of the Bihar sugar factories is consumed in the important towns of the United Provinces.[1] In view of this, the general freight advantage of the internal factories is substantially limited. We, therefore, agree with the finding of the Tariff Board that the freight advantage possessed by the average sugar factory in the white sugar tract is about four annas a maund.[2]

We may refer to another centre, Barabanki, which is not merely a good consuming market for Indian factory sugar, but, a junction through which large sugar traffic passes from the factories on the B. & N. W. R. to markets in the east of the Punjab and the western parts of the United Provinces.[3] In the following table an attempt is made to co-relate the quantity shipped from the different stations to and via Barabanki, and the railway rates charged.

Station from	*Tonnage to Maunds*	*Tonnage via Maunds*	*Rate per maund* Rs. a. p.
Basti ...	993	25,995	0 4 4
Sardarnagar ...	5,103	48,798	0 6 0
Gauribazar ...	525	14,306	0 6 3
Bhatni ...	1,608	16,124	0 7 0
Mairwa ...	504	6,840	0 7 6
Savan ...	417	26,519	0 8 0
Pachrukhi ...	1,207	13,440	0 8 1
Tamkuhi Road ...	4,837	61,697	0 7 7
Padrauna ...	5,736	36,185	0 7 0
Lakshmiganj ...	1,486	31,860	0 6 7
Ghughli ...	1,085	30,095	0 6 8
Marhowrah ...	808	28,341	0 9 6
Chakia ...	1,694	27,789	0 11 6
Lohat Siding ...	732	27 066	0 12 5
Tara Sarai ...	417	3,682	1 4 1
Howrah ...	...	...	...

In order to arrive at a clear idea of the transport advantage of the internal factories as against the imported sugar and the

1. See Tariff Board Evidence, Vol. I, p. 111, and 117.
2. Refer T. B. Report, Para 65.
3. Note that the markets of the Begg Sutherland group of factories extend up to the Eastern Punjab, Vide, T. B. Evidence, Vol. I, p. 104.

competition, it may be pointed out that even though Barabanki by itself is not a market where imported sugar competes keenly, partly because of the transport protection available to the indigenous article and partly due to other considerations which should not detain us for the present, its importance lies much more upon its being a transhipment station, through which heavy indigenous sugar traffic passes to other more important consuming markets. The point of note is that in the markets via Barabanki, distant despatching stations like Lohat Siding and Chakia have perforce to compete, notwithstanding the higher railway freight, because their local markets are limited in scope. When sugar goes up to the western parts of the United Provinces, transport protection against the imported sugar is increased, but the distant factories cannot avail themselves of this advantage. These are the facts which can be inferred from the above statement. In the western parts of the United Provinces and the Punjab, local factories or those in the vicinity have greater advantage.[1] To these markets, imported sugar has to pay Rs. 1-8-0 to Rs. 1-10-0 per maund by way of railway freight. Khandsari sugar, likewise, gets this natural transport protection. Some idea of the rates which Khandsari sugar has to pay can be had from the following figures.

Rates per Maund to Cawnpore[2]

Miles	*Station from*	*Rate*
		Rs. a. p.
148	Shahjahanpur	0 5 11
192	Bareilly	0 7 5
248	Moradabad	0 9 4
325	Bijnour	0 12 1

1. Rosa Sugar Factory is an instance. The markets of the factory are located within 200 miles from the factory so that the freights even to most distant markets are not more than Rs. 0-8-0 per maund, whereas the imported article has to pay from Rs. 1-6-0 to Rs. 1-12-0 per maund. Therefore the cost of transport is no drawback to marketing of the output.
   (Re. Letter from Messrs. Carew & Co., Ltd., Rosa, dated 11-11-31). See also Indian Tariff Board Evidence Vol. I., p. 165.
2. Vide, Government of the United Provinces' Reply to the T. B. Questionnaire, Evidence, Vol. I., p. 307.

CONCLUSIONS

Thus, the survey of the hinterland of the Calcutta port sufficiently emphasises the importance of internal sugar production and of railway transport in the distribution of total sugar requirements. The transport position from Calcutta to Delhi, as will be seen from the foregoing survey, varies from the standpoint of the home industry, from one of positive disadvantage in the former case, to that of very substantial advantage in the latter. The average transport advantage is reduced considerably, because in order to dispose of the total output, factories have to cater for distant markets. The situation is further aggravated by the overlapping of markets, and the consequent competition inter se of the internal factories. This latter phase of our industry needs a corrective, lest with the development of the productive capacity of the factories, and the establishment of new ones, the problem should assume serious proportions in the near future. In short, of the total sugar imported from Calcutta a substantial portion has hitherto been largely consumed in parts of Bengal and Orissa, as adverted to above, where the Indian factory sugar found it difficult to make its way. Further, due to inadequate output of our factories, the consumption of indigenous sugar was seasonal. With the rapid rise in the output in the recent years the problem has changed.

During recent years, there have been striking changes in the structure of the industry. The Sugar industry was offered protection in 1931, and since then, within a couple of years, it has undergone a metamorphosis, to the dismay of all those who had been hitherto prone to regard Indian capital and enterprise as proverbially shy and inefficient, and India from being an annual importer of sugar valued at about 20 crores of rupees, will soon have a surplus for export. Obviously, therefore, the nature of the transport problem has changed. The distribution of sugar portrayed in the preceding pages no longer holds good in all its details to-day; whereas imports have declined, the output of internal factories has substantially increased. Therefore, in most of the markets, where imported sugar had a monopolistic hold till 1932–33, to-day indigenous sugar has taken its place. The area within which imported sugar competes with the indigenous sugar is thus limited primarily to port towns and the districts in the vicinity. Besides, the localisation of the sugar factories in certain parts of the country has

added to the complexities of the marketing problem. The gravity of the situation has been realised alike by the sugar producers and the railway authorities. Therefore it does not come as a surprise to note a marked change in the rates policy, from one of deliberate fostering of imports to that of promoting the growth of the internal industry.

The E. I. R., realising the importance of the Calcutta market for indigenous sugar, has offered reduced station-to-station rates for sugar booked from more important sugar factories. This is a very desirable change in the rates policy which has materially helped the factories in capturing this important market. The nature of the reduction can be seen from the following table :—

Rates Per Maund to Howrah

Station from	Rs. a. p.	*Station from*	*Rate* Rs. a. p.
Ballia	0 12 10	Marhowrah	0 12 1
Basti	0 15 8	Muzaffarpur	0 11 0
Bhatni	0 13 6	Narkatiaganj	0 13 7
Champatia	0 13 4	Pachrukhi	0 12 7
Chakia	0 11 10	Padrauna	0 14 3
Gauribazar	0 14 1	Samastipur	0 9 11
Harinagar	0 13 10	Sardarnagar	0 14 4
Mairwa	0 13 1	Siswabazar	0 15 3

These are only a few of the more important stations from which reduced rates are available. The reduction is in fact substantial, and will help the movement of internal sugar traffic to Calcutta, where the competition of imported sugar is still very serious. But when it is recalled that the traffic moving from Howrah to internal centres is heavy, resulting in frequent shortage of wagons, the need for still lower rates on the return journey becomes obvious. Reduced rates to Howrah would attract better traffic from internal sugar factories and thus add to the railway receipts. It is hoped that the railway authorities would soon realise the necessity of a more forward policy in this direction in their own interest. Besides, reduced station-to-station rates on wagon loads should also be quoted to facilitate the movement of sugar traffic in bulk.

BOMBAY PORT

Bombay is the next port of importance. It has an extensive feeding area which adds to its prosperity, albeit of late Karachi and Kathiawar ports have attracted a portion of its traffic. The more important part of the hinterland includes Bombay Presidency (excluding Sind), C. P. and Berar, a part of the Nizam's Territory, and Central India. The importance of this port as a distributor of imported sugar can be easily gauged by the quantity and value of imports. The quantity of imports has risen from 183,054 tons in 1926-27, to 215,594 tons in 1929-30. Since, then however, there has been a steady decline both in quantity and value, due to the increase in the number and output of local sugar factories.

We shall, therefore, proceed to study the transport of sugar as it stood before the recent expansion commenced, and thereafter, point out the changes subsequently effected in the rate structure. In studying the distribution of sugar, the markets may conveniently be subdivided on the basis of railway lines serving them. In the study of sugar traffic during the year 1932-33 and before, one important point of note is that, unlike the Calcutta port, sugar imported through the Bombay port does not meet any serious competition with the internal sugar, except in the distant parts as will be seen presently. This is due to the complete absence of sugar factories in the presidency, with the single exception of the Belapur Factory.[1] This is due to causes other than the lack of acreage under sugarcane, because the existing acreage can feed several factories.[2] The most important cause which accounts for the present state of affairs is, in common with other provinces, that the bulk of the sugarcane produced is turned into gur, for which there has been a fair market in most years.[3] Therefore in studying the distribution of sugar these factors should constantly be kept in view.

In the absence of statistics of sugar traffic carried from either Bombay or Belapur on the G. I. P. to different consuming markets, it is difficult to make any precise estimate of the effects of railway rates charged on the movement of traffic. Therefore, in this case our discussion will be based mainly on the general tendencies which

1. See the Statement of the Government of Bombay to the T. B. and the Statement of the Belapur Company to the T. B. Evidence Vol. I.
2. See the Statement of "G"; T. B. Evidence Vol. I, p. 293.
3. Ibid; p. 266.

we have been able to gather from our study. The Belapur factory, be it noted, produces only 3 to 4 thousand tons of sugar annually[1], and therefore it can be safely said, in view of the huge imports of foreign sugar noted above, that the competition, if any, is confined to areas in the vicinity of the factory of about 150 miles. This does not mean that the marketing area of the Belapur factory is confined only within this area, but that, the imported sugar really feels the competitive force within that area, due to railway rates that the importer has to pay.[2] In more distant markets the consumption of Belapur sugar is not really competitive, but it is due to the preference shown by the consumer for Indian factory sugar. This is a most important fact in favour of the Indian sugar, and it is this factor which explains the presence of Bihar and U. P. sugar in the Bombay market. Preference based on patriotic motives has further helped to extend the marketing area of the Indian factories since 1930, and the consumers are willing to pay substantially higher prices for the indigenous product. These are, however, temporary factors, which cannot affect the more dominant trends in production and marketing, based on economic grounds, albeit they should be recorded.

THE RATES CHARGED BY THE G. I. P. RAILWAY

Fortunately, the G. I. P., unlike some of its other compeers, does not offer any needless and invidious concessions on the import traffic, and levies a charge at a uniform mileage rate, 2nd class railway risk, irrespective of the conditions of load, except to some competitive markets, where adjusted class rates or special station-to-station rates are quoted to meet mostly the port competition. This is the most welcome feature of the rates policy pursued by this railway. In the light of this fact, the special 1st class rates offered by the E. I. R., on the import traffic carried over 600 miles and more from Calcutta is certainly needless; this is particularly so because of the standing complaint of the Railways that the traffic passing from Calcutta to upcountry is heavy and the equipment

1. Vide, T. B. Evidence Vol. I, p. 68.
2. The principal markets of the factory are extended over the under mentioned area :—

   Nizam's Dominions, Indore State, Ahmednagar district, Nasik district, Poona district, Southern Maratha countries, East and West Khandesh, Nagpur, Bombay, Karnatak.

   Supra, p. 71.

insufficient. Let us, then, have a table portraying the rates charged on the G. I. P. from Bombay to the more important consuming centres. This will give us a clear idea as to the incidence of rates charged, the extent of the marketing area and the nature of internal as well as external competition.

Rates per maund on Sugar from Bombay

Miles	*Station to*	*Rate*	*Miles*	*Station to*	*Rate*
		Rs. a. p.			Rs. a. p.
119	Poona ...	0 5 2	520	Nagpur ...	1 3 2
283	Sholapur ...	0 10 11	464	Itarsi ...	1 1 3
310	Shahabad ...	0 13 11	616	Jubbulpore ...	1 6 7
443	Raichur ...	1 0 6	521	Bhopal ...	1 3 3
117	Nasik Road ...	0 5 1	635	Ujjain ...	1 2 4
162	Manmad ...	0 6 8	607	Bina ...	1 6 3
218	Ahmednagar ...	0 8 8	795	Kotah ...	1 6 0
204	Chalisgaon ...	0 8 2	702	Jhansi ...	1 7 9
232	Pachora ...	0 9 1	839	Cawnpore ...	1 8 6
261	Jalgaon ...	0 10 2	763	Gwalior ...	1 11 8
276	Bhusaval ...	0 10 8	804	Dholpur ...	1 13 2
353	Khandwa ...	0 13 4	838	Agra ...	1 11 9
363	Akola ...	0 13 8	868	Muttra ...	1 11 1
472	Wardha ...	1 1 6	957	Delhi ...	1 13 4

This table contains only class rates because, as has been referred to above, class rates are generally applicable on this railway. Special rates which are quoted to some markets will follow later. These rates have to be studied in parts. In Bombay City, imported sugar holds a virtual monopoly, because the Belapur factory has to pay Rs. 0-8-7 per maund by way of railway freight, whereas the imported article has to pay almost nothing. In some other markets like Nasik, Manmad, Chalisgaon, Pachore, Jalgaon, Bhusaval, etc., both imported and Belapur sugar is sold side by side, because the latter has an advantage in railway freight.

To some more distant markets, however, special station-to-station rates are quoted from Bombay and therefore the freight position works out as follows:—

Station to	*Miles*	*From Bombay*		*From Belapur*	
		Class Rate	*Special Rate (O.R.)*	*Miles*	*Rate*
		Rs. a. p.	Rs. a. p.		Rs. a. p.
Khandwa ...	353	0 13 4	0 12 11	246	0 9 7
Nagpur ...	520	1 3 2	1 0 0	413	0 15 5
Ujjain ...	635	1 2 4	1 1 1	527	1 3 5
Gwalior ...	763	1 11 8	1 10 10	655	1 7 11
Dholpur ...	804	1 13 2	1 9 7	696	1 9 4
Agra ...	838	1 11 9	1 8 0	730	1 10 7
Cawnpore ...	839	1 8 6	1 6 5	731	1 10 7

There are some very interesting trends of the rates policy and how it affects our trade and industries. The contrast between the class and special station-to-station rates from Bombay is interesting, and much more so when it is noted that most of the class rates are adjusted class rates. It will be seen that whereas to Agra, for 838 miles, the rate is Rs. 1-11-9 per maund, to Cawnpore for almost the same distance Rs. 1-8-6 is charged. This most obvious inconsistency is due to the competition of the E. I. R., or in other words port competition. The E. I. R. charges Rs. 1-9-2 and Rs. 1-4-8 per maund from Howrah to Agra and Cawnpore respectively. In order, therefore, to attract the traffic, passing from Calcutta port to these markets, to Bombay port, these apparently anomalous rates are quoted. These rates are further reduced as will be seen in the second column of special station-to-station rates. Again, the class rate from Bombay to Ujjain is lower than the rate from Bombay to Nagpur even though the distance is longer. This violation of the differential rule has been averted in the station-to-station rates, but the fact that lower rates are offered from the ports to some markets in order to meet the port competition stands out prominently. The rate to Ujjain is quoted to meet the competition of the B. B. & C. I. R., which finds it more economic to carry this traffic, Ujjain being only 466 miles from Bombay on this line, as compared with 635 miles on the G. I. P. R. Here, therefore, we have the instance of inter-railway competition. Needless to say that as a result of this competition, the penetration of imports is fostered and the internal traffic is handicapped, as will be seen by comparing column two and three. The Belapur Factory has to pay relatively higher freight. But given the railway system as it is, most of these anomalies will continue. A co-ordinated rates policy is the only remedy that can be suggested.

It will be seen from the forgoing review that the sugar traffic distributed from Bombay on the G. I. P. R. meets only with nominal competition in most of the markets, except in some distant centres. In this connection, the part played by the inter-railway competition has already been noted. Now we shall review the competition of Indian factory sugar from and via Cawnpore. The

statement below gives a succinct survey:—

Rates per maund from and via Cawnpore on the G. I. P. R.

Miles	*Station to*	*Rate*	*Miles*	*Station to*	*Rate*
		Rs. a. p.			Rs. a. p.
138	Jhansi ...	0 5 6	319	Bhopal ...	0 11 10
433	Ujjain ...	0 15 10	314	Jubbulpore ...	0 11 8
198	Gwalior ...	0 7 7	561	Nagpur ...	1 3 7
274	Agra ...	0 10 3	375	Itarsi ...	0 13 10
304	Muttra ...	0 8 9	233	Bina ...	0 8 10

This table has to be read with the Bombay rate table. We may, however, point out that of the rates contained in the foregoing table, the rates from Cawnpore to Agra and Muttra are cheaper on the B. B. & C. I., the distance being 258 and 219 miles respectively. Again, the route to Agra is shortest on the E. I. R., the distance being only 157 miles and therefore, the rate charged is Rs. 0-5-9 per maund at R. R. The rates contained in this statement have been particularly selected to show the transport advantage which Cawnpore has as a producer and distributor of sugar, and the marketable area which it can with advantage have under the present rates arrangement. Cawnpore sugar, as the statements given above bring out, can successfully compete with the imported sugar and can even go up to Nagpur. The protected area for the Cawnpore sugar extends to about 400 miles in the south. This is, however, true only of sugar manufactured in Cawnpore or in the immediate neighbourhood, because sugar from other factories which passes via Cawnpore has to pay higher freight. But let us not be understood to imply that Cawnpore sugar seriously competes with the imported sugar in the aforesaid area. In fact, Indian factory sugar, owing to the limited output, competes with the imported sugar only in the markets within about 200 miles of Cawnpore. Even this competition is only seasonal.

Thus, on the G. I. P., imported sugar meets nominal competition from the Indian factory sugar in some parts of the Deccan and in markets near Cawnpore, but taking the hinterland of the port as a whole it exercises a monopolistic sway, because the limited output of the indigenous sugar seriously handicaps its competitive capacity. Besides, in Southern India the comparative absence of sugar factories is a great disadvantage. In fact, in the total area surveyed above only one factory has been working, though recently a few more have commenced production.

The G. I. P. R., has also co-operated with other railways in offering reduced station-to-station rates from the more important sugar producing stations to Bombay, as will be seen from the following table :—

Stations	*Rate* Rs. a. p.	*Stations*	*Rate* Rs. a. p.
Ballia	1 2 7	Muzaffarpur	1 4 2
Basti	1 4 0	Narkatiaganj	1 5 4
Bhatni	1 2 10	Pachrukhi	1 3 4
Captainganj	1 3 9	Padrauna	1 4 0
Chakia	1 4 7	Ramkola	1 3 11
Champatia	1 5 2	Samastipur	1 4 7
Gauribazar	1 3 1	Sardarnagar	1 3 3
Ghughli	1 3 11	Siswa Bazar	1 4 0
Harinagar	1 5 5	Walterganj	1 4 0
Lakshmiganj	1 3 10	Cawnpore	0 14 0

The foregoing table shows only some of the centres from which the reduced rates are offered. The traffic from the factories in Northern India, including Bihar, is routed via Allahabad city and Naini, the share of the G. I. P. in the total charge being Re. 0-14-0 per maund. The E. I. R. share is 7 pies per maund, and the rest being of the B. & N. W. Railway. The action of the G. I. P. Railway is really commendable because, these reduced rates help the indigenous sugar in competing with the imported sugar in Bombay. The concession thus offered is very substantial, as will be evident if the class rates are taken into account, which operated before the aforesaid concession was offered. The rate from Cawnpore is equally interesting and the help it offers to the internal sugar industry becomes clear, when we note the rate from Bombay to Cawnpore which is Rs. 1-6-5 per maund.

Reduction in rates on the G. I. P. is not confined to traffic moving from the internal factories to ports, but station-to-station rates are also offered to consuming centres other than Bombay. For instance, from Cawnpore the following station-to-station rates are offered :—

Station to	*Rate per maund* Rs. a. p.	*Station to*	*Rate per maund* Rs. a. p.
Poona	1 3 2	Chalisgaon	1 6 2
Sholapur	1 9 11	Hisapur	1 6 0
Manmad	1 4 8	Dhulia	1 4 11
Ahmednagar	1 6 8	Yeotmal	1 8 4

It has already been pointed out that in the Bombay Presidency foreign sugar had a quasi-monopoly due to relative scarcity of indigenous factories, though since 1933 some factories have been built. The Belapur factory could cater only for a limited market. Even to-day the local factories cannot meet the total demand and therefore foreign sugar is imported. To replace these imports by indigenous sugar, the railway authorities have offered reduced rates from internal sugar factories to Bombay and other important towns. This is a very desirable change in the rates policy. It should further be noted that to the other ports as well, reduced rates are offered to help the movement of internal sugar traffic.

THE RATES CHARGED ON THE B. B. & C. I. RAILWAY

On the B. B. & C. I., imported sugar meets with still less competition. In fact, it would not be far from truth to say that there is no competition at all, except when the imported sugar goes to the United Provinces or the Punjab. This is so because there is no sugar factory at all in the area served by this railway. But it needs to be remembered in this case that most of the sugar imported into Gujarat and other important markets upcountry is obtained through the Kathiawar ports, which are more advantageously located in supplying these markets than Bombay. The class rates from Bombay to some important markets work out as under :—

Miles	*Station to*	*Rates per maund*	*Miles*	*Station to*	*Rates per maund*
		Rs. a. p.			Rs. a. p.
123	Bulsar	0 5 10	406	Ratlam	0 15 9
134	Bilimora	0 6 2	466	Ujjain	1 1 8
165	Surat	0 7 3	572	Kotah	1 5 4
147	Navasari	0 6 8	527	Marwar	1 1 2
202	Broach	0 8 7	524	Chitorgarh	1 3 10
246	Baroda	0 10 1	613	Ajmer	1 4 3
308	Ahmedabad	0 12 3	779	Agra Fort	1 12 3
312	Sabarmati	0 12 5	773	Muttra	1 12 5
348	Viramgam	0 13 8			

Sugar imported from Bombay port does not find it advantageous to go beyond Baroda, because the railway freight from Kathiawar Ports to these areas is cheaper. It may be pointed out that Belapur sugar also comes to Ahmedabad, Surat and Baroda, the rates charged being Rs. 1–2–6, Rs. 0–13–6, and Rs. 1–0–4 per maund respectively, but it cannot compete with the imported

sugar. This inability is due to higher railway rates charged from Belapur to these markets. Obviously, therefore, the more important markets are served by sugar imported from Kathiawar Ports. Here too, from the perusal of B. B. & C. I. Railway Goods Tariffs, it appears that, like the hinterland served by the G. I. P., the imported sugar is consumed largely in the area within about 500 miles of the port; and in this area the competition of the indigenous sugar is almost absent. Beyond this limit, sugar from the U. P. comes in competition. In order to have a clear idea of the relative transport position of the imported and indigenous sugar in the competitive markets, an attempt is made in the table submitted below to co-relate the two.

Stations to	*Rate from Bombay* Rs. a. p.	*Rate from Cawnpore* Rs. a. p.
Rutlam	0 15 8	0 12 7
Ujjain	1 1 8	0 12 8
Marwar	1 1 2	0 12 8
Chitorgarh	1 3 10	0 13 6
Ajmer	1 4 3	0 10 3
Agra Fort	1 12 3	0 3 8
Muttra	1 12 5	0 4 4

This is an interesting comparison. The rates in the first column are class rates, that is, for distances less than 600 miles, 2nd class rates are quoted at R. R. and for distances above 600 miles 1st class at O. R. But in the the first column, the rates given are station-to-station rates at O. R. So the rates show that in markets more distant from Bombay, like Agra and Muttra, indigenous sugar has a considerable freight advantage. Besides, as adverted to above, even for imported sugar to these markets, Bombay is not the natural port; Calcutta can serve better. In these cases the indigenous article has the advantage of about Rs. 1-8-0 per maund. This augurs well for the indigenous industry, for even though Indian sugar factories could not exploit this transport advantage to the full, with the development of productive capacity and addition in their numerical strength this advantage will act as a good safeguard. In other markets like Ajmer, Chitorgarh, Marwar, etc., too, indigenous sugar has transport advantage; albeit less than that in the case of Agra or Muttra. With the development of the Indian sugar industry, not only will this advantage be better utilised, but it will also be increased if

new factories nearer to the consuming markets are established. As the conditions stand at present, all these figures conclusively prove that Cawnpore sugar has transport advantage in its favour in all these upcountry markets, although the precise extent of the competition of the indigenous material is difficult to determine. Understood with these limitations, due to insufficiency of traffic statistics, the picture of the distribution of sugar depicted above gives us a good idea of the railway rates as affecting the distribution and consumption of sugar.

THE PRE-WAR AND CURRENT RATES ON THE B. B. & C. I. R. COMPARED

Before we pass on to discuss the distribution of sugar imported from Karachi it may be interesting to note the extent of increase in rates that has taken place since the war on the B. B. & C. I. We have here a few rates which give a rough idea of the extent of increase:—

Rates per Maund from Bombay

Miles	*Station to*	*1914*	*1917*	*1932*
		Rs. a. p.	Rs. a. p.	Rs. a. p.
165	Surat	0 4 3	0 5 1	0 7 3
246	Baroda	0 7 3	0 7 4	0 13 1
308	Ahmedabad	...	0 8 11	0 12 3
202	Broach	0 5 1	0 5 1	0 8 7

The increase in rates varies from station to station, for whereas in the case of Surat the increase has been about 80 per cent., in other cases it has been only about 50 per cent. This is not surprising, because there have been similar increases in the case of other industries as well. We have studied these increases in rates as affecting the industries selected for the present study at their proper places, and therefore there is hardly any necessity of repeating them here. But it may be pointed out that the increase of rates on the imported sugar is welcome in the interest of the indigenous industry.

