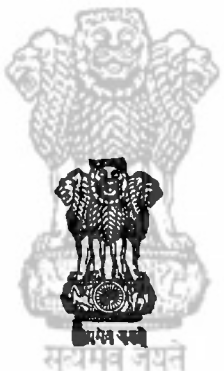
COMMITTEE
ON
TRANSPORT POLICY AND COORDINATION

Preliminary Report



GOVERNMENT OF INDIA
PLANNING COMMISSION
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Explanatory Note

The expressions 'lakh' and 'crore' signify 100,000 and 10,000,000 respectively.

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CHAPTER 1

INTRODUCTION

The Committee on Transport Policy and Coordination was set up on 22nd July, 1959. The Government resolution which sets out the terms of reference of the Committee is reproduced at Appendix 1. The Committee has been entrusted with the following tasks:

(a) to recommend a long-term transport policy for the country having regard to the various economic and other relevant factors;

(b) against the background of the long-term policy, to define the role of the various means of transport in the next five to ten years; and

(c) to suggest suitable mechanism for the coordination of the various means of transport.

Composition of the Committee

2. To start with, the Committee had five members, besides the Chairman. Shri K. B. Mathur, who was a member of the Committee on behalf of the Ministry of Railways, retired on 19th April, 1960, and in his place Shri Kripal Singh was appointed a member. Later, Shri A. K. Roy relinquished charge of the office of the Secretary, Department of Economic Affairs on 1st June, 1960, and his place on the Committee was taken by his successor in office, Shri L. K. Jha. Shri R. L. Gupta relinquished charge of the office of the Secretary, Ministry of Transport and Communications (Department of Transport) on 10th September, 1960, and was appointed Principal of the Administrative Staff College, Hyderabad. He, however, continues to be a member of the Committee. His successor in office, Shri G. V. Ayyar, has also been appointed a member. On the appointment of Shri Vishnu Sahay as Governor of Assam, Shri B. N. Jha was appointed a member of the Committee with effect from 10th November, 1960.

Paucity of Data

3. The Committee has so far held 18 meetings. At its first meeting which was held on 14th August, 1959, the Committee discussed generally the issues arising from its terms of reference and the type of data that was required to be collected for a proper study of these issues. It was realised at the very beginning that there was a great paucity of data particularly, in regard to means of transport other than the railways. Apart from undertaking studies of its own, the Committee decided to make use of all available information in the reports of the Committees like the Rail-Sea Coordination Committee, 1957, the Road Transport Reorganisation Committee, 1959, and the Inland Water Transport Committee, 1959, which was relevant to its work.

The Type of Information Required

4. The Government resolution on the Committee's terms of reference referred specially to the problems relating to coordination between the railways and mechanised road transport which had been under discussion between the Planning Commission and the Ministries of Railways and Transport and Communications for quite some time past. These problems, therefore, seemed to require prior consideration. One of the first tasks to which the Committee had to address itself was to determine the extent and the nature of competition offered by mechanised road transport to the railways in respect of both goods and passenger traffic in various regions of the country. In regard to road transport, it was realised that the Committee would require information on the following matters:—

(i) The role performed by the road transport industry in the country.—Apart from the total number of vehicles in the country, no data were available about the capacity of vehicles, the extent to which they were utilised, the type or volume of traffic carried by them and the extent to which the industry catered for feeder traffic or traffic on the routes parallel to the railways;

(ii) The existing state of organisation of the road transport industry.—It was not known how much of the industry was in the hands of well-organised units and how much in the hands of small individual operators who were unable to offer any reasonable standard of service;

(iii) The licensing policies pertaining to the commercial road transport industry which were actually being followed by the State Governments.—A clear picture was not available particularly in regard to the distances for which permits were generally issued and the procedure that was adopted for countersignature of permits for operations outside the regions of validity of primary permits;

(iv) The condition of the roads and their load carrying capacity in the various regions of the country and the possible development of capacity in future; and

(v) The cost of haulage by road, including the cost of construction and maintenance of roads with reference to their bearing on the cost of operation of road transport.

The information on several of these aspects of the road transport industry was either not available or was very inadequate. In regard to the railways, while a good deal of statistical information is available in the reports of the Railway Board, this is not adequate for a detailed examination of the various problems required to be studied by the Committee. It was felt that the data bearing on the following aspects would have to be processed for the use of the Committee:—

(i) The recent changes in the pattern of freight traffic on the railways and the extent of diversion of traffic, if any, from the railways to road transport on important routes;

(ii) The effect of these changes in the pattern of traffic on the railway finances;

(iii) The cost of haulage in the case of important individual items of traffic particularly bulk commodities like coal and iron ore;

(iv) The cost of haulage for suburban and non-suburban passenger traffic;

(v) The economics of operation of branch lines and the lines with low traffic density as distinguished from the through lines and the lines with high density of traffic;

(vi) An assessment of the unremunerative services provided by the railways and the element of subsidy involved therein; and

(vii) The incidence of railway freight on costs of production and prices of important commodities with a view to understanding the effects of any future adjustments in railway freight rates on industrial costs and prices.

Factual Surveys Organised by the Committee

5. At the instance of the Railway Board, the Zonal Railways had collected in 1959 certain data about the diversion of traffic from rail to road transport. The reports drawn up by these railways gave a rough indication of the extent to which traffic in certain commodities on certain routes was diverted from the railways to road transport as a result of the intensive competition offered by the lorries operating on long distance permits. The reports were carefully considered by the Committee and it was felt that it would be necessary to have factual sample surveys undertaken on selected routes to make an assessment of the nature and quantum of traffic moving by road on these routes. The Railway Board suggested the following routes for the purpose of these surveys:—

(1) Amritsar-Delhi-Kanpur;
(2) Calcutta-Patna;
(3) Bombay-Bangalore;
(4) Madras-Bangalore;
(5) Calcutta-Rajmahal; and
(6) Bombay-Nagpur.

A team of three officers, one each from the Ministry of Transport and Communications, the Ministry of Railways and the Committee was entrusted with the task of conducting these surveys. These six routes traversing different parts of the country cover between them in all a length of 2,508 miles. The surveys on the first five routes covering 1,983 miles have already been completed and the remaining one route covering a distance of 525 miles is proposed to be surveyed shortly. Meanwhile, the data in regard to the routes already surveyed are being processed and a separate report will be drawn up giving the results of the surveys. Apart from the utility of these surveys from the point of view of the work of the Committee, such studies, it is felt, would have to be conducted from time to time in future, as is being done in some other parts of the world.

Other Sources of Information

6. With a view to assessing the trends in the volume and type of traffic carried by road over the last few years, the Committee felt it necessary to get information from sources such as the State Governments, the chambers of commerce and the representatives of road transport undertakings in the country. These agencies were requested to let the Committee have factual information about the traffic carried by road transport and, more particularly, the recent trends in such traffic. The information received from these sources has been utilised for purposes of the analysis presented in Chapter VIII.

Enquiry into Cost of Haulage by Road

7. Another important issue, on which the available information was considered to be very inadequate, is that of the relevant economics of the various means of transport, more particularly, the economics of railway operation *vis-a-vis* road transport. While in the case of the railways, published data are available on the basis of which some rough analysis of costs of haulage is possible, in the case of road transport, no authentic data are readily available, particularly about goods services. The Committee accordingly decided to institute an enquiry into the cost of operation of a few selected road transport undertakings and to enlist the cooperation of the Chief Cost Accounts Officer in the Ministry of Finance for this study. The All-India Motor Unions' Congress suggested the names of six concerns in different parts of the country who were willing to cooperate in the study. In respect of three of these undertakings, two in Delhi and one in Madurai, the necessary data have already been compiled. This enquiry is referred to briefly in Chapter X.

Experience of Foreign Countries

8. In connection with the examination of the issues relating to long-term policy, the Committee has made an attempt to study the experience of some of the more important industrialised countries over the last few decades. The Committee addressed letters to the Indian Embassies in selected countries asking for information about the measures taken to secure coordination between the various means of transport. Some useful material has been collected through this correspondence. The Committee has also been making use of all published literature on the subject—official and non-official—which is available. A few reports were received from the United Nations Economic Commission for Europe and Economic Commission for Asia and the Far East. It is proposed to issue a separate Appendix setting out the material relating to the foreign countries when fuller information becomes available.

Discussions with the Interests Concerned

9. While the staff of the Committee was engaged on these basic studies, efforts were made to the extent possible to ascertain the views of the various interests concerned on the major issues before the Committee. For the sake of convenience, it was considered appropriate that the Chairman, in the first instance, should have informal consultations with the State Governments and the other parties concerned. The Chairman has had informal meetings so far with organisations represent-

ing (i) coastal shipping, (ii) automobile manufacturers, (iii) Light Railways, and (iv) inland water transport services and the State Governments of Punjab, Bihar, Orissa, West Bengal, Bombay, Rajasthan, Kerala, Madras and Madhya Pradesh. He also met representatives of the Indian Roads and Transport Development Association and a few other organisations. Moreover, he had informal meetings with the General Managers and seinor officers of some of the Zonal Railways and several individuals—official and non-official—who were either interested in or could be expected to assist in the enquiries of the Committee.

Study of Problems of the Means of Transport other than Railway and Road Transport

10. The Committee has collected some useful material relating to the means of transport other than railways and road transport, namely, coastal shipping, inland water transport and air transport and the studies of their problems are proposed to be pursued actively after completion of the present Preliminary Report on road-rail coordination. The Committee expects to deal with these problems in its final Report. The Planning Commission has recently suggested that the Committee may consider making advance recommendations on the problems of rail-sea coordination. This request is under consideration of the Committee.

11. The Committee is also expected to study the role of the traditional modes of transport, namely, bullock-carts and country boats. There is hardly any information available about the performance of these means of transport and the value of the services rendered by them to the economy. The Committee has requested the Programme Evaluation Organisation of the Planning Commission to make a sample study relating to bullock-carts and, to the extent possible, country boats in a few selected community development blocks. The timing of this study will depend, among other factors, on the marketing seasons in the areas selected for the purpose and this is one of the reasons why the study has not been completed so far. The Committee, at the same time, has been making an attempt to get all available data pertaining to this field from the State Governments and from the reports of such surveys as have been conducted so far by the various agencies, including the State Governments.

The Character of the Preliminary Report

12. The Committee did not consider it appropriate to issue a general questionnaire at the very beginning of the enquiry, following the practice usually adopted by the committees or commissions of enquiry. The Committee felt that the issues and the important considerations on which these issues should be judged, deserved to be brought out clearly before the public at large and students of public affairs who may be able to give their views on them. Accordingly, an attempt has been made in this Report to present the factual information that has been collected so far and to formulate the main issues which have been thrown up as a result of the studies undertaken by the Committee. The Report is confined to the problems of road-rail coordination only and does not

touch on the problems of coastal shipping, inland water transport and the other means of transport. The Committee has refrained from making any recommendations in this Preliminary Report, except in regard to the problem of coordination between the railways and the nationalised road transport undertakings in the States, operating mainly passenger services, in respect of which the Planning Commission had asked the Committee to make advance recommendations. This relatively limited issue of coordination has been dealt with in Chapter XII.

The Committee is very anxious to obtain on all the issues brought out in this Report, the considered comments of the public at large as also of specialists in the field of transportation. These comments will be helpful to the Committee in giving further thought to the problems set before it and in framing its recommendations.

Acknowledgements

13. The Committee gratefully acknowledges the assistance that it has received from the various Ministries concerned, more particularly the Ministries of Transport and Communications, and Railways, the State Governments, the Federation of Indian Chambers of Commerce and Industry, the Associated Chambers of Commerce of India, the All-India Motor Unions' Congress, the Association of Indian Automobile Manufacturers, the Indian Roads and Transport Development Association, the Coastal Shipping Conference, the Committee of Inland Water Transport Operators, the management of the Zonal Railways and the Light Railways, the Chief Cost Accounts Officer in the Ministry of Finance and the numerous other officials and non-officials who have assisted the Committee in its studies. The Committee trusts that all these agencies will continue to extend their cooperation to the Committee for the completion of the task assigned to it.

CHAPTER II

DEVELOPMENT AND REGULATION OF THE INDIAN RAILWAYS —A HISTORICAL RETROSPECT

In this chapter we intend briefly to survey the main developments in railway transport especially such as have a direct or indirect bearing on the problems of coordination between railways and other means of transport. The chapter is divided into three sections: Section I traces briefly the history of the growth of the railways and the part played by the State in it; Section II describes briefly the relationship between railway finances and the General Exchequer; and Section III traces the main developments in railway rate making.

I. A Brief History of Growth of the Railways

Early Development under Guarantee System

2. The construction and development of railways in India commenced about the middle of the nineteenth century. Between 1853, when the Great Indian Peninsula Railway Company started a line from Bombay to Thana, and 1861, a number of railway lines were constructed by companies under contracts with the Government which guaranteed to them fixed interest on the capital invested by them. The main financial provisions of these contracts were that the necessary capital should be raised by the companies, that the Government should guarantee interest on that capital at 5 per cent. per annum in Sterling and that any surplus profits earned by the railways in excess of the guaranteed interest should be divided equally between the companies and the Government. The Guarantee System on the whole is considered to have worked to the detriment of the Indian Exchequer on account of the high cost of construction. In 1869, the Government first undertook the construction of railway lines departmentally and all lines in the next ten years were constructed in this manner. By the year 1880, about 9,000 miles of railway lines had been opened to traffic.

Considerations Underlying the Rapid Expansion of Railways

3. Apart from considerations relating to the general economic development of the country, the expansion of the railways was also guided by administrative and military considerations. During the five years, from 1874 to 1879, India was visited by a series of famines. The Famine Commission appointed in 1880, emphasised the great importance of railways for the protection of the country from famines and observed that the country could not be held to be safe from famines in the future until the Indian railway system was extended to about 20,000 miles. In view of the necessity of rapid expansion of railways in the country, Government had again to fall back upon private companies for the construction of new lines. The Afghan War in 1878 led the Government to consider the need for extension in yet another direction, namely, the opening

of railway lines for purely strategic purposes. It was decided that while new productive and profitable lines should be left entirely to private commercial undertakings, the Government should undertake the construction of railways which, due to their unprofitable character in a commercial sense or to other causes, could not be built by private agencies. Thus, in the Eighties started an era of company lines being constructed and administered side by side with State lines. A considerable mileage of railways was also constructed by the former Indian States either through the Agencies of the Companies, Government or the Durbars themselves. Several minor lines were the property of District Boards or enjoyed a guarantee of interest from them.

4. From 1880 upto 1907, the operations of both the State and the aided companies went on side by side. During this period, productive lines were leased to private enterprise for operation, while the unproductive lines were operated by the State either directly or indirectly. By 1907, all the major railway lines which had been originally built by the companies had been purchased by the Government but were leased to private companies for purposes of management. In the following years, the companies were mostly in the position of managing agencies working the lines for the Government of India. At the end of 1920-21, the route mileage of the railways in India stood at 37,029, of which 73 per cent. was owned by the Government including Provincial Governments and District Boards, 12 per cent. by Indian States and 15 per cent. by private companies. In spite of the predominant State ownership, Government operated only 24 per cent. of the railway system while the companies managed and operated 68 per cent., the balance of 8 per cent. being operated by the Indian States.

The contracts with the two principal railway companies, namely, the East Indian Railway and the Great Indian Peninsula Railway were due to terminate in 1924 and 1925 respectively. The Government of India decided in 1923 to take over these railways under direct State management and also other principal railways as and when their contracts expired. As a result, by the beginning of World War II, the mileage operated by Government had increased considerably. At this time (1938-39) the total Indian railway mileage stood at 41,134. At the time of Independence, the mileage had been reduced to 40,524 owing to certain lines being dismantled during the War and was further reduced to about 34,000 as a result of Partition. By this time almost the whole of the railway system had been taken over from the companies. Later in 1949-50, with the integration of the Indian States, the railway lines belonging to the former Indian States were also merged in the Government railways. In 1958-59, the railway mileage in India stood at 35,081. The expansion of railway mileage in India over the period 1853 to 1958-59, is indicated in the statement at Appendix 2.

5. It will be seen from the above brief survey that throughout the history of railways in India, the Government played a leading part in their development: in the early period by giving financial guarantees to the companies which undertook construction of railway lines, thereafter by directly constructing and administering a part of the railway system side by side with the private companies and later by progressively taking over under direct management almost the entire railway system.

II. The relationship between the Railway Finances and the General Exchequer

Separation of Railway Finances from the General Finances

6. Between 1858 and 1898, the operation of railways in India resulted year by year in a loss to the taxpayer aggregating Rs. 58 crores in all—an average of Rupees one and a half crores per annum. Thereafter, till 1924, with the exception of the two years 1908 and 1921, there was a surplus every year—the total surplus during this period being Rs. 103 crores. Upto the year 1924, the railway finances were a part of the General Budget of the Government. Consequent upon the recommendations of the Acworth Committee, 1921, the Railway Budget was separated from the General Budget from the year 1924-25. The object of the separation was stated to be two-fold: (i) to relieve the General Budget from the violent fluctuations caused by the incorporation therein of the railway estimates, and (ii) to enable the railways to carry out a continuous policy based on the necessity of making a definite return to the General Revenues on the money expended by the Government on the railways.

7. A Convention was adopted in 1924, embodying the recommendations of the Acworth Committee. According to the Convention, the railways were required to pay, in addition to the interest liability on the capital-at-charge of commercial lines, a sum equal to one per cent. on the capital-at-charge on such lines plus 1/5th of any surplus profits remaining after the payment of this fixed return to the General Revenues. If the remaining surplus exceeded Rs. 3 crores, one-third of such surplus accrued to the General Revenues and the remaining two-thirds to the railways. The interest on capital-at-charge and the loss in working of strategic lines was to be borne by the General Revenues. A Railway Reserve Fund was set up to which such surpluses as were left after the payments to the General Revenues were to be transferred. The Fund could be used to secure the payment of the annual contribution to the General Revenues, to provide for arrears of depreciation and for writing down and writing off capital. Further, a Railway Depreciation Fund was formed to meet the charges on account of depreciation.

8. On the recommendations of the Acworth Committee, the Government passed a Resolution in February, 1925, in which they accepted the responsibility for finding the capital required for the construction or extension of branch lines. Hitherto, the branch lines were constructed by separate companies who were guaranteed a minimum return on the capital. According to the Resolution, the lines required for purely local purposes by the Local Governments or local bodies which were not remunerative from the railway point of view, were to be constructed only if the Local Governments guaranteed the Railway Administration against the losses in working plus the amount payable to the General Revenues of the Government of India. This procedure was later revised on the recommendations of the 1949 Convention Committee as mentioned in a subsequent paragraph.

The Railway Finances Since 1924 Convention

9. During the five years after the separation of railway finances from the General Revenues, *i.e.*, from 1924-25 to 1928-29, the railways were able to meet the obligations laid on them by the Separation Convention

and, besides paying interest charges and one per cent. on the capital outlay, made a further aggregate contribution of Rs. 8·29 crores to the General Revenues, the total contribution made, inclusive of interest, being Rs. 160·97 crores.

10. There was, however, a reversal of the trend in railway finances in 1929-30 due mainly to the economic depression. In the next eight years, from 1929-30 to 1936-37, the railway earnings were insufficient to discharge the liabilities of the railways to the General Revenues. The railways' net earnings position began to improve from 1937-38 which was the first year after depression when there was a positive surplus. The out-break of the Second World War brought prosperity to the railways and the year 1940-41 saw an appreciable increase in the railway revenues. This was the first year after 1930-31 when the railways were able, after meeting their commitments including the normal contribution to the General Revenues, to contribute Rs. 6·3 crores to the Revenue Reserve Fund. During the War, the entire arrears of contribution to the General Revenues were paid. However, on account of the conditions created by the war, the railways could not provide for the replacement and renewal of overaged assets with the result that they carried a heavy backlog of such assets by the end of the war. On account of the unstable conditions prevailing during the War, it was decided in 1943 that the Separation Convention of 1924, so far as it provided for the contribution and allocation of surpluses to the General Revenues, should remain inoperative until a new Convention was adopted and that the allocation of surplus between the railways and the General Revenues should be decided each year on an *ad hoc* consideration of their respective needs.