One important feature of the rates policy in the pre-war era, which should not escape our attention, is that very low rates were offered on the imported sugar to distant markets. Here are a few rates in support of the above statement.

Rates per Maund from Bombay

Station to	*Rates in 1914*	
	Actual Weight	*Wagon loads*
	Rs. a. p.	Rs. a. p.
Agra Fort	0 15 0	0 13 10
Fatehpur Sikri	0 15 5	0 14 3
Muttra Junction	0 15 0	0 13 10
Hathras City	0 14 0	0 12 10
Cawnpore	0 14 6	0 13 7

These lower rates have fortunately been discontinued, and to-day substantially higher rates are applicable on the imported traffic. However, the blame for charging lower rates on the imported traffic during the pre-war era does not rest on the B. B. & C. I. alone, but it is shared by all the railways.

THE HINTERLAND OF KARACHI PORT

Having studied the hinterland of Calcutta and Bombay with special reference to the distribution of imported sugar, we may now pass on to review the imports of Karachi port, which has been showing remarkable development in the recent years, and promises to show further growth in future. Both its present position and future potentialities, make the study of this port and its hinterland interesting. Inland trade statistics show that the hinterland of the port extends from Sind to the Punjab, Baluchistan and Afghanistan. The exports from Karachi port to Bihar and Orissa, the U. P. and Rajputana are very low, and the causes which go to explain the situation are diverse. Bihar and Orissa are naturally outside the hinterland proper of the port, the heavy imports being primarily of coal traffic imported from Bihar. The low exports of the U. P. are explained by the fact that occupying a central position with railway connections, it is linked to all the three ports, Calcutta, Bombay and Karachi. The movements of traffic therefore, are divided between these ports, the substantial part of the trade being directed to Calcutta and Bombay. Karachi finds an outlet only for the parts on the extreme west, thanks to the direct metre guage connection between Agra and Hyderabad (Sind), via Kuchaman Road on the B. B. & C. I. and Jodhpur Railways. As for Rajputana, we have already seen that the southern parts find an easier access to Bombay, and therefore, only its northern regions deal with Karachi. Therefore, the hinterland

proper of the port include Sind, the Punjab, Baluchistan, Afghanistan, the Northern parts of Rajputana and the Western districts of U. P. We shall study the distribution of sugar to these parts only.

RATES FROM KARACHI

It has already been pointed out that the N. W. R. quotes special station-to-station rates on long distance traffic from Karachi to some consuming centres. In the absence of detailed statistics it is difficult to point out the importance of different consuming markets, and the precise effect of railway rates on the movement of traffic. It is, therefore, proposed to select a few of the more important towns and the rates charged thereto. The special station-to-station rates quoted at O. R., from Karachi to some important markets on the N. W. R., tabulated below, give an idea in broad outline of the area over which imported sugar enjoys special reduced rates.

Rates per Maund from Karachi, 1932

Miles	*Station to*	Rs.	a.	p.	*Miles*	*Station to*	Rs.	a.	p.
898	Saharanpur	1	9	0	907	Delhi	1	8	1
843	Ambala City	1	8	9	920	Ghaziabad	1	8	2
844	Sirhind	1	9	9	949	Meerut City	1	8	6
806	Ludhiana	1	9	3	934	Muzaffarnagar	1	6	11
814	Patiala	1	8	7	798	Nabha	1	8	6

The markets depicted in the foregoing table are scattered over a wide range of the hinterland, and consume white sugar in varying quantities. In Baluchistan and the North Western Frontier Provinces there are no sugar factories, and yet the nature of competition inter se of imported and indigenous sugar in these localities is essentially different. In Baluchistan imported sugar is largely consumed, because the indigenous sugar does not enter there, due, *inter alia*, to longer distance and consequent heavy transport costs. In certain parts of the N. W. F. Province, sugar from the Punjab and the western parts of the U. P. comes in competition with the imported sugar, but the position of the latter is fairly secure even in these markets. This is partly due to lower rates quoted by the N. W. R. for distances over 750 miles, as we shall presently point out. In the Punjab proper, however, the competition of Indian factory sugar is of some moment. But it should be noted that the production of factory sugar in the province proper is not

sufficiently large, although there are seven sugar factories.[1] The result is that white sugar from the U. P. is imported in addition to foreign sugar. Further, in the East Punjab and the western parts of the U.P. imported foreign sugar from Karachi port meets more severe competition, not merely with the Indian factory sugar, but also with sugar imported from Calcutta port. This fact is evident from the special station-to-station rates quoted from Karachi to some more important markets like Saharanpur, Meerut, Ghaziabad, Delhi etc., referred to in the preceding table. But in these markets Indian factory sugar has a distinct transport advantage.

A critical analysis of the rates in the foregoing table may now be attempted. One striking feature of the rates is that they are lower than the 1st class rates available for traffic booked from Karachi to markets located at a distance longer than 750 miles, as can be seen from the following statement :—

Station to	*Actual Rate*			*1st Class Rate*			*Station to*	*Actual Rate*			*1st Class Rate*		
	Rs.	a.	p.	Rs.	a.	p.		Rs.	a.	p.	Rs.	a.	p.
Saharanpur	1	9	0	1	10	6	Delhi	1	8	1	1	9	8
Ambala City	1	8	9	1	11	2	Ghaziabad	1	8	2	1	9	11
Sirhind	1	9	9	1	11	3	Meerut City	1	8	6	1	10	7
Ludhiana	1	9	3	1	10	0	Muzaffarnagar	1	6	11	1	11	7
Patiala	1	8	7	1	10	3	Nabha	1	8	6	1	9	9

The concession available is substantial, more so when it is recalled that for traffic over distance lower than 750 miles, second class rate is charged. Local sugar factories have therefore to pay second class rates. Besides, these rates are not determined purely by distance, for whereas to Ambala City, for a distance of 843 miles, Rs. 1-8-9 per maund are charged, the rate to Sirhind, for 844 miles, is Rs. 1-9-9, though the difference is only of one mile. The differential clause is however observed. But when we note the rate to Khanna which is Rs. 1-10-2 per maund for 833 miles, we find that the differential clause is not observed ; for the shorter distance the higher rate is charged.

Further, the rates quoted to Delhi, Ghaziabad, Meerut City and Muzaffarnagar are decidedly lower than those to other stations. This is obviously due to competition from Calcutta port. Another

1. Vide, Letter of the Government of Punjab to the Tariff Board, Evidence Vol. I., p. 378.

striking feature is that reduced station-to-station rates are not available to some of the most important centres like Peshawar City, Lahore, Jullunder City and Amritsar.

Reduced station-to-station rates are quoted from Karachi to important stations on the R. K. Railway, as will be seen from the following table :—

Rates per Maund from Karachi (in 1932)

Station to	Rs.	a.	p.	*Station to*	Rs.	a.	p.
Bareilly City	1	7	10	Haldwani	1	9	0
Bhojeepura	1	7	11	Hargaon	1	7	0
Carewganj	1	7	9	Lakhimpur Kheri	1	7	2
Chandni Chawki	1	9	2	Pilibhit	1	8	3

These rates are also due to port competition, but the relieving feature in this case is that similar rates are also available for traffic moving from these stations to Karachi.

CURRENT RATES COMPARED WITH THOSE OF 1917

The general level of rates may next be examined. We give below a comparative statement showing the rates in 1917, and the current ones, from Karachi to some more important consuming markets[1] :—

Miles	*Station to*	*Rates in 1917.* Rs.	a.	p.	*Rates in 1932.* Rs.	a.	p.
786	Amritsar	1	0	8	1	9	5
929	Multan	0	12	3	1	4	8
933	Muzaffarnagar	0	15	8	1	13	11
802	Jullunder City	1	1	1	1	9	11
299	Sukkur	0	6	6	0	11	0
755	Lahore	1	1	10	1	8	3
897	Saharanpur	0	15	5	1	9	0
843	Ambala City	1	0	4	1	7	8

There are some apparent anomalies in the foregoing rates. It will be seen that lower rates are quoted to Muzaffarnagar, Saharanpur and Ambala City than the rate charged to Amritsar, even though the distance is longer in the former cases. These disparities prevailed even before the war and are being continued to this day. But, as has been already noted, lower rates in question are quoted to meet the port competition. A still more striking fact to note is

1. Rates for 1917 are taken from Mr. S. C. Ghose's "Monograph on Indian Railway Rates," p. 417.

the increase in rates since the war. This increase is welcome so far as the imported traffic is concerned. But a similar increase on internal traffic is detrimental to the interests of the indigenous industry. The white sugar industry needs encouragement at the hands of the railways.

Since the recent expansion of the Indian sugar industry, the policy of the N. W. R. towards the local industry has also changed. Reduced station-to-station rates quoted on sugar from Karachi to stations on the R. K. Railway have been discontinued since 1934. This is a desirable change in the interests of the local factories, particularly those situated in the U. P. Further, station-to-station rates are quoted in co-operation with the E. I. R. from internal producing centres to Karachi, as will be seen from the following table :—

Rates per Maund to Karachi (1934–36)

Station from	*Rate*	*Share*	
		N. W.	*E. I.*
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Buxar	1 4 0	0 12 0	0 8 0
Naini	1 4 0	0 14 0	0 6 0
Sitapur City and Thomsonganj ...	1 4 0	0 14 0	0 6 0
Rosa	1 3 2	0 14 0	0 5 2
Shahjahanpur ...	1 2 6	0 14 0	0 4 6
Bareilly	1 0 8	0 14 0	0 2 8

These are only a few of the stations from which reduced rates are available. Station-to-station rates are also available from other important sugar factories. In the following table we give rates from some of the more important centres.

Rates per Maund to Karachi (1934–36)

Station from	*Rate*	*Station from*	*Rate*
	Rs. a. p		Rs. a. p.
Cawnpore ...	0 15 3	Majhowlia ...	1 6 10
Basti	1 3 3	Marhowrah ...	1 6 3
Bhatni ...	1 3 6	Narkatiaganj ...	1 6 8
Chakia ...	1 6 6	Pachrukhi ...	1 6 2
Gauribazar ...	1 4 9	Padrauna ...	1 5 6
Ghughli ...	1 5 0	Samastipur ...	1 6 6
Lohat Siding	1 6 10	Sardarnagar ...	1 4 4
Mairwa ...	1 5 9	Siswa Bazar ...	1 5 3

These reduced rates have substantially helped the movement of local sugar to Karachi and augur well for the future of the industry. With the rapid expansion of the factory production, the time is not far off when the local sugar manufacturers will have to find markets for their surplus produce outside India, and it is then that the significance of reduced rates to port towns will be increasingly realised.

The N. W. R. also quotes station-to-station rates from internal centres to important towns like Hyderabad, Sukkur, Larkana, Shikarpur, Quetta, Chaman, Dadu, Nawabshah, Amritsar, etc.

SUMMARY AND CONCLUSIONS

(1) The transport of white sugar, both imported and indigenous, has been surveyed with special reference to the three most important ports of India, typical of the whole country, and even though Madras and Rangoon have been left out, the conditions already detailed give us a fairly good idea of the rates policy with which we are primarily concerned for the present. The transport facilities available to Indian white sugar factories, especially those in Bihar and the U. P. in marketing their white sugar, have been examined in detail and the nature and extent of competition with imported sugar reviewed, particularly as it existed during and before the year 1932–33. The co-relation between the rates charged and the traffic carried has enabled us to attempt some broad demarcation of the area, within which Indian factories enjoy transport protection, apart from the fiscal protection against the importers. It has been pointed out with the aid of statistics that Indian factories can compete with advantage in Bihar, the U. P., and the Eastern Punjab, thanks to their location, distant from the ports. This transport protection arising from advantageous location could not be fully exploited by the factories in the past, due to their inadequate output, with the result that their hold on the markets in the protected areas was at best only seasonal. In other parts of the country, imported sugar, till 1932–33 held complete way, and more so in the port towns which are by far the most important consumers of white sugar in this country. With the recent expansion in the number and output of sugar factories, imports have dwindled due to the heavy protective tariff, and the hold of the Indian factories over the internal market

has considerably increased; but in the port towns and markets in the vicinity imports continue to compete even now.

(2) The review of rates policy has brought to relief several striking features. One fact which stands out and may be subjected to strong comment is the policy of the E. I. R., in quoting lower rates on traffic shipped from Howrah to up-country over distances of more than 600 miles, on actual weight. In addition, special station-to-station rates are quoted to some markets both on actual weight and wagon loads. This, as has been pointed out, is common with the B. B. and C. I. and N. W. Railways as well, and therefore this defect in rates policy is not peculiar to this line. But the E. I. R. is more to blame because the traffic moving from Howrah to up-country centres is already very heavy, and complaints for shortage of wagon supplies are common. Besides, the imported traffic in sugar does not need any such protection, and would continue to flow in even after the concession in rates is withdrawn. This means a needless loss in railway revenues. Fortunately, however, the E. I. R. has since about 1934 withdrawn the reduced station-to-station rates on actual weight hitherto available, for traffic moving from Howrah. But station-to-station rates on wagon loads are still available. These must also be discontinued.

(3) An inportant fact to note is the lack of a central marketing organisation for sugar manufactured in factories which entails considerable waste in transport costs, resulting from the overlapping of the marketing area. This is, indeed, a very serious drawback in the organisation of the Indian sugar industry and no reduction in railway rates, however well-meant and far-reaching, would be able to improve the condition of the industry, until marketing arrangements are improved.

CHAPTER VII

WHEAT AND WHEAT-FLOUR

WHEAT PRODUCTION IN INDIA

The wheat growing area in India embraces the whole of Northern India down to the Gangetic delta and the greater part of the Central plateau near the Ghats. The crop is not cultivated at all in the Bombay Konkan, or in the Central districts on both sides of the Bay of Bengal, while in Assam and in Burma wheat is of very little importance. The wheat crop is however well-distributed; the North-West is a great wheat-growing tract; nearly 70 per cent. of the total crop of the country is harvested in the Punjab and the United Provinces. During the last decade the acreage under wheat in the more important wheat areas of the country has been fairly constant, and the increase, if any, has been very slight. In the Punjab, the area under wheat is about 11 million acres. In the U. P. the area is about 7 million acres, and in the C.P. and Berar, a little over 3 million acres. The total increase in the acreage has been about 2 million acres during the last decade, from 30 million acres in 1920 to 32 million acres in 1931. This increase fades into insignificance when compared with the increase in Canada from 18 million acres to 26 million acres, in Argentina from 13 million acres to 17 million acres, and in Australia from 9 million acres to 14 million acres, during the same period. Another important feature to note about the acreage under wheat is that the Punjab, the U.P. and the C.P. and Berar are the most important wheat producing areas in the country. This is of special interest for the study of transport, because it shows that if wheat produced in these three provinces and its distribution is studied, it would give a fair idea of the general distribution of wheat in the country.

The production of wheat in the more important wheat producing countries of the world has been multiplying fast, so that the world to-day is suffering from over-production of wheat relative to the demand; there has been both an absolute and relative increase in the output. Therefore, it is natural to enquire of the part played by India in this situation, because the annual Indian crop is larger

than that of either Canada, Argentina, or Australia. Production in India, except in the year 1921 and 1928, when the harvests were poor, has fluctuated during this decade within ten per cent., as can be seen from the figures of wheat production.

RELATIVE SIGNIFICANCE OF EXPORTS

In India, therefore, the increase in wheat production has been almost insignificant. The contrast between India and other wheat producing countries becomes still more vivid, when it is recollected that the total production has increased in the United States from 833 million bushels in 1920, to 892 million bushels in 1931, in Canada from 263 million bushels to 298 million bushels, in Argentina from 156 million bushels to 218 million bushels, and in Australia from 146 million bushels to 170 million bushels. Besides, in India, apart from the variations in area and yield, most of the wheat grown is consumed within the country and only a very small part is available for export. Further, the exports of Indian wheat during this decade have dwindled, due to great demand within the country. The contribution of India, therefore, in the acute world wide depression in wheat prices has been, if any, very humble because she has not appeared in the world market with huge stocks for sale.

WORLD SUPPLY REGULATES THE PRICE OF INDIAN WHEAT

The price of Indian wheat is determined not by the quantity produced in the country but by the world-production. In this connection it is instructive to note the remark of Mr. Dutta in his Enquiry on the Rise of Prices in India. He says, "apart from internal conditions affecting the supply, the exports are subject to violent fluctuations arising out of the variations in the supply in other countries. In one year the demand will be very large, and, even if the Indian harvest is abundant, prices will rise; in the following year, the foreign demand may be largely reduced owing to abundant supplies from Russia, and United States, and other exporting countries, and, even if the harvest in India is deficient, prices might fall. The European demand, therefore, exercises a very important influence on the price of Indian wheat".[1] These remarks made by Mr. Dutta in 1915 are as

1. Vide Report.

true to-day as they were then. The tendency has gathered increased force with the rapid development of efficient and economic transport facilities, the machanisation in agriculture and the consequent lower costs of production. The continuous economy in the means of production, which is the marked characteristic of the modern mass production, has considerably widened the marketing area of the more important exporting countries, and therefore, it is not surprising, if with the help of well-organised marketing agencies they are able to capture even the most distant markets. It has become a common sight—and significant enough—to note Australian wheat being sold at Bombay, even though in India the total acreage under wheat as well as its output is higher than that of Australia. To-day, therefore, we may go a step further and say that the foreign demand for, as well as supply of wheat exercise a very important influence on the prices of Indian wheat. This influence is exerted not merely on the export traffic, and thus through the export traffic only indirectly on the internal traffic, but the possibility and even the actual imports of foreign wheat also regulate directly the course of wheat prices in this country. The competition of the imported traffic within the country, however, is limited by the railway freight from the port towns to the up-country markets, and this forms a very strong barrier in normal times, against the dumping of foreign surplus wheat.

The foregoing discussion leads us to the conclusion that internal trade in wheat is more important to India. We therefore proceed to examine the problem of transport of wheat and the freight charged thereon. The marketing of wheat, as of other cereals, in India, has its own peculiarities. They are due to the nature of the wheat crop and the economic conditions of the cultivators.

MARKETING PECULIARITIES STATED

Let us examine these peculiarities seriatim. The Indian wheat crop is harvested by the end of April and is immediately brought to the market for sale. The time element between harvesting and marketing is a very important factor in determining prices. But before dwelling on this point it is better to take stock of the whole process. The small cultivators immediately bring their crop to market for sale, leaving a small portion with them for consumption. In some cases they sell their produce just

on the field, after harvesting, to the village grain merchant or the money-lender. The cultivators who are a little better off, market as a rule only a small portion of their produce, and that too because of the land revenue demand and water and other taxes. In short, the larger share of the wheat produced is on the market, immediately after harvest. This fact is of great significance. The time when wheat produced in other important wheat producing countries is put on the world market, happens to differ from the Indian season, and the harvesting season in India synchronises with the shortage of wheat stock on the world market. This stimulates exports from India, because due to the shortage of wheat supplies during this season, importers willingly pay a slightly higher price. "The period when there is least wheat available in Europe is during the months of June, July and August and therefore the prices then rule high, so that the importer instructs his agents in India who are the exporters, to buy certain quantities of wheat at certain prices, and it is this state of affairs that makes the exporter in India so anxious to obtain his wheat in time to ship it during the months of May, June and July; in fact he obtains a somewhat higher price for the May shipment than he does for the June shipment, and again the June price is slightly higher than July; after that prices become more even. It was stated to the Committee that as the exporter can afford to pay for the above three months' shipment, he can in turn afford and does pay a higher price to the owner up-country in India for deliveries in these months".[1] It is very doubtful as to whether the actual producers of wheat get any share in these higher prices, except that under economic pressure they are reluctantly made to part with their produce.

Economic conditions of the primary producers of wheat are such that they have scarcely any waiting capacity, and therefore they have no opportunity for demanding a higher price for their produce. Far from sharing in the higher prices, alluded to in the preceding paragraph, the cultivators are forced to put their produce on the market at a time when the market is glutted and therefore low prices prevail. This is especially true of wheat crop which is, being a money crop, cultivated primarily for defraying

1. From the extract quoted by Mr. S. C. Ghose, "Monograph on Railway Rates," pp. 298-99.

taxes and other expenses. Between May and July prices of grains in the local markets are generally low, and the chances of the cultivators taking advantage of the higher prices offered by the exporters are ipso facto nil.

RAILWAY TRAFFIC ANALYSED

This brings us to the examination of wheat traffic carried by different railways. In the absence of detailed statistics of river and rail-borne traffic, we have to make most of the statistics of aggregate wheat traffic carried by the railways. The following are the more important railways which carry wheat traffic[1]:—

Name	*Tonnage*	*Earnings* (lakhs of Rs.)
N. W. Railway	1,245	134·5
E. I. Railway	386	43·5
B. B. & C. I. Railway	277	32·2
G. I. P. Railway	217	25·1
B. N. Railway	80	9·6
Grand total	2,582	269·0

About 50 per cent. of the total wheat traffic is thus carried by the N. W. Railway alone, because it serves the most important wheat growing areas of the Punjab, and also carries the traffic from some important tracts in the United Provinces. It also shares its wheat traffic with the E. I., the G. I. P., and the B. B. and C. I. Railways. The greater portion of this traffic flows towards the ports, partly for export and partly for local consumption. Flour mills at these ports also consume an appreciable share of wheat imported from up-country centres, part of which is exported in the form of flour to foreign countries and part to upcountry markets.

The location of flour mills at the port towns or in their vicinity, the transport of wheat from the up-country producing centres to the ports, and the re-transport of wheat from these centres to upcountry markets sounds paradoxical. But this paradox is easily explained. Prices of Indian wheat being determined by the world market, irrespective of the nature of the season within the country, the port towns have become very important centres of wheat trade. The prices ruling in the internal wheat 'Mundies' are closely linked with the quotations of the port towns, and they in turn are affected by the conditions of world trade. It would

1. Compiled from the Report of Railway Board : 1930–31 ; Vol. II. p. 164.

indeed be difficult to point out the extent to which the internal prices are influenced by the quotations in the port towns, but it can be safely said that internal prices, port quotations, and the prices ruling in the world market are closely linked together, the difference being only of the transport costs. Therefore, the prices ruling in the internal markets during the harvesting season, are generally lower than those either at the port or in the world market.[1] The advantage of these lower prices can be better availed of by the flour mills centred near the wheat growing tracts like Amritsar, Ambala, Delhi, Cawnpore, etc., and they have in respect of the supplies of their raw materials a relative advantage over the mills at the ports.

But with this must be reckoned several other factors no less important. Port towns being more important collecting centres, a better and regular supply of wheat is assured to the local mills at even prices throughout the year. An adequate and a regular supply of the raw materials, at steady prices, is a great asset to the industry, and this is better assured to the mills at the ports than to those at the upcountry centres. The prices at the internal centres are undoubtedly lower from May to August, when the fresh supplies of wheat are available, but thereafter, the prices take an upward trend. This necessitates the storing of the wheat supplies by the mills, adequate enough for the season, or else they have to resort to hedging, the latter being more convenient in the port towns.

To these must be added better railway facilities to the ports. Although the total freight to the ports is generally higher than that enjoyed by the internal mills, this advantage is partly neutralised, as we shall see at a later stage. Besides, the marketing facilities are also different in the two cases. Mills at the ports have a considerable advantage in marketing. Firstly, the greater part of the total output of the mills is consumed in the town itself and its suburbs; secondly, flour can be easily exported to foreign countries from the ports; and thirdly, due to economies resulting from a large turn-over and higher prices realised in the local market, the surplus can with the help of relatively cheap railway rates from the ports, be profitably despatched to the internal centres of consumption.

1. Sir James Wilson has made very interesting calculations on this point, in his Memorandum referred to by S. C. Ghose, "Monograph," pp. 304–05.

The port towns constitute great 'Mundies' of wheat trade, both for export and internal consumption. The N. W. Railway serves primarily the Karachi port, although some wheat supplies originating on its line are also despatched to Calcutta and Bombay. Mr. Ghose found that of the total traffic on the N. W. Railway, of about 351 lakhs of maunds, in 1911, about 306 lakhs of maunds was booked to Karachi alone.[1] This shows the predominance of Karachi in attracting supplies of wheat from the internal centres. Similar statistics for the current year are not available, but the aforesaid estimate can be safely taken to be true of the general trend of traffic even at present.

RAILWAY CLASSIFICATION

Wheat in the Indian Railways, General Classification of Goods, is classed as grains and pulses, which includes Bajree, Barley, Beans-parched, Black gram, Dhal, Gram, Jowari, Maize, Moong, Mussoor, Mutt, Oats, Rice, Toor, Wheat, etc., at first class railway risk. In actual practice, however, railways quote special schedule rates. The N. W. Railway quotes C/B schedule for distances less than 233 miles, the basis of charge being 0·333 pie per maund per mile. On distance of 233 miles C/K telescopic schedule rate is charged. This basis of charge is as follows :—

	Pie per maund per mile
1 to 150 miles	·380
Plus 151 to 250 miles	·250
,, 251 to 400 ,, ...	·125
,, above 400 miles	·115

The E. I. Railway, similarly, charges over distances less than 101 miles at C/B schedule rate, the basis of charge being 0·333 pie per maund per mile ; and for distances above 101 miles at C/M telescopic schedule rate with the following basis :—

	Pie per maund per mile
1 to 150 miles	0·380
Plus 151 to 250 ,, ...	0·333
,, 251 to 500 ,, ...	0·200
,, 501 to 700 ,, ...	0·130
,, above 700 miles	0·100

1. Vide, "Monograph on Railway Rates," p. 310.

The B. B. & C. I. Railway charges the schedule rates similar to those on the G. I. P. Railway. These schedule rates constitute the basis of actual rates charged on the traffic. Therefore a detailed analysis is essential for appraising the effect of railway rates on the movement of traffic from the producing centres to consuming markets.

RATES ON THE N. W. R. CURRENT RATES

The more important wheat despatching stations on the N. W. R. and the rates per maund charged from them to Karachi during the year 1932 are given below:—

Mileage	*Station*	*Rate* a.	p.	*Mileage*	*Station*	*Rate* a.	p.
949	Meerut City	11	7	576	Multan City	10	7
934	Muzaffaranagar	11	4	685	Lyallpur	11	8
898	Saharanpur	11	1	299	Sukkur	7	10
843	Ambala	12	7	711	Sangla Hill	11	11
806	Ludhiana	12	9	721	Sargodha	12	0
802	Jullunder City	12	9	653	Gojra	11	4
788	Amritsar	12	7	727	Ferozepur	11	4
755	Lahore	12	4				

This being a long distance traffic the rates per mile are lower than those charged on the internal traffic. Here an interesting question arises as to whether these rates help the flow of traffic to ports, and thereby enable Indian wheat to regain the foreign markets it has lost. Before the war, India was the most important supplier to Great Britain[1], more than 60 per cent. of the annual exports were consigned to U. K. While the pre-war average of exports to U. K. was 985, it fell to 76 in 1928–29.[2] This loss in trade is due to the competition from other important wheat growing countries, like the United States, Canada, Argentine, Australia and Russia. These important wheat growing countries have increased their area under wheat crop ; their yield per acre is larger and they have lowered their cost of production by mechanisation of agriculture[3] and improved marketing arrangements.[4] Marketing Pools of Wheat Growers, which have

1. Vide, Dutta's Report on the "Rise of Prices in India," and Prof. C. N. Vakil's "Trade and Industry in Modern India."
2. Prof. Vakil's "Trade and Industry in Modern India."
3. Vide Report of the Imperial Economic Committee, Paras, 99-115.
4. Supra, Paras, 131-148.

been formed in the important wheat growing countries, are in a stronger position in negotiating with the carriers and purchasers alike. To these measures should be added the state help which these institutions get. In their zeal to improve the technique of production and the yield, cultivation was pushed on, unmindful of the demand, and the result was that demand could not keep pace with this growth in production, and therefore, the world wheat market began to suffer from over-production. In India, however, improvements in the technique of production have been very slow and therefore it is no wonder that she was unable to keep her hold over the British market. To this relatively higher cost of production in India should be added the increased demand for interal consumption, although it has till recently been a very minor cause. India's position, therefore, as an exporter of wheat has weakened considerably.

In view of the conditions in the world market, Indian wheat will find it increasingly difficult in future to face the competition in foreign markets. This is so because whereas in the foreign countries the cost of production has already fallen considerably and is still falling further, in India the situation is not very favourable to any such change. It is beyond the scope of the present thesis to dwell upon other factors affecting the cost of production. In the years immediately after the Great War rates were raised, and these are being continued in spite of the steep fall in prices. It need not be mentioned that the increase of railway transport charge is a very important item in the selling prices of a commodity like wheat, and more so when the length of haul ranges from 500 to 800 miles, as will be seen from the rates referred to in the preceding paragraph. It is needless to emphasise that railway rates on wheat deserve serious consideration at the hands of the railway authorities, because they undoubtedly restrict the flow of traffic. It may be contended on behalf of the railways, that when the cost of production of wheat in India has not been able to keep pace with that of the foreign producers, even if the railway rates were reduced, Indian wheat would not be able to stand foreign competition. This argument has considerable truth and calls for further consideration.

Railway rates should be so framed as to help the growth of traffic, and this can be only known by observing the effects of rates on the flow of traffic. It is clear that since wheat prices

have fallen, the incidence of railway rates has become heavier. Public opinion, however, does not look with disfavour at these rates, because they exercise a restrictive influence against the outward flow of wheat traffic. There is a growing sense of public opinion in favour of conserving India's food supplies for her own people, and the railway rates seem to help this process. Without entering into the controversy, it can be plausibly argued that these high rates restrict the flow of wheat traffic both to the ports and the internal consuming centres, particularly the latter. Wheat being a necessity of life, having an inelastic demand, a higher transport charge becomes a tax upon the community, with hardly any substantial diminution in the volume of traffic. In the case of traffic of this kind, if the reduced rates, attract a larger traffic, with less than proportionate increase in total receipts they should be maintained. The capacity to bear the transport charge is strictly limited in the case of such articles. Similarly, the possibility of increase in the volume of traffic in response to reduction in rates is limited, except in the case of export traffic. The task of the traffic manager is therefore extremely delicate and difficult.

The incidence of the current rates on the flow of traffic may be better understood by comparing them with the pre-war rates. The statement submitted below shows the rates to Karachi in a pre-war year, in a war-year and a recent year :—

Distance	*Station*	*Rates per maund*		
		1912	*1917*	*1932*
		a. p.	a. p.	a. p.
949	Meerut City	8 1	9 9	11 7
934	Muzaffarnagar	7 10	10 0	11 4
898	Saharanpur	7 6	9 10	11 1
843	Ambala	8 1	10 3	12 7
806	Ludhiana	9 8	10 10	12 9
802	Jullunder City	10 4	11 3	12 9
788	Amritsar	10 6	11 6	12 7
755	Lahore	10 0	11 2	12 3
575	Multan City	7 6	9 3	10 7
685	Lyallpur	9 3	10 5	11 8
299	Sukkur	4 6	5 10	7 10
721	Sargodha	9 9	10 10	12 0
711	Sangla Hill	9 6	10 8	11 11
653	Gojra	8 9	10 1	11 4
727	Ferozepur	9 0	10 3	12 0

The foregoing rates throw good light on the nature of the rates policy. Let us analyse the rates in 1912. Whereas the rate from Meerut City was annas 8–1 for a distance of 949 miles, from Amritsar annas 10–6 were charged for 788 miles. It appears, however, that lower rates were quoted from Meerut, Muzaffarnagar and Saharanpur to meet the competition from the E. I. R. to Calcutta. But when we push our analysis further, even the local rates show a preferential tone. For instance, from Ambala, for 843 miles, the rate was annas 8–1, from Ludhiana, for a shorter distance of 806 miles the rate was annas 9–8, and from Jullunder and Amritsar for still shorter hauls the rate was higher. This was due to the competition of the E. I. R. These lower rates on the competitive traffic helped the export of wheat, but the result of this competition was that rates on non-competitive traffic had to be raised, and thus, whereas the traffic from some centres was given stimulus, that from others received a setback. This was not in the interests of the community. Besides, the difference in rates was appreciable, and therefore the consequences were more mischievous. The rate, for instance, from Saharanpur for 898 miles was annas 7–6, and from Amritsar for 788 miles, the rate was annas 10–6, the difference being of as. 3 per maund irrespective of the longer length of haul. Saharanpur, therefore, due to its location on the junction of the E. I. and N. W. Railways was able to procure this preferential treatment in relation to a centre like Amritsar, notwithstanding the longer distance over which the traffic had to travel, the distance to Karachi and Calcutta being 898 and 938 miles respectively. Thus, even though Amritsar is located nearer to Karachi port it had to pay higher freight charge. Here the N. W. R. might argue that if they had not quoted lower rates from these competitive points, the traffic would have passed on to the E. I. R. This additional traffic carried at lower rates helped to lower the rates on the non-competitive points. This brings out the evils of competition. Saharanpur being nearer to Karachi than to Calcutta, the N. W. R. had every justification in keeping the traffic on its own line and preventing it from going to the rival line, and if lower rates were quoted they had enough justification. But from the nature of reduction offered, it becomes clear that the competition between the two lines must have been intense. Competition in itself is not bad, per contra, it is a motive power of an economic society in its dynamic state; but when

carried too far, it creates unhealthy economic conditions, by diverting the distribution of trade and industries into artificial channels, and checking thereby the growth of a sound and healthy industrial system. It need hardly be gainsaid that the competition was unhealthy, for while it gave an undue stimulus to a part of the traffic, the rest received a serious setback.

The current rates have one most important relieving feature, in as much as the unhealthy competition adverted to in the preceding paragraph has been checked. For instance, the difference in the rates charged from Saharanpur and Amritsar has been reduced from as. 3 to as. 1–6. But, here again, is broached another question of principle. Since both the N. W. and the E. I. Railways are State-owned and State-managed, it is questionable whether the competition should be permitted to continue. Both these railways form part of a single system, and therefore competition between them should not be permitted. It should be the task of the Railway Board to so regulate the movement of traffic at these competitive points, as to eliminate this unhealthy competition, and direct the flow of traffic to the line where the cost of transport is relatively lower. This would eliminate the waste of transport costs, which unregulated competition entails, and thereby afford a much needed relief to the non-competitive traffic.

Secondly, the current rates are maintained at a comparatively higher level than the pre-war rates, notwithstanding the fall in prices. Wheat prices in India have fallen to the pre-war level, but the level of rates which was fixed in 1921, the days of phenomenal rise of prices, is being kept up to this day undisturbed. In consequence, the incidence of railway freight has become heavier.

THE HIGHER INCIDENCE OF RATES ON INTERNAL TRAFFIC

Further, the rates quoted in the preceding table are generally for long distance traffic, and therefore relatively lower, because they are based on the telescopic schedule. At the same time the distance traversed is on a single system. But the internal traffic, in the first place, does not move over such long distances, and secondly, even when it moves over long distances, it generally passes over more than one line, and therefore, the incidence of freight charge becomes still heavier. Let us illustrate the point. Suppose, for instance, wheat from Jullunder, Ludhiana and Ambala is required for local consumption at Cawnpore, Agra or Allahabad. Here the

traffic has to pass over more than one line and although the system is the same, because all the railways concerned are State-owned and State-managed, the telescopic rates levied are calculated not on the basis of the total distance travelled, but on that of the individual lines separately. The result is that the incidence of rates is raised on the internal traffic.

The evil effects of working the railway lines on an individualistic basis, and the higher incidence of rates which the internal traffic has to bear becomes still more conspicuous, when the telescopic basis of rates is taken into consideration. The telescopic rates are higher per mile on a shorter length of haul. Thus, for instance, the rate from Sukkur to Karachi, for 299 miles, is as. 7–10, whereas from Ambala to Karachi, for 843 miles, the rate is as. 12–7. The table submitted below shows the nature of railway freight charged on local traffic in 1913 and 1932.

From	*To*															
	Ambala				*Patiala*				*Shahdhra*				*Shikarpur*			
	1913–1932				*1913–1932*				*1913–1932*				*1913–1932*			
	a.	p.	a.	p.	a.	p.	a.	p.	a.	p.	a.	p.	a.	p.	a.	p.
Jaranwala	5	2	7	5	5	1	7	4	1	7	2	6	7	10	9	3
Sangla Hill	5	0	7	4	5	0	7	3	1	5	2	4	7	11	9	4
Okara	4	10	7	1	4	10	7	0	2	1	2	11	7	5	9	0
Khanna	1	2	2	0	1	2	1	11	3	4	4	7	9	2	10	6

The increase in rates differs with the distance travelled; the percentage increase is higher for lower distances. For instance, the rate from Jaranwala to Ambala has been raised from as. 5–2 in 1913, to as 7–5 in the current year, the increase being of about 43 per cent. Similarly, from Sangla Hill, Okara and Khanna to Ambala, the increase effected is about 46, 47 and 71 per cent respectively. Thus, from Khanna to Ambala for a lower distance, the increase has been about 70 per cent. Rates to other centres have also been raised on a similar scale. The average increase seems to be about 50 per cent.

The incidence of increase in rates indicated in the preceding paragraph is about the local traffic. When, however, through rates are taken into consideration, the incidence becomes still heavier, due to the higher charge per mile for a lower distance, and the individualistic rating policy pursued by the railways.

It should, however, be noted that in response to the general pressure of public opinion, the railway authorities introduced

reduced rates on wheat traffic, moving from the internal growing centres to Karachi, on the N. W. R., as an experimental measure, during the year 1931–32. These rates were applicable for a distance of 600 miles and over. From May 15th to June 19th 1931, C/P schedule rates were quoted. A further reduction was thereafter made, so that from June 20th to September 14th 1931, we find C/R schedule rate in operation. The nature of the reduction can be seen from the undermentioned table.

Rates per Maund per Mile to Karachi[1]

Station from	*Ordinary Rates* CB/CK schedule	*Reduced Rates* C/P schedule	*Reduced Rates* C/R schedule
Lyallpur	0 11 8	0 8 5	0 6 10
Toba Tek Singh	0 11 2	0 8 0	0 6 4
Okara	0 11 6	0 8 4	0 6 9
Montgomery	0 11 4	0 8 2	0 6 6
Mian Channun	0 10 10	0 7 9	0 6 1
Kharewal	0 10 7	0 7 9	0 6 1

From the foregoing table it will be seen that the railway authorities offered substantial reductions in rates with a view to help the movement of wheat to Karachi, but the traffic booked during the period concession rates were in force, showed no response to the inducement offered. Per contra, the traffic booked was less than that for the corresponding period of the preceding year and the earnings received a serious set back. The volume of traffic fell from 2·64 lakhs of tons to 2·61 lakhs of tons, and the earnings from Rs. 5·18 lakhs to Rs. 31·31 lakhs. The concession was therefore withdrawn.

The efforts of the N. W. R. in trying this experiment is indeed commendable and one feels that the duration ought to have been extended, as there was only a slight fall in the volume of traffic. Looking to the peculiar economic conditions when the experiment was tried, the results do not seem to be so disappointing. Besides, the period during which the experiment was tried was rather short. The response of traffic to the stimulus of reduced rates, particularly when the demand for the article is inelastic, takes a relatively long time.

There is a greater need for such an experiment in the direction of stimulating internal traffic, which has to pay rates higher than

1. The information was supplied by the Agent N. W. Rly.

those paid by the port traffic. This would substantially help the flour-milling industry.

Out of the total wheat traffic of about 4 lakhs of tons booked on the E. I. R. in 1911, about 3·2 lakhs of tons were consigned to Howrah and Khidderpore Docks[1], part for local consumption and part for export. The greater portion of wheat received at Howrah is consumed locally, while that at the Khiddepore Docks is primarily meant for export. It should be noted at this stage that wheat traffic on the E. I. R. comes mainly from the United Provinces. A part of the traffic is carried by the B. N. W. R. and transhipped to the E. I. R. at Mokameh Ghat. Before the E. I. R. and the O. R. R. were amalgamated, the former had to depend for a fairly good portion of its wheat traffic on the latter. Thus, both the O. R. R. and B. N. W. R. were good feeders to the E. I. R. for wheat traffic to Calcutta. Since the purchase of the railway lines by the State, the O. R. R. and the E. I. R. have worked as one single system. This has helped the movement of wheat traffic from the United provinces to Howrah considerably. The traffic to-day gets telescopic rates on the total distance traversed, viz., from Moradabad, Rai Bareli, Chandausi, etc., to Howrah. This emphasises the oft repeated necessity of treating all the lines owned and worked by the State, if not the entire railroad of the country, as one system, in matters of rate-making for through traffic.

RATES ON THE E. I. R. DURING THE YEAR 1932

The rates per maund from some more important wheat collecting centres on the E. I. R. to Howrah are as follows :—

Mileage	*Station*	*Rate* a. p.	*Mileage*	*Station*	*Rate* a. p.
283	Mokameh Jn.	5 10	864	Bulandshahar	10 10
332	Patna City	6 5	889	Ghazibad	11 0
411	Buxar	7 1	429	Benares	7 2
292	Gaya	6 0	568	Rai Bareli	8 4
418	Moghal Serai	7 1	465	Jaunpur	7 6
512	Allahabad	7 11	550	Fyzabad	8 3
564	Khaga	8 4	678	Hardoi	9 3
633	Cawnpore	8 9	805	Chandausi	10 4
718	Etawah	9 7	818	Moradabad	10 5
818	Farukhabad	10 5	901	Meerut	11 2
804	Hathras	10 4	938	Saharanpur	11 5
802	Aligarh	9 6			

These rates are based on the telescopic schedule already referred to. The criticism to which these rates are subject is in

1. Vide, S. C. Ghose's "Monograph," P. 315.

general similar to that of the N. W. R. adverted to above. The difference in details will be noted presently.

RATES ON E. I. R. AND N. W. R. COMPARED

On comparing the rates on the E. I. R. and those on the N. W. R., the most striking conclusion which emerges is that the level of charge on the latter is relatively higher. To illustrate the statement, while the freight from Sangla Hill to Karachi, for 711 miles, is as. 11-4 on the N. W. R., the rate from Etawah to Howrah on the E. I. R., for 718 miles, is as. 9-7, the difference between the two being of as. 1-9 per maund in favour of the latter. This is a substantial difference, especially when the traffic moves in bulk. Again, while from Multan City to Karachi, for 575 miles, the N. W. R. charges as. 10-7 per maund, the E. I. R. charges only as. 8-4 from Khaga to Howrah, for 564 miles, the difference being of about as. 2-3 per maund. A similar difference in the incidence of freight charged is maintained even for shorter distances. For instance, the rate charged on the N. W. R. from Sukkur to Karachi, for 299 miles, is as. 7-10, while the E. I. R. charges as. 6-0 from Gaya to Howrah, for 292 miles.

RELATIVE POSITION OF PRE-WAR AND CURRENT RATES.

It is necessary at this stage to recall the rates charged on the E. I. R. during the pre-war year, so as to get a definte idea of the level of rates charged during the period and the increase effected in the meantime. The rates from some more important despatching stations are given below. Mention should be made that in studying the pre-war rates we have divided the rates on the E. I. R. into two sub-divisions : those charged from the despatching stations on the E. I. R. proper, and those charged from the despatching stations on the O. R. R., because the two lines were worked separately then.

Despatching stations on the E. I. R.

Distance	*Station*	*Rates per Maund*		
		1911	*1917*	*1932*
		a. p.	a. p.	a. p.
219	Sahebganj	3 4	3 7	4 9
332	Patna City	4 8	4 11	6 5
411	Buxar	5 3	5 9	7 1
564	Khaga	5 3	6 10	8 4
633	Cawnpore	5 3	6 10	8 9
818	Farukhabad	6 10	8 10	10 5
804	Hathras	6 9	8 9	10 4
823	Aligarh	6 11	8 11	10 6
854	Khurja City	7 2	9 0	10 9
889	Ghaziabad Junction	7 5	9 3	11 0

It will be seen that the rates were raised considerably during and after the war. There seems to have been an all round increase of about 50 per cent. One point of minor importance that may be noted is that the rates from Cawnpore and Khanga have been better adjusted after the war on the basis of mileage. So also the E. I. R. does not charge lower freight from the competitive points as is the case with the N. W. R. This is presumably due to the lower basis on which rates are fixed on the E. I. R. as compared with those on the N. W. R.

RATES ON THE O. R. R. SECTION

We shall now consider the rates charged from the despatching stations on the O. R. R. section, where the competition of the N. W. and the G. I. P. is felt. The rates quoted are as follows :—

Rates per maund to Calcutta

Distance	*Station*	*1911*	*1917*	*1932*
		a. p.	a. p.	a. p.
612	Barabanki	6 1	8 0	8 9
634	Behramghat	6 1	8 0	8 11
667	Madhoganj	6 4	8 3	9 2
718	Shahjahanpur	6 8	8 7	9 7
762	Bareilly	6 11	8 7	10 0
835	Chandausi	7 3	9 3	10 4
881	Moradabad	7 6	9 4	10 5
568	Rai Bareli	5 11	7 10	8 4

The basis of these rates from the competitive points is similar to the rates from the non-competitive points, because the competitive lines, both the N. W. and the G. I. P., have a higher basis of charge. Therefore, the E. I. R. can easily attract traffic without having to resort to the manipulation of rates.

Rates from the above stations to Karachi are submitted below :—

	1911	*1917*	*1932*
	a. p.	a. p.	a. p.
Barabanki	10 7	12 2	12 11
Behramghat	10 9	12 4	13 3
Madhoganj	10 0	12 7	13 10
Shahjehanpur	10 0	13 1	14 1
Bareily	10 11	10 11	13 3
Chandausi	10 2	12 1	13 3
Moradabad	10 9	11 11	13 0
Rai Bareily	10 0	12 7	13 1

It will be noticed that the N. W. R. is at a considerable disadvantage in respect of this traffic. This is due to various causes. Firstly, the distance from these stations to Karachi port is a serious handicap ; secondly, the traffic has to pass over more than one line ; and thirdly, the basis of charge on the N. W. R. is relatively higher. It is also uneconomic for the N. W. R. to compete for this traffic, and more so because both the lines are now under common ownership. From the level of rates charged on the lines, it is clear that they are essentially non-competitive.

Rates charged from some of these stations to Bombay port are mentioned below :—

	1911	*1917*	*1932* *
	a. p.	a. p.	a. p.
Barabanki	9 6	11 1	11 10
Behramghat	9 7	10 11	11 10
Madhoganj	9 7	11 6	12 6
Shahjahanpur	9 11	11 6	13 11
Rai Bareli	9 7	11 2	11 8

These special station-to-station rates quoted on the G. I. P. on wagon loads, show the attempts made by the authorities to attract traffic to ports. One striking feature of the current rates is that the increase when compared with the rates of 1917 has not been much. But even the current rates are higher as compared with those charged on the E. I. R., and therefore, if traffic from these stations is attracted to Bombay the reasons can be traced to causes other than of purely railway freight, viz., prices quoted at Bombay, sea freight from Bombay to foreign ports, etc.

RATES FROM B. N. W. R. TO HOWRAH

The E. I. R. draws its Howrah traffic from the B. N. W. R. stations as already referred to. The current rates from some important collecting centres to Howrah work out as follows :—

Stations	*B. N. W.*	*E. I.*	*Total*
	a. p.	a. p.	a. p.
Azamgarh	4 0	3 8	7 8
Bahraich	5 7	3 10	9 5
Ballia	3 1	4 0	7 1
Balrampur	5 7	4 0	9 7
Basti	4 5	4 1	8 6
Chauri Chaura	3 11	4 3	8 2
Chupra	2 2	4 3	6 5
Darbhanga	2 2	5 1	7 3
Ghazipur City	2 10	4 5	7 3
Gonda	5 1	3 11	9 0
Gorakhpur	4 3	4 0	8 3

* At O. R.: W./400 ; L.

This traffic is routed via Mokameh Ghat. Thus, the movement of wheat traffic from the more important collecting centres to Howrah on the E. I. R. has been noted. It will be seen that the rates charged by the E. I. R. are lower than those of the N. W. R. The traffic is directed mainly to Howrah. This traffic is not for export alone but the greater portion is consumed locally. There are a number of flour mills at Howrah and in the vicinity. There are also flour mills in some internal centres like Cawnpore, Agra, Allahabad, Patna, etc. These internal mills draw their supplies primarily from the sorrounding wheat growing areas. Therefore, these mills have to pay relatively lower rates on wheat purchased in the harvesting season. But the price of local wheat being determined by the world market quotations, it is general experience that the internal prices keep up an upward tone, as compared with the port quotations, just after the harvesting season is over. This is a great handicap which neutralises the advantage of location in the proximity of the sources of supply of wheat. These and other causes have been adverted to, and need not therefore, be repeated here. What is meant to convey is that the rates charged on wheat supplies to the internal flour mills are equally important.

The E.I.R. quotes special station-to-station rates, lower than the schedule rates, from the distant wheat growing centres to important consuming markets. Thus, special rates quoted to Agra from some of the more important wheat growing areas in the Punjab via Ghaziabad are as follows:

Station	*Rate* a. p.	*Station*	*Rate* a. p.
Patiala	2 10	Lahore, Gurdaspur	
Montgomery Mandi Bahauddin	3 2	Gujranwala Shikarpur	3 1
Lyallpur	3 1	Sangla Hill	
Ambala City Rajpura Junction	2 11	Hafizabad Gojra	3 2

The foregoing are the reduced rates quoted by the E.I.R. on its own line for through traffic from the stations referred to on the N.W.R. Special rates are also quoted to Cawnpore, as will be seen from the statement submitted below:—

Rates per Maund to Cawnpore

Stations	*Rate* a. p.	*Stations*	*Rate* a. p.
Ambala Cantt.	8 8	Khanna	9 7
Bassi Pathanan	9 5	Jandiala	12 4
Jullundur Cantt.	11 1	Jagraon	10 11
Rupar	10 5	Ludhiana	10 2
Sirhind	9 2		

Similarly, reduced rates are quoted to other more important consuming markets on its own line and to stations on the foreign railways especially on the Eastern Bengal Railway.