11. As a result of the recommendations of the Railway Convention Committee, 1949, it was decided that the General Revenues should receive only a fixed annual dividend from the railways including interest charges payable under the Resolution of 1925, and that for a period of five years commencing from 1950-51 the annual dividend should be a sum calculated at the rate of 4 per cent. on the capital invested out of the General Revenues in the railway undertaking, as computed annually, provided that no dividend should be payable on the capital invested in unremunerative strategic lines. This rate of dividend was subject to a review by a Committee to be appointed by the Parliament towards the end of the aforesaid period. As regards the Depreciation Reserve Fund, the Convention Committee recommended that the rate of contribution to the Fund should be a minimum of Rs. 15 crores a year for the next five years, but should the results of operation of the railways permit additional contributions over and above this minimum amount, such contribution could be made to the extent necessary and justified.

12. In 1946-47, a Betterment Fund had been constituted for financing works for amenities to passengers and schemes for staff welfare as well as for unremunerative operating improvement works. The Convention Committee, 1949, recommended that a fund of a more comprehensive character, to be called the Development Fund, should be created for financing all works of an unremunerative nature; such as (a) passenger amenities, (b) labour welfare, (c) unremunerative operating improvement works costing more than Rs. 3 lakhs each, the expenditure upto Rs. 3 lakhs being charged to revenues, and (d) new lines and projects which were necessary but unremunerative. The Committee felt that the policy for construction of unremunerative lines including branch lines laid down in the

Resolution of 1925, was not entirely satisfactory since the railways could not undertake such projects unless the losses were guaranteed by the sponsoring authorities. The Committee observed that this policy could not be allowed to continue if the railways were to fulfil their role in the economic development of the country. Accordingly it made the recommendation, which was accepted by the Government, that the Development Fund should be responsible for financing projects which were necessary but unremunerative at the time of construction. The Betterment Fund referred to above was merged in the Development Fund.

13. A Convention Committee was appointed in 1954 on whose recommendations, the Railway Convention was revised to be operative for five years from 1st April, 1955. This was later extended by Parliament by one year so as to make the period of conventions coincide with the periods of five year plans. The Convention Committee, 1954, recommended that the rate of dividend should continue at 4 per cent. on the capital invested for another period of five years. Certain minor adjustments were, however, made in the matter of calculation of the capital-at-charge for arriving at the total dividend payable. The railway finances have been recently reviewed by the Convention Committee of 1960, which has recommended that the existing system of payment of dividend by the railways to the General Revenues at a fixed rate should continue and the rate of dividend should be increased from 4·0 per cent. to 4·25 per cent. The recommendations of the Committee are described in Chapter IX.

14. From the above, it will be clear that the railways, since the separation of their budget from the General Budget, have had a definite obligation to make contfibutions to the General Revenues in the terms prescribed by the Conventions. Since the beginning of the First Five Year Plan, there has been a rapid expansion in the capital-at-charge of the railways. This has correspondingly increased the total amount payable by way of dividend to the General Revenues. Railway finances, on the other hand, have been adversely affected recently by several factors leading to a rise in the working expenses and also by the changing pattern of traffic on the railways under the five year plans. These trends will be dealt with in detail in Chapter IX.

III. Developments in Railway Rate Making

15. In this Section, an attempt is made to survey briefly the developments that have taken place from time to time in the railway freight rate structure and in the rate making policy in the country.

Basic Rate Structure from the Earliest Times to the Present Day

16. During the very early days of railway development, there was no Government regulation applicable to railway freight rates and fares, except that in terms of the contracts with the companies, the rates and fares were initially fixed with the approval of the Government who could order them to be reduced only in the event of the net profits of the railway exceeding 10 per cent. of the capital outlay. Even then the Government's power was confined to making such reductions in rates and fares as would not bring the net receipts below 10 per cent. of the capital. The control of the Government over rates and fares was thus not very effective.

In the year 1868, maxima rates were fixed and the companies were left free to fix their rates within these maxima. No minima rates were fixed but five "classes" were prescribed with one separate "class" each for foodgrains and for coal. Nothing was, however, said as to which articles were to be placed in each class, nor was any specific restriction placed on the powers of the companies to transfer articles from one class to another.

17. As more and more railways were established and more railway companies were formed, the need was felt by the Government for having greater control over the rate structure of the companies. According to a Resolution of the Government of India issued in 1887, it was laid down, among other principles, that ".....There should be no undue preference, in other words, a railway administration ought not to be permitted to make preferential bargains with particular persons or companies such as granting them scales of charges more or less favourable than those granted to the public generally". The adoption of this very important principle made it obligatory for the railways to give equality of treatment to all their customers. The principle of prohibiting undue preference was given statutory recognition when the Indian Railways Act was passed in 1890.

In 1891, the Companies were prohibited from making any alteration in the classification of individual commodities without the sanction of the Government. Even so there was not sufficient uniformity in the rates charged owing to the absence of a uniform classification of commodities applicable over all the railways. It was only in 1910 that a uniform general classification for all the railways was evolved by the Tariff Simplification Committee of the Indian Railway Conference Association and was introduced with the approval of the Railway Board.

18. During the next three decades the number of 'classes' in the classification was increased from time to time, as also the level of rates. But the form of the rate structure remained basically unaltered.

19. The railway rate structure was revised with effect from 1st October, 1948, and certain major changes were introduced. Standard telescopic class rates on continuous mileage from the booking station to the destination station, for all commodities were adopted irrespective of the number of railways involved. Also, standard telescopic wagon-load rates for certain commodities were introduced in replacement of the different schedule rates previously in force over different railways. The terminal and short distance charges were standardised. Definite orders were issued preventing different units of the Indian Railways from quoting any exceptional class rates or from adding to the prescribed wagon-load scales.

20. The adoption of such a uniform and standard rate structure was particularly in the interest of the backward and under-developed areas such as those served by the North Eastern and the Assam Railways, in that the higher than the standard class rates which were in force over such railways, to meet their high costs of operation, were abolished and the standard class rates were adopted over these railways also. Thus for the first time, the railway freight structure was to be re-oriented along national lines.

21. Certain minor changes were introduced in the railway freight structure in April, 1955, including (i) adjustment in the basis of charge for class rates to afford relief to long distance traffic, and (ii) levy of a surcharge of $6\frac{1}{2}$ per cent. on consignments of 'smalls'. From 1st April,

1956, a supplementary charge of one anna in the rupee was levied on all traffic with the exception of a few commodities like grain, pulses, fodder etc. This supplementary charge was increased to two annas in the rupee from July 1, 1957.

22. In the year 1955, the Railway Freight Structure Enquiry Committee composed of officials and non-officials was appointed to review the railway freight structure in all its aspects. Keeping in view the recommendations of this Committee, the freight structure was revised in 1958. The important features of the new structure were that whereas it represented a moderate overall increase in the charges, the freight burden on foodgrains was reduced and no increase in the freight rates was made in the case of a few commodities of common use such as kerosene oil, salt, fruits and vegetables. For coal, although the Committee had recommended a substantial increase in freight over long distances, Government accepted a new basis for rates which maintained the existing level of rates for short distance traffic and limited the increase in the long distance freight to Rs. 2 per ton. Generally, for all commodities somewhat higher percentage increase in rates were made for short haul traffic as compared with long distance traffic, so as to encourage road transport over short distances.

23. The freight structure introduced from October 1, 1958, is now in force, but a surcharge of 5 per cent. on freight on all goods traffic, with the exception of manganese and iron ore intended for export, has been imposed from April 1, 1960.

The Contribution of Railway Rates to Industrial Development

24. In the period preceding the First World War, the freight structure in force was mostly designed to assist export and import traffic. The rates charged, however, indirectly helped the growth of industries at the port towns, as the raw materials could be moved cheaply to the ports and finished products from the ports to the inland consuming markets. Thus the low rates for wheat, oilseeds, hides and jute to Calcutta, originally quoted for encouraging export, led to the establishment of flour, oil and jute mills, as also of tanneries in and around Calcutta. Similarly, the low rates for cotton and wool to Bombay were largely instrumental in developing Bombay as a textile manufacturing centre.

25. During the inter-war period, as a result of development of several industries, the railways became increasingly conscious of inter-railway competition. Competition also appeared between railways and coastal shipping. In the circumstances, special rates were freely quoted to capture traffic for individual railways, as well as port to port rates to capture coastal traffic. More and more traffic began to move at special rates and at scheduled rates which, in fact, were standardised station to station rates of general applicability over the particular railway. Such a rating policy, though prompted by growing competition, had a favourable impact on the growth of industries in the hinterland and encouraged development of industries at places like Kanpur, Dhariwal, Ahmedabad, Poona, Baroda, Sholapur, Nagpur, etc.

26. The Industrial Commission (1916-1918) strongly recommended, in the interests of industrial growth, that internal traffic "should be rated as nearly as possible on an equality with traffic of the same class and over similar distances to and from the ports". It further recommended the grant of special rates for a term of years to new industries.

27. The Royal Commission on Agriculture in its Report in 1928 commented that while the railways are a commercial undertaking and as such must earn a reasonable rate of interest on the capital sunk in them, they could greatly encourage internal manufacturers by charging the lowest possible rates for the movement to the factory of raw materials and from the factory of finished articles all over the country. The Commission also specially pointed out that there had been practically no increase in the rates for agricultural produce since 1913, in spite of the great rise in its value during the intervening period of 14 years.

28. The Report of the Indian Tariff Board 1929, on the heavy chemical industry, under the chairmanship of Dr. John Mathai, is of special interest in studying the historical development of railway rate making policies. The Report devoted a whole chapter to the subject of railway rate making and referred to railway rates as a powerful instrument for the development of industries. The Report dwelt on the need to introduce telescopic rates on a continuous mileage basis on the railways in India and emphasised that it was essential that consideration of railway finance should be subordinated to the interest of the country as a whole.

29. The recommendations made in these successive reports exerted a powerful influence on Government and did much to liberalise the railways' attitude towards quotation of promotional rates for indigenous industries. Iron and steel, sugar, cement and paper industries, among others, owe much of their prosperity to the assistance given by the railways in the shape of low rates, both for raw materials and finished products. Low rates on coal assisted both the growth of the coal mining industry and the numerous industries using coal as a raw material.

All the iron and steel factories have received substantial assistance from the railways, not only in the matter of facilities for transport by the provision of sidings etc., but through the grant to these industries, of exceptionally low rates both for their finished products and for their raw materials such as iron ore and dolomite.

The export of coal too was considerably assisted by the extremely low freight rates charged by the railways. Because of the concentration of coal-fields in Bengal and Bihar and the long distances over which it has to move to reach the consumer, coal has always been treated differently from other commodities for the purpose of railway rate making. Almost from the very beginning the scale for coal was specially kept at a low level and a telescopic basis of charges on through distance, ignoring railway boundaries, has been applied to it. A rebate was given from time to time to assist in the export of coal.

The establishment of the sugar industry in Uttar Pradesh and Bihar, after protection was granted to the industry in 1931, was assisted considerably by the low special rates quoted by the railways for both sugarcane and sugar. The cement industry also received assistance in the shape of very low rates for limestone, gypsum and cement.

General Policy in the Past Regarding Freight Rates

30. It will be seen that from the early stages of railway development in India the railway rates have been subjected to Government regulation. The Indian Railways Act, 1890, enjoined special obligations on the railway

administrations in the matter of avoidance of any undue preference or prejudice in rating. The rating system has been influenced from time to time by considerations of public interest, and the rates on certain basic commodities like coal, foodgrains, etc., were kept specially low in keeping with the economic requirements of the country. It is interesting to recall that the Acworth Committee in its report in 1920-21 remarked that the Indian Railway rates were among the lowest in the world. The position appears to be the same at present also.

CHAPTER III

THE ROLE OF RAILWAYS AS A PUBLIC ENTERPRISE

Social Aspects of Railway Working

The brief historical survey in the preceding chapter brings out the fact that the development of railways in the past was guided not so much by purely commercial considerations as by considerations relating to the general economic interests of the various regions in the country and the social, strategic and political purposes which the railways were called upon to serve from time to time. The Indian Railways, of course, are required to make contributions to the General Revenues—and since the country entered the era of five year plans, there has been an increasing emphasis on the railways contributing to the plan resources; but the earning of a profit is not and has never been the be-all and end-all of the railways. They have always been treated as a public utility undertaking which is expected to perform certain social tasks even though these might involve some financial loss. In this connection, it is relevant to quote the following extract from a statement supplied by the Ministry of Railways to the Taxation Enquiry Commission (1953-54):—

> "Railways are no doubt a commercial concern but they are hardly a commercial concern in the conventional sense. As a State undertaking they owe it to the public to provide transport at the cheapest rates, consistent with the maintenance of their financial solvency and providing means for their development....."*

2. In this chapter, we endeavour to list some of these social obligations of the railways. We shall discuss these under two separate heads, namely, social obligations underlying the railway rating structure and the obligations placed on the railways as a common carrier including the obligations to provide services which are unremunerative. In the nature of things, the list cannot be made exhaustive. The relationship between Government and the railways is so close that it becomes difficult to define in precise terms the role that the railways as a commercial undertaking or as a public utility service are expected to play *vis-a-vis* the administration.

The Influence of Social Considerations on Railway Rating Structure

The General Principle of Railway Rate Making

3. In the first place, as will be abundantly clear from the brief survey in Chapter II, the freight structure on the Indian Railways, as in most

*Report of of the Taxation Enquiry Commission 1953-54, Volume IV (Evidence) Part I, Ministry of Finance (Department of Economic Affairs.), Government of India: p. 218.

other countries, has been much less based on the cost of the service provided by the railways than on 'the value of service' or what is commonly known as the principle of 'charging what the traffic will bear'. To some extent, this principle underlying railway freight making is warranted by commercial considerations. A large monopolistic undertaking like the railways has suitably to adjust its prices so as to distribute the burden of its 'overhead or joint costs over various commodities in the manner best suited to the interest of the business'. This consideration itself leads to a differential rating structure. In regard to basic commodities like mineral ores or coal, which are of comparatively low value, the railways as a commercial undertaking may find it advantageous to recover just the out-of-pocket expenses and only a small or even no share of overhead or joint costs. The bulk of the overhead or joint costs, therefore, has in the nature of things, to be borne by other commodities which are high-priced and can bear the burden of high charges. Sir William Acworth describes the principle underlying the railway rate making as under:—

> ".....the total railway revenue is made up of rates which, in the case of traffic unable to bear a higher rate, are so low as to cover hardly more than out-of-pocket expenses; which, in the case of medium-class traffic, cover both out-of-pocket expenses and a proportionate part of the unapportioned cost; and which finally, in the case of high-class traffic, after covering that traffic's own out-of-pocket expenses, leaves a large and disproportionate surplus available as a contribution towards the unapportioned expenses of the low class traffic, which such traffic itself could not afford to bear". *

Non-Commercial Considerations in Railway Rate Making

4. Apart from purely commercial considerations, the system of differential railway rates in almost every country is based upon considerations of public policy. The rates on the Indian Railways were fixed deliberately to assist certain lines of trade and certain economic objectives which the then Government wanted to pursue in the country. Under this policy, the rates of certain commodities like coal, important raw materials and foodgrains were deliberately kept low although on strictly commercial considerations, these would have hardly been justified. Recently in 1958, when the revised freight structure was introduced on the Indian Railways, the coal rate was not allowed to be increased in the full measure recommended by the expert Committee on Railway Freight Structure, because the proposed increase in the rate was not considered to be in the public interest.

5. It is difficult to work out accurately the financial implications of the differential rating structure which the railways have been called upon to adopt from time to time from the point of view wholly of the public interest as distinct from the commercial interest of the railways themselves. One method of estimating approximately the value of the special concessional freight rate on coal would be to assume that the rate on coal should be the same as that on iron ore and other ores, that is to say, instead of being charged at a special low rate, coal should

* 'The Elements of Railway Economics' by Sir William M. Acworth, Clarendon Press, Oxford, (1924) p. 85.

be placed in the Class in which iron ore and other ores are placed (*viz.* Class 32·5A) and then to examine what would be the additional earnings to the railways on this account. On this basis the additional earnings to the railways are estimated to be of the order of Rs. 23 crores per annum as against the existing total earnings from coal of about Rs. 40 crores. This is on the basis of the volume of coal traffic in the year 1958-59 and as the traffic would increase in future, the value of the concession in railway freight rate could also be assumed to increase correspondingly. The value of special concession in freight rate levied on foodgrains could also be approximately assessed. The freight rates, on an average, have increased between 1938-39 and 1958-59 by about 97 per cent. whereas, the corresponding increase in freight rate on foodgrains has been of the order of 26 per cent. only. If it is assumed that the rates on foodgrains should have gone up in the same ratio as the overall level of freight rates, the railways would have earned about Rs. 15 crores more per annum on the basis of the traffic in foodgrains carried in 1958-59. Between 1st April, 1956, and 1st July, 1957, supplementary charges were levied on general freight rates but not on foodgrains. The loss to the railways due to non-levying of the supplementary charges on foodgrains for the period from 1st April, 1956, to 30th September, 1958, *i.e.*, a period of 2½ years, is calculated approximately at Rs. 5·5 crores. Similar calculations could be made in regard to the value of concessions in freight rates on other commodities, the rates on which could be considered to be well below the rates which might be levied on them on commercial considerations.

Equality and Undue Preference Restrictions in Respect of Railway Rates

6. The railways' obligation to have a freight structure based on larger public interests rather than in keeping with the costs, *ipso facto*, makes it incumbent on the railways to have a freight structure which does not involve any personal preferences or discrimination. The necessary condition of the railway rating policy, therefore, is that all rates should be made public and that any rates charged by the railways can be assailed before the Railway Rates Tribunal as being unreasonable in themselves, or as resulting in 'undue preference or undue prejudice'. It is impossible to evaluate all the benefits accruing to the general public from the railways' obligations to have uniform railway rates all over the railway system and from the railways' obligations to publish the rates. These obviously are important safeguards to ensure equality of treatment to small unorganised sections of the community, to secure geographical equality of opportunity and to eliminate uncertainty as to charges which might burden particular transactions. Under Section 41 (2) (i) of the Indian Railways Act, 1890, 'whenever it is shown that a railway administration charges one trader or class of traders or the traders in any local area lower rates for the same or similar animals or goods, or lower rates for the same or similar services, than it charges to other traders or classes of traders, or to the traders in another local area, the burden of proving that such lower charge does not amount to an undue perference, shall lie on the railway administration.'