Before we close this section, it is necessary to note that the E.I.R. has offered reduced station-to-station rates from wheat-growing tracts in the Punjab to Calcutta, since 1933.

Rates per Maund to Howrah

Station from	*Total Rate* Rs. a. p.	*N. W.* Rs. a. p.	*E. I.* Rs. a. p.
Kasur	1 0 4	0 6 3	0 10 1
Lahore	1 0 4	0 6 10	0 9 6
Lyallpur	1 0 4	0 7 11	0 8 5
Montgomery	1 0 4	0 7 9	0 8 7
Multan City	1 0 7	0 8 9	0 7 10

These are only a few of the more important stations from which reduced station-to-station rates are available on wheat traffic to Howrah. The traffic from these stations is routed via Sahanranpur. Delhi is another important junction for wheat traffic moving from stations on the N.W.R. to Howrah. The number of stations from which reduced rates are avilable and the uniformity of the quotation is apt to be misunderstood by the lay public. That reduced rates should be offered from the more important wheat growing areas to the consuming markets has been accepted. The rates quoted should be such as the traffic can bear. In other words, the rates should be low enough to help the movement of the traffic, and at the same time be remunerative to the carrier. Viewed from this criterion, the aforesaid rates quoted by the N.W. and E. I. Railways are in keeping with the principles of railroad economics. They are sufficiently low to help the movement of traffic, and do not seem to be unremunerative to the railways. No doubt distance is an important factor in rate-making and should constantly be kept in view by those responsible for making the tariffs, but these rates have strictly observed the differential rule. In long distance traffic, particularly in the case of low-priced articles, the capacity of the article to bear the transport charge is more important than the distance. No wonder, therefore, that these rates have attracted a greater volume of traffic, which has increased from about 39 thousand tons in 1931 to about 121 thousand tons in 1933. This phenomenal increase in traffic clearly shows that the railways had hitherto failed to gauge the magnitude

of this traffic, and the necessity of fostering the same. This is a striking illustration of the immense help which progressive and sympathetic rates policy can render to Indian trade and industries, and at the same time add to the railway receipts. As a matter of fact entire railway tariffs need revision in the light of the fundamental principle of value of service rendered. Further, the railway authorities should have well considered schemes, backed by definite statistical data, for opening new avenues for traffic. The co-operation of the business community in this direction would be invaluable. One only despairs of the ultra-conservative policy pursued by the Indian railways and their indifference to public opinion.

RATES ON THE G.I.P. RAILWAY

The basis of rates for grains and pulses on the G. I. P. has already been noted, and therefore it is proposed to review the actual rates affecting the movement of traffic from the more important centres of production. The rates to Bombay from more important wheat producing centres are as follows:—

Distance	*Station*	*Rate* a. p.	*Distance*	*Station*	*Rate* a. p.
675	Katni Marwara & Via	... 12 10	554	Kareti	... 11 8
654	Saugor	... 12 11	536	Godarvada	... 12 3
839	Cawnpore	... 10 8	505	Pipariya*	... 12 9
520	Nagpur	... 8 5	417	Harda*	... 11 4
472	Wardha	... 11 8	353	Khandwa*	... 10 3
493	Hinganghat	... 11 6	425	Timarni*	... 11 5
616	Jubbulpore	... 9 0	443	Banapura*	... 11 9
702	Damoh	... 11 9	147	Lasalgaon*	... 5 1
583	Gotegaon	... 11 3			

From the foregoing table it will be seen that in some cases the rates quoted are station-to-station rates, and in others schedule rates. This is so because from some stations, station-to-station rates, lower than the schedule rates are quoted. It will be seen that the station-to-station rates carry considerable concessions as compared with the schedule rates. Thus, for instance, the special rate quoted from Cawnpore to Bombay is as. 10–8, whereas the schedule rate would be Re. 1–0–0. This quotation carries a concession of about 30 per cent. Again the actual rate quoted from Nagpur to Bombay is

* These are schedule rates inclusive of short distance and terminal charges.

as. 8-5, whereas the schedule rate would be as. 12-11. Here, too the special rate carries a concession of about 30 per cent. Similarly the other station-to-station rates are also lower than the schedule rates; the extent of concession in individual cases varies. From some important wheat despatching stations to Bombay, however, station-to-station rates are not quoted and hence the schedule rates are applicable as given above.

PREFERENTIAL RATES

Of the important centres referred to in the preceding table, six are denied special reduced station-to-station rates which are enjoyed by the rest. The handicap, thus imposed, can be adequately gauged by a critical review of the actual rates. As has already been noted, the traders are concerned more with the relative level of rates than with the absolute one, and therefore these rates deserve a detailed consideration. That Bombay is a very important market for wheat produced in the Central Provinces can hardly be gainsaid. Mr. Ghose found that of the total wheat traffic of about 87·5 lakhs of maunds on the G. I. P., about 58 lakhs of maunds were consigned to Bombay[1], and from the detailed figures about the traffic of the several despatching stations that he worked out, it is evident that the stations referred to in the above statement are very important. Harda, Timarni and Banapura are some of the most important wheat despatching stations in the Central Provinces, on the G. I. P. main-line. The extent of the disadvantage which the traffic from these stations suffer becomes clear when the rates charged from other stations are compared. Thus, while the rate from Nagpur, for 520 miles, is as. 8-5, from Pipariya for 505 miles, it is as. 12-9, and from Harda, for 417 miles as. 11-4. Here, again, it is interesting to note, on the authority of the figures of traffic compiled by Mr. Ghose, that Harda, Timarni, Banapura, Pipariya, and Lasalgaon are one and all, better shippers than Nagpur.[2] Why then this preference in favour of Nagpur?

The preferential treatment is not merely in favour of Nagpur, but is shared by all those stations which enjoy station-to-station rates. Further, even amongst the stations which enjoy special station-to-station rates, the element of preference appears to have crept in. For instance, the rate from Saugor, for 654 miles, is

1. Vide, "Monograph on Railway Rates," pp. 318-19.
2. Vide, "Monograph on Railway Rates," pp. 318-19.

s. 12-11, whereas from Cawnpore, for 839 miles, it is only as. 10-8, nd from Jubbulpore as. 9-0. Again, the rate from Damoh, for 02 miles, is as. 11-9, while Gotegaon has to pay as. 11-3 for 83 miles. Even the Gotegaon rate appears to be preferential when ompared with the rate charged from Kareli.

Let us then analyse the possible causes of this apparently referential rating. The Cawnpore-Bombay rate seems to have een fixed in view of the Cawnpore-Howrah rate which is as. 8-9. rom Nagpur a lower rate is quoted because of the alternative route on the B. N. R. to Calcutta. These lower rates re, thus, due to port competition. This assumption is further trengthened when the rates charged from Hinganghat and Vardha are taken into account. The rates charged increase as the istance between the Nagpur Junction and the despatching stations ncreases, i. e., the rates change inversely with the probability f competition from the B. N. R. Similarly, the rate quoted from ubbulpore has been affected by the competition of the E. I. R. via Jaini, and the B. N. R. rates charged from Saugor and Damoh are ikewise affected by the competition of the alternative route on he B. N. R. and the E. I. R. From the aforesaid review, therefore, t follows that the G. I. P. R. has quoted special station-to-station ates, lower than the schedule rates, only from the competitive oints. But this inter-railway competition places serious handicap n the traffic from the non-competitive points.

PRE-WAR RATES COMPARED

It may be instructive at this stage of our enquiry to recollect he rates prevailing before or during the war, with a view to know whether the apparent anomalies dealt with in the preceding pararaph are of recent growth or the survivals of the old policy. The position of rates from more important centres may be summed up as follows:—

Rates per maund to Bombay

Mileage	*Stations*	*Rate*				*Mileage*	*Stations*	*Rate*			
		1917		*1932*				*1917*		*1932*	
		a.	p.	a.	p.			a.	p.	a.	p.
839	Cawnpore	8	7	10	8	554	Kareli	8	9	11	8
520	Nagpur	7	0	8	5	417	Harda	9	0	11	4
616	Jubbulpore	7	0	9	0	505	Pipariya	8	9	12	9
702	Damoh	9	6	11	9	425	Timarni	8	9	11	5
654	Saugor	9	7	12	11	443	Banapura	8	9	11	9
583	Gotegaon	7	9	11	3						

HIGHER LEVEL OF RATES ON THE G. I. P.

The G. I. P., has effected a higher percentage increase in its rates than the E. I. R. as can be seen by comparing the rates from the more important centres on the respective lines. For instance, the G. I. P. has raised its rates from Kareli, Pipariya, Timarni, and Banapura by about 3 annas per maund, but the E. I. R. for a similar distance from Khaga has raised the rates by annas 1-6 only. The increase has been still higher from some stations on the G. I. P. *e. g.* from Saugor and Gotegaon the increase in rates amounts to as. 3-4 and as. 3-6 respectively.

From the review of rates in 1917 and 1932 it is clear that the G. I. P. has adjusted its rates from the competitive points according to the rate quoted by the alternative route, distance for distance. This is so in the case of the Cawnpore-Howrah rate. The rate is quoted on the same basis and the difference in the total rate is due to the distance traversed. This is so because the G. I. P. has laid down a specific rule, that in local booking between any two stations on the G. I. P., the rates obtainable by the alternative foreign railway route are applied to the local route, provided that the rates do not fall below the minimum. This practice prevailed in 1911[1], and is being continued to this day, as will be seen from the rates referred to in the foregoing statement. The present policy in respect of rates from the Central Provinces to Bombay is merely a continuation of the policy pursued during and before the war, with a few minor changes.

Of the minor changes introduced after the war, one which may be noted is the adjustment of rates from Shahpura to Harda and the neighbouring group of stations. In 1917, the rate from Harda was higher than that charged from Timarni, Banapura, Pipariya, Kareli, etc., although the distance from Harda is shorter. To avoid this disparity in rates, it was suggested that instead of the lower rates charged from stations situated at distances higher than that from Harda, they should be charged a rate equal to that of Harda, because the difference of one anna between this rate and the rate on the alternative route from Jubbulpore to Howrah via Naini, in favour of the latter route, would not materially affect the direction

1. Vide, Ghose's "Monograph on Railway Rates," p. 321.

of traffic.[1] These disparities have been removed, as will be seen from the foregoing rates. Since 1934, station-to-station rates from Kareli, Banapura group of stations have been totally discontinued.

There was some justification for the competition in rate-making adverted to above, between the E. I. R. and G. I. P., before and during the war, but there is no justification for the continuance of the same policy in the current traiffs, since both the lines have come under common ownership and management. This sort of competition results in waste and injustice to the shippers. There seems to be practically no reason why two lines of the same system should indulge in wasteful competition. For instance, the distance between Jubbulpore and Howrah is 733 miles, and from Jubbulpore to Bombay it is 616 miles. It is clear therefore, that Bombay has an advantage in respect of mileage for Jubbulpore traffic. But distance is only one of the several factors which determine the rate. Mileage, physical features of the area to be traversed, conditions of carriage and the availability of the return load, are the most important factors which determine the rates charged. It is argued in favour of the Calcutta traffic that lower operating costs coupled with the better return loads, and more favourable physical features of the country to be traversed, enable the E. I. R. to carry traffic more economically to Howrah than the G. I. P. does to Bombay. This is, indeed, a very important point, and it is difficult for us, with the data at our disposal, to hazard any opinion, because before any decision can be arrived at it is necessary to study the detailed statistics about the working expenses and the traffic carried. Such an analysis is more helpful in determining precisely the absolute level of rates to be charged, which we do not propose for the present to enquire into. The study of the relative level of rates would be sufficient for the purpose in hand. The E. I. R. quoted from Jubbulpore to Howrah, a rate of as. 8-0, 1917, for a distance of 733 miles, which was calculated on the same basis as the other rates. For example, from Etawah for 720 miles, the rate charged was as. 8-0, and from Hathras for 806 miles, as. 8-9, So also the scale rates on the E. I. R. for 700 and 750 miles worked out as annas 8-6, and annas 8-10 respectively. Therefore, the E. I. R. rate from Jubbulpore was not lower than the ordinary

1. See Ghose's "Monograph," p. 320

rate, and as such it was not quoted to divert the G. I. P. traffic. The rate quoted by the G. I. P. from Jubbulpore to Bombay, per contra, was lower than the schedule rate, and is still lower relatively, and as such it is competitive, notwithstanding the common ownership of both the lines. The policy, therefore, needs a corrective ; it should be re-shaped in the light of the post-war developments. It is a relief to note that this defect has recently been remedied, and the rate from Jubbulpore to Bombay has been raised from Rs. 0-9-0 per maund to Rs. 0-10-6. A similar change needs to be made in other directions as well. The inter-railway competition should be eliminated as far as possible, and the watch-word of any scheme of re-organisation should be greater efficiency and lower costs per unit.

Before we close the discussion of rates charged on the G. I. P., it has to be noted that the general level of current rates on this railway is very high. This is partly due to the extravagance in working expenditure. Of all the lines, the working expenses of the G. I. P. have paid no heed to the changes in the economic conditions of the country, and have kept up an upward trend, notwithstanding the fall in prices. This has adversely affected the trade and industries of the localities served by the G. I. P. and the case of wheat trade adverted to above is an instance to the point. That these rates call for an immediate reduction, so as to give a much needed relief to the wheat trade hardly needs any emphasis. The consumers of wheat at Bombay and the shippers up-country both need this relief.

RATES ON THE B. B. & C. I. RAILWAY

The current rates on the B. B. & C. I. R. are based on a schedule similar to that on the G. I. P., as has already been mentioned. It is important to note that wheat traffic to Bombay is mainly carried by the G. I. P. The greater share of the wheat traffic hauled by the B. B. & C. I. is carried to Karachi ; this railway acts as a good feeder to the N. W. R. Besides, it also carries traffic for internal consumption. Therefore, the total wheat traffic carried by the B. B. & C. I. and the earnings derived thereform are as important as those of the G. I. P. In what follows, therefore, an attempt will be made to have a brief and succinct review of the rates policy pursued by this railway in respect of its wheat traffic.

PRE-WAR RATES

Before the war, due in no small measure to the intense and often cut-throat competition inter se of the different railway system in the country, the B. B. & C. I. also quoted competitive low rates to Bombay port from distant centres, to have a share in the competitive traffic. But as will be shown presently, the reduced rates offered by this railway were only such as competition warranted, and do not show a medly of disparities as in the case of the G. I. P. This was presumably due to the greater powers of regulation in respect of port traffic possessed by the Government over the B. B. & C. I. under their contract[1]. The fact, however, remains that the B. B. & I. C. rate schedules show a minimum of disparities, as will be evident from the rates prevailing in 1914 and 1919 submitted below :—

Rates per Maund to Bombay

Distance	*Station from*	*1914*	*1919*
		a. p.	a. p.
246	Baroda	5 2	...
202	Broach	4 3	...
308	Ahmedabad	6 2	...
406	Rutlam	6 9	...
466	Ujjain	7 2	...
773	Muttra Junction	8 3	...
779	Agra Fort	8 1	8 7
848	Delhi Sadar	7 2	8 11
773	Muttra Cantonment	7 3	8 7
799	Hathras City	7 4	8 9
906	Farukhabad	9 1	9 7
992	Cawnpore	8 3	9 7

1. Dwelling on the powers Mr. Ghose remarks : "In the case of Karachi, a special provision has been made in the B. B. & C. I. R., Contract that the Railway Board may at any time require the B. B. & C. I. R., to quote over that railway system such rates in respect of the conveyance of passengers and goods to and from both the ports of Bombay and Karachi as to secure the carriage of trade to and from such ports on equal terms, and it is further provided that the Railway Board may require the quotation of a rate from stations of consignment to destination whether the route is entirely over the undertaking, or whether the route is only partly over the undertaking. The B. B. & C. I. R., have also in respect of traffic originating on their metre gauge system, to quote the same rate to Karachi via the J. B. R. and the N. W. R., and to accept mileage division of rates and are not allowed to charge block rates to Karachi, but this is the only instance where such a position exists." Vide, "Monograph on Indian Railway Rates," p. 221.

As will be seen, the rates given above are not completely free from disparities [1], but this does not refute the claim of relative evenness. Before, however, the disparities are discussed it is necessary to note the more striking features. Special station-to-station rates, quoted from some centres to Bombay in 1914, were discontinued later. In place of these, schedule rates are now applicable. This is a very important change in the rates policy which helps to discourage the export of wheat. But it should be noted that the aforesaid stations are not important for their despatches of wheat and have been referred to primarily to show the change in policy. The policy of encouraging the export of raw materials by quoting reduced rates, which was the sine qua non of railway policy in the pre-war period, has been considerably modified. As will be seen from the foregoing table, reduced rates were quoted even from the relatively unimportant stations on the export of food grains, seemingly under the belief that that the export traffic was more profitable, but the experience has taught the truth of the matter and the policy has been changed accordingly.

Another important feature of the rates policy which emerges from the foregoing table is the internal competition of the railways, which prevailed then and led to marked reductions in rates from the competitive points. The port competition had become more intense. Thus, it may be noted that while from Cawnpore to Bombay, for 992 miles, they charged Rs. 0-8-3 per maund, from Ujjain to Bombay, for 466 miles, the freight came to Rs. 0-7-2. This was obviously due to competition from the E. I. R. to Calcutta port. Again, from Delhi, for 848 miles, the freight was only Rs. 0-7-2 per maund, because of the competition of both Karachi and Calcutta ports. After the publication of the Acworth Committee Report, which brought these most glaring drawbacks of the rates policy into light, competition was regulated and improvements are being made gradually to suit the requirements of the carriers as well as the public.

CURRENT RATES TO INTERNAL CENTRES

We shall now briefly review the freight charged on the internal traffic. In this case, however, pre-war rates are not available and therefore we shall deal only with the current rates. Ahmedabad,

1. The rate from Broach for a shorter distance is higher than that from Baroda.

Baroda and Ajmer are the three most important wheat milling as well as consuming centres on the B. B. & C. I. R., and their wheat supply is drawn from the Punjab and the C. P., although there are other areas as well which send wheat in some quantities. Besides, these centres will best illustrate the characteristic features of the rates policy as affecting the internal traffic. The table given below shows the rates charged from the more important wheat producing districts in the Punjab.

Station from	*To Ahmedabad*		*To Baroda*		*To Ajmer*	
	Miles	*Rate*	*Miles*	*Rate*	*Miles*	*Rate*
		Rs. a. p.		Rs. a. p.		Rs. a. p.
Jullunder Cantt.	741	1 2 0	803	1 2 8	436	0 13 3
Gurdaspur	846	1 3 10	909	1 4 5	542	0 14 11
Gojra	908	1 5 0	971	1 5 7	604	0 15 10
Lyallpur	878	1 4 2	941	1 5 9	574	0 15 6
Sargodha	921	1 5 3	984	1 5 10	617	0 15 10
Jaranwalla	855	1 3 6	918	1 4 1	551	0 15 3
Ferozpur	731	1 0 4	794	1 0 11	427	0 12 3

These rates are on through traffic passing over two railways, the N. W. R. and the B. B. & C. I. R. As adverted to above, telescopic schedule rates are quoted on wheat traffic on both the N. W. and the B. B. & C. I. Railways, but the internal traffic does not get the benefit of these telescopic schedule rates to the full extent, because in calculating telescopic rates the total distance traversed is not taken into consideration, but calculations are based on the distance traversed on each railway separately. In through rating, Indian railways treat themselves as separate entities both for internal and external traffic. But internal traffic suffers more than the external, because the ports are as a rule linked directly with internal centres, and the exporter has the advantage of shipping the traffic from the nearest port. Further, the exporter gets the advantage of port competition from the competitive centres. Therefore, in the case of export traffic, the disadvantage even where it exists is neutralised, but the internal traffic has to bear it in full. Let us take up concrete instances from the foregoing table. The consignment despatched from Jullunder Cantonment to Ahmedabad travels up to Hissar on the N. W. R., a distance of about 164 miles, and thereafter the B. B. & C. I. carries it to its destination over a distance of about 577 miles. In calculating the rates, the N. W. R. charges Re. 0-4-10 on the basis of C/B schedule, which is applicable when the consignment travels for distances less than 233 miles. Thus,

even though the total distance traversed by the consignment is 741 miles, it does not get the benefit of telescopic schedule rates on the total distance. The same is the case with other centres. The de facto incidence of rates on the movement of internal traffic is therefore higher than the telescopic rates.

Rates from the C. P. wheat producing centres work out as follows :—

Station from	*To*			
	Baroda	*Godhra*	*Ahmedabad*	*Nadiad*
	Rate	Rate	Rate	Rate
Amraoti	0 13 4	0 14 7	0 15 0	0 14 3
Akola	0 11 10	0 13 1	0 13 6	0 12 9
Nagpur	1 0 2	1 1 5	1 1 10	1 1 1
Khandwa	0 10 1	0 9 0	0 10 10	0 10 4

These rates are similar to those discussed in the preceding paragraph, excepting that the traffic originates on the G. I. P. instead of the N. W. R. In this case also the through traffic does not get the benefit of telescopic rates on the total distance traversed. This finishes our study of railway rates on wheat.

Flour Milling Industry

General Outlook

In what has been said above, the attention was concentrated on the discussion of the production and marketing of wheat, and the part played by railway rates in facilitating its distribution. It was noted in the course of the study that an appreciable part of the total wheat supply put on the market is consumed by the flour mills. It may be stated that in general these mills are distributed throughout the country ; but they are better centralised at the port towns, and a few other more important consuming and distributing centres. The flour milling industry is an important and an indispensable part of the quasi-agricultural industries in all advanced countries ; especially in wheat growing countries it forms an inseparable adjunct of the wheat trade. Doubtless, with the rapid advance in the technique of production and the tendency towards greater diffusion of the different processes, with a view to get better efficiency and lower costs, the production of wheat and its milling have become more specialised, with the consequence that certain countries take only to the one or the other. The flour milling industry of the United Kingdom aptly illustrates this economic tendency.

TARIFF PROTECTION

But in this connection it should not be overlooked that there is an essential difference in the technique of the two processes; while the production of wheat is concerned primarily with the agricultural technique, the milling industry is purely an industrial process. Due in no small measure to this essential difference in the technique, and the modern tendency of preparing the raw materials into finished products within the four corners of a country, as a result of the growing spirit of nationalism and the suspicion of the States inter se, there is a move on the part of the wheat growing countries to foster their milling industry with the aid of tariff barriers. The result is that the wheat growing countries wanting to sell their exportable surplus of wheat to other countries, advocate free trade in wheat, but at the same time, impose high duties on the imports of flour into their borders. It should also be noted that they export only that portion of the total output of wheat, which is not utilised within the country and is thus an economic surplus. As a result of this change in modern commercial policy, the tendency towards the increased diffusion of several processes of production is being limited in scope. There have been several other factors also operating in the same direction, of which the present industrial depression in general and the agricultural depression in particular are more prominent. Needless to say that the flour milling industry has acquired increased importance and concerted attempts are being made to develop it in every State.

INDIAN FLOUR MILLING INDUSTRY

India, being one of the most important wheat growing countries of the world, has not been immune from these formidable world economic forces which have been moulding the agricultural and commercial policy of nations, though the policy of the Government of India has not come up to the expectations of the people. While the useful work done by the various Provincial Departments of Agriculture and at the Pusa Institute, now shifted to Delhi, aided with the vast irrigation schemes, has doubtless rendered very useful services to the Indian agriculture in general and the production of wheat in particular, and have turned vast tracts of uncultivable land or those on which less valuable crops were cultivated into fertile wheat fields, less susceptible to famine and

draught, the flour milling industry has been totally neglected. In fact it has often been asserted that the production of commercial crops, like wheat and cotton, received early attention of the Government, because the industries in the United Kingdom were in need of these raw materials. The question of exports of Indian wheat to the United Kingdom was extensively investigated by Mr. Wilson, the first Indian Finance Member, with special reference to transport and the text of the Memorandum submitted by him strikingly reveals the intentions of the Government of India. Notwithstanding the indifference of the State, the flour mill industry in India holds a recognised place. The railway rates which the more important flour mill centres have to pay on their supplies have already been studied, and therefore to make the study complete it is proposed to have a brief review of the rates charged on flour from the more important centres to consuming markets.

RAILWAY RATES ANALYSED

In the Indian Railways General Classification of Goods, flour, which includes attah, gram flour, maida, soojee, etc., is classified as second class at railway risk, in contrast to grains and pulses which are classed as first class at railway risk. Thus, railways seem to have made a considerable difference between grains and flour in respect of rates to be charged. In rate-making, differentiation between grains and flour is doubtless essential, and helps in a more equitable assignment of transport charges according to the ability to bear, which is higher in the case of flour. It would, however, be idle to deny that the difference in value between the two is not so great as to permit one being charged at first class rate when the other is charged at second class.[1] This however, refers only to the general classification, and therefore does not indicate the incidence of the rates charged in actual practice. In order to have a proper appreciation of the railway rates on the movement of flour traffic, a review of rates charged from the more important distributing centres to the consuming markets is essential.