Adjustment of Rates on the Basis of Costs

7. The distinction made in railway transportation between the costs of haulage and the rates charged for individual commodities has obviously important implications from the point of view of road-rail coordination. A concrete example would illustrate the point. In accordance with the

system of differential rating, the rate actually charged by the Indian Railways for a haul of 500 miles varies, for example, from Rs. 17·71 per ton for coal to Rs. 103·47 per ton for cigarettes and confectionery and Rs. 125.18 per ton for medicines and chemicals. The cost of haulage by rail at 6 nP. per ton mile, which is the average cost for broad and metre gauge together, comes to Rs. 30 for this distance. Thus while the rates charged by the railways are much higher than the average costs for certain items of traffic, they are substantially lower than the costs in the case of certain other commodities. In the case of former set of commodities, the railways would be at a competitive disadvantage *vis-a-vis* road transport, even though the average cost of haulage by road is substantially higher than the cost of haulage by rail. As an illustration, it may be pointed out that according to the lowest calculation of costs cited in Chapter X (paragraph 16), the average cost of haulage per ton by road for a distance of 500 miles works out to Rs. 61·50 nP. It will be observed, therefore, that road transport could easily undercut the railways in respect of all commodities the railway rates for which, happen to be more than Rs. 61·50 nP. per ton, although the cost of haulage by road will be higher than that by railways. Road transport could easily attract traffic in these commodities by quoting competitive rates.

8. A good deal of thought has been given in some foreign countries in recent years to the possibility of revising railway freight structure in a manner so as to make the railway rates correspond to the costs of haulage. The main consideration guiding such thinking has been the growing competition between railways and road transport. On services in respect of which the railway charges have been high in relation to costs, the railways almost everywhere in the world have laid themselves open to the competition of road transport which has affected adversely their financial position. As Professor Gilbert Walker has put it, "an intractable problem has been presented by the competition between road and railway rates, that is to say, by the co-existence at one time of two prices for transport, the one discriminating their commodities by value and based on the average cost of operating traffic over the system as a whole, the other determined by the cost of the particular service run and the freight carried"*. Later in the Report (Chapter XI) we refer to the recent developments in railway rate making in countries like Great Britain and Canada and discuss the problems relating to adjustment in freight rates based on costs under the conditions obtaining in India. The fundamental basis for the suggestion that the railway freight rates or, for that matter, the freight rates charged by any other mode of transport should correspond to the actual cost of haulage, is that the railways as also other modes of transport should be treated purely as commercial undertakings. This implies that the railways as also other modes of transport should be free from all types of public service obligations or should all bear these obligations to the same extent, so that the conditions of competition between them are completely equalised.

The Social Obligations of the Railways

The Obligation of a Common Carrier

9. The fundamental obligation placed on the railways is that of a common carrier. The common carrier obligations can be divided into

*Article on '*The Transport Act 1947*' in *Economic Journal* March 1948; Page 22.

two broad categories, namely, (a) obligation to carry traffic that may be offered, and (b) liability for claims for compensation. According to Section 27 of the Indian Railways Act, the railways have the obligation to receive and forward all the traffic offered to them without any undue preference as defined in Section 28 of the Act. Thus as a common carrier, the railways cannot refuse to carry any goods offered to them or discriminate between what to carry and what not to carry. Under the existing conditions in India such obligations are not shared by other means of transport. In this connection a typical example cited by the Railway Board is that the lorries carry groundnut oil in drums from Kurnool to Madras and tender the empty drums at Madras to be carried by rail back to Kurnool, thus enabling these lorries to carry high-priced goods like cotton piece goods as return loads. The empty drums with large volume in relation to weight are uneconomical to carry. The railways as a common carrier cannot refuse to carry the empty drums, although the carriage of such drums back to Kurnool gives an undue advantage to their competitors in preference to themselves. Other examples could be cited to indicate the handicaps placed on the railways by their obligation as common carriers—handicaps to which their competitors are not subjected at least under the present-day conditions in India.

10. As regards liability for claims for compensation the railways at present, according to Section 72 of the Indian Railways Act, assume the responsibility of a bailee only and not of a common carrier. However, the railways propose by legislation to assume common carrier's liability shortly. When this is done the liability under the Carriers Act of 1865 will be the same for all modes of transport except that carriers other than railways and tramways may, by special contract signed by the owner of such property or his duly authorised agent, limit their liability in respect of the same.

11. If the railways were free to recover the cost of all services that they provide, the obligations placed upon them to carry all traffic as a common carrier would no longer be any burden to them. The railways almost everywhere in the world, however, are under obligation to provide certain services which are unremunerative. The more unremunerative services may include services in low-density areas, where costs cannot be recovered or services at rates lower than the cost because of the social obligations placed on the railways. It is difficult to work out the exact financial implications of these obligations. This will require collection of elaborate data and could best be attempted only in regard to some selected services provided by the railways.

Uneconomic Branch Lines

12. The railways in almost every country in the world operate uneconomic branch lines or sections. The Indian Railways have to operate numerous such lines. The Committee has requested the Railway Board to make an attempt to estimate the financial results of working selected lines in the various zones and let the Committee have an idea of the losses involved in operating these lines. One of the questions requiring consideration on the part of the Committee is whether under the present day conditions in India, it is possible to contemplate suspension or closure of any unremunerative services. There is, in fact, an increasing demand for new railway lines and, as we shall discuss later, (Chapter XIII) commercial considerations are not always dominant in deciding on the construction of these lines.

There are, in addition, the Light Railways owned by private companies, some of which under old agreements with the Government railways are subsidised by the latter. So long as these railways have to be continued in public interest, the Government railways are under an obligation to underwrite their losses and pay them a minimum return on the special invested. The management of some of these railways urged that the problem of Light Railways should receive special consideration by the Committee. It was represented that owing to a continuous increase in their cost of operation and the diversion of traffic to road transport, the Light Railways were finding it very difficult to meet their ordinary working expenses, and that some of them were already running into deficits and were being subsidised by Government railways. It was urged that these railways could not afford any further diversion of traffic to road transport resulting in losses of revenue and that a separate code of principles should be evolved for regulating motor transport in the areas served by the Light Railways. The Committee has gone into the problem of Light Railways at some length and has had prolonged discussions with the representatives of the State Governments concerned. It is admitted by all concerned that some of these railways at least could not be discontinued and replaced by road transport services in the near future. It will be a matter for consideration how these railways could be made to pay their way during the period that they are required to continue in service.

Non-paying Suburban Passenger Services

13. The railways provide suburban (or what are known as commuter) services in large cities. Cheap season tickets are provided on these suburban services and the frequency of train services has to be maintained depending upon the traffic during peak hours. The suburban services are recognised the world over to be generally non-paying. The Committee has asked the Railway Board to let it have an indication of the losses incurred by the Indian Railways on such services. It is doubtful, however, whether on the basis of the statistics compiled by the Indian Railways, it is possible to have a very exact estimate of these losses.

Certain Special Concessions and Facilities Provided by the Railways

14. The Indian Railways provide a number of special concessions and facilities, particularly for the traffic relating to Defence personnel and Defence stores and for the Posts and Telegraphs Department. The railways have long standing arrangements with Defence and Posts and Telegraphs authorities in these matters. Recently the Indian Railways introduced concessions in freight rates on certain export commodities. In addition to these, there are certain concessions granted by the railways on social grounds to passengers in certain circumstances. These include various concessions given to students, Bharat Scouts and Girl Guides, blind persons, and tubercular patients etc. Further, goods moved on behalf of certain institutions like the Red Cross are carried free of charge. The total value of the more important among these concessions given by the railways during 1958-59 is estimated to be about Rs. 3·6 crores, which includes Rs. 1·8 crores for Military traffic, Rs. 0·3 crores for the Posts and Telegraphs Department and Rs. 1:5 crores for the other concessions given to the travelling public.

Amenities for Passenger Travel

15. Apart from the fact that the railways have to subsidise a large field of passenger services—almost all passenger services on the metre gauge system being run at a loss—the railways are under obligation to provide minimum amenities for passenger travel. There are increasing demands for such amenities from the travelling public which cannot always be resisted with success. It is difficult to make an estimate of the financial losses involved in the provision of such amenities over the entire railway system.

Obligation in Respect of Staff

16. As a public undertaking the railways at present are under obligation to provide to their staff uniform scales of salaries and wages and other amenities. In several regions of the country, the railways as a Central Government undertaking, have to pay scales of wages which are substantially higher than the scales admissible to the employees of the State Governments within whose territories the railways function. This obligation, therefore, involves a social burden on the raiways which the comparatively smaller units in the other means of transport are not called upon to bear. It should be possible to work out an estimate of the financial burden imposed on the railways on this account although this will require detailed calculations.

Preference for Certain Types of Traffic under Government Directions

17. Under Section 27-A of the Indian Railways Act, the Central Government may direct any Railway Administration in the public interest, to give preference to the transport of such goods or class of goods, as may be specified by it. Such directions are generaly given in respect of low-rated traffic like coal, mineral ores for export, raw materials for iron and steel, cement and textile industries, manure and foodgrains etc. When such a direction is given by the Central Government, the railways have to provide transport facilities for such items of traffic notwithstanding arrears of high-rated traffic waiting to be moved. If the overall railway capacity on the sections concerned does not permit of the movement of the commodities required to be given priority under Government direction, this would necessarily oblige the railways to surrender high-rated traffic in order to be able to meet the wishes of the Government. It is impossible to make any estimate of the financial implications involved in the Indian Railways carrying out such orders of Government from time to time.

18. Later in the Report (Chapter XI) we shall refer to the attempts made in several countries and more particularly, in the United Kingdom to reduce the burden of unremunerative services provided by the railways. We have also considered the questions whether the obligations similar to those placed on the railways could also be placed on road transport or alternatively whether and to what extent the cost of such public service obligations can be reimbursed to the railways.

CHAPTER IV

ADMINISTRATIVE ORGANISATION OF THE INDIAN RAILWAYS

In this chapter, an attempt is made to describe briefly the administrative organisation of the railways in India. We have in the earlier chapters attempted to bring out the dual role of the Indian Railways as a commercial undertaking and also as a public utility undertaking. It is important in this context to understand the exact relationship between the Government and the Railway Administration and, more particularly, how the responsibility for performance of this dual role is divided between the two.

Central Administrative Organisation

2. The administrative control of the railways in India is the responsibility of the Railway Board set up under the Indian Railway Board Act, 1905. The Act invested the Board with all powers of supervision and control of Government over the railways. The Railway Board performs the dual functions of the Chief Administrative Authority of the Indian Railways and the Secretariat of the Minister for Railways. It functions like any other Ministry of the Government of India and exercises all the powers of the Central Government in respect of regulation, construction, maintenance and operation of the railways.

Upto 1951, the top administrative set-up of railways continued to be departmental in character represented by the Board with a Chief Commissioner, a Financial Commissioner and three functional members. The Chief Commissioner was not incharge of any specific portfolio but was the sole adviser on all railway matters and policy to the Minister. He and the Financial Commissioner were *ex-officio* Secretaries to the Government of India in the Ministry of Railways. He had the right to over-rule the Board's view or to reject its advice, if he so thought fit. The Board was, however, reorganised in April, 1951 and the post of the Chief Commissioner was abolished. The Board later functioned with a Financial Commissioner and three functional members, one of whom was appointed as the Chairman of the Board. The Chairman was like any other member of the Board incharge of a specific portfolio. He did not enjoy the powers conferred on the former Chief Commissioner of Railways. From 1st October, 1954, however, the post of Chairman of the Board was made comparable to that of the Chief Commissioner of Railways. The Board thus reconstituted consists of a Chairman, a Financial Commissioner and three functional members. The Chairman is a functional member unlike the former Chief Commissioner who was not incharge of any specific portfolio but was responsible only for overall functional supervision and co-ordination of work. Members of the Board have the right of direct access to the Minister in respect of functions assigned to them. The Chairman, however, is made solely responsible under the Minister for Railways for arriving at decisions on technical questions and advising the Government on matters of railway policy. He is responsible for intra-Board co-ordination and all policy and other important matters are put to the Minister through him. The Chairman has power to over-rule the other Members

of the Board, except that, if in any matter of finance the Financial Commissioner does not agree with the Chairman, he has the right to ask for it to be referred to the Railway Minister and the Finance Minister. From 18th August, 1958, the Chairman, the Financial Commissioner and other Members of the Board function as *ex-officio* Secretaries to Government in their respective spheres, the Chairman having been given the rank of Principal Secretary in the Ministry of Railways. Under the existing set-up, the Minister is in touch with the day-to-day administration of the railways and in his discretion can deal with any matter concerning the administration. Parliament exercises control over the railway administration as over any other department of the Government.

3. The question of the Central Controlling Authority for the railways being reorganised as an autonomous statutory body has come up for consideration before several committees. The idea was suggested first in the thirties—the main underlying objective being that the railways should be run on business principles and be free from political influence. The Government of India Act, 1935, included provisions for the creation of a Federal Railway Authority. The Indian Railway Enquiry Committee (1936-37) revived the idea of a Federal Railway Authority and recommended that political interference in the affairs of Authority must be avoided and it should also be free from administrative interference by Government. The Committee observed that "while political interference is the high road to bankruptcy, administrative interference leads to stagnation and is almost to be equally deplored". The Committee suggested that the Government in future should confine its interest in railways to that of a debenture holder and should delegate wide powers to the Railway Board. Later, the Indian Railway Enquiry Committee, 1947, strongly criticised the departmental set-up for the administration of the railways and recommended the vesting of the control and management of the Union Railways in a Statutory Authority responsible for developing an efficient, adequate and economical system of railways with due regard to the interests of agriculture, industry, commerce and the general public and the interests of their staff and safety. The Committee, while recommending the setting up of a Statutory Authority, pointed out two defects of the existing system *viz.*, (i) "the Board is now not only the supreme Union Railway Executive, but is also part of the Secretariat of the Government of India", and (ii) further, "Railways are now exposed to undesirable interference in their day-to-day working". The Estimates Committee of Parliament in its 19th Report on Railways (1955) referred to the recommendations of the Indian Railway Enquiry Committee 1947, and observed that the Statutory Authority envisaged by the latter Committee "may, no doubt, assist in overcoming these defects". The Estimates Committee, however, refrained from recommending any radical change being made in the Central Controlling Authority of railways at the time when the Second Five Year Plan was just about to be launched by Government. The Committee suggested that special measures should be taken to overcome the defects pointed out by the Indian Railway Enquiry Committee, 1947.

4. In view of the general policy of the Government of India to set up statutory bodies to administer commercial undertakings of Government, the question has been raised in certain quarters in recent years, why the railways should not be managed through a similar body. It has been argued that this form of management would enable the railways to function with a certain degree of independence and without day-to-day interference of Government. Moreover, the railways would be in a position to function

more effectively as a commercial enterprise. At the same time, a view has also been expressed, that the present organisation of the Railway Board, as the Central Railway Authority, combining both the administrative and executive functions of day-to-day running of the railways and the secretariat functions as a Ministry of the Government of India, is more efficient than an organisation in which there may be a division of these functions between separate bodies. Such a division of functions, it is pointed out, would lead to an inadequate appreciation of the problems and the needs of the Railways at the Government level and to delays in decisions on matters calling for inter-Ministerial consultation or even otherwise for decisions at Government level.

Detailed administration of the Railways is at present the direct responsibility of a Central Ministry. And policy matters relating to the other forms of transport, in so far as they are subject to Central control or supervision, are the concern of another Ministry. Such a division of responsibility in the field of transport policy, adds to the difficulty of co-ordination. According to one view, so long as the Ministry of Railways remains responsible for detailed administration of the railways as at present, it would be open to serious objection to entrust to it, at the policy making level, the fortunes of other forms of transport also.

5. We have separately studied the question of co-ordination between the railways and the road transport undertakings owned by the State Governments and have endorsed the policy followed by the Government of India for some time past with regard to the transformation of departmental undertakings in the States into Corporations set up under the Road Transport Corporations Act, 1950, in which the railways can participate. We have mentioned that the utility of the corporation form of management lies mainly in the fact that this would provide a forum for the two public authorities to arrive at mutual understanding and enable the railways to put forward their views effectively in an informal atmosphere. In the course of its investigations and informal discussions with the various interests concerned, the Committee has observed certain tendencies which, if continued, might have serious implications from the point of view of the larger interests of the country. We have referred earlier to the demand for the opening of new railway lines and extension of railway systems in regions at present not served by them. It is difficult to say that these demands are always based on a careful assessment of the needs of the regions concerned. Then again, there is a tendency in certain quarters to take the railway services for granted and at the same time to ask for extension of other means of transport irrespective of their likely effect on the railway finances. Having regard to all these considerations, an important question that might deserve consideration is whether some way could not be found, in the larger interests of the country, of integrating the interests of the railways with those of the State Governments. The Committee has not been able to give any detailed thought to this matter.

6. In this connection, it may be relevant to mention that the Select Committee on Nationalised Industries of the British House of Commons in its recent report on the British Railways (July, 1960) has commented in some detail on the role of the British Transport Commission and the division of responsibilities between the Commission and the Ministry of Transport. The Committee has quoted the British Transport Commission as having expressed the view that, "on the one hand, they have to

act like a normal commercial undertaking and....base their decision on business considerations.... On the other hand, the Commission's services are often expected to be guided primarily by the public interest.... These two approaches, the commercial and the often unprofitable public service, frequently conflict". The Committee has further observed that "the Ministry's view is different. They believe that no conflict should exist for the Commission, because it should not be for them to have to decide where the public interest lies". Commenting in detail on the Commission's duty, the Committee has expressed the view that in making the decision regarding the size and shape of railways to be provided, the Commission could have based their decision on financial grounds and provided only such services as were profitable. "It seems to our Committee that the best initial test of what the public need is given by what they will pay for. If, thereafter, there are other considerations which make it desirable for members of the public to travel or freight to be carried on some routes at prices below the cost, it should be for the Government and not the Commission to decide."

Organisational Set-up at Zonal and Divisional Level and Size of Zones

Size of Zones:

7. The Indian Railway system was reorganised from 1st April 1952, into six zones, namely, (i) Northern, (ii) Eastern, (iii) North Eastern, (iv) Southern, (v) Central, and (vi) Western. The Eastern Zone was bifurcated in August, 1955, into two, namely, (i) Eastern, and (ii) South Eastern. Later, in January 1958, the North Eastern Railway was split up into North Eastern and North-East Frontier. There are thus at present eight zones, and the mileage of these zones is as indicated below:

Zonal Railways	*Mileage (As on March 31, 1959)*
1. Central	5,346
2. Eastern	2,319
3. Northern	6,435
4. North Eastern	3,082
5. North-East Frontier	1,733
6. Southern	6,161
7. South Eastern	3,496
8. Western	6,064
Total	34,636

The mileage of the existing Zones thus varies from 1,733 in the case of North-East Frontier Railway to 6,435 in the case of Northern Railway. The four big zones are: (i) Northern, (ii) Southern, (iii) Western, and (iv) Central; and these between themselves account for 24,006 miles of the total mileage of 34,636 of the railway system as a whole.

8. The principal considerations underlying the pattern of distribution of the railways into zones were enunciated by the then Minister for Railways and Transport in the Interim Budget Session after Partition (1947-48) as follows;

> "We have decided that there should be a regrouping of these Railways. The question of regrouping involves three principles. First of all, Railways have to be arranged in such a way as to promote operational efficiency; secondly, it ought to promote administrative convenience; and thirdly, it ought to effect economy in controlling and supervisory establishment."

The following extract from the speech delivered by the Minister at the time of inauguration of the Central Railway (November 5, 1951) will also be relevant in this connection:

> "The reorganisation of administration, the tightening up of control, the application of the increased resources of the enlarged system to the maximum advantage, the elimination of duplication and waste, the economies in the procurement, utilization and stocking of equipment and materials—all these, to mention only a few items, should help to reduce the overall cost of transportation both to the nation and to the individual."

It was thus expected that the reorganisation would generally result in economy of operation. It was not, however, stipulated that each zone will be financially viable. This will be clear from the following extract from the speech of the then Minister of Railways and Transport, made during the debate on Railway Budget in the Lok Sabha on 5th March, 1954:

> "....it would be clear that regrouping was intended for planning and carrying out a policy of uniformity in administrative pattern, rationalisation of workshops and other operational facilities, and for reducing the overheads by eliminating duplication of work and unnecessary correspondence between contiguous railways, in order to ensure more expeditious disposal of business....it was not the intention that each zone should necessarily pay its own way financially. Consequent on regrouping, all the six zones were treated as one single system."

The general policy being followed by the Indian Railways is that irrespective of whatever be the profit or loss on individual zones, the system as a whole should be able to meet all charges including the dividend payable to the General Revenues and the cost of unremunerative services all over the railway system.

9. It may be noted in this connection that after amalgamation and regrouping of the railways, the Railway Board decided, with effect from April, 1952, that it was not necessary to continue apportioning the earnings and costs between various Zonal Railways and the system of accounting which was in vogue earlier was done away with. Later, from 1st April, 1954, however, the Railway Board reverted to the old system of accounting, according to which the earnings and costs were apportioned between various Zonal Railways indicating the financial results of each zone separately. The system of accounting adopted on the Indian Railways between 1952

and 1954 was similar to the one that obtained on the British Railways. It is possible that the Railway Ministry at the time of taking decision on the subject of the size of individual zones were guided by the pattern of the railway regions obtaining in the United Kingdom till 1948. The British Railways had been divided into four regions from 1923—the two larger units being London Midland and Scottish Railway and London and North Eastern Railway having a mileage of 7,790 and 6,590 respectively. The number of regions was, however, increased later to six, thereby reducing the size of the large units. The largest region that was thus created, namely, London Midland, had a mileage of 4,207 whereas the size of the largest zone in India, created after reorganisation in 1951-52, namely the Northern Zone is 6,435 miles. Also, it may be noted that, the mileage of each region in the United Kingdom is concentrated over relatively much smaller area as compared with the area covered by each zone in India and that the British Railways are equipped with a much better system of inter-communications. It is, however, significant that the White Paper presented in the British Parliament in July, 1954, considered the size of the regions in the United Kingdom to be still very large. To quote from the White Paper:

> "For management purposes, these Regions are in themselves very large systems. The Commission have reached the conclusion that either the larger Regions must be broken up into smaller Regions, or there must be introduced a definite measure of management decentralisation within them: functional decentralisation is not sufficient. In view of the major upheaval which important alterations to the Regions involve, the Commission have decided in favour of the latter alternative for the present time".

According to the latest White Paper on "Reorganisation of Nationalised Undertakings" (December 1960), the British Government intend to decentralise management and to confer a large degree of authority on the regional organisations. The White Paper envisages that: "The Regional Railway Boards which will replace the present Area Boards will be fully responsible for the management and operation of their Regional railway systems. Each will be autonomous in all matters which concern its region alone. They will thus continue the process of devolution of authority and decentralisation of management. Each Regional Railway Board will maintain a regional trading account as a means of assisting it to secure the highest level of efficiency and economy of operation."

10. As regards the size of the zonal railways in India the Estimates Committee of Parliament in their 19th Report on the Railways (1955) referred to the observations made by the responsible Railway officials that the work-load imposed upon them after regrouping of the railways was very heavy with the result that it was difficult to keep the degree of supervision on the actual work that they would have considered desirable. Earlier, the Efficiency Bureau attached to the Railway Board after making a scientific analysis had come to the conclusion that the work-load on all the Railways had increased considerably. It was this that led to bifurcation of the Eastern Railway into two units in August, 1955. The Estimates Committee in its Report observed that there was a tendency for the work-loads to increase due to the activities envisaged in the five year plans. According to the Committee, "the general consensus of opinion was that the size of a railway unit should not exceed 3,000 to 3,500 miles". In

the opinion of the Committee, "the question of re-arrangement of the existing railway units into smaller units cannot, therefore, be avoided and will have to be faced at some stage or other". The Committee endorsed the principles which had been enunciated by a retired Chief Commissioner of Railways for determining the regouping of railways in India. The main underlying considerations recommended by him, were that the size of the units should be such that the contact between the administrative officers and the executive and between the executive and the staff under their command should be close and should ensure effective supervision and the General Manager and his Heads of Departments should be in a position to visit the remotest part of their charge at least once a year. Further, he recommended that decentralisation should be extended to the point that it was possible to achieve speedy decisions and that the man on the spot was given sufficiently adequate powers to discharge the responsibilities placed upon him.

Organisational Set-up at the Zonal Level

11. The size of the Railway Zone and the type of organisation to administer the Zone are thus closely inter-linked. In the context of road and rail co-ordination, it is necessary to study the organisational set-up not merely at the Zonal level but also at the Divisional and District level and particularly, to understand the extent of delegation of authority which is enjoyed in practice by the administration at all these levels. We shall mention here, briefly, the type of administrative set-up at the Zonal Headquarters of each railway as also in the Divisions and the Districts.

12. At the top of the Administration of each Zonal Railway is the General Manager who exercises overall supervisory control over the various Departments of the railway and co-ordinates their working. He is responsible for the efficient running of the Zonal Railway Administration and the Railway Board have delegated to him wide administrative and financial powers in matters relating to establishment, works etc. In order to enable the General Manager to concentrate on matters of policy affecting the Zonal Railway and on activities directed to promote the general efficiency of the system, he is assisted by a Senior Deputy General Manager (except on the North Eastern and North-East Frontier Railways where these posts do not exist), who has been given the status of a Head of Department, but is not burdened with the responsibility of any major department. The work of the railways is distributed functionally among several Departments, each headed by a functional Chief. The Heads of Departments of the Zonal Railways communicate with the Directors in the Railway Board direct on matters relating to their functions, the General Manager being kept informed of all important correspondence with the Board.

Organisational Set-up in the Divisions and Districts

13. At the lower level, there are two systems of administration, namely, Divisional and District, the former obtains in Central, Eastern, Northern, Southern and Western and the latter in South Eastern, North Eastern and North-East Frontier Railways. Under the Divisional system, each Zone is divided into a number of Divisions, each one of which is headed by a Divisional Superintendent who is a Senior Officer and acts as a coordinating authority for the Division and is directly responsible to the General

Manager and his chief functional Advisers. He is assisted by other Divisional officers in the various fields like traffic, engineering etc. The Divisional Superintendent has been delegated powers in respect of sanctioning establishments, works, etc., and is in a position to take quick decisions on the spot instead of referring every matter to the Head Office. Under the District system, the Zone is divided into a number of districts managed by functional officers who are directly responsible to their respective chiefs at the Headquarters. Thus there is direct functional control and guidance from the Heads of Department to the District Officers. The co-ordination between different Departments is done only at the Headquarters level. This system, therefore, imposes a certain degree of strain on the Headquarters office in respect of day-to-day administration at the district level.

Questions for Consideration

14. In the context of heavy burden placed on the Indian Railways under the five year plans which obviously is bound to increase enormously in future plans, and having regard to the considerations relating to competition from road transport in the years to come, it seems to us that there are two questions which need to be seriously considered: firstly, whether the present size of the railway zones is conducive to its working as a commercial enterprise, and secondly, as stated earlier, what should be the delegation of authority at various levels in the railway administration. In connection with the latter question it needs to be emphasized that what is important is the effectiveness of such delegation in practice and the freedom at all levels to exercise the delegated authority. There is at present no clear dividing line between the responsibilities of the Minister for Railways and those of the central administrative authority *i.e.*, the Railway Board. As for the General Managers of the Zonal Railways, they cannot be considered as counterparts of the large industrial undertakings enjoying considerable degree of freedom or, for that matter, as Chiefs of the Area Boards on the British Railways*. The General Managers are essentially administrative chiefs responsible for operation of the Zonal Railways according to the policy and intention of the administration at the Centre.

It is a matter for examination as to whether complete integration of financial interests of the railway zones based on a principle of cross-subsidization of these zones *inter se* affects the sense of accountability of the authorities of individual zones for the working results of their administrations.

These are important and complicated issues which may perhaps deserve special study. The Committee itself has not been able to give any detailed thought to these issues.

*As already mentioned in paragraph 8 of this Chapter, the British Railways propose to make the regional bodies autonomous in all matters concerning the respective regions.

CHAPTER V

DEVELOPMENT AND REGULATION OF ROAD TRANSPORT

Growth of Mechanised Road Transport in India

Motor transport started assuming importance in the economy of India only after the First World War. There were only a few thousand vehicles before the commencement of the war consisting largely of motor cars and taxis. Again, during the war a large number of vehicles were imported consisting largely of motor cars. Sizeable imports of commercial vehicles *i.e.,* buses and vans commenced only from the early twenties. By 1938-39 there were in the territory of the then British India 12,397 goods vehicles and 23,645 buses. During and immediately after the Second World War, there was a rapid expansion of goods vehicles in the country and their number in 1946-47, *i.e.,* the year just preceding the Partition, had increased to 40,107. The number of buses declined during the war years but by 1946-47 had increased again to almost the same level as immediately before the war. The growth of commercial vehicles for goods and passengers in the Indian Union from the year 1948-49 to 1958-59 is indicated in the Statement at Appendix 3. It will be seen that during this period the number of goods vehicles almost doubled, from about 73,000 in 1948-49 to 1,45,000 in 1958-59. The number of buses, on the other hand, increased from 27,275 in 1948-49 to 44,744 in 1958-59 *i.e.,* by about 64 per cent. It may be mentioned in this connection that apart from the increases in the number of vehicles referred to above, there has been a substantial increase in the average capacity of the vehicles over the period. This is due mainly to the heavier diesel vehicles gradually replacing the petrol vehicles. Moreover, in the case of goods vehicles a significant increase has been allowed in the permissible registered laden weight with effect from November, 1958.

The Constitutional Position in Regard to Roads and Road Transport

2. Before we describe the system of regulation of road transport industry in the country, we may refer briefly to the constitutional position in regard to roads and road transport. Before the adoption of the Constitution all matters relating to roads were in the Provincial List. In the Constitution of India, however, the highways declared by or under law made by Parliament to be national highways are included in the Union List. The construction and maintenance of these highways, therefore, fall within the purview of the Union Government. The Government of India accepted, with effect from the 1st April, 1947, complete financial liability for the development and maintenance of certain roads provisionally approved by them as suitable for inclusion in a system of national highways. In 1956, Parliament enacted a Law declaring these highways to be national highways and vesting them in the Union Government.

Mechanised road transport is included in the Concurrent List in the Constitution, and the Central Government thus have concurrent powers of legislation in regard to this subject. The executive authority in regard to subjects in the Concurrent List rests with the State Governments.

Under Article 73 of the Constitution, the Union Government has executive powers in respect of all matters in the Concurrent List only if this is expressly provided for in the Constitution or in any law made by Parliament. In regard to road transport the executive authority rests at present with the State Governments. This has been more or less the position in regard to the distribution of powers between the Central Government and the States (Provinces) ever since the beginning of motor traffic.

Interstate trade and commerce is included in the Union List (Entry 42)*. The Interstate transport thus comes within the Union List.**.

Early Legislation to Regulate Motor Transport

3. The Motor Vehicle Act of 1914 was the first all-India enactment for controlling motor vehicles. This was a comparatively short Act of 19 Sections only and did not make any distinction between different types of motor vehicles nor was any attempt made to restrict their free movement. At that time motor transport was still in its infancy and it was not until after the end of the First World War that there was a fairly rapid expansion of motor traffic. The number of motor vehicles of all kinds imported into India was only 4,419 in 1913-14, but had risen to 25,950 in 1927-28.

4. In an effort to introduce some more adequate form of regulation and control the 1914 Act was supplemented in the post-war years by a number of Provincial Acts, and a good deal of thought was given to the question of the codification of the rules and regulations pertaining to motor transport. A comprehensive set of model rules was brought before a Conference of the representatives of the Provincial and Central Governments held in 1931. It was, however, pointed out that the Act of 1914 could not support such a comprehensive code and that the first requirement was a more substantial basic law for regulating the road transport industry.

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*The entries in all the three lists in the Constitution such as relate to transport and communications are reproduced at Appendix 4.

**The term 'commerce' has a wide connotation and includes transport and communications. The following observation in the commentary on the Constitution of India by D. D. Basu (Third Edition, Vol. 2) will be relevant in this connection :

> "Again, by the application of the doctrine of 'Implied and Ancillary Powers' the Supreme Court of the United States has used the inter-State commerce power of the Congress [Art. 1, Section 8(3)] as a most potent means of expansion of the federal power.
>
> Thus, the power to regulate interstate commeree includes the power to control all necessary incidents thereto such as bills of lading, contracts of sale and lease of property connected with interstate commerce. Again —
>
> "The power of Congress to regulate commerce carries with it the power over all means and instrumentalities by which commerce is carried on".
>
> So regulation of interstate commerce means—
>
> (*i*) regulation of instruments of transport,
>
> (*ii*) regulation of the goods that are in transit,
>
> (*iii*) regulation of the persons carrying on that commerce."

Road-Rail Competition

5. Meanwhile, the question of road-rail competition was beginning to engage attention. Public recognition of the need for co-ordination between these two forms of transport was contained in the report of the Indian Road Development Committee which was appointed in 1927 to examine the desirability of developing the road system of India and the means by which such development could be financed. In the course of its report the Committee drew pointed attention to the recommendations made earlier by the Government of India Secretariat Procedure Committee of 1919 and the Indian Railway Committee of 1920-21 to the effect that there was need to constitute one department in the Government of India to control all means of transport namely, railways, ports, water transport, road transport etc., and it emphasised as "particularly important" that "the development of roads and railways should be directed by a single policy".

Mitchell-Kirkness Report on Road-Rail Co-ordination

6. With the onset of the economic depression in 1930 competition between railway and road transport was intensified and in 1932 the Government appointed two officers, K. G. Mitchell, Road Engineer with the Government of India and L. H. Kirkness, a railway officer, to enquire into the extent of this competition and the possibility of future co-ordination and development. According to the Mitchell-Kirkness Report, the competition between rail and road transport was mainly in the field of passenger traffic and that also within the zones of 1 to 50 miles. The carriage of merchandise by road transport in competition with railways had not developed to any great extent. The Report, however, noted that with the revival of trade, the improvement of motor vehicles and better organisation of motor transport, competition with railways would increase in the field both of passenger and goods traffic. Counter-competition by railways was not favoured on the ground that this would involve expenditure of public money and it was doubtful whether such expenditure in the long run could generally achieve its objective. It was suggested, however, that the solution of road-rail competition in many cases lay in the railways themselves operating road transport on routes running parallel to them although there would be objections to railways embarking on road transport. The Report referred to the advantages offered by motor transport and observed that both rail and road transport had their appropriate fields and it was proper that authority should, so far as possible, confine each to that field although the duplication of services over certain limited distances could not be excluded. The Report drew attention to the considerable difference which existed in the degree of external control over railways and road transport and observed that the development of motor transport "had temporarily outrun the machinery for its control". The view was expressed that, apart from its probable effect on railways, public opinion would support some tightening of the control over motor transport in order to ensure safer, more convenient and more reliable service. It was suggested that the number of buses on any route might be restricted and the issue of time tables, publication of schedules of fares and compulsory insurance might be prescribed. On the question of the future expansion of railways, the Report noted that "it was unlikely that many schemes of new railways could be financially justified parallel to metalled roads on which motor transport will take much of the passenger traffic".

7. The problem of road-rail competition was discussed at a Conference held in Simla in April, 1933. An important outcome of this Conference was that Boards of Communication were set up in the Provinces and a Transport Advisory Council was created at the Centre. At its second meeting, the Transport Advisory Council recommended that steps should be taken to amend the Motor Vehicles Act, 1914. But before fresh legislation was enacted, another Committee—the Indian Railway Enquiry Committee, 1937—made some pertinent observations on the subject of road-rail competition. Proper regulation of road transport, it was stated, was necessary not only in the interest of safety but also in order to guide its development on sound and economic lines and such regulation would be necessary even if the railways did not exist. In regard to passenger services, a system of route licensing was recommended—licences to be granted where public need or convenience was shown having regard to the adequacy of the transport services including transport by rail. For goods transport, the Committee favoured a system of regional licensing and recommended that permits should be granted to operate within the area of a District Magistrate's jurisdiction. The Committee recommended that the railways should have full powers on the same terms as the other road users (a) to run road services (b) to invest money in or enter into working agreements with road transport undertakings and (c) to arrange road transport services through contractors. The Committee urged the importance of voluntary co-ordination between the railways and the more important elements in the road transport industry. It proposed that legislation should be undertaken to lay down the principles on which road transport should operate. The administration of the Act was to rest with the Provincial Governments.

8. In March, 1938, a Bill was introduced in the Legislative Assembly, namely, the Motor Vehicles Bill with two main objectives: (a) to codify and bring up-to-date the law regulating motor transport in India; and (b) to make possible the co-ordination of various forms of transport. The Bill was passed as the Motor Vehicles Act, in 1939. Whereas, the Motor Vehicles Act, 1914 contained provision only for compulsory licensing of drivers and registration of motor vehicles, the Motor Vehicles Act, 1939 required all transport vehicles to obtain permits from authorities constituted under the Act and restricted them from operating except in accordance with the conditions given in the permits. The Act also created machinery for the administration and control of road transport which has continued up to the present day. One of the basic features of the Act was that all permits were to be issued either for a region or a specified route and a Regional Transport Authority in granting new permits was required to consider, among other things, the adequacy of the existing road transport services on the route or in the region concerned. The main consideration in regard to the regulation of road transport through permit system was the control of *inter se* competition within the road transport industry. However, the Act contained provisions empowering the State Governments to put restrictions on distances of validity of permits or types of traffic carried or to regulate fares and freights having regard, among other considerations, to the desirability of co-ordinating road and rail transport. The Act was amended in 1956 and special provisions were made in the amended Act for the adequacy of services provided by other means of transport as well, to be kept in view by the Regional Transport Authorities while granting a new permit. An important feature of the Act of 1956 was the setting up of a new body, namely, the Inter-State Transport Commission, to look after the development,

co-ordination and regulation of inter-State services. The provisions of the Act which are relevant to co-ordination of rail and road transport are discussed in some detail in the next chapter.

Post-War Developments in Road-Rail Co-ordination

9. The problem of road-rail co-ordination receded into the background during the World War II when the entire transport system of the country was subject to heavy strain. However, in their anxiety about the situation that might develop after the War, the Government of India in the Department of War Transport set up in 1943 a Technical Sub-Committee of the Subject Committee on Transport to consider the future of road transport and road-rail relations in the country. The Sub-Committee made several far-reaching and far-sighted recommendations, the more important among which were as follows:—

(i) Goods transport on national highways should be controlled by the Centre.

(ii) The short haul goods traffic should be transferred to roads.

(iii) As regards long distance goods transport by road, competition between road and rail should be prevented by a system of regulation, combining an expert judgement on the merits of each case on the basis of public and economic need with scientific zoning.

(iv) As regards passenger transport, "the principle of maximum amalgamation of passenger service operators to form substantial concerns on main routes, and of controlled monopolies on light traffic routes should be the basis of policy".

(v) Minimum fares both for rail and road should be established by agreement.

(vi) The railways should develop closer co-operation with road passenger transport and ultimately acquire a commanding interest.

(vii) Within the general framework of the Constitution, adjustments should be made so as to give the Provinces an interest in railways and the Centre an adequate voice in road transport.

The Sub-Committee was not able to suggest specifically what form these adjustments should take. However, it recommended that the necessary adjustments had to be found in the direction of a consolidated Central Transport Budget from which, or in parallel with which, the Provinces would derive some direct share in the profits and losses of railways, the Centre having already a large share of the total receipts in taxes derived from motor transport. The capital expenditure on both roads and railways should be contemplated and embarked upon as part of the consolidated transport budget since such capital was to be raised from the same sources. Such a pooling of revenues and balancing of expenditure would promote the development and maintenance of a comprehensive well balanced transport system.