SCHEDULE RATES

Schedule rates, lower than the second class rates, are quoted by the more important railways. The N. W. R. quotes C/B schedule

1. Under the present classification of goods which contains ten classes, the railways perhaps could not do anything better.

rates on flour at owner's risk, having a uniform basis of ·333 pie per maund per mile, irrespective of the length of the journey, a rate similar to that charged on grains for distance of less than 233 miles on the same line. The E. I. R. charges C/M schedule rate, at owner's risk.[1] The G. I. P. and the B. B. & C. I. charge C/B/C/J schedule rate at owner's risk, referred to above.

The B. N. R. charges C/H schedule rate at owner's risk, the basis of charge being as follows :—

	Pie per maund per mile
1 to 300 miles	0·380
plus 301 to 700 „	0·130
„ Above 700 „	0·100

STATION-TO-STATION RATES.

These schedule rates are applicable on the flour traffic en masse. But special station-to-station rates, lower than these schedule rates, are quoted from and to certain stations. A preliminary survey of these rates is therefore, a necessary prelude to the detailed discussion of the schedule rates. The N. W. R. contains the undermentioned special rates to Karachi.[2]

Stations	*Rate per Maund* a. p.	*Stations*	*Rate per maund* a. p.
Agra Fort Via Agra East Bank Via Idgah	10 7	Delhi Lahori Gate Via Delhi Serai Rohilla	11 7
		Hathras City	10 9
Cawnpore	12 4		
Via Cawnpore	12 4*		

The most striking feature of the above rates is that they are quoted from the competitive points. No doubt the towns referred to are important centres of flour milling industry, and as such the reduced rates facilitate the movement of traffic to the ports,

*Plus a transhipment charge of two pies per maund, when traffic is booked from G. I. P. R. stations and via.

1. For the basis of charge refer to the rates on wheat adverted to above. On wagon loads, however, still lower rates are charged. C/B schedule rate is quoted, at O. R. for distances less than 233 miles, and for longer distances C/K schedule, at O. R.

2. These rates are applicable on wagon loads: C/300·B. G., C/200 M. G., O. R.

but the clear absence of other important centres, like Amritsar, Ambala, Ferozepur, Lahore, Lyallpur, Multan, etc., is disappointing and brings to relief the characteristic feature of the working of Indian railway policy, which has been frequently noted during the course of this study. The railways would argue that reduced rates are quoted because of the alternative route available to this traffic due to port competition. It is needless to reiterate that port competition imposes a great deal of hardship upon the industries located at the non-competitive points, and facilitates at the same time, the export and import traffic, not unoften to the detriment of the internal trade. It is not our intention to protest against the foregoing reduced rates, because they are in fact essential for the development of Indian flour milling industry, but it should be emphasised that similar facilities should be extended to other milling centres referred to above.

Station-to-station rates are also quoted for internal traffic from some centres. We give below a few rates quoted on traffic via Ghaziabad :—

From	*To*	*Rate per Maund*	*N. W. R.*	*E. I. R.*
		a. p.	a. p.	a. p.
Ambala City	Cawnpore	8 11	3 9	5 2
,, ,,	Aligarh	6 5	3 11	2 6
Ferozepur	Cawnpore	12 9	7 1	5 8

These rates are indeed very useful for the movement of internal traffic, and therefore the necessity for the extension of similar rates on a more liberal scale is urged in the interest of trade and industries. Recently some changes have been made. Station-to-station rates are now available from Patiala and Amritsar to Cawnpore, but the rate from Ambala City to Cawnpore has been raised from Rs. 0-8-11 to Rs. 0-9-9 per maund.

Station-to-station rates are also available on the G. I. P. from a few more important centres. During and before 1932, reduced rates were quoted from Bombay to more important stations like, Madras, Bangalore, Mysore, Cawnpore, Agra, Bezwada, and Nagpur, but they have been discontinued since then. Now station-to-station rates are available from more important centres like Allahabad, Cawnpore, New Delhi, Agra, to Bombay and other more important consuming markets. This is a very desirable change in the rates policy.

On the B. B. & C. I., as noted above, station-to-station rates are quoted to Karachi in conjunction with the N. W. R. Similar facilities are given for traffic to Bombay as will be seen from the rates given below :—

Rates per Maund to Bombay[1]

Station.	*Rate.*		*Station*	*Rate.*	
	a.	p.		a.	p.
Agra	11	7	Bhatinda	14	3
New Delhi	11	7	Via Bhatinda	14	0
Hathras City	10	9	Goviana	14	4
Cawnpore	12	1	Kotkapura	14	6
Raman	14	6	Muktsar	14	11

Recently the rates from Agra, New Delhi, Hathras city and Cawnpore have been raised. The freight from Agra has been raised from Re. 0-11-1 to Re. 0-14-0 per maund. The rate from New Delhi has been raised from Re. 0-11-7 to Re. 0-12-4. Similarly, rates from Hathras and Cawnpore have been raised to Re. 0-13-8 and Re. 0-14-4 respectively.

SCHEDULE RATES ON FLOUR ANALYSED

This brings us to the study of schedule rates. The Flour Milling Industry being centred mainly at the port towns, it is proposed to review mainly the schedule rates as quoted on the traffic from the ports, though the traffic from other important centres will not be ignored. The schedule rates applicable for traffic in flour from Karachi to upcountry consuming markets are the same as those on wheat, the difference being only as to the conditions of carriage, for whereas the wheat traffic is allowed the C/B and C/K schedule rates at railway risk, flour is permitted the same at owner's risk, on wagon loads. Therefore, to avoid repetition we shall pass on to rates on internal traffic. Rates from some important centres work out as follows :—

The Current Rates for Flour[2]

Station from	*To Ludhiana*		*To Sialkot*		*To Rawalpindi*	
	a.	p.	a.	p.	a.	p.
Ambala Cantonment	2	7	7	1	8	7
Patiala	2	7	7	1	8	6
Lyallpur	6	3	3	11	6	6
Shahadara	3	10	2	10	5	4
Bhatinda	3	3	6	1	7	9

1. Rates are applicable only on load wagons.
2. These rates are on wagon loads : O. R. C/340.

These rates when compared with the pre-war rates show the extent of increase that has taken place. The incidence has doubtless increased considerably, especially on the traffic which passes over more than one line. Of course the rates that we have collected are for the local traffic only, but from the higher incidence of rates per maund per mile, which the traffic for lower distance has to bear, we can safely draw the conclusion as stated above. The pre-war rates were as follows :—

Rates per Maund (in force in 1913)

Station from	*To Ludhiana*	*To Sialkot*	*To Rawlpindi*
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Ambala Cantonment	0 1 5	0 4 3	0 5 7
Patiala	0 1 5	0 4 3	0 5 7
Lyallpur	0 3 8	0 2 4	0 3 10
Shahadara	0 2 3	0 1 8	0 3 2
Bhatinda	0 1 11	0 3 7	0 5 2

HIGHER LEVEL OF RATES

On a comparative review of the two foregoing statements of rates, emerge some very useful and interesting conclusions about the rates policy. The rates have been increased considerably. For instance, the rate from Bhatinda to Sialkot has been raised from as 3-7 to as. 6-1 ; the rate from Lyallapur to Rawalpindi is raised from as. 3-10 to as. 6-6. It will be seen that other rates have also recorded a similar increase, the precise percentage varying with the distance traversed. Rates have been nearly doubled, except for longer distances. These rates may have had enough justification in 1919, or 1921, when the prices had raisen to the peak[1] levels, but at present these rates place a very heavy tax upon the people, and further reduce the purchasing power of the agricultural population which has already fallen substantially. Doubtless, the import duty on wheat has come as a substantial relief to the agriculturists, but the reduction of railway rates on wheat and flour would further help to relieve the distress.

It has been remarked, and not without justification, that after the close of the war, Indian railways were permitted to raise their rates much above the level warranted by the situation, with the result that railways, like the industries receiving more than necessary

1. Vide, the Evidence of C. A. H. Townsend, Director of Agriculture, Punjab, Fiscal Com.; Evidence Vol. I., P. 90.

fiscal protection, have become less efficient, and their working expenses have risen steadily, even though prices have been falling. The raising of rates has had an undesirable protective effect so that to-day the railways are unwilling to lower their rates and strongly resist any claim made out for their reduction. This faulty measure, initiated with feverish haste, when rehabilitation had become a mania with the belligerent countries, of whom India was one, has plunged the entire railway system of the country into the whirlpool of inefficiency, of which rising working expenses and falling revenue receipts are the symptoms. At the initial stages, these higher rates did in fact temporarily swell up the receipts, as they synchronised with the rise in prices, but the curtain of delusion was soon lifted. With a turn in the business activity, the burden of railway rates was felt, and as the industrial depression gathered strength, the complaints from the trade and industries became more frequent. But the railways stuck to the old rates, with the result traffic dwindled and with it the receipts. This is the vicious circle which makes the task of re-organising our railway policy at once essential and more difficult.

The foregoing review of schedule rates on the N. W. R. gives us an adequate idea of the incidence of railway rates charged and the extent of increase effected since the war. Similarly, the other railways have also raised their rates and are reluctant to reduce them now, so as to suit the present level of prices, partly because their working expenses, instead of falling, have maintained an upward trend. This affects adversely alike the cultivator and the miller, more so because in other countries the technique of production has been revolutionised, and the cost of transport considerably lowered. Therefore, the necessity of reduction in rates cannot be too strongly emphasised.

We may conclude that the necessity of reducing the rates on the transport of wheat and wheat-flour is very great. The problem needs to be tackled immediately but not from the viewpoint of port traffic alone. Port traffic is no doubt important, since port towns are by far the largest consumers of wheat, but the internal traffic is equally important, and therefore the railway rates policy should be so regulated as to develop both kinds of traffic, and not one at the expense of the other, as the railways have been prone to do.

CONCLUSIONS

(i) The current railway rates on wheat in comparison with those of the pre-war year are considerably higher, and the difference becomes still more glaring, when the relative level of prices is taken into consideration.

(ii) The internal traffic has to bear a still higher freight, because in calculating telescopic schedule rates on through traffic railways do not take into account the total distance traversed by the consignment; the distance traversed on different railways is taken separately.

(iii) Facilities for flour traffic are insufficient. Station-to-station rates should be quoted on wheat from the more important wheat producing areas to the flour mills and on flour to the more important consuming markets.

(iv) The aim of railway rates policy should be to provide more efficient and economic transport facilities for internal as well as port traffic: and both must receive an equal treatment at the hands of railway administrations.

CHAPTER VIII

PAPER

THE IMPORTANCE AND SCOPE OF THE STUDY

In this chapter we shall study the organisation of paper industry in India with special reference to railroad transport. We shall divide this study into two parts. The first part will contain a review of conditions before the grant of protection, and in the second part the present condition of the industry will be analysed. The study of railway rates as affecting the development of paper industry in this country is instructive because railway rates play an important part alike in production and marketing. Raw materials like rags and grass are collected from distant centres with the result that the cost of transport forms a substantial part of the total cost. Again, the paper mills being largely localised in Bengal, railroad transport plays a prominent part in marketing the finished product. In view of these peculiar features of the industry, it would be no exaggeration to say that railway freight charges regulate the competitive capacity of the mills. It is significant to note that the demand for paper in India is more varied and larger than the productive capacity of the local mills, necessitating heavy imports of foreign paper. These foreign imports moving from ports to distant consuming markets have, likewise, to pay substantial railway freight. The aggregate railway freight thus paid by the local mills raises their cost of production and any economy in this direction would be welcome to the parties concerned. The internal competition of local mills has further helped to raise the incidence of railway freights. To this must be added the competition of imported paper moving from the nearest port to the consuming centres. This is not all. The local mills compete inter se in acquiring their supplies of raw materials, particularly for articles like grass and rags, and in doing so pay higher railway freight.

The importance of a flourishing paper industry in the life of a nation need hardly be stressed. The necessity of a well-organised paper industry is still greater in the case of a relatively backward country like India which is passing through a period of transition.

Be it noted that in every civilised country paper is an article of regular consumption and a necessity of life. It would not be far from truth to say that in modern times the consumption of paper in a country, satisfying the varying needs of the society, indicates the extent and growth of civilisation. Taking this as the criterion, we find that India lags far behind other countries, her consumption of paper being only half a pound per head of population per year, whereas in even the most backward countries of Europe the consumption is ten pounds per head. Rightly has Mr. Gladstone remarked that the consumption of paper is the measure of a people's culture. It is clear, therefore, that the Indian paper industry has a bright future, if efficiently organised and properly conducted. With the spread of education the demand for paper is bound to increase, and in the steady growth of the reading and writing public in India, we may trace a reasonable assurance for the development of Indian paper industry.

THE STRUCTURE OF INDIAN PAPER INDUSTRY BEFORE 1925

THE TITAGHUR PAPER MILLS

The Titaghur Paper Mills Company was floated in 1882, and commenced manufacture of paper with three machines in 1884. The Kankinara Paper Mill, started by the Imperial Paper Mills Company about the year 1894, was taken over by the Titaghur Paper Mills Company in 1903. Since then both the mills, one at Titaghur and the other at Kankinara, on the E. B. R., are worked by the same Company. By 1915, the capacity of the mills had increased to about 17 to 18 thousand tons of pulp, for internal consumption, and about 20 thousand tons of paper every year. The paper manufactured by the mills is of different varieties[1], and the total output has fluctuated from year to year, except during the war, when it steadily rose from about 17 thousand tons to about 23 thousand tons.[2]

The industry far from making any progress has barely maintained itself. This unfavourable position of the industry

1. The approximate percentage is : white printings 50 per cent ; writings 20 per cent ; and Brown Badamis and News about 30 per cent. These are, however, only general figures and hence subject to alteration according to the demand of the market.
Vide T. B. Report on Paper Industry, Evidence Vol. I, p. 241.
2. Ibid., p. 241.

is due to the abnormal conditions created by the War and the slump that followed thereafter. The output of paper increased during the War, due to the exclusion of foreign competition and the protection afforded thereby, but received a very serious setback just after the protective influence of the war had disappeared. The sudden fall in the output from 23 thousand tons to 19 thousand is due to the competition of the imported paper, which began to pour in after the treaty of Versailles was signed. The competition soon became more serious and the output further declined to 15,750 tons in 1921-22. Needless to say, therefore, that foreign competition operated to the detriment of the Indian paper mills.

Foreign competition became serious in the Indian market, partly because certain varieties of paper were not manufactured at all, especially the very superior and inferior varieties; and of the varieties of paper manufactured by the mills, primarily of medium quality, the prices were relatively higher as compared with those of the imported paper. Specialisation is a very important factor in reducing the cost of manufacture, but the Indian mills have not been able to realise it.[1]

The primary raw materials which the Titaghur Mills use are sabai grass, imported wood pulp, rags, and waste paper. When worked to the full capacity, the mills would consume about 30,000 tons of sabai grass annually, about 6,000 tons of imported wood pulp and 4,000 tons of rags and waste paper, the precise ratio of each varying with the quality or the grade of paper manufactured. Of the primary raw materials used by the mills, sabai grass has been the most important indigenous raw material, and the supplies are drawn from Sahebgunj, Rewa, Nepal and U. P. in the propor-

1. "We are unable to manufacture a large variety in order to meet competition offered by the importers, and owing to there being insufficient number of mills in the country to admit of specialisation in qualities and inter-dealing on British system while as a whole catering for all kinds in demand. Specialisation tends to reduce cost of manufacture, and this will, no doubt, be naturally evolved if the industry be encouraged. The Indian manufacturer is certainly at a disadvantage while conditions compel individual mills to manufacture so many different kinds and the remedy can only come with the expansion of the industry. Also the Government Departments require large number of the different kinds." Tariff Board Report on Paper Industry, Vo. I, pp. 241-42.

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tions given below[1]:—

Area	*Approximate Supply* (Lacs of Maunds)	*Field Area* (Miles)	*Mileage to Mills*
Western Circle	2	20	900
Nepal	3	30	550
Sahebgunj	4	18	212

The supplies of grass are cut and collected under contract, and transported from the fields to the factory with the help of camels and bullock carts. The freight by road from field to the despatching station is Rs. 15–4–0 per ton, and from the despatching station to the mill on rail the freight comes to about Rs. 13–8–0 per ton.[2] Besides, a fixed amount of royalty has to be paid irrespective of the quantity of grass raised from the Western and Eastern Circles and Nepal.[3] The royalty of the Sahebgunj area is paid by the contractor who works the fields and supplies grass to the mills. In view of the reduced consumption of grass, the royalty which was a fixed amount, formed a very substantial part of the total costs incurred by the mills[4], but with the working of the mills to full capacity the incidence of royalty was expected to be reduced considerably[5]. Of the other primary raw materials, rags and waste paper were collected from the important centres within the country and the wood pulp was imported.

The auxiliary raw materials used by the mills and their approximate annual consumption was as under[6]:—

Materials	*Quantity* cwts.	*Materials*	*Quantity* cwts.
Acid	1,032	China Clay	53,994
Alkali	65,285	Lime	96,334
Alum	27,425	Salt	37,590
Rosin	8,211	Dyes	452

1. Ibid, p. 243.
2. Ibid, p. 243.
3. The royalty is paid on the following scale :—

			Rupees per annum
Western Circle	...	1,77,500	Govt. royalty and Salami
Nepal	...	80,000	Nepal Durbar
Eastern Circle	...	10,251	To Government

Ibid, p. 243.

4. For the season 1922–23, the incidence of royalty was :—

Western Circle	2,463 tons (½ full-working)	Rs. 63-15. per ton.
Nepal	4,255 tons (½ full-working)	Rs. 20-7-6. per ton.
Sahebgunj	7,637 tons (½ full-working)	Rs. 3-6-0. per ton.

5. The incidence with full capacity :—
Western Circle Rs 14-3-1 ; (per ton). Nepal Rs. 8-0-0. per ton.
6. Ibid. p. 246.

Most of these materials were also purchased locally.[1]

Coal of different grades was purchased from the Bihar and Orissa coal-fields, the actual price charged varying from Rs. 10 to Rs. 14 per ton, according to quality f. o. r. mills. In this case the railway freight was about Rs. 4 per ton.

THE BENGAL PAPER MILL COMPANY

The Bengal Paper Mill Company's factory, situated at Ranigunj, started working in 1891, and manufactures paper of different varieties: Printing, Writings, Blottings, Unbleached and coloured, Badamis, Browns[2], etc., and the aggregate annual output varied from about 5,280 tons in 1909 to about 6,565 tons in 1923. In other words, the output of the mill has been fairly steady, notwithstanding the abnormal conditions created by the Great War, which affected the output of the Titaghur Mills appreciably. The mills have felt the necessity of specialisation in production, but, have not been able to put it into force due to the nature of the demand[3].

The primary raw materials used by the mills are grass, jute, rags, hemp, waste paper and imported pulp.[4] Of these raw

1. Ibid. p. 247.
2. The average proportion of the different varieties was as follows:—

	Per cent.		*Per cent.*
Printing	34·77	Writings	3·81
Unbleached	27·06	Blottings	0·20
Badamis	18·38	Antiques	0·19
Browns	10·46	Colours	0·17
Azures	4·96		

Vide Evidence Vol. I. p. 114.

3. Cf. "In order to meet the requirements of various users, particularly Government, it is necessary to make above classes of paper, although it is highly desirable to make as few kinds as possible. The objection to several varieties is increased cost of production and decreased outturn. Although from import returns, figures indicate the possibility of mills restricting their varieties of paper, in practice, it is found that all big paper dealers in indigenous papers require various kinds."

Ibid. p. 114.

4. The average quantity of the various raw materials used by the mills has been as follows:—

Grass ...	... 6,500	Tons.
Pulp ...	... 2,500	„
Rags, Jute etc	... 1,250	„
Waste Papers	... 1,051	„

Vide Supra.

materials, grass and wood pulp are by far the most important and constitute about 75 per cent. of the total supply of raw materials required. So far as wood pulp is concerned, railway rates are not important, because it is imported from foreign countries, and rail transport is necessary only from Howrah to the site of the mills, a distance of about 123 miles. In the case of other raw materials railway rates are more important, because they are collected from more important centres within the country and carried by railways over longer distances. Grass is collected from Chota Nagpur and the United Provinces. The Nagpur area includes Singbhum and Porahat, Bonai, Gangpur, Nagra, and Kali-Hati. The actual quantities of grass collected from all the areas in a pre-war and a post-war year are given in a table submitted below so as to show the relative importance of different areas :—

	1913-14 Maunds	*1922-23* Maunds	*1923-24* Maunds
Nagpur	99,286	99,400	81,670
Ramnagar	not worked	82,637	50,165
Landsdowne	,,	46,555	Nil
Sahebgunj	50,293	19,851	,,
Nepalgunj	59,686	29,277	,,
Pirpainti	4,506	Nil	,,
Bariarpur	9,300	,,	,,

The auxiliary raw materials are partly imported and partly collected from the internal centres of production. Many of the auxiliary raw materials are manufactured within the country, and with the improvement in the efficiency of local factories the demand of the mills will be met more fully from local materials. Of these articles, dyes are likely to be imported for some time to come in future, while the manufacture of other articles is being increasingly improved. The supplies of coal are available in the vicinity of the mills, and therefore railway freight is a negligible item.

THE INDIAN PAPER PULP COMPANY

The mill is situated on the bank of the river Hooghly at Hazinagar near Naihati, on the Eastern Bengal Railway, about 30 miles from Calcutta. This is the first Indian Paper Mill which endeavoured to manufacture paper from bamboo, and succeeded after spending very large amounts on experimental work for nearly

1. Ibid, p. 134.

three years. The mill commenced working in April 1922, with a capacity for 200 tons of paper per month, and its output during 1923 and 1924 was 1793 and 2,435 tons respectively. The paper turned out is of different varieties: white printings and writings, blotting, unbleached and toned printings (Superior Badami) antique laids and antique woves, azur laid and coloured printings.[1]

Bamboo is the primary raw material used by the mills, and the supplies are drawn mainly from the Chittagong Hill Tracts, at a distance of about 470 miles. The bamboos are cut on the contract basis, and thereafter floated down in rafts to the Company's crushing and bailing plant at Jaitpura, which is about 14 miles upstream off Chittagong on the Karanfuli River. After crushing and bailing, the bales are transported by boats to the Chittagong Jetties, whence they follow the usual combined route to the mill at Naihati. The distance covered by rafting is 119 miles, by boating and steamer 134 miles and by rail 217 miles. The average cost per ton of bamboo delivered at the mills is Rs. 50, which would be substantially reduced after the expansion of the plant. The cost of reserve bamboo, it is added, varies according to the quantity extracted which may increase or reduce overhead charges. Moreover, the development of the reserve in order to work up to the quantity required necessitates abnormal expenditure, which would not give a fair idea for criticism or comparison. Although there is a plenty of bamboo available, the organisation of collection on a large scale can only be done at a great cost to the pioneer.[2] It is clear, therefore, that the mills have to incur relatively higher costs, because it is a pioneer in the field of paper manufacture from bamboo, and that these costs do not convey to us a fair idea of the cost in future.

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1. The average proportion of each variety is given below :—

	Per cent.
White Printings	38·14
Writings	24·64
Blottings	1·92
Unbleached, etc.	7·72
Antiques	5·27
Azure Laid	0·28
Coloured	0·47
Badami, etc.	21·46

Ibid, p. 468.

2. Ibid, pp. 469-70.

The chief auxiliary raw materials used are Sulphur, Magnesia, Bleaching Powder, Rosin, Alum, China Clay, Dyes, Wires, 1st Press Felts, Jacket Conch, Dryer Felts, and Stores. Some of these materials are purchased in India while others are imported from abroad. Magnesium bisulphate is manufactured in the mill itself from sulphur and magnesia. Railway freight on these articles to the mills is not a substantial item in the cost of production.[1] Coal is brought by rail from the Bengal coalfields at a distance of 150 miles.

THE UPPER INDIA COUPER PAPER MILLS

The Upper India Couper Paper Mills Company was registered in 1879; the works, situated in Lucknow on the left bank of the river Gomti, commenced work in 1882. The different grades of paper made are White Printings, Cream-Laids, Government Water-marked Paper, Azure Laid, Cream Wove, Badamis, Browns, Unbleached Printings, Coloured Papers, Antiques, White Cartridge and Manilla, etc. Of the total production[2], about 50 per cent are Badamis and Brown, about 30 per cent whites, and 20 per cent miscellaneous.

The primary raw materials used by the mills are rags, hemp, jute, sabai grass and waste paper. According to the present rate of output the average annual consumption of different raw materials is sabai grass 1,125 tons, rags 1,110 tons; hemp 637 tons, jute 555 tons, and waste paper about 210 tons. These primary raw materials are drawn from the United Provinces, the Punjab, Rajputana, the Central Provinces, the Nepal Gunj Forests, the Kheri Forests, and the Dehra Dun Forests, the distance to be traversed varying from 10 to 500 miles. Contractors are employed to collect the raw materials, and they deliver them to the mills at Badshahnagar Railway Station. The average cost per ton delivered at the mills is given below[3]:—

	Rate for 1913-14 Per ton Rs. a. p.	*Rate for 1923-24* Per ton Rs. a. p.
Rags	43 8 7	75 1 11
Patmal (Jute)	41 13 3	68 4 8
Hemp	64 0 0	99 0 4
Sabai Grass	31 2 6	72 2 1
Waste Papers	15 10 5	51 3 6

1. Ibid, p. 472.
2. Ibid, pp. 34-35.
3. Ibid. p. 36.

The auxiliary raw materials are mostly imported from England ; some of them like lime and rosin are purchased from Katni, Murwara and Bhawli respectively. Coal is imported from Bengal as well as from the Pench Valley in C. P., according to the quality required. Freight on coal is an important item because the distance is great.