(viii) A Central Road and Road Transport Authority to be called the 'Indian Road Board' should be set up which should be made responsible for development of road and road transport in the country. The Board would implement and administer the general road transport policy, direct the regulation of road transport on the national highway system and instruct the Provincial Transport Commissioners who would be the Chairmen of the respective Provincial Transport Authorities regarding the policy to be pursued by them. It would also deal with the appeals from the decisions of the Provincial Transport Commissioners.

The Sub-Committee noted that the last recommendation would cut across the existing constitutional distribution of subjects between the Centre and Provinces. However, the Sub-Committee emphasised that "the future of land transport will be in great danger of lasting damage during the transitional period with the consequences possibly disastrous to the Provinces and the Centre alike unless there is a unitary policy centrally organised".

10. The suggestion regarding the setting up of a Road Board was considered at the seventh meeting of the Transport Advisory Council held in January, 1945. "The majority of the Council recognised that differences and disputes as to rating and other matters must inevitably arise between the various parties controlling, providing and using transport and that, under the Constitution as it stands, no specific provision exists for the resolution of such differences when centrally controlled railways and provincially controlled motor transport are both concerned. They recognised the need for the creation of some independent authority or tribunal, the nature, functions and constitutional means of creating which should be further explored by the Centre in correspondence with Provinces". This was again discussed at the eighth meeting of the Transport Advisory Council held in October, 1945. The Central Government while welcoming the proposal felt that there were certain practical difficulties in implementing it. They expressed the view that "ultimately it may be that there will be set up in India some wholly independent body on the model of the United States Inter-state Commerce Commission. But it would first be necessary not only that such a body should have a constitutional status and authority but also that the issues laid before it should be of a juridical nature, *i.e.*, that there should be some competent legislative pronouncement in terms of policy against which the tribunal could test the issues." However, they felt that the Government of India Act, 1935 did not appear to include any provision under which such a body could be set up or a law of co-ordination could be enacted. Consequently, the idea of setting up a Road Board on the lines conceived by the Technical Sub-Committee was not pursued.

11. As regards the Technical Sub-Committee's recommendations concerning passenger transport services, the Council favoured the idea of the railways acquiring a financial interest in road transport companies. This policy was spelt out in detail in a White Paper issued by the Government of India in 1946. The White Paper recommended tripartite companies being set up in which the railways, the State Governments and the private operators should participate. The policy was finally embodied in the Road Transport Corporations Act, 1948, which was replaced later by the Act of 1950.

The Code of Principles and Practice

12. During its seventh session in January, 1945, when the Transport Advisory Council considered the recommendations of the Technical Sub-Committee, it discussed in detail the problems of road-rail co-ordination and rcommended that the Provinces should agree to regulate motor transport generally in accordance with a Code of Principles and Practice to be drawn up by the Centre with the agreement of the Provincial Governments subject to minor modifications to suit local conditions. In pursuance of this recommendation a Code was drafted by the Central Government and circulated to the States in September, 1945. It was approved at the eighth meeting of Transport Advisory Council in October, 1945 with minor modifications. The State Governments were accordingly requested to ratify the Code. Their response varied from acceptance without any reservation to substantial objections. A Special Committee was then appointed to report on the modifications that might be necessary. The Code as modified by the Special Committee was circulated for acceptance to the State Governments, but again some of them did not give unqualified acceptance. The Code was then again discussed and finalised at the twenty-sixth meeting of the Central Board of Transport held on the 29th March, 1950. It was then circulated to all the State Governments in April, 1950 with the request that its provisions should be implemented immediately. The important provisions of the Code are summarised below:—

(i) State Governments will organise public passenger transport and will form substantial undertakings in which the railway or railways concerned will be offered on reasonable terms a financial interest of not less than 20 per cent.

(ii) The State Governments will invite the railway or railways concerned to co-operate in setting up a Joint Committee or Committees or other suitable machinery for mutual consultation in matters affecting road-rail co-ordination and the recommendations of such Committees will be given due weight by the State Governments and the Railway Administration concerned.

(iii) A public carrier permit should normally be valid with due regard to geographical conditions, flow of traffic and marketing centres for compact areas, a circle with a radius of 75 miles.

(iv) Permits, if any, issued outside this compact area should be for specified route or routes only.

(v) It is open to the State Transport Authority to specify the goods to be carried.

(vi) A Regional Transport Authority should not, except in accordance with the general or specific instructions of the State Transport Authority grant, countersign or renew any carriers' permits valid for a distance exceeding 75 miles between places connected by rail.

(vii) The Regional Transport Authority should refer to the State Transport Authority any application for permits or renewal of a permit for a distance exceeding 150 miles between places connected by rail.

(viii) Save in accordance with any regular agreement between the railways and the State Government, the State Transport Authority shall not normally grant or countersign or renew a carrier's permit between places connected by rail:

(a) for distances exceeding 150 miles unless the Authority is satisfied that the goods to be carried cannot be transported by rail without undue expense or inconvenience at least in the outward direction; and

(b) for distances exceeding 300 miles unless the circumstances are very exceptional or the goods are highly perishable or fragile.

The Code was not accepted by several of the State Governments. The Governments who accepted all or most of the provisions of the Code were Mysore, Uttar Pradesh, Rajasthan, Orissa, Mahakoshal and Vindhya Pradesh area of Madhya Pradesh, Himachal Pradesh and Manipur. These State Governments conveyed their acceptance to the Ministry of Transport and Communications in the same year or in the following year and proceeded to take steps to implement the Code.

13. The fact that the Code was not accepted by all State Governments did not, at that time, prove to be of great practical significance, for in the period immediately following the cessation of hostilities the whole transport system of the country continued to be subject to heavy pressure, so much so, that the Motor Transport Taxation Enquiry Committee which submitted its report in 1950, recommended *inter alia* that the restrictions on the carriage of goods imposed by the Code should not be enforced for three years as there was little or no road-rail competition in the country. Although this recommendation which was considered at the 12th meeting of the Transport Advisory Council held in April, 1951 was not accepted, it reflected the general feeling prevailing at that time that road-rail competition was not an immediate danger; indeed there seemed to be more likelihood of the growth of the road transport industry being unduly throttled. Even the States which did not accept the Code did not all proceed to issue permits without any restrictions on the distances or the areas for which these permits were valid, and most State Governments were known to have imposed distance restrictions to varying extent on the road transport industry. A major factor hampering the development of the industry at this time was uncertainty about its future. Several State Governments in the hope of being able to nationalise road transport in future were issuing permits for temporary periods of 4 months at a time and the industry was being subjected to a great deal of harassment owing to permits having to be renewed frequently after short intervals.

The Study Group on Transport Planning

14. The question of the proper organisation of the road transport industry and its co-ordination with rail transport came once more to the forefront in 1953 when the programmes undertaken in the First Five Year Plan began to have their impact on the transportation system of the country. A departmental Study Group was set up in 1953 to make recommendations on planning of the transport industry. The Study Group made certain detailed recommendations with a view to enabling road transport to play its proper role in the national economy. It was of the opinion that the Code of Principles and Practice was an elastic document

based on sound economic principles, but suggested that the mileage limit for the free issue of permits for goods transport between points connected by the railway be increased from 75 miles to 150 miles. It also recommended the following order of priority for the expansion of road transport services:

(1) Passenger and goods traffic in areas not served by railways;

(2) Passenger and goods traffic in rural areas;

(3) Passenger and goods traffic on feeder roads to rail-heads;

(4) Passenger transport over distances not exceeding 150 miles in areas served by railways; and

(5) Carriage of goods over distances ordinarily not exceeding 150 miles in areas served by railways.

At the fifteenth meeting of the Transport Advisory Council held in February, 1956 some of the State Governments urged that as the railways were not in a position to lift all the goods offered to them, the restrictions imposed under the Code were unnecessary. The Council agreed that the relaxation of the Code could be considered in relation to specific routes and areas and recommended that States should send their proposals for relaxation in respect of specified routes and areas to the Ministry of Transport who would consider these in consultation with the Ministry of Railways. Some of the State Governments made recommendations in regard to the relaxation of the Code but in very few cases did they specify the routes or areas and the recommendations on the whole were of a general character.

Mussoorie Conference

15. In 1957, the State Transport Commissioners/Controllers in a conference held at Mussoorie, made the following recommendations among others:—

(i) that permits should be given to whoever produced a serviceable vehicle;

(ii) that goods transport vehicles should be allowed to operate freely within a State; and

(iii) that the Code of Principles and Practice in the regulation of motor transport should be suspended for a period of five years, after which the matter should be reviewed.

16. The Ministry of Railways, objected to the relaxations recommended by the Conference and after inter-departmental discussions between the Ministries of Railways, Transport and Communications and the Planning Commission and after consultations with the Inter-State Transport Commission, the following policy decisions were taken. A few State Governments have accepted these decisions while others are understood to be unwilling to accept them.

(a) Permits for public carriers may be issued freely for distances upto 300 miles or for regions with radius upto 150 miles.

(b) As regards inter-State permits for distances beyond 300 miles, if the local railway administration (who must be consulted before issue of permits) object to the issue of such permits, the matter should be referred to the Inter-State Transport Commission.

(c) Even in respect of permits for intra-State routes exceeding a distance of 300 miles, the State Governments were to be advised to consult the Inter-State Transport Commission if the railway administration concerned objected to the issue of such permits.

These decisions were conveyed to the State Governments by the Ministry of Transport and Communications in June, 1959.

The Recommendations of the Road Transport Reorganisation Committee (1959)

17. The Road Transport Reorganisation Committee (1959) which was appointed primarily to survey the machinery for administration of motor transport in the States and to suggest a model administrative set-up for this purpose, went in some detail into the licensing policies pertaining to commercial road transport and made several recommendations in this regard. The major recommendations made by the Committee in regard to licensing policy which have important implications from the point of road-rail co-ordination are reproduced below:—

1. Private carriers' permits for *bona-fide* use should be issued without any restrictions and the permits may be valid in the State or as many States as desired by the applicant.

2. (a) Within the estimated overall capacity of the State, the issue of intra-State public carriers' permits should be free and unrestricted subject to the allocation of a certain number of permits to each region in order to ensure all sided development.

(b) All intra-State permits issued for goods vehicles should be valid for the whole of the State subject to the proviso that any operator can confine himself to a region and pay a lower rate of tax. The present permit holders should be given the option to secure State wide validity subject to eligibility.

3. (a) Stage carriage permits should continue to be issued for specific routes but the number of stage carriages that should ply on each route should be fixed and reviewed annually.

(b) A more liberal policy should be followed in the grant of stage carriage permits until travel facilities catch up with the demand. Increase in the present number of vehicles is necessary on routes where existing occupation ratio is more than 70 per cent. Permit holders with good records should have guarantee of renewal.

4. States may be left free to initiate and negotiate proposals for inter-State traffic but the Inter-State Transport Commission should be vested with powers to issue permits in case of need. The Commission should also be armed with necessary executive staff for proper functioning instead of being wholly dependent on the States.

5. The Inter-State Transport Commission may function on the lines of the United States Inter-State Commerce Commission.

6. On the basis of the present powers vested in the Inter-State Transport Commission, the Committee recommends that the Commission should receive proposals from the States relating to inter-State traffic by the end of December every year and take necessary action.

7. Permits for inter-State transport of goods should be issued following a liberal policy somewhat on the system prevailing in the U.S.A. where the governing factor is public convenience and necessity to meet all-felt needs.

18. These recommendations were discussed at the meeting of the Transport Development Council held in March, 1960. Recommendations at Nos. 1 and 3 (a) and (b) were accepted by the Council. As regards recommendations 2 (a) and (b), the Council was of the view that these would impinge upon the subject of road-rail co-ordination and decision on these should be postponed till the report of the Committee on Transport Policy and Co-ordination was available. Similarly, decisions on recommendations Nos. 6 and 7 were also postponed. As regards 4 and 5, the Minister of State for Transport and Communications explained at the meeting that it was considered advisable for the Commission to try and bring about reciprocal arrangements by advice and persuasion rather than by issuing directions.

CHAPTER VI

LICENSING POLICIES PERTAINING TO COMMERCIAL ROAD TRANSPORT

In this chapter, we propose briefly to mention the provisions in the Motor Vehicles Act, 1939 (as amended in 1956) pertaining to the licensing of commercial road transport services in the States and practice followed by the State Governments in regard to the issue of various types of permits. In dealing with the existing practice, we have confined our attention to freight services only. In respect of passenger services, several State Governments are understood to be going ahead with the nationalisation programmes and the services in the hands of private operators may be expected to be gradually reduced in number. In regard to these services, therefore, we have separately considered arrangements for co-ordination between nationalised undertakings of the States and the railways (Chapter XII).

2. The following paragraphs briefly explain the provisions of the Motor Vehicles Act, 1939 (as amended in 1956), which govern the licensing policies in regard to commercial road transport.

State and Regional Transport Authorities

3. According to Section 44 of the Act, each State Government is required to constitute a State Transport Authority for the entire State and Regional Transport Authorities for different regions in the State. It is laid down that "the area specified as the region of a Regional Transport Authority shall in no case be less than an entire district, or the whole area of a Presidency town". The Act puts a lower limit on the size of a region, but does not fix any upper limit.

A State Transport Authority is expected to discharge the following functions:

(a) to coordinate and regulate the activities of the Regional Transport Authorities and to perform the duties of a Regional Transport Authority where there is no such Authority (*i.e.,* in Union Territories);

(b) to settle all disputes between Regional Transport Authorities; and

(c) to discharge such other functions as may be prescribed.

A Regional Transport Authority is empowered to grant permits and counter-signatures for all types of transport vehicles.

4. According to Sections 47 and 55, a Regional Transport Authority, in considering an application for a stage carriage/public carrier permit, has to have regard, *inter alia,* to the following consideration: the adequacy of other passenger transport services/goods services operating or likely to operate in the near future, whether by road or other means between the places to be served. Under these Sections, the Regional Transport Authority has to take into consideration any representations

made by persons already providing passenger/goods transport facilities by any means along or near the proposed route or area.

Permits for Intra-Regional and Inter-Regional Operations

5. Section 57 of the Act lays down the procedure to be followed by Regional Transport Authority for the issue of intra-regional permits, that is, the permits valid within a region. According to this Section, "the Regional Transport Authority shall make the application available for inspection at the office of the Authority and shall publish the application or the substance thereof in the prescribed manner together with a notice of the date before which representations in connection therewith may be submitted and the date, not being less than 30 days from such publication, on which, and the time and place at which, the application and any representations received will be considered". The Authority has to dispose of the application at a public hearing at which the applicant and the person making the representation shall have an opportunity of being heard.

6. According to Section 63, a permit granted by the Regional Transport Authority of any region shall not be valid in any other region unless the permit has been countersigned by the Regional Transport Authority of the other region. For the grant of countersignatures for inter-regional operation, the same procedure has to be followed as for the issue of the intra-regional permits (outlined in paragraph 5 above).

Permits for Inter-State Operations

7. As regards inter-State operation of goods vehicles on a regular basis, Section 63 (1) of the Act lays down that a public carrier permit in any one State is not valid in any other State unless countersigned by the State Transport Authority of that other State or by the Regional Transport Authority concerned. For the countersignature of permits, the same procedure is required to be followed as is laid down in Section 57 for the grant of new permits *i.e.*, representations have to be invited and heard. However, an exception to this procedure is provided in the case of countersignatures granted under reciprocal agreements between States. "It shall not be necessary to follow the procedure laid down in Section 57 for the grant of countersignature of permits, where the permits granted in any one State are required to be countersigned by the State Transport Authority of another State or by the Regional Transport Authority concerned as a result of any agreement arrived at between the States". [Section 63 (3) proviso].

Temporary Permits

8. The provisions quoted above relate to issue of regular permits for regular operations. For issue of temporary permits (permits to be effective for a limited period not to exceed 4 months) the procedure laid down in Section 57 is not required to be followed (Section 62). The purposes for which temporary permits can be issued under the Act are defined as follows:—

(a) for the conveyance of passengers on special occasions such as to and from fairs and religious gatherings, or

(b) for the purpose of a seasonal business, or

(c) to meet a particular temporary need, or

(d) pending decision on an application for the renewal of a permit.

Inter-State Transport Commission

9. Under Section 63-A, the Inter-State Transport Commission shall perform throughout an inter-State region all or such of the following functions as it may be authorised to do by the Central Government by notification in the Official Gazette, namely:—

(a) to prepare schemes for the development, co-ordination or regulation of the operation of transport vehicles and in particular of goods vehicles in an inter-State region;

(b) to settle all disputes and decide all matters on which differences of opinion arise in connection with the development, co-ordination or regulation of the operation of transport vehicles in an inter-State region;

(c) to issue directions to the State Transport Authorities or Regional Transport Authorities interested regarding the grant, revocation and suspension of permits and of countersignatures of permits for the operation of transport vehicles in respect of any route or area common to two or more States;

(d) to grant, revoke or suspend any permit or countersign any permit for the operation of any transport vehicle in respect of such route or area common to two or more States as may be specified in this behalf by the Central Government;

(e) to perform such other functions as may be prescribed by the Central Government under Section 63C.

So far the Commission has been authorised to perform functions under clauses (a), (b), (c) and (e), but not those specified in clause (d) above. It may be mentioned that powers under (d) will need to be exercised only if the powers under (c) fail. Sub-Section (4) of Section 63A provides that where the Commission in the exercise and discharge of its powers under (c) above issues directions to any State Transport Authority or Regional Transport Authority, the State Transport Authority or Regional Transport Authority, as the case may be, shall give effect to, and be guided by, any such directions. Under an existing convention reached between the Ministry of Transport and Communications and the Ministry of Home Affairs, however, the Interstate Transport Commission is required in cases where there is disagreement between the Commission and a State Government or between one State and another which the Commission is unable to resolve, to refer the matter in dispute to the Zonal Council concerned (or Zonal Transport Committee that may be constituted for the purpose) for bringing about a settlement. It is only if the Zonal Council is unable to settle the dispute that the Commission will issue a direction under (c) above.

Licensing Policies being Followed by the State Governments

10. The above paragraphs set out the important provisions in the Motor Vehicles Act. We have also described in detail in Chapter V, the basic policy decisions taken and the distance limits for licensing adopted from time to time for the regulation of commercial road transport in the context of road—rail co-ordination. The Committee in the course of its investigations has tried to study the existing procedures and practices followed by the Transport Authorities in issuing permits for various types

of vehicles, and the more salient facts which have emerged from this study and need to be given careful consideration are set out in the succeeding paragraphs.

Distance Limits in Regard to Grant of Permits

11. Taking first the permits for intra-State operations, the Committee has noticed that several State Governments are following a liberal policy with regard to countersignature of permits from one region to another and although the primary permits issued on a regional basis may be valid for a distance of 300 miles only, these permits on countersignature can operate in practice over much longer distances. The factual position about the practice followed in regard to the issue of permits for inter-regional operations in various States is set out below. In Punjab permits for goods vehicles are issued on a regional basis by the State Transport Commissioner, but are countersigned freely for the entire State on payment of a prescribed fee. In the case of Rajasthan each Regional Transport Authority is authorised to grant three types of permits, namely, (i) permits for fixed routes, (ii) for one region only, and (iii) for the State as a whole. The Uttar Pradesh Government have authorised each Regional Transport Authority to grant permits valid upto three regions and permits for still larger areas are issued by the State Transport Authority. The Madras Government are understood to have grouped regions into four zones, each zone consisting of three to four regions and each Regional Transport Authority can issue permits valid over the Zone as a whole. Each Regional Transport Authority in Madras is also authorised to countersign permits for three routes in the neighbouring zones. In Kerala permits are granted for operation all over the territory of the State. The Orissa Government are understood to have recently decided to make all permits valid for the State as a whole. The State Governments of Bihar, Maharashtra, Gujarat and Assam have informed the Committee that countersignatures for inter-regional operations are being granted freely.

Section 68 of the Act provides that a State Government may make rules with respect to the conditions subject to which, and the extent to which, a permit granted in one region shall be valid for another region within the State without countersignature. It is possible that several State Governments have framed rules under this Section dispensing with the need for countersignatures of permits for inter-regional operations.

Inter-State Operations

12. Countersignatures of permits for inter-State operations are granted in several States under reciprocal agreements arrived at between the State Governments concerned. Several States have concluded such agreements under which the number of vehicles to be allowed to operate on the routes common between them is fixed (*vide* list at Appendix 5). The State Governments do not in practice consult the Inter-State Transport Commission before arriving at the number of countersignatures to be granted under reciprocal agreements on inter-State routes or when the number of such countersignatures is to be revised from time to time under these agreements. As stated in paragraph 7 above, in the case of countersignatures to be granted under reciprocal agreements between States, it is not necessary for the Regional Transport Authority or the

State Transport Authority concerned to follow the procedure of representations being invited and heard. Under Section 43 (1) (iv) of the Act, a State Government, having regard, among other considerations, to the desirability of co-ordinating road and rail transport may by notification in the Official Gazette issue directions to the State Transport Authority for giving effect to any agreement entered into with any other State Government. No such notification can be issued unless a draft of the proposed directions is published in the Official Gazette and objections or suggestions received in this connection are considered, after giving an opportunity to the parties interested of being heard. The relevant provision of the Act, as at present worded, is of permissive nature. In several States, no directions are issued (or notified) by the State Governments to the State Transport Authorities concerned. Thus, under the present arrangements, the railways do not always get advance information about the permits to be countersigned on the inter-State routes common between two or more States and have no opportunity to file their representations against the grant of such countersignatures. It is a matter for consideration whether and in what manner the provisions of the Act can be amended so as to ensure coordination between railways and road transport on the inter-State routes.

Grant of Temporary Permits

13. The Committee has also noticed that in several States temporary permits are being issued under Clause (c) of Section 62. These permits are issued ostensibly 'to meet a particular temporary need' and do not require countersignature for inter-regional or inter-State operations (*vide* sub-Section 4 of Section 63). At the instance of the Committee, the Ministry of Transport and Communications have collected figures from some of the States in regard to the number of temporary permits issued for distances of 300 miles and above and the available information for a period of six months, *i.e.* from January to June, 1960, is presented in a statement at Appendix 6. It will be observed that a large number of temporary permits are being issued by various Regional/State Transport Authorities for distances of 300 miles and above. These permits can broadly be placed in the following four categories:

(a) First, in some of the States, temporary permits are issued for the newly acquired vehicles pending the issue of regular permits which must necessarily take time.

(b) Second, in the case of the States which have not yet arrived at reciprocal agreements between themselves, the inter-State operations are allowed under temporary permits or temporary countersignatures.

(c) Third, some State Governments in the reciprocal agreements in respect of inter-State traffic have made a provision for the issue of a certain number of temporary permits in addition to the regular permits provided for under the agreements.

(d) Fourth, temporary permits are issued by a few States for long distance haulage between important towns; as for instance, between Delhi and Calcutta, Delhi and Bombay, Delhi and Bangalore and Bombay and Calcutta, etc.

A large number of temporary permits seem to belong to the categories (b) and (c) above and permits in category (d) appear to be issued in comparatively small numbers. The phrase 'temporary need' is not defined in the Act and it is thus left to the discretion of the Regional Transport Authority or the State Transport Authority, as the case may be, to decide the need for such permits. The Act, however, specifically lays down that a temporary permit shall, in no case, be granted in respect of any route or area specified in an application for the grant of a new regular permit, and that a temporary permit, in no case, be granted more than once in respect of any route or area specified in an application for the renewal of a permit during the pendency of such application for renewal. The Committee is not aware of the procedure that is followed by the Regional/State Transport Authorities to assess the genuineness or otherwise of the need for temporary permits. The Railway Board have brought to the notice of the Committee several instances in which temporary permits were granted without the need for such permits having been clearly stated by the applicants. The Board have also cited several examples of vehicles which have been using temporary permits over and over again for a few months in succession for practically the same routes. A number of road transport undertakings advertise in newspapers for haulage of goods over long distances and in their advertisements they specifically mention that goods will be carried without transhipment. The advertisements convey the impression that these undertakings provide regularly scheduled services over long distances traversing a number of States as, for instance, between Delhi and Calcutta, Delhi and Bombay, Bombay and Calcutta, etc. Movements over such long distances are being arranged on the basis of temporary permits.

The issue of temporary permits in large numbers is clearly not in the interest of coordination either within the road transport industry itself or between the railways and road transport, because the existing operators on the routes concerned or the railways do not have the opportunity to file objections in regard to the issue of such permits.

14. The Inter-State Transport Commission has expressed its view about this practice of issuing temporary permits by the various State Transport Authorities as under:—

> "....the carriage of all kinds of goods regularly month after month cannot in any way be said to be a temporary need. When the issue of temporary permits is restricted so as to conform to the provisions of section 62 of the Motor Vehicles Act, 1939, regular needs are necessarily to be met by the issue of permanent permits which will have to be granted after consulting the Railway authority concerned. 'Temporary permits' obtained as a short cut to circumvent the formalities prescribed for a regular permit amount to an evasion of the law".

15. In this connection, it may be relevant to mention that the State Transport Commissioner in the Punjab under Section 62 of the Motor Vehicles (East Punjab Amendment) Act, *i.e.* Act 28 of 1948, is authorised to issue temporary permits to be effective for a limited period, among other purposes, "in any circumstances as may, in the opinion of such authority, justify the grant of such permits". The Punjab High Court in a judgement given in 1958 ruled that the Central Act 100 of 1956 (*i.e.*,

Motor Vehicles Amendment Act, 1956) has not provided anything repugnant to the Punjab Act, and there is nothing to show that the Parliament had covered the whole field of legislation on the matter of issuing temporary permits and the purposes for which they could be issued. The Court thus ruled that the relevant provisions in the Punjab Act were not "so repugnant to or inconsistent with" the corresponding provisions of the Central Act of 1956 that they "must be deemed to have been impliedly repealed". The Court, of course, observed that it would have been perhaps good if the provision in the Punjab Act had been expressly or impliedly repealed by the Parliament.

The Madras Government have amended Section 62 of the Motor Vehicles Act and thereby empowered the Regional Transport Authorities to issue temporary permits under such circumstances as may in their opinion justify the grant of such permits (*vide* Madras Act XX of 1948). This provision of the Madras Act is in force in Andhra Pradesh also. It is possible that in other States also such amendments may have been made to the Act of 1939 as applicable to those States which may not have been expressly or impliedly repealed by the Parliament.

16. The Committee has no detailed information as regards the possible effects of the liberal policy with regard to the grant of permits on the coordination within the road transport industry itself. The opinion expressed by the All India Motor Unions' Congress, who represent the road transport operators, is quoted below for what it is worth:—

> "The operators do feel, and rightly too, that for the present, further issue of permits is not justified on any economic grounds, though for political or other reasons, these continue to be issued"*.

17. As regards the possible effect on the interests of the railways of the policy with regard particularly to the issue of long distance permits, we shall deal with this in subsequent chapters where we discuss the recent trends in the distribution of traffic between railways and road transport and more particularly the trends in the pattern of traffic on the railways and their effect on the railway finances.

18. It is possible that the liberal policy followed by the State Governments in regard to the countersignatures of permits or the issue of long distance permits may, in certain cases, be due to the impression that the railway facilities available in the regions or the routes concerned are not adequate to meet the demands of traffic. Moreover, there may be genuine demands for long distance haulage by road in particular cases because of the special needs of traffic in question. On the other hand, in numerous cases, the demand for long distance haulage by road transport may arise largely because of the fact that the freight charged by road transport in respect particularly of high-priced goods is substantially lower than that charged by the railways.

The Road Transport Reorganisation Committee (1959) recommended that there should be a separate Deputy Transport Commissioner attached in each State who should be incharge of Planning and Development Wing and should be an expert in the economics of transport and traffic engineering and should be responsible for traffic surveys and for

**Vide* their letter dated the 12th July, 1960 addressed to the Committee.

recommending to the Government and the State Transport Authority concerned the quantum of increase required for various types of road services. This information, the Committee recommended, would provide the basis on which the State Transport Authority might be in a position to fix the relevant quotas for permits for additional vehicles. The recommendation was later accepted by the Transport Development Council. The Committee is, however, not aware whether and to what extent the recommendation has been given effect to by the State Governments. In so far as the Committee has been able to collect information in this behalf, it may be stated that no appropriate machinery exists at the State or the regional level to scientifically assess the need for new permits to be issued or for countersignature of permits for inter-regional or inter-State routes.

19. The policy and practices in regard to licensing of commercial road transport, which have been detailed above, will need to be examined carefully having regard to the long-term considerations pertaining to road-rail coordination and against the background of division of authority between the States and the Centre in regard to the regulation of road transport as stipulated in the Constitution.

CHAPTER VII

EXISTING STATE OF ORGANISATION OF ROAD TRANSPORT INDUSTRY AND ITS CAPACITY TO UNDERTAKE PUBLIC SERVICE OBLIGATIONS

Possibility of Extension of Social Obligations to Road Transport)

As explained in Chapter III, certain social obligations have to be placed on the railways in the larger public interests. A very important matter for consideration in regard to road-rail co-ordination is whether it is possible to place similar obligations on road transport also so as to remove the inequality of conditions of competition between the two. Nowhere in the world has any Government found it possible to equalise the conditions of competition between rail and road either by relieving both these means of transport completely of these obligations or subjecting both to exactly similar obligations. To quote from a note prepared by the Secretariat of the U.N. Economic Commission for Europe for the Inland Transport Committee of the Commission in June, 1958:

> "Some Governments believe that the undertakings (transport) would probably continue to give the public perfectly satisfactory service, even if their public service obligations were abolished. A large number of governments, however, consider that their countries' economic and social needs would no longer be satisfied if these obligations were abolished. While they agree, though subject to many qualifications, to certain forms of relief, they decline to allow the undertakings complete freedom to decide on the density of their operations and the frequency of their services, or full discretion to bring their tariffs into line with their costs and with transport market conditions. The decision would appear to depend primarily on economic and demographic conditions in the country in question. In densely populated and comparatively small countries, 'public service obligations' can presumably be abolished as regards freight traffic or even passenger traffic without a failure on the part of the undertakings to provide the public with essential services, and the elimination of standardized railway tariffs may not cause any serious economic or social difficulty. The same is not true, of course, of less densely populated or larger countries where large areas might be deprived of regular services and where the abrupt abandonment of the system of standardized railway tariffs might upset the equilibrium of the economy. Now, the object of co-ordination is not only to ensure that the distribution of traffic conforms to the public interest and to safeguard the financial stability of undertakings; it must also make it possible to maintain essential public services....To extend to the road and the inland waterways in general the obligation to provide ser-

vices would be impossible, inadvisable and ineffective. Impossible, because the imposition of such an obligation on a small-scale undertaking does not make sense. Inadvisable, because the overall cost of transport would be increased without advantage to anyone; should it be considered necessary to organize a service not based on purely commercial considerations, it would be unnecessarily costly to have two answering the same needs. Ineffective, because the impact of that obligation on the undertaking in question would in general be very different from what it is on the railway."

2. The present state of organisation of the road transport industry in this country deserves to be considered before any thought could be given to the possibility of the industry sharing some of the obligations of the railways. In regard to passenger services, almost all State Governments have undertaken nationalisation programmes and the nationalised undertakings in the States are estimated to provide 30 per cent of the services, the remaining 70 per cent being still in the hands of private operators. Almost all the State Governments, however, are anxious to extend the sphere of nationalised services and the share of nationalised undertakings in the passenger services is expected to increase further during the periods of successive five year plans. The freight services, on the other hand, are almost entirely in the hands of private operators, except in Himachal Pradesh and, to some extent, in Manipur where these services have been nationalised, having regard to the peculiar conditions in these territories. The State Governments do not so far appear to be anxious to nationalise goods services. In fact, the Planning Commission has advised the State Governments not to include any nationalisation programme for freight services in the Third Five Year Plan.

The road transport industry in the private sector, particularly the part of the industry engaged in freight services, is owned at present by a large number of small operators, a majority of whom just own one vehicle each. According to the Road Transport Re-organisation Committee, 1959, "most of the operators in the field are small men, lacking a high degree of education or managerial training, without adequate financial resources, subject to a lot of harassment and a certain degree of squeeze from police and other authorities, constantly driven from pillar to post in pursuit of permits and facilities, and functioning generally in a somewhat disorganised manner". We have attempted to collect facts and figures to indicate the distribution of the industry according to the size of the unit and the data obtained by us which pertain to eleven States, are presented in Appendix 7. These statistics confirm that the industry is owned largely by small individual operators. The First Five Year Plan had emphasized the desirability of the existing private operators amalgamating, wherever possible, into big viable units to enable them to achieve better returns and maintain better standards of operation. The Government of India have throughout this period pursued the question of the formation of viable units in the industry but without attaining any significant results. In fact, they have failed even to reach a clear-cut policy decision acceptable to all the States. The Road Transport Reorganisation Committee recommended that the formation of efficient viable units should be encouraged in all reasonable

and legitimate ways; but the Committee at the same time was of the view that no ban should be placed on the owner of a single vehicle in the case of goods transport. The Committee made certain suggestions with regard to the size of viable units both for goods and passenger services. These recommendations were discussed at the meeting of the Transport Development Council held in New Delhi in March, 1960. The Council recognised that for bringing about better organisation in the road transport industry, it would be useful to encourage the formation of viable units. It was, however, felt that to give preference to these units might lead to the creation of vested interests which would be undesirable. The Council, therefore, recommended that no rigid pattern should be prescribed in this regard and that the State Governments might consider the constitution of such units according to their individual needs. The past experience shows that in the absence of any clear-cut policy backed by deliberate effort on the part of the State Governments, it will be unrealistic to expect the industry to be organised in the form of viable units over any reasonable period of time.

3. A comparatively recent development in the field of road transport is the rapid growth of booking agencies, namely, the intermediaries in the industry who do not necessarily in all cases own any vehicles of their own but undertake booking of business on behalf of the operators on a commission basis. The Study Group on Transport Planning (1953) made the following observations in regard to the role of these intermediaries:

> "Considerable harm has been done to the motor transport industry by intermediaries, popularly known as goods booking and forwarding agencies. Often such agencies have not even premises of their own and do not have any responsibility to discharge except to bring the lorry owner and the user of the transport together. Such intermediaries are known to exist in other countries, U.S.A., also, but there they are properly licensed and have to act subject to certain statutory safeguards".*

The All India Motor Unions' Congress in their letter dated the 12th July, 1960, to the Committee have said that

> "....the goods booking and forwarding agents who accept the goods from the public for transportation, charge higher rates to the consignors. But in the absence of any regulations they are free to and always indulge in bargaining with the individual operators in the matter of rates. A great majority of the operators having no facilities of their own, to accept or store the goods, are always at the mercy of these agents and have no alternative but to accept the rates offered".

The Indian Roads and Transport Development Association has in its memorandum to the Committee recommended that

> "One essential condition for the healthy growth of road traffic is to organise reliable booking agencies to function in the same manner as railway booking offices".

*Report of the Study Group on Transport Planning, Government of India (1953), page 107.

The Ministry of Transport and Communications, it is understood, are formulating certain proposals to regulate the booking agencies.

4. Several officials and non-officials concerned with the road transport industry in their informal discussions with the Chairman of the Committee have pointed out that there are numerous instances of the road transport operators resorting to practices like overloading, evasion of taxes and circumventing regulatory measures imposed under the law. The overloading of vehicles seems to be the common practice in almost all regions of the country. It has been argued that the operators resort to overloading with a view to increasing their profits from the business and if only the practice of overloading could be stopped, the competition from road transport might well be expected not to affect the railways seriously.

Some of the malpractices in the road transport industry to which our attention has been drawn are, in fact, found in certain other forms of transport also. Many of the defects which exist in the industry follow from the ownership of the industry being widely dispersed and the consequent competition *inter se*. It may be relevant to quote here the following observations made in the April, 1960 issue of *'Motor Transport'*—a Journal of the All-India Motor Unions' Congress:

> "....the composition of this industry is such, so far as goods transport services are concerned, that there is an acute competition *inter-se*.....
>
> "....the great majority of the operators being individuals owning just one or two trucks; their dependence on middle men—the so-called booking and forwarding agents, for soliciting traffic; their having raised huge loans at a very high rate of interest due to complete lack of any credit facilities by the Government; and a host of other factors are responsible for their very sad plight".

5. Having regard to the conditions obtaining at present, it is a matter for consideration whether the industry could be made to follow any code of conduct or discipline as might be necessary in the interest of road-rail coordination. During informal discussions of the Chairman with the Indian Roads and Transport Development Association (I.R.T.D.A.) in February, 1960, it was suggested that the Association might give thought to the question as to how far the road transport industry in India, as at present constituted, could be asked to bear the obligations of a common carrier. The I.R.T.D.A. in its memorandum submitted to the Committee in April, 1960, has pointed out that the railways are in a position to undertake obligations of a common carrier mainly because

(a) the railways have a freight structure which is based on a monopoly of all traffic and hence it is possible for them to agree to carry traffic of every description;

(b) on account of monopoly, the railways can have an idea of the traffic pattern in both directions; and

(c) the railways control both the track and the rolling stock and are in a position to repair promptly damage to track etc.

The I.R.T.D.A. has further pointed out that none of these conditions applied to road transport industry in India and that since it has no monopoly of traffic, it cannot estimate the volume of traffic likely to be offered. Further, it is not permitted to operate truck-trailer combinations which can be employed for carrying cheaper materials like coal and raw materials. On account of these reasons, the road transport industry has to carry such traffic as is offered within its economic rate of operation. Further, road transport has no security of tenure as permits are to be renewed every five years. Finally, the I.R.T.D.A. has observed that "a good deal can be done by abolishing all the present restrictions and inhibitions and creating the same conditions of operation as for the railways. For instance road transport operators can be invited to quote a schedule of rates at which it will be obligatory on them to carry the goods offered. Also conditions regarding insurance, delivery and timetables can be stipulated."

6. There are many regions in the country where road transport is the only means of transport available or has to carry by far the largest part of traffic. The Committee has no evidence to show that the road transport industry in these regions has had a tendency to get better organised so as to be able to undertake such obligations as are necessary to be undertaken under conditions of virtual monopoly. The basic question to consider is whether the road transport industry could be so organised that it can be depended upon to undertake the public service obligations similar to those which are placed on the railways. The Committee has not been able to get any definite answer to this question even from the experience of the foreign countries in which road transport has come to occupy an important place in the economy. It may be interesting to study the experience of West Germany in this regard. The transport industry in West Germany is well organised and there are 26 Freight Control Agencies which assist B.A.G.—'The Federal Institute of long distance Goods Traffic'—in the enforcement of tariff control and other regulatory measures on the road transport industry. Of the 26 Freight Control Agencies, 19 are cooperative organisations of the industry. The long distance transport of goods by road, *i.e.*, the road transport operating beyond the distances of 50 Kilometres, is subject to fixed tariff rates established by the Federal Ministries of Transport and Economics and are almost the same as the tariff on the railways except in the case of coal and ores for which the railways have special rates. According to the Report of the Commission of Inquiry on the German Federal Railways (1960), "the road transport tariffs, much like inland water transport tariffs, cannot be fully enforced..... The experience during recent years shows that the result of tie-in business and price reductions prevailing in inland water-ways transport is in a still greater measure also applicable to road transport"*. The Committee does not have enough factual material in regard to the experience of West Germany. However, the observation of the Commission on German Federal Railways quoted above will give an indication of the difficulties which might be expected in enforcing any fixed freight structure on the road transport industry even when the industry may be reasonably well organised, as in West Germany.