THE DECCAN PAPER MILLS

The Deccan Paper Mills Company was formed in 1885 and the Mill, which is situated at Mundhwa adjoining the Hadapsar Railway Station, about 5 miles from Poona, commenced manufacture by the end of 1887, having a capacity of about 1,700 tons per year. The Mill manufactures various kinds of paper such as ledge and azure laid, superior and ordinary white writings, and printings, coloured papers, badami printings, white and brown cartridge, and wrappings. Of the total output the percentage of different grades in the pre-war period was : azure laid, writing wove, and cream laid 51 per cent ; white printing 31 per cent; coloured printing 4 per cent ; white cartridge and badami 3 per cent; brown 11 per cent. Since 1914 the proportion has been : azure laid and cream laid 15 per cent; white printing 34 per cent; badami printing 39 per cent; coloured printing 2 per cent; brown 10 per cent. Thus, there has been a remarkable change in the production of the different grades of paper. The change is obviously due to the nature of the demand and the foreign competition. Badamis are seemingly more in demand and therefore the output has been raised from 3 per cent. to 39 per cent. But the most important fact to be noted in this case is that the progress of the mill has not been steady and its aggregate output has fluctuated considerably from year to year. The output of the mills went on steadily increasing in the pre-war years, with the exception of the year 1911-12, but since 1914-15 the manufacture received a serious setback and has continually declined, so much so that the mill ceased to work in March 1924.[1] After some time the mill was re-opened and the manufacture commenced as will be seen at a later stage. The Company reiterated the argument advanced by the other paper mills that one of the serious disadvantages under which they worked is the lack of specialisation in production

1. Vide, Report of the Tariff Board, 1925, p. 3.

which raises the cost of paper turned out.[1] This is the standing grievance of all the Indian paper mills, and can only be remedied with the increase in the output of the individual mills and the establishment of new ones.

The primary raw materials used by the mills are rags, imported pulp, gunny, hemp, old ropes and waste paper; the precise proportion of each varies according to the total output and the quality of the paper manufactured. Rags, after sorting, dusting and cutting, yield on an average 60 per cent. of bleached paper. On the average, therefore, one ton of rags produces about half a ton of white paper. The collection of raw materials is entrusted to the contractors. It may be noted that rags are collected from important centres in the Bombay Presidency, but a large share is contributed by Bombay City proper. Of the auxiliary raw materials, Rosin, French chalk and Ochres are purchased within the country, while caustic, bleach, alumina sulphate, and China clay are imported from abroad. Coal is obtained from the Central Provinces and Bengal. In the pre-war period only Bengal coal was used, and as in 1913-14 the pits mouth cost of coal was about Rs. 6 per ton, railway freight amounted to Rs. 11-1-0. Since the War both C. P. and Bengal coal is used, the former costs about Rs. 13-0-0 per ton at pitsmouth, plus Rs. 9-7-0 per ton as railway freight and the latter costs Rs. 11-8-0 per ton pitsmouth, plus Rs. 16-13-0 as railway rates.[2]

These are the most important paper mills which we need discuss here, because even though there are some other minor mills, like those at Bombay and Rajahmundri, the general conclusions will be equally applicable to them. Besides, the information

1. Cf. "We manufacture a larger variety of paper than a single manufacturer in Western countries commonly does because the prevailing conditions do not lend themselves to the economic manufacture of a standard grade of news printings, and the market for the better grades demands a large amount of specialisation. In having to make different grades and specialities we are at a disadvantage in as-much as the constant change—over from one quality to another entails a certain loss of materials, restricts production, involves a large percentage of 'Broke and Retree', and the product cannot be expected to come up quite to the standard of those who have specialised in their own particular line."

   T. B. Report on Paper Industry. Evidence Vol. I, p. 661.

2. Ibid. p. 665.

available about the organisation of these minor mills is very meagre.[1]

DETAILED ANALYSIS OF PRIMARY RAW MATERIALS AND TRANSPORT COSTS

It is clear from the foregoing study that the Indian mills have to carry their raw materials over long distances and that in most cases railway transport is the only means of conveyance available. We have pointed out at an earlier stage that the cost of railroad transport is higher than that of water transport, which imposes a still more serious burden on the Indian paper mills as compared with their rivals in the Western countries. In view of these two-fold difficulties, it is necessary to examine in detail the position of the raw materials, with special reference to transport costs.

The mill should be located within a reasonable distance of the raw materials lest the cost of transport should become uneconomic. We propose to examine the location of the more important mills and the sources of their raw materials in the light of this criterion. Let us start with the Titaghur Mills. Sabai grass, which is the most important raw material, is drawn from the Western Circle area and Sahebgunj. The distance from the Western Circle area to the mills is about 900 miles and from Sahebgunj about 200 miles, which clearly brings out that the former area is more costly, since the railway freight is more than treble than that from the Sahebgunj area. The variations in railway freight paid by the mills can be seen from the statement given below[2] :—

Areas	*1913-14*	*1920*	*1922*	*Early 1924*	*Late*[3] *1924*
Western Circle ...	Nil	0 8 1	0 10 11	0 9 11	0 8 1
Nepal ...	0 5 10	0 10 1	0 11 0	0 10 7	0 8 5
Ramjeedas (B.N.R. excluded)	0 2 4	0 3 7	0 3 4	0 3 8	0 2 8

It can hardly be doubted that the Western Circle areas are very costly because railway freight is high, in view of the longer

1. Notwithstanding frequent enquiries from the Agents of these minor mills we could get no information at all.
2. Vide, Ibid, p. 307.
3. In the beginning of the year 1924 rates were higher but they were subsequently reduced.

distance. The mill authorities themselves have realised this fact because they say that these areas "have proved expensive holdings up to date, but with full working, we hope to get grass at economic rates. These areas will not be worked at their cheapest until a pulp mill is erected near the grass fields[1] and the freight on the raw materials saved[2]..." Thus, it was realised that the transport of grass from Western Circle areas was not commercially profitable, and as the mills, depended for their supplies of raw materials on these areas no great expansion in the output would be possible in future. These areas were acquired by the Company in 1920[3], and a royalty of about Rs. 1,77,500 per year has to be paid for the same. It seems that the Company acquired this area, because during the War production had received a marked stimulus, and therefore competition among the mills for Sabai grass, which was the most important raw material known then, increased. Besides, the price of imported pulp had risen considerably. The radius was therefore enlarged to have an adequate supply of raw materials assured. The mills had increased their consumption of grass from 17,283 tons in 1914 to 21,400 tons in 1923-24 and that of wood pulp had actually declined from 6,952 tons to 3,964 tons during the same period.[4] Sabai grass was being increasingly utilised and therefore the mills had to get their supplies from Western Circle areas. That was, however, an abnormal period. The continuance of the same cost can have little justification to-day, with the return to more stable economic conditions, and much less so in future. Above all, it may be said that the mills drawing the supplies of their raw materials from such distant areas

1. For manufacturing 10,000 tons of wood pulp about 24,000 tons of grass is necessary as submitted by Sir W. Carey and would be collected as follows :—

		Tons
Saharanpur Division	...	13,000
Landsdowne Division	...	5,500
Kalagarh Division	...	3,500
Ramnagar Division	...	2,000
Total	...	24,000

Ibid, p. 333.

2. Ibid, p. 244.
3. Ibid, p. 330.
4. Ibid, p. 320.

have no future. There are, however, other grass fields, besides the Western Circle areas, which are nearer the mills, and the output extracted from them is as follows:—

		Maunds per year.
1.	Sahebgunj	450,000
2.	Nepal	460,000
3.	Eastern Circle of Gonda and Bahraich ...	80,000
4.	Ramnagar and Bettiah Forest ...	70,000
5.	Rewa	35,000
6.	Hazaribagh	15,000

Of the above forests, excepting Sahebgunj and Nepal, the other areas had not been worked to their full capacity, because the requirements of the mills did not permit further exploitation. But one feels that if the mills had in these fields potentialities claimed by the contractor, they would not have gone in quest of grass to a distance of 900 miles and paid heavy royalty. Rightly Professor Kale remarked, "Taken by itself, the supply may be unlimited, but as an economic proposition, supply means supply at a particular price, so that, unless you are able to bring down the cost of raw material a great deal, you cannot say that the supply of the raw material is unlimited".[1] In short, Sabai grass can be economically utilised by the mills only to a limited extent and that the future development of the industry cannot be based on this raw material.

Sabai grass is likewise the most important raw material of the Bengal Paper Mills Company, its annual consumption being 6,500 tons, as against about 2,500 tons of wood pulp, and a similar amount of rags, jute and waste paper. Ramnagar field, which supplies a very substantial proportion of grass required by the mills, is at a distance of about 700 miles and railway freight comes to about Rs. 13-13-1 per ton, as against Rs. 9-0-0 per ton from Nagpur fields[2]. It is indeed doubtful to say that an industry which gets its raw materials from a distance of 700 miles on railroads has any advantage and would in future be able to develop. Besides, in this particular case, with the development of different mills, the demand for Sabai grass would increase, and as the supplies are not available nearer at hand, the radius from

1. Ibid, p. 337--38.

2. Ibid, p. 134.

which this raw material would be drawn is also bound to expand. The increase in demand, without a *pari passu* increase in supply, is sure to intensify the internal competition of the mills, and thereby give rise to further complications. A similar situation, but on a smaller scale, arose during the War, and the mills extended their radius with the result that internal competition increased. From what has been adverted to above, and from the evidence tendered by Mr. Carr on behalf of the Bengal Paper Mills Company, it does not seem to be fully established that an adequate supply of Sabai grass would be forthcoming at a reasonable price, if the output of the mills is increased. It is doubtful whether the cost of this primary raw material would not go up, even if the manufacture was confined to its present limits. In short, the quantity of Sabai grass that can be made commercially available is restricted.

The Upper India Couper Mills use Sabai grass and rags in almost equal quantities in addition to jute, hemp and waste paper. Rags and the raw materials other than Sabai grass are collected from the more important towns like Cawnpore, Hathras, Muttra, Aligarh, Delhi, Meerut, Ambala, Khurja, Muzaffarnagar, Bulandshahar, Ferozabad, Ghaziabad, Benares, Allahabad, etc. These materials are collected by the agents. But the supply of rags and hemp, even though cheaper than grass, cannot be relied upon since the sources are scattered over a very wide area. Mr. Nabi-Ulla was right in saying that the supply was precarious.[1] Therefore, the future expansion of the mill cannot be based on rags and hemp as the primary raw materials, although they will continue to aid production.

Sabai grass is drawn from the Forests of Nepalgunj, Kheri, and Dehra Dun. The Nepalgunj and Kheri Forests are about 200 miles from Lucknow, while the Sahebgunj Forests about 400 miles. It will, therefore, be seen that the Nepalgunj and Kheri Forests are nearer and more profitable to work. In fact, the mills for long drew their supplies only from the Nepalgunj forests, but the internal competition which grew up later drove them out of that forest, and they had per force to fall back on the Kheri and Dehru Dun Forests. We have already pointed out while studying the organisation of the Bengal Mills and the sources of their raw materials, that, with the increase in their output during the war

1. Ibid, p. 83.

and the rise in the price of wood pulp, the mills extended their radius of supply, and went as far as Western Circle areas at a distance of 900 miles, and paid large sums as royalty to keep up an adequate supply of raw materials assured to them. These distant regions are proving uneconomic holdings to the Bengal mills. Besides, as the mills are going on working further into the fields, the cost of transport is rising and has its obvious reflex effects on the total cost. At the initial stages the mills got the necessary supply just at the bottom of the hill, but now they have to go higher and higher and the cost of transport is therefore rising. In short, the supply of grass and the railway freight thereon does not augur well for the future of the mill ; it cannot be a sound basis of future expansion. This is the condition of mills using sabai grass as the primary raw material.

The Indian Paper Pulp Company, per contra, utilises bamboo as its primary raw material. It has already been pointed out that the progress of this mill is being anxiously watched because bamboo, according to the expert opinion on the subject, is a more economic and reliable raw material for the manufacture of paper. Therefore, it is interesting as well as instructive to have an analysis of bamboo supplies with special reference to transport costs. It will be recalled that the Campany has a lease of a large bamboo area in the Chittagong Hill Tracts, at a distance of about 470 miles from the site of the mill, from which it draws the requisite tonnage of bamboo from year to year. The capacity of the mill is 200 tons a month, or 2,400 tons a year, and taking approximately 2¼ tons of bamboo as requisite for one ton of unbleached pulp, we find that in all about 5,400 tons of bamboo would be required. As regards the cost per ton of bamboo delivered at the mills, figures submitted by Mr. Muir, the Managing Director, may be noted :—

The Cost per ton of Bamboo during 1923-24[1]

Cutting	15	0	0
Rafting to Jaitpura	2	8	0
Crushing and Despatch	9	0	0
Boating to Jetty	2	8	4
Landing Charges	2	4	0
Railway Freight to Naihati	8	7	0
Siding Charge	0	1	9
Total ...	39	13	1

1. Ibid, p. 499.

In addition to the foregoing, other expenses of about Rs. 15-11-0 are incurred[1], so that the total costs amount to about Rs. 55-8-0 per ton.

THE COST OF SABAI GRASS AND BAMBOO COMPARED

The Tariff Board pointed out that the cost of sabai grass under favourable circumstances might range from Rs. 50 to Rs. 55 a ton, and in unfavourable seasons would be higher. Paper manufactured from such a costly raw material cannot compete with the imported paper, because the better part of the Indian demand is for cheap paper. Paper made from grass, therefore, starts the race under an initial handicap and a very serious one.[2] As adverted to above, this high cost of sabai grass is due to the internal competition ; the mills were scrambling for grass, and the demand had outrun the economic radius from which grass could be collected. When an Indian paper maker, in order to assure himself of adequate supplies of grass, has to resort to fields from 500 miles to 900 miles away from the factory, thereby adding Rs. 25 a ton to the cost of paper on account of railway freight, and still more in view of the intense internal competition, he is willing to incur large expense by way of royalty and rent which adds another Rs. 25 a ton to the cost of paper, it cannot be said that an adequate supply at economic price is available. In fact, the paper mills in India which use sabai grass are at a disadvantage in competition with the imported paper. Thus, even though India possesses supplies of sabai grass in plenty, they cannot be counted as a natural advantage. As Prof. Kale says, " It is not abundance in general that is of importance, it is abundance in a given place and in relation to other factors that counts."[3]

The utilisation of bamboo as a raw material for the manufacture of paper in India augurs well for the future of the industry. In fact, if it were not for the discovery of bamboo as a material for paper making, the Indian paper industry would have been relegated to an insignificant position. Thanks to the labours of Messrs. Sindall and Raitt, Indian has become a pioneer in a most important branch of paper making. Though, paper made from

1. Vide, Tariff Board Report, Para 56.
2. Ibid, Para 102.
3. Vide, " Economics of Protection in India," P. 66.

bamboo is not so strong as that made from sabai grass, still it is as strong as, and possibly stronger than the paper made from wood pulp.[1] There is another consideration in favour of bamboo as against wood or grass. Bamboo has an advantage over wood in the fact that the growth of trees is slow, and therefore there is no assurance of continuous supply, whereas bamboo can be reproduced almost every year. Bamboo has superiority over grass in the fact that it is very difficult to separate impurities from grass, which might creep into the finished paper, whereas there is no such fear in the case of bamboo. In view of this, bamboo is expected to prove a cheaper raw material for paper manufacture than sabai grass. The present cost of bamboo, which is slightly above Rs. 55 a ton is expected to fall substantially in future with a better and fuller working of the mill. The Tariff Board found that as the annual extraction of bamboo from the Kasalong reserve was comparatively small the cost of extraction was high. Even so the cost delivered at Naihati in 1923-24 was lower by about Rs. 5 a ton than the averge cost of grass delivered at either the Ranigunj or the Titaghur mills in that year. Therefore, the Board held that given time and perseverance, the Company will succeed in bringing down the cost substantially. Thus, bamboo offers good prospects for future development, and there is good ground for hoping that the paper industry based on bamboo will ultimately be able to do away with protection.

PRESENT POSITION

With the grant of protection, the Indian paper industry has entered on an entirely new phase. The most striking feature of the industry during this period has been the steady progress of the paper mills and the increase in the consumption of paper. Of course there has been no material change in the number of the mills, but their capacity as well as the actual output has increased appreciably. There has been no change in the equipment of the factories of the Titaghur Mills Company and the Bengal Paper Mills Company, in as much as they still have four machines each, as they had in 1925, although there have been some minor changes in the technique. Similarly, the Upper India Couper Paper Mills Company has continued its operations with two machines without

1. Vide, Tariff Board Report, 1925, Para. 37.

making any fresh additions. The Indian Paper Pulp Company's mill at Naihati and the Deccan Paper Mills Company's mill at Poona have now added one machine each. There are other minor mills but information about them is not available. The Tariff Board in 1925, estimated the capacity of five important mills with 16 machines to be 33,000 tons a year; and according to the estimate of the second report in 1931, which is the latest available, the capacity has risen to 45,000 tons a year[1], an increase of about 12,600 tons, due mainly to the installation of additional machines at Naihati and Poona and to the starting of a new mill at Rajahmundry. The details of the inrease in the output of the more important mills, as given by the Tariff Board, are very interesting.[2] The production of printing and writing paper has increased steadily and substantially. The increase in the output of badami paper has barely maintained itself. The Titaghur Paper Mills Company specialise in the production of printing and writing paper, and badami paper is manufactured only to a limited extent. They have practically ceased the production of wrappers. The Bengal Paper Mill Company specialise in the manufacture of printing paper and the other varieties are only subsidiary. It may, however, be noted that the Bengal Paper Mills lead the other mills in the output of wrappers, because thereby they are better able to utilise their raw materials and waste is eliminated. They have an elaborate system of strainers and filters which enables them to collect all the refuse which is packed with the grass as it arrives at the mill, and this material, which would otherwise be thrown out as waste, is utilised for the manufacture of wrappers. The Indian Paper Pulp Company produces primarily printing and writing paper and the Upper India Couper Mills concentrate on printing and badami. Thus, there has been a substantial increase in the output of the mills.

In the meantime, the demand for paper has also increased considerably. Of this increase in demand, the Indian Paper Mills have been able to capture only a part, with the result that the imports of paper have kept up a steady upward trend.

We shall now discuss the present position of rates on different raw materials, and thereafter review the freight on paper, both

1. Vide, T. B. Report 1931, Para 10.
2. Ibid, Para. 11.

imported and local manufactures, so as to have a more comprehensive study of the present position of railway transport charges as affecting the paper industry.

Present Position of Railway Rates on Raw Materials.

The Basis of Rates

1. *Grass*

Grass is classified as 1st. class railway risk in the General Classification of Goods[1]. But special schedule rates, lower than the class rates, are quoted at owner's risk on different railways. The Assam Bengal Railway quotes C/Q schedule rate at O. R. on wagon loads (W/100), the basis of charge being as follows :—

		Pie per maund per mile.
	1 to 100 miles	0·200
Plus	101 to 200 „	0·170
„	201 to 500 „	0·140
	Above 500 „	0·100

The Bengal and North Western Railway charges C/D schedule rate, at O. R. in wagon loads (W/100), on a uniform basis of 0·250 pie per maund per mile. The Eastern Bengal Railway has a similar basis of charge. The B. N. Railway charges BN/Z schedule, at O. R. at wagon loads (WR/300), subject to a minimum charge of Rs. 30 per wagon. According to the BN/Z schedule for the first and up to 250 miles the charge is levied at the rate of Re. 0–4–0 per four-wheeled wagon per mile, and Re. 0–3–0 for extra distances above 250 miles, to be added to the charge of 250 miles. The E. I. Railway quotes C/L schedule rate, at O. R. on wagon loads (W/150), with the basis of charge given below:—

		Pie per maund per mile.
	1 to 100 miles	0·380
Plus	101 to 300 „	0·220
„	301 to 600 „	0·130
	Above 600 „	0·110

On the N. W. Railway, when grass is carried at O. R. in wagon loads, L/T, L/V, and L/W schedule rates are charged, according to

1. Vide, Indian Railways General Classification of Goods, P. 341.

the conditions of carriage. According to L/T Schedule the basis may be conveniently tabulated as follows :—

		Per 4-wheeled wagon per mile. Rs. a. p.
	1 to 100 miles	0 3 6
Plus	101 to 200 ,, ...	0 2 9
	Above 200 ,, ...	0 2 0

The basis of L/V schedule is as follows :—

		Per 4-wheeled wagon per mile. Rs. a. p.
	1 to 100 miles	0 4 3
Plus	101 to 200 ,, ...	0 3 3
	Above 200 ,, ...	0 2 6

The L/W schedule has a slightly higher basis of charge.

		Per 4-wheeled wagon per mile. Rs. as. p.
	1 to 100 miles	0 5 0
Plus	101 to 200 ,, ...	0 4 0
,,	Above 200 ,, ...	0 3 0

The R. & K. Railway charges C/B schedule rate, at O. R. on wagon loads (W/120), on a uniform basis of 0·333 pie per maund per mile.

2. *Rags*

Next to grass another important raw material used by the Indian paper mills is rags which we shall presently study. Rags are classified as 1st. class railway risk in the General Classification of Goods. Some railways, however, quote lower rates when the traffic is booked at owner's risk in wagon loads. The B. B. & C. I. Railway quotes C/B and C/J schedule rates when traffic is booked in wagon loads (W/200 B. G., W/120 M. G., or N. G.) at O. R., the former schedule rate being applicable in case the traffic is carried for distances less than 300 miles and the latter for distances of 300 miles and over. The C/B schedule has a uniform basis of charge of 0·333 pie per maund per mile. The basis of C/J

schedule is tabulated below :—

		Pie per maund per mile
	1 to 150 miles	0·380
Plus	151 to 250 „	0·333
„	250 to 500 „	0·200
„	501 to 700 „	0·130
	Above 700 „	0·100

Here it should be pointed out that as the C/J schedule is applicable only to distances of 300 miles and over, the rates for distances of less than 300 miles as contained in this schedule do not apply. The B. B. & C. I. Railway authorities have, therefore, prepared a separate table of these two schedules known as C/B/CJ schedule. The B. N. Railway quotes C/R schedule rate with the basis of charge as follows :—

		Pie per maund per mile.
	1 to 150 miles	0·140
Plus	Above 150 „	0·110

The E. I. Railway quoted the same C/R schedule rate. The G. I. P. Railway quotes C/O schedule rate; the basis of charge is given below :—

		Pie per maund per mile.
	1 to 75 miles	0·300
Plus	76 to 400 „	0·170
„	Above 400 „	0·100

The N. W. Railway quotes C/L schedule rate, having the following basis of charge :—

	Pie per maund per mile
1 to 100 miles	0·380
plus 101 to 300 „	0·220
„ 301 to 600 „	0·130
„ Above 600 „	0·110

Grass and rags are the two most important raw materials largely utilised by the paper mills. Imported pulp is also largely used by the mills, and this tendency has received a stimulus since the last few years, due to a fall in the price of pulp. Wood pulp is classed as first class railway risk in the General Classification of Goods, without any exceptions on the different railways. Bamboo is also utilised, but railway transport is not so important in this case, because water transport is largely used. Besides, as adverted to above, the railways concerned have quoted special station-to-station rates to the mills whenever requested. Further, bamboo traffic for

paper mills is important only on some railways, and therefore it is needless to recount the basis of rates quoted on all the more important railways here. This finishes our review of the basis of rates quoted by the different railways on the raw materials used by the paper mills. We shall now proceed to examine the actual rates paid by the different mills on the raw materials they use.

RATES ON THE RAW MATERIALS CONSUMED BY THE TITAGHUR MILLS

Before we proceed to analyse the actual rates paid by the different mills on their raw materials, it is necessary to know their relative importance from the standpoint of quantitative consumption. The utilisation of bamboo as a raw material for the manufacture of paper, which was almost insignificant in 1924-25, has steadily increased under the stimulus of protection. The Titaghur Paper Mills Company manufactured about 1,841 tons of paper in 1930-31 from bamboo. By now the consumption must have increased still more. The consumption of grass has remained steady between 1924-25 and 1930-31, and from the trend of production it is clear that grass offers little prospect for expansion. The consumption of other raw materials, like rags, hemp, etc., has also remained almost steady. The use of wood pulp is increasing due to a steep fall in price, and its exemption from duty, as the Board has pointed out.[1] This, in short, is the situation as to the raw materials consumed by the Titaghur Company's Mills.

The E. I. R. quotes special rates on grass traffic coming to the Titaghur and Kankinara Paper Mills. We give below the special station-to-station rates on grass (dry) quoted by the E. I. R. to Naihati, for traffic to the aforesaid mills :—

Station from	*Rate per 4-wheeeld Wagon* Rs. a. p.	*Station from*	*Rate per 4-wheeled Wagon* Rs. a. p.
Shaharanpur	79 0 0	Gajroula	71 0 0
Via Ghaziabad	75 0 0	Babrala	70 0 0
Saneh Road	75 0 0	Chandausi	68 0 0
Najibabad	74 0 0	Japla	32 0 0
Nagina	73 0 0	Bariarpur	28 0 0
Jawalapur	77 0 0	Hazaribagh Road	21 0 0
Kotdwara	76 0 0	Mirza Chowki	21 0 0
Dhampur	72 0 0	Sahebgunj	21 0 0

1. "The imposition of protective duty on paper while wood pulp is admitted duty free has naturally acted as a stimulus to an extended use of imported pulp.
Vide, T. B. Report, 1931. Para. 16.

It will be seen that the railway freight from the Western Circle area is very heavy, and therefore it is not surprising if the consumption of grass has not shown a proportionate increase. It has already been shown that this area is not within the economic limit of the Bengal mills, the distance being about 900 miles from the mills. A relatively higher incidence of railway freight from these stations is due to the longer distance over which the traffic has to pass, rather than to the higher level of the freight charge, because the rates adverted to above are special rates, lower than the ordinary rates, applicable only on the traffic passing to the mills. Rates from the Sahebganj area are lower because of the distance which is about 200 miles only.

Since 1934, however, the rates have been raised from some stations. For instance, the rate from Soneh Road has been raised from Rs. 75 to Rs. 83. The higher incidence of rates will be seen from the following table :—

Station from	*Rates per Wagon*	
	1933	*1935*
	Rs. a. p.	Rs. a. p.
Via Ghaziabad	75 0 0	83 0 0
Soneh Road	75 0 0	83 0 0
Najibabad	74 0 0	81 0 0
Gajroula	71 0 0	78 0 0
Babrala	70 0 0	77 0 0
Chandausi	68 0 0	75 0 0

The utilisation of grass, as a raw material is obviously uneconomic, in face of the growing popularity of bamboo and wood pulp. The rise in the cost of transport makes it still more uneconomic. This change in the rates policy is an indication that the paper mills should draw their supplies of grass from areas in their vicinity. Therefore, in so far as these rates help to check the unhealthy competition for grass from the Western Circle, they help the industry.

Another change in the rates policy may also be noted. The E. I. R. quoted station-to-station rates on grass from some more important stations in the vicinity of the mills on wagon loads alone, as will be seen from the foregoing table. But now reduced rates are available on actual weight per maund. The relative

position will be seen from the following table :—

Station from		*Rate per 4-wheeled Wagon* 1932-33 Rs. a. p.	*Rate per maund* 1935 Rs. a. p.
Japla	...	32 0 0	0 3 1
Bariarpur	...	28 0 0	0 2 8
Hazaribagh Road	...	21 0 0	0 2 1
Mirza Chowki	...	21 0 0	0 2 1
Sahebgunj	...	21 0 0	0 2 1

Grass pressed when booked to Titaghur and Kankinara mills is charged at the following rates[1]:—

Station from		*Rate per maund* Rs. a. p.	*Station from*		*Rate per maund* Rs. a. p.
Bagha	...	0 4 7	Nepalgunj Road	...	0 6 3
Bahraich	...	0 5 11	Mautanwa	...	0 5 2
Barahni	...	0 5 4	Nishanagara	...	0 6 5
Harinagar	...	0 4 5	Pachperwa	...	0 5 5
Jarwa	...	0 5 7	Padrauna	...	0 4 7
Kawapur	...	0 5 7	Shohratgunj	...	0 5 2
Mankapur	...	0 5 5	Tulsipur	...	0 5 7
Mihinpurwa	...	0 6 5	Ueka Bazar	...	0 5 1
Murtiha	...	0 6 4			

The traffic is routed via Mokameh Ghat, and the rates have been kept specially low to stimulate traffic moving to the mills. The lower level of rates becomes still more clear when it is recalled that the traffic has to pass over two railway systems, the B. & N. W. R. and E. I. R.

On traffic in rags passing via Naihati to Titaghur and Kankinara Mills the E. I. R. does not quote any station-to-station rates, and therefore the C/R schedule rate is applicable. We tabulate below the rates based on this schedule from some more important towns via Naihati with a view to point out the incidence of freight on the traffic moving to these mills.

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1. In minimum consignments of three B. and N. W. Railway 4-wheeled wagons or multiples thereof, such 4-wheeled wagons subject to weight for charge of 120 maunds each wagon.

   Vide, Goods Tariff, E. I. R. Part I, p. 337.

Rates per Maund via Naihati

Mileage	*Station from*	*Rate*			*Mileage*	*Station from*	*Rate*		
		Rs.	a.	p.			Rs.	a.	p.
47	Burdwan ...	0	1	1	493	Allahabad ...	0	5	2
245	Bhagalpur ...	0	2	10	612	Cawnpore ...	0	6	3
270	Jamalpur ...	0	3	1	769	Agra ...	0	7	8
113	Asansol ...	0	1	7	785	Hathras ...	0	7	10
118	Sitarampur ...	0	1	8	410	Benares ...	0	4	5
262	Mokameh Ghat	0	3	0	531	Fyzabad ...	0	5	6
313	Patna City ...	0	3	6	602	Unao Mills ...	0	6	2
393	Buxar ...	0	4	3	882	Meerut City ...	0	8	6
273	Gaya ...	0	3	2	919	Saharanpur ...	0	9	1

This statement shows the nature of railway freight charged on the transport of rags consumed by the Titaghur and Kankinara mills. It is not, however, claimed that the aforesaid mills do actually draw their supplies of rags from all these markets. But, as the Titaghur Mills Company deposed before the Tariff Board, in 1925, that they collected rags from more important towns, within the country, the foregoing table gives a fairly good idea of the marketing area and the freight charged. It will be noted that the freight per maund per mile would work out to be a little higher in the case of rags than in that of grass. This is due to the fact that the rates on rags noted above are on actual weight, while those on grass are applicable for wagon loads only. Further, it seems that since rags are collected from scattered sources and in small lots even if special station-to-station rates were offered on wagon loads the mills would not be able to avail themselves of the concession. Grass fields are more or less centralised, and even though the mills have to bring grass from fields located at a distance of more than 900 miles, the average freight paid per maund may be lower for grass than for rags. This shows that from the standpoint of railway freight, the collection of grass, which has been subjected to very severe criticism, is perhaps less costly than that of rags. In fact, while the transport of grass has been studied to some extent, rags have been completely neglected. This is very unfortunate. No one who has a fair knowledge of the Indian paper industry can deny that rags constitute to this day one of the most important raw materials of paper manufacture in this country. With the exception of bamboo, which is yet in its experimental stage, if grass occupies the first rank amongst the primary raw materials, rags are next in importance. That the railways should encourage the movement of traffic in rags cannot be denied.

Railways have quoted schedule rates, lower than the class rates, as adverted to above, and hence they are free from any charge that the interested parties may endeavour to advance against them. The difficulties that exist can be partly reduced by improving the system of collection. Besides, it should be noted that there are two most important markets, Calcutta and Bombay, which supply the mills with rags and waste paper, and the freight works out to about Re. 0-1-5 and Rs. 1-0-9 per maund respectively. We shall next examine the railway freight on raw materials consumed by the Bengal Paper Mills Company's factory at Ranigunj.

The Bengal Paper Mills bring their grass supplies from the Eastern Circle areas, United Provinces and the Central Provinces, as noted elsewhere. The railways carrying this traffic have co-operated and have quoted special station-to-station rates from the more important areas. The statement given below shows the station-to-station rates quoted by the E. I. R. in co-operation with the B. & N. W. R., and N. W. R.

Rates on grass (dry) to Ranigunj, B. P. Mill Siding

From	Rate per maund (Wagon Load) Rs. a. p.	*From*	Rate per maund (Wagon Load) Rs. a. p.
Babrala	0 5 11	Bagaho	0 4 6
Chandausi	0 5 9	Bahraich	0 5 10
Gajraula	0 6 1	Barhni	0 5 3
Via Ghaziabad	0 6 5	Harinagar	0 4 4
Hazaribagh Road	0 2 0	Jarwa	0 5 6
Garwha Road	0 2 8	Kawapur	0 5 6
Jawalapur	0 6 8	Mankapur	0 5 4
Katdwara	0 6 6	Mihinpurwa	0 6 2
Via Lucknow	0 4 2	Murtiha	0 6 3
Mirza Chowki	0 2 1	Nepalgunj Road	0 6 2
Via Mokameh Ghat	0 2 1	Nantanwa	0 5 1
Nagina	0 6 3	Nishanagar	0 6 4
Via Naini	0 3 7	Pachperwa	0 5 4
Najibabad	0 6 4	Shohratgunj	0 5 4
Sahebgunj	0 2 1	Tulsipur	0 5 6
		Uska Bazar	0 5 0

In this table we have included the Western Circle areas also because the railways allow special rates even from these despatching stations, although the mill does not draw its supplies from that circle due to longer distance and consequent higher freight charge. But the fact that the railways quote low station-to-station rates shows that in the event of scarcity of grass in the fields near by,

the mill can with ease draw its grass supplies from that area instead of stopping work. This is indeed a good facility. Another important feature of the foregoing table is that in respect of railway transport facilities, especially in the areas referred to therein, the Ranigunj Mill is in a position almost similar to that of the Titaghur and Kankinara Mills. But, here it may be noted, as we shall show in detail later, that the Ranigunj Mill draws its grass supplies from Nagpur fields, which are decidedly more suitable in matters of railway freight than the Western Circle areas.

Rates from some important fields, via Asansol, for Sabai grass carried to Ranigunj Bengal Paper Mill Siding, work out as follows :[1]—

Station from	*Rate*			*Station from*	*Rate*		
	Rs.	a.	p.		Rs.	a.	p.
Annupur	66	0	0	Jenapur	61	0	0
Birsinghpur	74	0	0	Pendra Road	62	0	0
Chandia Road	77	0	0	Talcher	70	0	0
Jaithari	65	0	0	Umaria	76	0	0

To these rates must be added the freight from Asansol to Ranigunj Bengal Paper Mill Siding which is 11 pies per maund. It will be seen that the freight charge is substantially high, and the mill cannot be said to have any natural advantage in respect of grass from these fields. It is in the interest of the mills to get their grass from the fields nearer to the sites.

The E. I. R. quotes station-to-station rates lower than the schedule rates on traffic in rags passing to the Bengal Paper Mill Siding from the under-mentioned important stations :[2]—

			Rs.	a.	p.
Cawnpore	...	...	0	5	4
Allahabad	...	...	0	4	3
Aligarh	...	...	0	7	1
Unao Mills	...	...	0	5	4

Similar reduced rates are available for unserviceable ropes and cuttings from some important centres as tabulated below :[3]—

			Rs.	a.	p.
Cownpore	...	...	0	5	4
Allahabad	...	...	0	4	3
Aligarh	...	...	0	7	1

1. These rates are per wagon.
2. W/200 ; L.
3. These rates are available in wagon loads : W/300 ; and the loading and unloading to be done by the consignor and consignee respectively.

THE UPPER INDIA COUPER MILLS

Let us next take up the Upper India Couper Paper Mill, having grass and rags as its primary raw materials. The utilisation of bamboo is unknown to this mill. The use of wood pulp has been taken up only very recently because of the fall in price. The consumption of grass has not shown any increase, although there have been wide fluctuations in the quantity consumed from year to year. The use of wood pulp has gradually increased. The consumption of other raw materials, like rags, has remained fairly constant, about 74% of the total paper being manufactured from these materials, as against about 15% from grass, and 11% from wood pulp.

The E. I. R. quotes special rates on grass as well as rags. The station-to-station rates quoted on grass from some more important despatching stations are given below :[1]—

Station from	*Rate per maund* Rs. a. p.	*Station from*	*Rate per maund* Rs. a. p.
Hazaribagh Road	0 3 4	Bhagalpur, Colangunj, Ghogha, Piripinti, Sabour	0 4 2
Mirza Chowki	0 4 2		
Sahebgunj	0 4 3		
Via Naini	0 1 3		
Haradwar, Jawalapur	0 3 4		

It will be seen that the Couper Mill is more favourably located in respect of its grass supplies than either the Titaghur or Ranigunj Mill. Even as regards the Western Circle areas, it commands a better location than that of the other mills. The only serious disadvantage under which it labours is its low annual output. This has far-reaching effects. Due to lower output, its demand for the raw materials is less, and therefore it has to collect or purchase on a smaller scale. On the contrary, the Titaghur Paper Mills Company, with its two mills, having a larger output, comes to the market in a stronger position, and makes purchases on a larger-scale, and neutralises thereby the advantage of location which the Couper Mill possesses. In fact, the Titaghur Mills Company drove out the Couper Mill from the Nepalgunj grass area, as noted elsewhere, due mainly to its stronger position and the consequent better purchasing power that it commands. All this shows that

1. These rates are quoted via Lucknow for traffic to Badshanagar and are applicable on wagon loads.

the freight advantage which the Couper Mill possesses, as revealed by the foregoing statement, should not be pressed too far. This fact has a further significance. It shows that even if the railways offer special transport facilities by quoting reduced rates, they may not be able to develop traffic, due to deficiencies in organisation of the industry or in other spheres. In other words, the reduction in transport costs by itself cannot help the development of the industry; there should be an all-round efficiency. Transport cost constitutes only a part of the total cost of production.

Rags are collected from the more important towns in the United Provinces, the Punjab and the Central Provinces. The statement given below shows rates from some important collecting centres:—

Rates per maund

Miles	*Station from*	*Rate* Rs. a. p.	*Miles*	*Station from*	*Rate* Rs. a. p.
46	*Cawnpore	0 0 10	219	Hathras	0 2 8
49	*Rai Bareli	0 0 11	265	Khurja	0 3 1
238	*Aligarh	0 2 1	290	Ghaziabad	0 3 3
	*Etawah	0 1 9	303	Delhi	0 3 5
81	*Fyzabad	0 1 1	187	Benares	0 2 4
	*Shahagunj	0 1 9	165	Jaunpur	0 2 2
125	Allahabad	0 1 9	205	Moradabad	0 2 6
181	Mirzapur	0 2 3	286	Meerut City	0 3 3
233	Farukhabad	0 2 9	306	Hardwar	0 3 5
180	Firozabad	0 2 3	322	Saharanpur	0 3 7
203	Agra City	0 2 6			

Freight on rags is also cheaper as compared with that of the other mills due primarily to its location. It commands a central position in catering for the important towns noted above. This advantage of location becomes still more important in marketing paper, particularly in competition with the foreign imports, as will be shown later. In short, from the standpoint of railway transport the location of the mill is favourable, but it cannot be too strongly emphasised that its lower annual output is a very serious handicap, which neutralises much of its transport advantage in competition with the other mills.

THE DECCAN PAPER MILLS COMPANY

We shall now examine the freight paid by the Deccan Paper Mills Company, on the raw materials consumed by the Reay Paper

(* These are station-to-station rates.)

Mills, near the Hadapsar Railway Station. It has already been stated that rags constitute by far the most important part of the raw materials used by the mill, and therefore, we tabulate below a few rates from important towns on the G. I. P. Railway to show the nature of freight which the mills have to pay.

Rates per Maund via Poona

Miles	*Station from*	*Rate*			*Miles*	*Station from*	*Rate*		
		Rs.	a.	p.			Rs.	a.	p.
101	Thana	0	2	4	311	Bhusaval	0	5	4
166	Sholapur	0	3	3	555	Nagpur	0	7	10
172	Nasik Road	0	3	4	345	Burhapur	0	5	9
142	Belapur	0	2	11	388	Khandwa	0	6	5
266	Pachora	0	4	8	555	Bhopal	0	7	10
296	Jalgaon	0	5	1	650	Jubbulpore	0	8	8

The rates are subject to the minimum charge of Rs. 10/- per 4-wheeled wagon used. There are siding charges which are levied in addition to the above rates. Further, the charge from Poona to Hadapsar has to be added. Bombay, which is the most important centre supplying rags to the mill, has not been included in the above table because the G. I. P. Railway quotes special station-to-station rate of Rs. 45/- per wagon from Bombay to Hadapsar. The capacity of the wagon is 16 tons, but, we are informed that it can hold only about 11 tons of the material[1]. But even at this loading capacity the concession offered is in fact substantial. Bombay is the only station from which station-to-station rates are quoted to the mills. In this respect the G. I. P. Railway presents a great contrast as compared with the E. I. Railway. As adverted to above, the E. I. Railway quotes reduced station-to station rates from important collecting centres to the mills on its lines, but the G. I. P. does not do so. Again, the relative level of rates on the G. I. P. is higher than on the E. I. R. For instance, whereas the freight from Mirzapur to Couper Mills via Lucknow, for 181 miles is Re. 0-2-3 per maund, that from Nasik Road, via Poona is Re. 0-3-4 for 172 miles. Thus, the charge for a lower distance is about 50 per cent higher. This higher charge is partly due to the hilly nature of the country to be traversed, but the fact remains that the G. I. P. charges higher rates. This is a very serious handicap for the development of the mill. Since the mill has to pay about 50 per

1. Information was kindly supplied by the Deccan Paper Mills Company, Poona.

cent higher freight than the other mills on its important primary raw material, it is obvious that the area from which it can draw its supplies is considerably restricted. This limits the output of the mill and raises the cost of production. To remove this handicap, it may be suggested that the G. I. P. should quote station-to-station rates, lower than the schedule rates, from the more important towns on its own lines and on the B. B. & C. I. R.

In addition to rags and gunny pieces, the mill also uses waste paper which is brought from Bombay and Madras. The value of the material varies from Rs. 15 to Rs. 80 per ton f.o.r. Bombay. The railway freight from Bombay to Hadapsar station is Re. 0-4 11 per maund, which amounts to Rs. 8-6-0 per ton. The freight from Madras to Hadapsar is Rs. 1-0-9 per maund in wagon load consignments, the minimum weight being charged at 300 maunds per wagon. Wood pulp is imported and the railway freight from Bombay to Hadapsar is Re. 0-4-11 per maund on actual weight. There are no wagon load rates. Coal is brought from C. P. and Bengal. Railway freight from C. P. collieries is Rs. 7-10-0 per ton and from Bengal collieries it comes to Rs. 13-14-0 per ton. Chemicals and stores are purchased from Bombay and the railway rates to Hadapsar work out as follows :—

Articles	*Rate per maund* Rs. a. p.
Sulphate of Aluminia, Rosin, China Clay & Farina	0 4 11
Caustic Soda, Bleaching Powder, and Soda Ash	0 5 4
Silicate of Soda and Formalin	0 11 8
Anniline Colours	0 4 5
Engineering Stores	0 4 11

Before we close the study of railway freight on raw materials paid by the Indian paper mills, something needs to be said about the rates on bamboo, which is consumed primarily by the Indian Paper Pulp Company's mill at Naihati, and of late by the mills of the Titaghur Paper Mills Company. In the year 1930-31, Titaghur and Kankinara Mills manufactured about 1,842 tons of paper from bamboo. The A.B. and E.B. Railways quote combined station-to-station rates to these mills from more important stations. In addition there are reduced seasonal rates quoted by the railways which are very useful to the mills. This, in short, is the position

of railway rates on the raw materials consumed by the mills. We shall next examine the rates on paper.

RATES ON PAPER CONSUMED IN THE COUNTRY

In the foregoing pages we have outlined in detail the present position of the industry and total consumption of paper in the country. Thereafter, the internal production, or, the output of individual mills has been studied with special reference to railway transport. It now remains for us to examine the freight paid on marketing the output of the different mills, and on the imports of paper from foreign countries, so as to understand the relative position of the indigenous industry and the imports in matters of railroad transport facilities. This line of treatment is necessary, because the Indian mills have complained of preferential rates on the import traffic. The Titaghur Paper Mills Company complaining against this sort of unfair discrimination submitted : " It will hardly be credited, but it is a fact that, as late as 1913, there was an enormous discrimination in favour of the importer. Railway rates on paper from Howrah are considerably lower than from the mills in the neighbourhood of Calcutta, while when despatching paper to Cawnpore, Delhi or Lahore, the mills had to pay no less than 60 per cent more freight per maund per mile than did the Bombay and Karachi importer. As an example of this unjust discrimination, we may quote rates to Jubbulpore, which are, from Bombay, Re. 0-9-6 and from Naihati Rs. 1-3-0 per maund : the distance from Naihati is 16 per cent greater than from Bombay and the freight charge is 100 per cent."[1] On being asked by the President to give further information, Mr. Carr of Messrs. Balmer Laurie & Company, Managing Agents of the Bengal Paper Mill Company, gave the details of railway freight to Lahore, as paid by the importer and by the Ranigunj Mills. While the rate from Ranigunj to Lahore for about 1,200 miles was Rs. 60 per ton, that from Karachi to Lahore for about 725 miles was Rs. 26-10-0.[2] This was the condition then. The task set before us to find out as to how far this preferential treatment is the constituent element of the railway rates policy as pursued at present. We shall also study the marketing conditions and endeavour to point out the incidence of railway rates on the movement of traffic.

1. Vide, Indian Fiscal Commission, Evidence Vol, II, p. 391.
2. Ibid, p. 395.

The Titaghur Paper Mills Company sells its output throughout India, including Burma.[1] The approximate quantity of paper sold in different markets, as submitted by Sir W. Carey in his oral evidence before the Board,, is as follows :—[2]

	Per cent
Delhi and the Punjab	10
Calcutta	23
Bombay	6
South India	5
Burma	5
United Provinces	2
General Mofussil	11
Government and Railway (including Provincial Governments)	38

These are the averages for a certain number of years. It will be seen that Calcutta is by far the most important market, consuming as it does about 23 per cent. of the total output of the Titaghur and Kankinara Mills. The importance of the Calcutta market is equally great to other Bengal mills as well.[3] The Calcutta market and the purchases made by the Government and Railways together account for more than 60 per cent. of the total annual production of the Company. Next in importance is the Punjab area, with Delhi as its distributing centre. Consumption in the towns near Calcutta is about 11 per cent. Bombay consumes about 6 per cent of the aggregate production. Burma and South India each consume about 5 per cent. The United Provinces ranks last, because the Upper India Couper Mills are more advantageously located in supplying this area.

A critical study of the tariffs of the Indian railways reveals that special provision has been made in matters of railway rates for traffic from internal mills, and that there is no room for the old suspicion of preferential treatment, adverted to above, which popular opinion still seems to foster. Lower rates in wagon loads are quoted from the mills to more important consuming markets. This is especially true of the railways which serve the mills. To take up the Titaghur Company's mills, we find that the

1. Indian Tariff Board on Paper, 1925 : Evidence Vol. I, p. 249.
2. Ibid, p. 350.
3. These rates are applicable only on traffic booked by the Naihati, Titaghur and Kankinara Paper Mills.

E. I. R. quotes special station-to-station rates via Naihati to more important centres as tabulated below :—

Rates per Maund from and Via Naihati[1]

Mileage	*Station to*	*Actual weight*	*Wagon load*
		Rs. a. p.	Rs. a. p.
245	Bhagalpur and Via	0 3 10	0 3 2
273	Gaya	0 6 0	0 5 0
410	Benares Cantonment	0 7 2	0 6 1
493	Allahabad and Via	0 7 5	0 6 2
612	Cawnpore	0 9 2	0 7 8
...	Moradabad	0 12 1	0 10 1
769	Agra City	0 11 7	0 9 8
804	Aligarh	0 12 1	0 10 1
882	Meerut City	0 13 3	0 11 1
883	Delhi	0 13 3	0 11 1
919	Saharanpur and via	0 14 3	0 11 11

It will be seen that on wagon load consignments freight concession is in fact substantial, and helps the manufacturers in marketing their output, especially in competition with the imported traffic which does not get the benefit of reduced rates. Of course there are a few reduced rates quoted on imported traffic to centres[2] like Delhi, Agra, Meerut City and Saharanpur, etc., but the fact remains that the rates are favourable to internal traffic. Let us compare these special station-to-station rates quoted from and via Naihati on paper manufactured by the mills with the class rates charged on imported paper from Howrah. We shall take the case of the Bhagalpur market. The rate from and via Naihati is Re. 0–3–10 on actual weight and Re. 0–3–2 on wagon loads, whereas from Howrah the charge is Re. 0–9–10. Similarly, to Gaya the local rate is Re. 0–6–0 on actual weight and Re. 0–5–0 on wagon loads, while the importer has to pay Re. 0–10–11. Even making an allowance for the distance, it is clear that the internal

1. These rates ara applicable only on traffic booked by the Naihati, Titaghur and Kankinara Paper Mills.
2. The reduced rates quoted from Howrah are:

Station to	Actual weight	Wagon load	Station to	Actual weight	Wagon load
Delhi	1 9 8	1 0 1	Meerut City	1 10 2	1 0 0
Via Delhi	1 9 0	0 15 10	Saharanpur	1 10 10	1 0 4
Via Delhi Serai-Rohilla	1 9 1	0 15 11	Via Saharanpur	1 10 2	1 0 1
Jumna Bridge & Agra City	1 9 8	1 0 1			

traffic has a clear advantage over the importer. The same is the case with the long distance traffic. Even in those centres where the imported traffic gets the advantage of port competition, internal traffic has a relative advantage. For instance, to centres like Agra, Dehli, Meerut and Saharanpur the importers pay Rs. 1-9-8, Rs. 1-9-0, Rs. 1-10-2, and Rs. 1-10-10 respectively but the local manufacturers booking from and via Naihati have to pay very low charges, as will be seen from the foregoing table.