*From an English Translation of the Report of the Commission.

CHAPTER VIII

RECENT TRENDS IN THE DISTRIBUTION OF TRAFFIC BETWEEN ROAD TRANSPORT AND RAILWAYS —A FACTUAL ASSESSMENT

Estimates of Traffic Carried by Road Transport

Apart from the total number of vehicles registered in the various States, there is hardly any information available on the basis of which an assessment could be made of the role performed by road transport in the economy. The estimates of total ton miles or passenger miles hauled by road transport as quoted by different agencies, differ very widely. They depend upon varying assumptions regarding (a) the capacity of the vehicles, (b) the extent of utilisation of vehicles (*i.e.*, the load factor), (c) the mileage performed by each vehicle on an average per day, and (d) the number of days in a year a vehicle is utilised on an average, etc. The statement at Appendix 8 lists the main assumptions made by (i) the Indian Roads and Transport Development Association, (ii) the Road Transport Reorganisation Committee (1959) and (iii) the Railway Board, in estimating the volume of traffic carried by road. The statement also shows the corresponding assumptions made by our Secretariat. The estimate of ton miles performed in the year 1958-59 by commercial road transport in India varies from about 8,500 millions as worked out by our Secretariat to 17,400 millions as formulated on the basis of assumptions indicated by the Railway Board. On the basis of the data given by the Indian Roads and Transport Development Association, the figure comes to about 12,800 million ton miles. As regards pasenger miles, the estimate of our Secretariat is about 25,000 millions as against the estimate of about 34,000 millions put forward by the Railway Board and 37,700 millions by the Road Transport Reorganisation Committee. The above figures illustrate the range of variation in the various estimates of the traffic carried by the transport industry in the country.

2. Over the last decade, *i.e.*, since the commencement of the First Five Year Plan, there has been a phenomenal increase in the volume of traffic, particularly goods traffic, carried by the Indian Railways. The total tonnage carried by the railways is estimated to have increased from about 92 million tons in 1950-51 to about 156 million tons in 1960-61, *i.e.*, an increase of the order of about 59 per cent. The ton miles on the railways during the same period are estimated to have increased by about 100 per cent., from 26,980 millions to about 54,000 millions. There has also been a rapid expansion in the capacity of the road transport industry during the period and according to the estimates of our Secretariat referred to earlier, the proportion of total ton miles on road transport to the total ton miles on road and rail has increased from about 11 per cent. in 1948-49 to about 16 to 17 per cent. in 1960-61. It is understandable that the share of road transport in high-priced goods should have gone up during this period by a still higher percentage, as it is such goods that are generally carried by road transport. As regards passenger

traffic, there has been a consistent increase in this traffic on the railways from 1952-53 onward and in the last year of the Second Plan, the passenger miles on the railways are estimated to have increased from about 37,000 millions to about 45,000 millions, *i.e.*, by 21.6 per cent. The estimate of passenger miles on road transport, however, has shown a more than proportionate increase during the period and, as will be seen from the statement at Appendix 9, the proportion of passenger miles on road transport in the aggregate traffic carried by rail and road, as worked out by our Secretariat, has improved from about 31 per cent. in 1952-53 to about 40 per cent. in 1960-61. The estimate of passenger miles on road transport does not include the traffic carried by private motor cars.

It may, of course, be stated that every increase in traffic carried by road transport is not necessarily at the expense of the railways, since the introduction of road services, or, for that matter, any extension of any means of transport is bound, to some extent, to give rise to new demands for transportation. Moreover, a substantial proportion of goods vehicles in the country is used on feeder services or for the carriage of intra-city traffic or traffic in the regions not served by the railways which could not be considered as competitive to the railways.

3. A study of the trends in the average lead of various items of railway traffic, for which figures are available, shows that while the overall average lead has been steadily increasing during the recent years, the average lead of coal and foodgrains, which are low-rated commodities and together constitute about 50 per cent. of the total ton miles, has increased at a faster rate. The following table is of interest in this connection:

Table I

Trends in the average lead of traffic on the Railways

(*Figures in Miles*)

Year	Coal for Public including Non-Government Railways	Grains	Oil-seeds	Other Revenue Traffic	Total Revenue Traffic	Total Coal (including Non-Revenue Traffic)	Total Revenue and Non-Revenue Traffic
1950-51 . . .	347	318	360	N.A.	N.A.	357	292
1951-52 . . .	332	339	407	N.A.	N.A.	350	297
1952-53 . . .	335	330	388	301	315	336	295
1953-54 . . .	345	335	351	309	319	346	298
1954-55 . . .	325	359	350	309	322	343	300
1955-56 . . .	354	376	334	323	336	364	317
1956-57 . .	361	384	352	336	347	365	321
1957-58 . .	436	435	406	347	384	382	341
1958-59 . . .	443	457	460	349	388	422	346

N.A. : Not available

While the overall average lead has increased by 18.5 per cent. during these nine years, the average lead of coal has increased by 27·7 per cent. and of grains by 43.7 per cent.

4. The following broad conclusions seem to emerge from the above paragraphs:—

(a) There has been a phenomenal growth in the volume of traffic moved by the railways under the five year plans. However, to judge from the growth of the number and capacity of motor vehicles, there has been a proportionately larger expansion of the traffic moved by commercial road transport over this period. The share of road transport in high-priced goods *i.e.*, the commodities other than coal and mineral ores, has increased in still higher proportion over the period.

(b) The share of road transport in passenger traffic has shown a gradual increase during the period.

5. It is not easy to determine to what extent, if any, the expansion of traffic on road transport has been at the expense of the railways; or in other words, to what extent the traffic has been diverted from the railways to road transport. In the Introductory Chapter we have mentioned the various studies undertaken by the Committee to obtain data regarding the volume and type of traffic actually carried by road transport. The results of the factual surveys that were organised by the Committee on selected routes are being analysed and will be presented in a separate report. This report will be compiled when the comparable figures pertaining to the traffic carried by the railways on the routes also become available. We may, however, briefly mention here the broad conclusions which have emerged as regards the nature of traffic moved by road transport on these routes and the average lead of such traffic. The relevant statements are produced at Appendix 10.

Before the salient facts brought out in these statements are summarised, it may be mentioned that the survey showed that 20 per cent of all vehicles checked were operating on temporary permits; the highest percentage of vehicles with temporary permits being on Calcutta-Patna route (47 per cent.). As regards the age of the vehicles, it was found that about 63 per cent. of them were not more than 5 years old. The average payload or carrying capacity of the vehicles operating on these routes varied from 4.84 tons on Bombay-Bangalore route to 7.73 tons on Amritsar-Delhi route, the overall average for the total number of vehicles checked being 5.93 tons.

Appendix 10·1 shows that the number of trucks moving over 200 miles on the routes surveyed by the Committee was 17·5 per cent. of the total, while the number of trucks moving over 300 miles was 5·2 per cent. of the total. The number of trucks moving over long distances was the highest on the Bangalore to Bombay route; those moving beyond 200 miles being more than 25 per cent. and those moving over 300 miles being 9·3 per cent. of the total.

Appendix 10·2 gives an idea of the movement by road of more important commodities on the routes surveyed according to distance categories. It will be seen from the statement that the quantity moved over

200 miles formed a considerable proportion of the total quantity hauled by road in respect of finished goods on Calcutta-Patna and Bombay-Bangalore routes (35 to 39 per cent.), of sugar and gur on Delhi-Kanpur route (15 to 23 per cent.), Bangalore-Bombay and Delhi-Amritsar routes (33 to 38 per cent.), of mineral oils including kerosene and petrol on Delhi-Amritsar route (51 per cent.), of textiles on Bangalore-Bombay route (65 to 72 per cent.) and Delhi—Kanpur route (40 to 59 per cent.), of raw cotton and raw jute on Bangalore-Bombay route (64 per cent.) and Amritsar-Delhi and Delhi-Kanpur routes (29 to 55 per cent.), of iron and steel and foodgrains on Bombay-Bangalore route (48 per cent. and 21 per cent. respectively), and of provisions on Bangalore-Bombay and Amritsar-Delhi routes (53 to 58 per cent.). The quantities moved beyond 300 miles in respect of finished goods, textiles, raw cotton and provisions formed quite a substantial proportion of the total quantities moved by road of these commodities on some of the routes.

6. We hope to obtain shortly the corresponding data pertaining to movement of these commodities on the railways. An examination of such data as are available shows that on some of the routes there has been a perceptible decline over the last 3 years in the traffic pertaining to commodities which move in substantial quantities by road over distances exceeding 200 miles on the routes; the notable examples being foodgrains, fruits and vegetables, sugar and gur and kerosene oil on Delhi-Amritsar route, sugar and gur on Delhi-Kanpur route, iron and steel wrought on Patna-Calcutta route, raw cotton and textiles on Bombay-Bangalore route. A further detailed examination will be required to make an assessment of the quantum of diversion of traffic in these commodities from rail to road on the routes surveyed.

The Information Supplied by the Chambers of Commerce on the Extent of Diversion of Traffic from Rail to Road

7. As stated earlier, the Committee had asked for information about the volume and type of traffic carried by road transport from the Chambers of Commerce and Industry. The replies received from the various constituents of the Federation of Indian Chambers of Commerce and Industry and the Associated Chambers of Commerce of India are revealing. A brief round-up of these replies is given at Appendix II. It will be seen from the statement at the end of the Appendix that a large number of commercial undertakings have resorted to increased use of road transport for movement of their goods and that the share of road transport in the total dispatches of these firms has increased significantly over the period. The share of rail transport in the goods moved on account of these firms has correspondingly declined. The principal commodities in respect of which these trends are noticeable are cotton yarn, cotton cloth, jute goods, vanaspati, engineering goods, provisions, general chemicals, paints, leather goods and paper. The commodities in respect of which there is no noticeable increase in the volume of traffic carried by road transport are fertilizers, tea and iron and steel. The traffic in non-ferrous metals like aluminium and copper on account of the two firms which replied to the questionnaire of the Committee, seems to have been diverted from road transport to the railways over the last three years. No other commodity has shown this trend. Several commercial firms have stated that their goods are moving by

road over long distances extending to 1,000 miles and in some cases to 1,500 miles, though, perhaps, the total quantities are not very large.

8. The commercial firms have mentioned their preference for road transport for long distance haulage in respect of several types of traffic. Chief among the reasons cited for this preference are (a) the lower freight rates in the case of road transport as compared with rail transport, (b) avoidance of multiple handling and extra charges involved therein, (c) quicker delivery in the case of road transport as compared with railways (d) safer handling, (e) avoidance of expensive packing which is required in the case of railways, (f) facilities provided by road transport in regard to door to door delivery, (g) quick settlement of claims, (h) easy availability of bookings, and (i) personal attention given by the road transport operators to the firms including provision of storage facilities at destination points, etc.

Changes in the Pattern of Traffic Carried by the Railways

9. The commodities in respect of which a noticeable increase in road traffic could be said to have taken place are generally high-priced ones and the railway freight on these is generally higher than the freight charged by the road hauliers. We have analysed the broad trends in regard to the movement of low-rated and high-rated commodities on the Indian Railways over the last four years on the basis of the data published in the Annual Reports of the Railways. A detailed statement in regard to these trends is given at Appendix 12. For the purpose of this analysis, we have included in the low-rated category, commodities which fall in classes upto 40 per cent class of Scale-A. The principal commodities included in this category are coal, limestone, gypsum, mineral ores, cement, manures, salt, foodgrains, fruits and vegetables, sugarcane, wood, etc. All other commodities which fall in classes above 40 per cent of Scale-A are categorised as high-rated. It will be observed that between the years 1955-56 and 1958-59, the total originating tonnage in respect of the low-rated commodities has increased by about 22 per cent. *i.e.* from 57.4 million tons to 69.8 million tons. During the same period, the tonnage in respect of other commodities which are comparatively high-rated, has declined by about 4.8 per cent.

The Influence of Five Year Plans on the Pattern of Rail Traffic

10. More than any other factor, the pattern of production under the five year plans influences the pattern of traffic on the railways. An increasing emphasis is being laid on the development of basic industries like steel, coal, mineral ores and heavy mechinery manufacture in the five year plans. For movement of raw materials and products of these industries, the railways are considered the most suitable means of transport. Therefore, the share of traffic connected with these industries in the total traffic carried by the Indian Railways is bound to increase significantly over the period of the subsequent Plans. This is borne out by the statement at Appendix 13. The share of coal in the total traffic on the railways was 33 per cent. in 1950-51, and is estimated to increase to 38 per cent. in 1965-66. Taking coal, minerals ores, cement, foodgrains and salt, the share of these commodities, all of which are low-rated, in the freight traffic on the Indian Railways will increase from 50.4 per cent. in 1950-51 to 64.1 per cent. in 1965-66, while that of all the remaining goods described

as 'other goods' in the statement will be reduced from 49·6 per cent. in 1950-51 to about 35·9 per cent. in 1965-66. The commodities grouped in the category 'others' in the statement correspond roughly to those which may be considered as high-rated on the railways.

Changing Pattern of Rail Traffic in Foreign Countries

12. It will be instructive to study, in this connection, the experience of industrially advanced countries in the world.@ In Great Britain, about 72 per cent. of the total traffic (ton miles) carried by the railways at present consists of coal and mineral ores*. In USA, coal and mineral ores account for 53 per cent. of the total originating traffic on the railways. In France, the proportion of these commodities in rail traffic comes to 64 per cent. In U.S.S.R., the rail traffic in coal, mineral ores and foodgrains accounts for 45 to 50 per cent. of the total traffic carried (in terms of ton-kilometres) on the railways. The experience of the foreign countries thus indicates that the bulk of the traffic carried by the railways is in coal and mineral ores.

13. There have been significant changes in the recent years in the distribution of total goods and passenger traffic measured in terms of ton kilometres and passenger kilometres respectively between rail, road and other means of transport in the industrially advanced countries of the world. In U.S.A., for instance, the share of railways in the total goods traffic has gone down from 64 per cent. in 1939 to 46 per cent. in 1958, while that of road has increased from 9 per cent. to 21 per cent. during the same period. In the case of passengers, the share of railway traffic in U.S.A. declined from 65 to 30 per cent. between 1939 and 1958. In United Kingdom, during the years between 1954 and 1959, the share of railways in goods traffic was reduced from 53 to 42 per cent., while that of road transport increased from 46 to 57 per cent. Taking United Kingdom, France and West Germany together, during the period 1930 to 1954, the share of railways in total goods traffic decreased from 75 to 52 per cent. while that of road transport increased from 10 to 34 per cent. It is only in the Soviet Union and the East European countries that the railways still carry the bulk of goods traffic amounting to about 80 to 90 per cent. of the total traffic.@@

14. An important development in the field of the road transport industry in U.S.A. and the Western European countries has been the phenomenal growth of transport on own account, *i.e.,* by private motor carriers. Thus it is estimated that private cars account for over 88 per cent. of total passenger mileage in U.S.A. and over 50 per cent. in the countries of Western Europe. About half the volume of goods transported by road in Western Europe is accounted for by 'transport on own account' (U.N. Economic Survey of Europe, 1956). In U.K., according to a survey made by the Ministry of Transport & Civil Aviation in April, 1958, the 'C' licence goods vehicles *i.e.,* the private carriers carried 56

@ The figures for Great Britain are based on the data published in "*The Annual Abstract of Statistics of U. K.*' those for USA and other countries are based on the information contained in the '*Bulletin of Transport Statistics*' and the '*Economic Survey of Europe*' published by the U.N. Economic Commission for Europe.

*These commodities on British Railways could no longer, perhaps, be treated as 'low-rated' at present.

@@ *Vide* Appendix 22.

per cent. of the total tonnage and 46 per cent of total ton miles carried by road. In India, the growth of private carriers has so far been slow, but if the experience of other countries is any guide, the increase in the number of such carriers is likely to be more rapid in future.

15. From the preceding paragraphs, it is quite clear that the pattern of traffic on the Indian Railways has been undergoing significant changes over the last few years and that the share of comparatively low-rated commodities in the total freight traffic carried by the railways has had a tendency to increase and is likely to increase further in the coming years. This is largely because of the influence of the industrial development programmes taken up in the five year plans. However, recently there has been an increasing tendency on the part of commercial firms in the country to make greater use of road transport for long distance haulage of goods which were normally sent by railways in the past. There are indications of a certain amount of traffic in commodities which have to bear comparatively higher freight rates on the railways, being diverted from railways to road transport. The broad pattern of general economic development that may possibly be envisaged over the long run is likely to result in further concentration of low-rated traffic on the railways and the experience of foreign countries also tends to confirm these trends. In the subsequent chapter we shall try to study briefly the implications of these trends from the point of view of railway finances.

CHAPTER IX

RECENT TRENDS IN RAILWAY FINANCES

Economics of Haulage of Low-rated Commodities

For a study of the impact of the changing pattern of traffic on the railway finances, it is necessary to compare the cost of haulage per ton mile of each major commodity with the corresponding railway earning per ton mile from that commodity. In the following chapter, we have quoted certain figures of costs of haulage of coal and other commodities as worked out by the Railway Board. The cost of haulage of coal is calculated very roughly at 3·85 nP. per ton mile on broad gauge and 5·70 nP. per ton mile on metre gauge; the corresponding figures of average cost for commodities other than coal being 5·28 nP. and 9·18 nP. respectively. The figures of commodities, other than coal, representing as they do the average costs of haulage of numerous types of commodities, are not very significant. In regard to earnings, from the year 1959-60, the railways maintain figures of ton mile—and derived therefrom are the figures of average earnings per ton mile—for each of 22 important commodity heads which together account for more than 75 per cent. of the revenue earning traffic. For a rough comparison, perhaps, the earnings per ton mile for these 22 commodities could be compared with the overall average cost per ton mile. The statement at Appendix 14 shows the average earnings per ton mile for these 22 commodities on broad gauge and metre gauge separately. The items marked with asterisk in the statement are all those in which the average earning per ton mile is less than the overall average cost of haulage per ton mile. It will be seen that the earnings per ton mile from coal traffic (3.35 nP. on the broad gauge as well as metre gauge) do not cover the costs even on broad gauge, and are much lower than the costs on the metre gauge. Since the freight rate for coal tapers off sharply with increase in the distance of haulage, the long hauls of coal—and more especially on the metre gauge—are particularly uneconomical to the railways. The other items of traffic in respect of which earnings do not cover the cost on broad gauge are grains and salt. On the metre gauge, besides coal, grains and salt, a number of other low-rated commodities, namely, oilseeds, marble and stone, manganese ore, iron ore and other ores, sugar, cement, wood, fresh fruits and vegetables, are being carried at a loss to the railways. Even though the figures indicate, *prima facie,* that traffic in iron ore and manganese ore on the broad gauge do not involve the railways in a loss, it will be appreciated that the average cost of haulage does not represent the correct cost of hauling these commodities; for their carriage involves substantial empty haulage, and is also over a relatively much shorter lead, particularly in the case of iron ore.

2. From the above analysis, it is apparent that if the share in the total railway freight traffic of coal and iron ore and other such commodities on which the average earnings on broad gauge or metre gauge fall short of the average costs of haulage, is to increase in the future, partly under the impact of the plans and partly as a result of the growing

competition from road transport, it is bound to affect the financial position of the railways adversely. In the following paragraphs, we attempt to briefly survey the recent trends in railway finances since the beginning of the First Five Year Plan.