It seems, however, that these reductions in rates offered on the transport of paper manufactured by the the local mills do not affect the selling prices. As Sir W. Carey said " In paper freight is to some extent or rather to a much less extent, a consideration because of its comparatively small bulk."[1]. Prices in the market are regulated by the imports and therefore an equalisation of prices in the ports as well as upcountry markets has been effected. No doubt, there is some difference in prices, but it is inconsiderable, and freight cannot be said to play an important part therein. If the Indian mills do not realise higher prices in the upcountry markets the phenomenon is not difficult to explain ; it is due to foreign competition. With all these weaknesses in the organisation of the Indian paper industry, it should not be forgotten that the concessions in railway rates granted to local mills are appreciable and facilitate the marketing of paper.

The E. I. R. has raised the rates since 1934, both on actual weight and in wagon loads, as will be seen from the following table :—

Rates per Maund via Naihati for traffic from Titaghur Mills

Station to	*Actual weight* Rs. a. p.	*Wagon loads* Rs. a. p.
Aligarh	0 14 2	0 11 10
Allahabad	0 9 10	0 8 2
Bareilly	0 13 4	0 11 1
Benares Cantonment	0 8 8	0 7 3
Cawnpore	0 11 6	0 9 7
Delhi	0 15 4	0 12 9
Gaya	0 6 8	0 5 7
Lucknow	0 11 4	0 9 5
Meerut City	0 15 9	0 12 9
Moradabad	0 14 1	0 11 9
Patna	0 7 5	0 6 2
Shaharanpur	0 15 10	0 13 2

1. Vide, Tariff Board, Evidence, Vol. I. p. 351.

This change in the rates policy is probably due to the fact that with the reduced rates hitherto available, traffic did not increase because as pointed out by Sir W. Carey, railway rates do not affect the prevailing price level which is determined by foreign competition. If so, the railway authorities will get better receipts without any adverse effect on the industry.

Other local mills enjoy similar concession rates which are not available to the importer. The Bengal Paper Mill Company's factory at Ranigunj gets reduced rates both on actual weight and on wagon loads as may be seen from the statement submitted below[1] :—

Station to	*Actual weight* Rs. a. p.	*Wagon load* Rs. a. p.	*Station to*	*Actual weight* Rs. a. p.	*Wagon load* Rs. a. p
Bhagalpur, Gaya, Monghyr	0 3 10	0 3 2	Delhi	0 11 10	0 9 1(
			Saharanpur	0 12 9	0 10 8
			Meerut City	0 11 10	0 9 1(
Cawnpore	0 7 8	0 6 5	Jubbulpore	0 9 2	0 7 8
Allahabad	0 5 11	0 4 11	Bombay	nil	1 4 8

When we compare the rates paid by the Ranigunj Mill and the importer and also the rates paid by the Naihati and Titaghur group of mills, the most obvious conclusion which emerges is that the Ranigunj Mill has a freight advantage in the nearer as well as up-country markets over all others, excepting the Upper India Coupers Mills, as we shall point out later. Thus, for instance, to markets nearer Calcutta like Gaya, freight from and via Naihati is Re. 0-6-0 from Howrah Re. 0-10-11, and from Ranigunj Re. 0-3-10 per maund on actual weight. To Cawnpore, rates from and via Naihati are Re. 0-9-2, from Howrah Re. 1-6-9 and from Ranigunj Re. 0-7-8 per maund. To Delhi, likewise, Ranigunj Mill has an advantage because freight from and via Naihati is Re. 0-13-3, from Howrah Rs. 1-9-0 and from Ranigunj Re. 0-11-10. It does not come as a surprise to note, therefore, that whereas Titaghur Company's mills are hardly able to sell about 23 per cent. of their output in these areas, the Ranigunj mill disposes of more than 40 per cent. No doubt the total quantity sold by the Titaghur Company's mills in these areas is greater than that of the Ranigunj Mills, but what we intend to emphasise is that the freight concession granted by the railways facilitates the marketing of the paper of the local mill.

In this case also the rates have been raised since 1934, as will be seen from the following table :—

Rates for Ranigunj B. P. M. Siding

Station to	*Actual weight* Rs. a. p.	*Wagon loads* Rs. a. p.
Agra	0 12 5	...
Aligarh	0 12 10	0 10 8
Allahabad	0 8 6	0 7 1
Bareilly	0 12 0	0 10 0
Cawnpore	0 10 1	0 8 5
Delhi	0 13 11	0 11 7
Farukhabad	0 12 8	0 10 7
Gaya	0 5 0	0 9 2
Lucknow	0 9 11	0 8 3
Meerut City	0 13 11	0 11 7
Moradabad	0 12 8	0 10 7
Patna	0 5 10	0 4 10

Station-to-station rates are also available for traffic to markets like Bombay, Poona, Jubbulpore, etc. To Bombay and Poona, the rate is Rs. 1-0-4, and Rs. 1-6-6, per maund respectively on wagon loads. The concession offered by these rates becomes apparent when we compare them with the rate from Howrah to Bombay on the imported traffic, which works out at Rs. 1-10-3 per maund on wagon loads and Rs. 1-14-5 per maund on actual weight.

The upper India Couper Mill does not get the railway transport facilities in the form of reduced rates on the despatches of paper in actual weight as enjoyed by the Bengal Paper Mills, adverted to above. The reduced rates are available only on wagon load consignments, unlike the Bengal Paper Mills which enjoy concession rates both on wagon load consignments and on actual weight. However, before discussing the effects of this most obvious discrimination by the E. I. R. on the movement of traffic from the mill, it is necessary that the reduced rates granted on wagon load consignments be noted.

Mileage	*Station to*	*Rate* Rs. a. p.	*Mileage*	*Station to*	*Rate* Rs. a. p.
203	Agra City	0 4 4	303	Delhi	0 5 9
238	Aligarh	0 4 10	286	Meerut City	0 5 6
125	Allahabad	0 3 2	203	Moradabad	0 4 4
130	Via Naini	0 3 3	330	Patna Junction	0 6 0
187	Benares Cantt.	0 4 1	336	Patna City	0 6 1
466	Bhagalpore	0 7 4	...	Rampur	0 4 1
325	Gaya	0 6 0	322	Saharanpur	0 5 11

It is interesting to compare these rates with those quoted from the Bengal Paper Mill centres, e. g. from and via Naihati. The rate quoted from Naihati to Bhagalpur for 245 miles is Re. 0-3-10 per maund on actual weight and Re. 0-3-2 on wagon load consignments; but via Lucknow to Aligarh for 238 miles the rate quoted is Re. 0-4-10 on wagon loads. Thus, the reduced rates available to the Upper India Couper Mill on wagon load consignments are higher than the rates quoted to the Bengal Mills on actual weight consignments. This sort of discrimination is undesirable as it seriously handicaps the marketing facilities of the Couper Mill. Besides, it needs to be pointed out that the reduced rates quoted on the wagon load consignments from Badshahnagar are utilised only to a limited extent, since the larger part of its despatches are in consignments of smaller size, and therefore, if these reduced rates were available without any conditions as to the size of the consignment it would do yeomen service to the mill.

Since 1934, a new scale of rates has come into force, as will be seen from the following table:—

Rates per maund on Paper
Via Lucknow to

	Actual weight O. R.	Wagon loads O. R.
Benares Cantonment	0 5 2	0 4 4
Bhagalpur	0 9 6	0 7 11
Cawnpore	...	0 2 0
Delhi	0 7 7	0 6 4
Farukhabad	0 6 0	0 5 0
Gaya	0 7 6	0 6 3
Hathras	0 5 10	0 4 10
Meerut City	0 6 11	0 5 9
Moradabad	0 5 6	0 4 7
Patna City	0 7 8	0 6 5
Rampur	0 5 2	0 4 4
Saharanpur	0 7 6	0 6 3
Aligarh	0 6 1	0 5 1
Allahabad	0 4 1	0 3 5

One important feature to note in this connection is that hitherto station-to-station rates were available for traffic moving from this mill only on wagon loads. But now reduced rates are also quoted on actual weight, though the general level of rates has been raised.

In short, there has been a very remarkable change in the rates policy of the E. I. R., as demonstrated by the recent changes in the

rate structure ; rates on traffic moving from local mills have been raised. This has restricted the facility of lower rates hitherto available to the local mills. Imported traffic has also been affected by this change in policy, for reduced station-to-station rates, which were available for traffic moving from Howrah both on actual weight and in wagon loads, are now available only on wagon loads, the former concession having been withdrawn. Further, the rates on wagon loads have been raised, as will be seen from the following table :—

Rates per Maund from Howrah to:

		Former rate	*Present rate*
Delhi	...	1 0 1	1 8 11
Meerut City	...	1 0 0	1 10 2
Saharanpur	...	1 0 4	1 10 10

Thus, so far as the relative level of rates is concerned the local mill manufacturers have no cause to feel uneasy.

The Reay Paper Mills at Hadapsar are served by the G. I. P. Railway. There are some special station-to-station rates quoted by the railway, but they cannot be compared with the facilities given by the E. I. R. to the Bengal Paper Mills. This affects the marketing arrangements of the Reay Mills, especially because it has to meet the competition of the imports. It has neither the advantage of reduced rates enjoyed by the Bengal Mills nor the protection from foreign competition which the Couper Mill enjoys. We give below the freight paid by the Reay Paper Mills to more important markets :—

Station to	*Rate* Rs. a. p.	*Station to*	*Rate* Rs. a. p.	*Station to*	*Rate* Rs. a. p.
Bombay	0 5 4	Ajmer	1 9 1	Hyderabad	0 12 0
Delhi	1 0 1	Ludhiana	2 10 2	Secunderabad	0 12 0
Cawnpore	1 1 10	Allahabad	1 15 4	Bangalore	1 5 5
Gwalior	1 0 0	Kotah	1 13 10	Bezwada	1 6 1
Nasik	0 7 0	Ahmedabad	1 0 1	Guntur	1 8 4
Jalgaon	0 11 2	Baroda	0 13 11	Mysore	1 8 1
Yeotmal	1 3 11	Surat	0 11 1	Trichinopoly	1 14 5
Jubbulpore	1 7 6	Rajkot	1 3 8		
Nagpur	1 4 3	Sholapur	0 6 8		

Bombay is the most important market, and here the importer has a clear advantage in as much as he has to pay nothing by way of railway freight. From the foregoing statement it will be seen that markets in Southern India are advantageous to the mills,

since the freight from the port to the markets is higher than that from the mill. But in these markets the demand is limited to small quantities and is for various kinds of paper. In the centres in Upper India, like Cawnpore, the Couper Mill and the Bengal Mills have an advantage in the form of lower freight. The same is the case with the markets in the Punjab. This leads us to the conclusion that the Reay Mills have to sell a greater part of their output in markets where they have no freight advantage.

From the foregoing discussion it will be seen that the railway rates are on the whole favourable to the local mills, and the popular criticism of rates policy is no longer justified. The special station-to-station rates which the railways quoted on the import traffic in pre-war years, denying similar facilities to the local mills, have fortunately become things of the past. Per contra, the rates position to-day is just the reverse. While the local Mills are quoted special station-to-station rates to more important consuming centres, both on actual weight and on wagon load consignments, the imported traffic gets the concession only to a few markets and that too due to port competition. This has helped the mills considerably in marketing their output and gives a substantial protection against the competition of the importer. Thus, the railway rates policy supplements the policy of discriminating protection. We should not, however, be understood to convey that the present policy is perfect in all aspects and that it needs no corrective. Far from it. There are many defects which need to be removed as adverted to above. In short, we appreciate the attitude taken up by the railway authorities, especially the E. I. R. and hope that they would with courage pursue the policy, making the necessary improvements so as to encourage the development of our trade and industries. Besides, they should pursue a similar policy in respect of other industries as well.

The manufacturers on their part should make the best use of these facilities by improving their technique of production and marketing arrangements. For the present we are not concerned with the technique of production, but it needs to be pointed out that an undue reliance upon the raw materials, which are costly and have a very limited scope for development, raises

the cost of production and neutralises the effects of the protective tariff and the sympathetic rates policy. Thus, the scramble for sabai grass, with its concomitants of high transport costs and royalty, should be removed by mutual agreements between the manufacturers to the advantage of all concerned. The competition inter se of the local mills, both in respect of the purchase of raw materials and the marketing of the finished products, should be put a stop to. This would mean a substantial economy in general costs, particularly of railway transport; waste would be eliminated. We shall now briefly summarise our conclusions.

SUMMARY OF CONCLUSIONS

1. The per capita consumption of paper in comparison with other countries of the world is deplorably low and if Gladstone's dictum that 'the consumption of paper is the measure of a people's culture' is correct, India requires a highly developed and specialised paper mill industry.

2. But the study of the organisation of the Indian paper mills reveals that they supply only a part of the demand for paper and the deficiency is made good by imports from foreign countries. Besides, as the Indian Tariff Board recorded, even with the development of the paper industry, India would not be able to become self-sufficient and a part of the supply will have to be imported.

3. Production of paper is centralised in Bengal and therefore the cost of railway transport, both on the collection of raw materials and the marketing of the finished product, is a very serious handicap, which raises the cost of production to a level appreciably higher than that in other countries.

4. Thanks to the railway rates policy as pursued at present this natural handicap is being minimised.

5. But the manufacturers on their part should improve their marketing arrangements, and the spirit of mutual mistrust and jealousy should be replaced by one of co-operation and co-ordination; the watch-word for the future needs to be efficiency and economy.

CHAPTER IX

The Need for a National Policy

In the foregoing pages, a theoretical and analytical survey of the railway rates policy as affecting the trade and industries of this country has been presented. Separate chapters have been devoted to the study of rates in relation to selected trades, and the main conclusions brought out by the analysis have been summarised at the end of each of them. In this chapter an attempt will be made to state the broad conclusions based on this detailed study.

INDIVIDUALISTIC POLICY

The most striking feature of the railway rates policy as discussed in the preceding pages is the individualistic policy pursued by the Indian railways. Doubtless, it is difficult to visualise the damage caused by the policy to the industrial development of this country. Much less will it be possible to assess precisely the harm done to individual industries. However, in the body of the book we have endeavoured to point out in broad outline, how this policy affects the trades concerned with numerous illustrations in support of our remarks. The detailed data which we have collected unmistakably demonstrate the injurious effects of such a policy, and call for an urgent enquiry. Such a policy might have had some justification when the Indian railways were owned and managed by Companies, and the Government of India could not exercise adequate control over their rates policy; but the continuance of the same policy now that the nationalisation of Indian railways has been accepted both in theory and practice is hardly defensible. As has been frequently observed in the course of the present study, even those lines which are directly managed by the Railway Board are treated in matters of rate making as separate systems, and in through booking a consignment cannot avail of the telescopic rates on the total distance traversed, if it travels over more than one railway. It will be recalled that a distinguished official of one of the great Indian railways deposed before the Indian Tariff Board in their enquiry on salt industry, that the railways had built up their rating structure on the basis of separate organisations, and therefore they were reluctant to depart from

the same as that would necessitate the revision of the entire rate structure. This conservative policy adversely affects internal as well as foreign trade, but more so the former, because while the ports are linked with the internal centres by direct lines of usually the same system, the internal traffic as a rule has to pass over more than one railway. We have analysed the working of this policy in considerable detail, and have come to the conclusion that the need for an early revision of such a policy of rate making is paramount in the public interest.

COMPETITION BETWEEN RAILWAYS

Another important feature of the rates policy as revealed by our analysis is the competition between the different railways for traffic to and from the ports, which results in the lowering of the rates on competitive traffic, and thereby subsidises the export of raw materials and the import of finished products, to the detriment of local industries. The local manufacturers pay relatively higher railway freights both on raw materials collected from internal producing centres, and in marketing their finished products in local consuming markets. This is not all. In marketing their finished products they find that whereas they have to pay higher freight per unit, their foreign rivals conveniently push their products from the nearest port at substantially reduced rates. The railway freight charged on this competitive port traffic is similar to that quoted by the railway authorities to utilise the unused capacity of their plant which would otherwise run to waste. Indian manufacturers are thus made to subsidise their foreign competitors. This feature of our railway policy adversely affects the utilisation of the raw materials produced within the country by internal factories, because it helps the import of foreign materials in our market. For instance, if the cotton mills at Ahmedabad or Nagpur wish to utilise the Punjab-American cotton, they have to pay higher railway freight per mile, and therefore prefer to import foreign cotton through Bombay at reduced rates. Further, this very cotton, which the local mills find costly due to railway freight, the Japanese exporters conveniently export at reduced rates available from the cotton growing tracts in the Punjab to Karachi port. No wonder therefore, if as a result of this pernicious rates policy, our cotton growers have to depend upon the

Japanese export houses. The same is the case with our other raw materials. This excessive dependence upon foreign demand for our raw materials is a very serious weakness in our body-economic, more so to-day in the face of growing economic nationalism. The Japanese threat of the boycott of Indian cotton which enabled Japan to exact onerous terms from the Government of India, under the Indo-Japanese agreement is only one of the several danger signals which should make us alert to safeguard our interests. Exchange control, quota system, clearing agreements, bilateral treaties and such other restrictions have already affected the demand for our raw materials. Besides, in view of the growing tendency for national self-sufficiency under which agriculture, in countries hitherto importing our raw materials, is being protected and subsidised, in future the foreign demand for our raw materials is apt to fall. Raw materials, if produced, will have to be largely consumed within the country. India is to-day primarily an agricultural country, and in future too, if she wants to have stable and flourishing manufacturing industries, agriculture will continue to hold the premier rank. It is therefore imperative that our railway rates policy should be radically revised and made to serve adequately the national interests.

Another most conspicuous evil of this internecine port competition in matters of rate making which fosters the penetration of imports needs sufficient emphasis. Such a rates policy attempts to mainpulate the localisation of industries as has been pointed out in the foregoing pages. Indeed, to a student of railway economics it comes as a surprise to note that the railways owned and directly managed by the state, should in serving the ports continue to indulge in this dangerous competition and seriously jeopardise the true interests of the country. But the study of Indian railway rates policy reveals a series of surprises of which this is only one. This defect in the rates policy would automatically be removed, if the railways under direct state management were to be worked as one single system in fixing the rates, because in that case others would follow suit.

DIFFERENT GAUGES

Defects in the construction of railways in this country have an adverse effect on the maintenance and growth of internal trade and industries, because Indian railways, from their very inception

were planned and constructed to meet other more pressing military and political needs. Dwelling upon the political interests which the development of a net-work of railroads would promote, Lord Dalhousie wrote, "It cannot be necessary for me to insist upon the importance of a speedy and wide introduction of railway communication throughout the length and breadth of India. A single glance cast upon the map recalling to mind the vast extent of the Empire we hold, the various classes and interests it includes, the wide distances which separate the several points at which hostile attacks may at any time be expected, the perpetual risk of such hostility appearing in quarters where it is least expected, the expenditure of time, of money and of life that are involved in even the ordinary routine of military movements, would convince the urgency of speedy communication." He had realised that the New India which he had created, knitting together the disconnected and distant areas resulting in an extensive territorial homogeneity, by his forward policy of conquest and annexation, could be made safe, only if the collective resources of all the parts could be made available for the protection of each. As the President of the Railway Board in England, he had gathered invaluable experience of transport agencies, and therefore he could realise the fiction of controlling India mainly from the sea-board, and also the strategic superiority which a net-work of railway lines, connecting different inland strategic positions with each other and with the ports, would impart to a country like India. No wonder, therefore, if even a casual observer can locate the defects of our railroad construction. The main ports are well served, being linked with the internal markets on broad guage, but the lines connecting the internal centres of production and consumption are generally numerous and involve a break of gauge. How this most striking feature of our railroad system coupled with their individualism in matters of rating has helped to curtail the marketing area of internal industries has been explained in detail in the preceding chapters. For instance, the Ahmedabad mills have to pay relatively higher rates per mile while, catering for markets in Bengal, Bihar, Orissa and the U. P. than the competing imports, because the consignment has to travel over more than one railway system, and there is usually the break of gauge involving transhipment charges, delay, etc. Thus, lack of uniformity in gauge operates as a very serious handicap in the growth

of our internal trade and industries, and therefore it is essential that this defect should be immediately made good by moulding the rates policy on proper lines.

ABSENCE OF RATE REGULATION

Another glaring defect is the absence of an active and alert central authority to regulate and control the railway rates policy in the public interest. The Railway Board as at present constituted has failed to meet the requirements of the business community. This is due to the spirit of ultra-conservatism which pervades the entire bureaucratic system of this country, of which the railways are an essential part, and makes them averse to any change from the status quo. The reluctance of our railway authorities to modify the present rating structure built upon the basis of separate organisations, notwithstanding the repeated recommendations of several Commissions and Committees, is an outstanding example of their lack of adaptability and contemptuous disregard of public opinion. The railway rates policy, indifferent to public opinion, can easily frustrate a well-meant protectionist policy. In matters of rate making it is essential that a free, dispassionate and progressive mind should be applied ; specially because rate making is essentially an art and not a science. A railroad tariff, well adapted to the growing needs of a dynamic society, is the product of a long process of evolution, the result of a series of changes and alterations. The primary task of the railway authorities is to closely scrutinise the effects of railway rates on the growth of traffic with the aid of detailed traffic statistics, and in the light of the experience gathered therefrom, to make prompt revisions in the tariffs from time to time, so as to keep them abreast of the changes in the economic and industrial structure of the areas served. In view of this, the present Railway Board, to be useful to the country, should be made more responsible to public opinion and its personnel revised so as to infuse a new life and a more progressive element in it. It is essential that the Controlling Authority, by whatever name it may be known in future, should be sufficiently alert and responsive to public opinion. What is needed is that in matters of policy the Controlling Authority should have purely Indian interests in view; it should act with greater responsibility and effectiveness, because it is only then that the deep rooted suspicion in the public mind will be removed, and the railway

system enabled to render the most efficient and economic service to the people at the lowest cost.

PREFERENTIAL RATES

The prevalence of numerous preferential rates is another most glaring defect of our rates policy. It is due to the lack of effective regulation of rates policy on right lines. Therefore, to-day it is no secret to those interested in railway matters that the state has failed to make adequate provision for protecting the Indian industries against unfair and uneconomic discrimination in rate making. The Indian business community has been pressing upon the state since long, the need for making legislative provision to secure an adequate guarantee of just and reasonable rates. The Railway Rates Advisory Committee, appointed in 1926, has done useful service to the commercial community but it has failed to go far enough. The Committee is essentially a compromise, a half way measure, and as such its powers and functions are subject to serious limitations. The members do not possess the powers of a judicial body, and the fact that the Government may or may not accept the recommendation of the Committee after all the trouble taken and expense incurred in investigating a case, has failed to engender confidence in commercial circles. Above all, the onus of proof is laid on the complainant which undermines the utility of this institution. What is needed is that the Rates Advisory Committee should be turned into a Statutory Tribunal. The experience of the working of the Committee gives added force to this demand. The new Rates Tribunal should be constituted on the lines contemplated by the Acworth Committee to solve the anomalies of rate making in India.

A NATIONAL RATES POLICY

These defects reveal the magnitude of the task that awaits an attempt at reform. The scheme of reconstruction should be broad-based and elastic. It should be comprehensive enough to cope with the variety of problems and the diversity of conditions. So also it should be sufficiently elastic to adapt itself to the varying requirements of our industries from time to time. An active and energetic management of the railway rates policy calculated to foster a more rapid economic development of the country, is necessary. A national rates policy should be a true supplement

of the scheme of discriminating protection. The placid contentment which breeds conservatism, and encourages a passive policy to serve only the demand that offers itself should be replaced by a more aggressive policy. That the railroads not only carry traffic but create one, is a very familiar truth to the student of transport economics. There is nothing novel or startling about it. In almost all the industrially advanced countries, railways are being worked on these lines. In Germany, railway rates are carefully regulated to serve alike the local industries and agriculture. German railways assist the export trade by preferential tariffs carefully framed to enable the home manufacturer to enter foreign markets on favourable terms, and augment the restrictive influence of import duties on import traffic. In short, German railways in matters of rate making are inspired neither by the rule of supply and demand nor by the necessities of competition, but by the need to protect national industries against foreign competition to aid the development of national seaports, and to permit the inflow of essential merchandise at a low price. The railway rates policy is formulated and worked so as to supplement the fiscal policy of the country. Similarly, the American railroads have moulded their rates policy so as to bring about the widest development of markets and the greatest possible range of trade. This should serve as an object lesson for Indian railways. Our railway rates policy should be an important and effective link in the general economic policy of the country. The Railway Authority of the future should deal with the railways as one co-ordinated national industry, and make suitable and timely changes to help the economic progress of the country, if it is to justify its independent and exalted position.

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Acworth Committee Report, 171, 172n, 177.

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