The Recent Trends in Railway Finances

3. As stated in Chapter II, for about a decade preceding the commencement of the First Five Year Plan, and during the period of the Plan, the railway finances were in a satisfactory position and the railways were able to meet their commitments towards the payment of dividend to the General Exchequer. The railways, however, carried a heavy backlog of overaged assets which had been long due for replacement and the contributions made by the railways to the Depreciation Reserve Fund were far from adequate to provide fully for the replacement requirements at the prevailing prices. During the first plan period, the railways contributed about Rs. 184·57 crores to the Depreciation Reserve Fund while the withdrawals from the Fund amounted to Rs. 206·49 crores. Even the Second Plan started with a heavy backlog of replacements and renewals. During the second plan period, the contributions to the Depreciation Reserve Fund were Rs. 241·42 crores inclusive of interest, while the withdrawals from the Fund amounted to Rs. 319·38 crores. From 1951-52 to 1955-56, the railways contributed a total sum of Rs. 172·84 crores by way of dividend to the General Revenues. The dividend paid by the railways during the second plan period is estimated at Rs. 244·65 crores.

The position with regard to the capital-at-charge, gross earnings and net earnings from the year 1951-52 onwards is shown in the table below:

Table 1

Year	Capital-at-charge	Gross earnings	Net earnings	Earnings as percentage of capital-at-charge		Operating ratio
	(*Rupees in crores*)			Gross	Net*	
1951-52 . .	850·11	290·82	61·75	34·21	7·26	77·0
1952-53 . .	837·38	270·56	47·18	32·31	5·49	80·6
1953-54 . .	869·30	274·29	36·91	31·55	4·25	83·4
1954-55 . .	901·58	286·78	44·06	31·81	4·88	82·3
1955-56 . .	958·98	316·29	50·34	32·64	5·20	81·6
1956-57 . .	1071·71	347·57	58·38	32·43	5·45	80·3
1957-58 . .	1222·44	379·78	57·78	31·07	4·73	81·5
1958-59 . .	1356·59	390·21	59·32	28·76	4·37	82·4
1959-60 . .	1432·88	422·33	74·55	29·47	5·20	79·2
1960-61 (Budget Estimates)** .	1563·29	464·50	75·90	29·71	4·84	80·1

*The net earnings are inclusive of the dividend paid to the General Revenues

**This year's working expenses will include the effect of Pay Commission's recommendations including the arrears payable for the preceding year 1959-60. This has to be allowed for in judging the financial results of 1960-61.

It will be seen that the gross earnings as a percentage of the capital-at-charge have tended to be lower in recent years than in any of the years from 1951-52 to 1957-58. The ratio of both gross earnings and net earnings to the capital-at-charge declined gradually between the years 1955-56 and 1958-59, but have registered a small improvement since that year.

4. The following statement shows the earnings and expenses separately for coaching and goods traffic (broad and metre gauge only) for the last five years.

Table 2

(Rupees in crores)

Year	Coaching			Goods		
	Gross earnings	Expenses (including interest)	Percentage of expenses to earnings	Gross earnings	Expenses (including interest)	Percentage of expenses to earnings
1955-56 . .	128·21	126·29	98·5	199·20	180·61	90·6
1956-57 . .	137·05	132·48	96·6	225·90	200·78	88·8
1957-58 . .	142·98	147·81	103·3	255·83	224·85	88·7
1958-59 . .	140·03	150·57	107·5	267·78	239·80	89·5
1959-60 . .	150·83	153·75	101·9	290·91	254·42	87·5

NOTE:—The above figures are inclusive of the freight charges for the carriage of railway coal and materials.

Passenger earnings (including earnings from the coaching traffic) on the railways have not increased in the same proportion as the earnings from freight traffic. Thus, whereas between 1955-56 and 1959-60 passenger earnings increased by only 17·6 per cent., the increase in goods earnings was of the order of 46·0 per cent. Also, in regard to passenger traffic, the railway system as a whole seems to be losing in recent years, and the net surplus on passenger traffic in the earlier years gave place to a net deficit from the year 1957-58 onwards. The loss from passenger traffic in 1958-59 was of the order of Rs. 10·54 crores but was reduced to Rs. 2·92 crores in 1959-60. These figures are exclusive of the collections from passenger fare tax levied with effect from September 15, 1957, which accrues to the State Governments.

5. There has been no increase in passenger fares in the period 1955-56 to 1960-61, apart from certain minor adjustments given effect to from 1st April, 1955. As referred to in Chapter II, however, the freight rates have been increased from time to time during the period. The net overall increase in freight rates, however, could be said to be much lower than the relative increases in the general prices or wage bill and the costs of railway stores during the period. This will be clear from the statement at Appendix 15.

6. In interpreting these trends, several considerations have to be kept in mind, quite apart from the fact that the year 1958-59 was a year of relatively slow tempo of economic activity with consequent diminution of the gross earnings of the railways. First, with the increasing tempo of developmental works undertaken as part of the five year plans, the capital expenditure each year was substantial and the real value of the additions made to the capital in more recent years is less than that of the equivalent capital investments in the earlier years. Second, the amount charged in any year to the capital account includes the amount in respect of the works still in progress at the end of the year which does not earn a return until the works are completed and brought into use. Third, the new works are not expected generally to prove adequately remunerative until they have been in use for some years. Fourth, the proceeds of passenger fare tax not included in the above figures, amounted, during the years 1957-58 (part of the year), 1958-59 and 1959-60 to Rs. 3·68 crores, Rs. 12·24 crores and Rs. 12·77 crores respectively.

7. Moreover, there have been significant increases in the working expenses of the railways due to reasons beyond their control. On account of the concessions granted to the staff from time to time, the cost per head of staff increased from Rs. 1448 at the end of 1954-55 to Rs. 1660 in 1959-60, apart from the increase in costs resulting from increase in the strength of the staff from 9·83 lakhs in 1954-55 to 11·51 lakhs in 1959-60, an increase of 17 per cent. in 5 years. The increase in *per capita* cost of staff in itself has meant increased expenditure of the order of Rs. 20 crores per year. Moreover the increases in the prices of coal effected between July, 1956, and August, 1959, have increased the fuel bill of the railways by about Rs. 7 crores per annum and this would go up further due to the enhancement in the statutory price of coal by 81 nP. and of excise duty by about 1 nP. per ton from April 1, 1960. In the result the index of price of coal with 100 as the base at the end of 1952-53 increased to 101 at the end of 1955-56 and to 133 at the end of 1959-60. The increasing proportion of the inferior quality of coal allotted to the railways has also contributed to the rise in their working expenses. The prices of other materials consumed by the railways have also gone up over this period.

Contributions to and Withdrawals from the Development and Depreciation Funds

8. We may now briefly mention the trends in the railways' contribution to the Development Fund and the Depreciation Fund in relation to the withdrawals from these Funds. The following statement summarises the position since the year 1955-56.

Table 3

Development Fund

(Rupees in Crores)

Year	Appropriation to Fund from			Withdrawal from the Fund	Closing balance
	Surplus and interest on balance	Loans from General Revenues	Total		
1955-56	7·57	..	7·57	12·14	12·97
1956-57	20·65	..	20·65	19·84	13·75
1957-58	13·63	..	13·63	25·53	1·85
1958-59	8·13	10·98	19·11	28·06	—1·69
1959-60	20·28	14·85	35·13	25·54	8·91
1960-61 (Budget Estimates) .	18·43	7·63	26·06	26·06	8·91

Table 4

Depreciation Reserve Fund

(Rupees in crores)

Year	Appropriation to the Fund	Withdrawals from the Fund	Closing balance at the end of the year
1955-56 . .	48·67	45·89	103·47
1956-57 . .	48·90	43·68	103·14
1957-58 . .	49·38	63·62	88·89
1958-59 . .	48·40	80·72	56·70
1959-60 . .	47·96	68·36	37·30
1960-61 (Budget Estimates) . .	46·78	63·00	21·08

In the last few years, the withdrawals from the Development Fund have been of a much higher order than appropriations to the Fund so that the railways had to resort to loans from General Revenues—to the extent of Rs. 10·98 crores in 1958-59, Rs. 14·85 crores in 1959-60 and Rs. 7·63 crores in 1960-61 to meet their commitments. Withdrawals from the Depreciation Reserve Fund have also been of a higher order than appropriations to the Fund and this has been made possible by means of drawing on the previous balances in the Fund. The balance in the De-

preciation Fund which was Rs. 100·69 crores on 1st April, 1955, is estimated to be reduced to a rather small figure of Rs. 21 crores at the end of 1960-61.

Financial Position of the Zonal Railways

9. An examination of the financial position of the individual zonal railways also reveals some interesting results. While the Central, the Eastern, the Northern, the South Eastern and the Western Railways show positive results, the North Eastern, the North-East Frontier and the Southern Railways are losing on balance. The statement at Appendix 16 sums up the financial results of working of the zonal railways from 1954-55 to 1959-60.

Taking first the railways which showed positive results, it will be seen that of these, the Central and the Eastern Railways showed a declining trend till 1958-59 in the percentage return on capital but the figure improved in 1959-60. The return on capital on the Western Railway has shown a gradual decline between the years 1955-56 and 1959-60. This development has to be studied in the context of heavy increases in capital investment on the various zonal railways and other general considerations mentioned in paragraphs 6 and 7.

As regards the railways showing losses, namely the North Eastern, the North-East Frontier and the Southern, there is a noticeable trend towards a worsening of the position. Thus, on the North Eastern Railway the percentage of net loss on capital-at-charge has gone up from 6·7 per cent. in 1956-57 to 13·95 per cent. in 1959-60. On the North-East Frontier Railway, the percentage of net loss has gone up from 4·64 in 1958-59 to 12·03 in 1959-60. The North-East Frontier Railway was formed on 15th January, 1958, after bifurcation of the former North Eastern Railway. It is interesting to note that with the separation of the North-East Frontier Zone, from the North Eastern Zone, the total losses of the combined system taken as a whole have practically doubled. Thus, whereas in 1957-58, the losses of the North Eastern Railway amounted to Rs. 9·47 crores, in 1959-60 the losses of the North Eastern Railway and the North-East Frontier Railway taken together, have amounted to Rs. 19·37 crores.

On the Southern Railway, the percentage of net loss to capital-at-charge has gone up from 0·34 in 1956-57 to 1·09 in 1959-60. Its operating ratio has also shown an upward trend, varying from 80·53 per cent. in 1954-55 to 96·34 per cent. in 1957-58, though it went down to 92·77 per cent. in 1958-59. The estimated figure for 1960-61 is 95·7 per cent.

10. It may be mentioned that the three railways which have shown net deficit in working are either wholly or substantially metre gauge, with the inherently less economic features of operation of the metre gauge system*, and also have relatively much higher proportion of passenger traffic. On the Western Railway also about 63 per cent. of the total route mileage is metre gauge, but the traffic carried by this railway consists largely of freight traffic and the proportion of goods train miles

*As explained in subsequent chapters (Chapters X and XI), while fares and freights are uniform all over the railway system, there is a significant difference in the average costs per passenger mile and per ton mile on the broad gauge and metre gauge lines.

to passenger train miles on the Railways is much higher than that on the Southern, the North Eastern or the North-East Frontier Railway.

11. It is not clear to what extent, these trends in railway finances have been influenced, among other factors, by the amalgamation and the zonal regrouping of the railways which was given effect to during 1951–53. In the first place, the scales of wages paid to the staff in several units before the merger were much lower than those obtaining on Government Railways, and with the integration of the railways, uniform scales of wages and salaries and uniform standards in operations were introduced over the entire system, which had a marked impact on the working expenses of the railways. Secondly, the system of charging on the basis of inflated mileage which was in vogue over several units was done away with. Moreover, as the integration and regrouping of the railways was done on considerations other than the financial viability of each Zone, it is not known to what extent this factor has influenced the financial results of the system as a whole.

The Financial Prospects for the Third Five Year Plan

12. The Report of the Railway Convention Committee (1960) gives estimates of the anticipated earnings and working expenses on the railways at the existing level of freights and fares during the five years of the Third Plan, *i.e.,* from 1961-62 to 1965-66. According to these estimates, the capital-at-charge on the Indian Railways is estimated to increase from Rs. 1,563 crores at the end of 1960-61 to Rs. 2,313 crores at the end of 1965-66, *i.e.,* by about 48 per cent. The gross traffic receipts on the railways are estimated to increase from Rs. 464·5 crores in 1960-61 to Rs. 711·22 crores in 1965-66, *i.e.,* by about 32 per cent. The ratio of net earnings (inclusive of dividend payable to General Revenues) to the capital-at-charge in 1965-66 works out to 4·1 per cent. as against 4·8 per cent. in 1960-61. Over the entire period of the Third Plan, after meeting the contribution to the Depreciation Reserve Fund (Rs. 350 crores over five years) and to the General Exchequer by way of dividend (Rs. 387 crores), the net surplus of the Railways will amount to about Rs. 11 crores only.

Principal Recommendations of the Convention Committee (1960)

13. The Convention Committee (1960) after a review of the railways' financial position has made its recommendations recently and some of the more important recommendations, as accepted by the Parliament, are reproduced at Appendix 17.

Briefly, the Committee has recommended that the existing system of payment of dividend by the railways to the General Revenues at a fixed rate should continue for the next five years and that the rate of dividend should be increased from the existing rate of 4·0 per cent. to 4·25 per cent. The Committee noted that the Development Fund was expected to close with a deficit of Rs. 33·46 crores at the end of 1960-61 and that according to the estimates given by the Railway Board, the likely net surplus of the railways to be credited to the Fund was estimated at Rs. 11 crores against the likely expenditure of Rs. 115 crores to be met from the Fund. In view of this wide gap, the Committee recommended continuance of the facility of providing temporary loans from the

General Revenues to finance the Fund during the next five years. While proposing a higher rate of dividend to be paid by the railways to the General Revenues, the Committee recommended certain concessions which were considered "necessary for easing the ways and means position of the railways". These are mentioned in the recommendations reproduced at Appendix 17.

Long-term Trends in Railway Finances—
Need for Careful Examination

14. Before considering the long-term prospects of railways finances, we may mention the salient features of the present situation.

(i) In the first place, the contributions which the railways expect to make to the Depreciation Reserve Fund during the coming five years will be just a little more than the amount required to meet the actual cost of replacement requirements during the period and the balance available in the Fund will increase only by about Rs. 20 crores over the present small figure of about Rs. 21 crores. This is a very meagre balance considering that at the end of the Third Plan the total capital-at-charge of the railways will be Rs. 2,313 crores. The balances in the Fund have been almost denuded as a result of the large withdrawals during the second plan period which were inevitable on account of the back-log of replacements from the past. The contributions to the Depreciation Reserve Fund are at present estimated on the basis of the actual requirements of replacement and the railways' capacity to finance them during the period of each Convention. It is possible to take a view that the contributions to the Depreciation Reserve Fund should be calculated after carefully revaluing the capital-at-charge on the basis of the present replacement costs. The Committee has not gone into detailed calculations on this basis. It can, however, hardly be questioned that the railways' contribution to the Depreciation Reserve Fund during the third plan period might well have been at a somewhat higher figure if only the railways could afford it. This would enable the railways to start with a reasonable balance in the Fund in the Fourth Plan for replacements.

(ii) Secondly, the expenditure met out of the Railway Development Fund has exceeded the net surplus since 1957-58 and the railways have had to take temporary loans from the General Revenues to meet the expenditure. For the period of the Third Plan, the actual expenditure chargeable to the Fund is much more than the amount available with the Railways. The Comptroller and Auditor General is understood to have questioned the desirability of financing the Development Fund by temporary loans from the General Revenues and to have suggested that the Fund should rely only on railway surpluses and the expenditure therefrom should be restricted to the amounts available and for purposes for which the Fund was originally created. The Convention Committee (1960) while appreciating the view of the Auditor General expressed doubt about the practicability of implementing this suggestion 'during a period of developing economy.' Nevertheless, if it is not in the public interest to curtail the unremunerative expenditure chargeable to the Railway Development Fund, it will be a matter for consideration whether the railways should be burdened with the interest load on such expenditure.

15. From the foregoing paragraphs, it will be clear that the financial position of the railways will be somewhat difficult during the third

plan period. It could, of course, be argued that with suitable increases in fares and freights, the surpluses on the railways could be improved so as to enable them to meet their commitments including the expenditure required to be incurred from the Railway Development Fund during the period. We have, however, to consider the long-term prospects of railway finances against the background of the position as revealed for the third plan period. Several factors have to be taken into account which will influence the railways' financial position in the long run. First, as discussed in the preceding chapter, the proportion of low-rated commodities in the total traffic on the railways has been increasing in the last few years and is likely to increase further in the coming years. Second, while the short-term requirements of finances of the railways could possibly be met by making small uniform increases in the railway rates on all commodities, in the long run it may be inevitable to consider major modifications in the railway rating structure having regard to the changing pattern of railway traffic and also to the competitive position of railways *vis-a-vis* the other means of transport in the country. There are obvious limitations, however, within which modifications in rates could be contemplated. The increases in rates on low-rated commodities, such as foodgrains, coal and raw materials of industries, will react generally upon the economy as a whole, and particularly on the costing pattern of important industries in the various regions of the country. On the other hand, the future pattern of rates on what may be described as high-rated commodities at present on the railways, will have to be considered carefully having regard to the possibilities of development of road transport and other means of transport.

16. Moreover, in considering the long-term prospects of railway finances, we have also to take into account the possible effect of the new railway lines which may be built in future. As stated elsewhere in the Report, there are demands from all quarters for construction of new lines without adequate regard being had to their financial viability. Several new lines may also require to be added, as in the period of the first two Plans, to cater for the requirements of industrial projects taken up under the Plans, although they may not be wholly justifiable from the point of view of the railways' commercial interests. In fact, with the growing importance of road transport, some of the existing lines on the railway system may become increasingly unremunerative because the traffic carried on these lines is of a type which is specially vulnerable to competition from road transport. If such lines have to be continued in the public interest, it may have serious financial implications for the railways. As we have noticed above, the increase in the earnings of the railways in the period of the first two Plans has not been commensurate with the increase in their capital-at-charge. This disparity is likely to be accentuated in future. The future of the railways' financial obligations towards the General Exchequer has to be considered against the background of these developments. It is a question for consideration what changes will require to be made in the railway rating structure in future to enable them to meet their financial obligations, and what the repercussions of these changes will be on the general economy of the country, or alternatively what changes are required in the nature and extent of financial commitments of the railways towards the General Exchequer. The more recent trends in competition between rail and road in the country lend special urgency and importance to the consideration of these questions.

CHAPTER X

INHERENT ADVANTAGES OF ROAD AND RAILWAY TRANSPORT AND THEIR COMPARATIVE COSTS

Apart from the differences in freight rates charged by the railways and road transport, there are several factors arising out of the diverse economic and technological characteristics of these two modes of transport which determine their suitability for different types of traffic, or the users' preference for one mode over the other. The railways are a large-scale transport industry, have a large fixed plant and require heavy capital investment. Therefore, within the limits of the existing facilities, the greater the volume of traffic on the railways, the lower will be the unit cost. The railways can transport full wagon loads of goods over long distances at unusually low cost. In the road transport industry, on the other hand, the operating units are small, each unit requiring a relatively small investment of capital. The industry thus has a much greater adaptability to varying conditions and is also able to adapt equipment and type of services to the particular needs of the shippers.

Inherent Advantages of Road Transport

2. The flexibility of road transport is, perhaps, the most important factor in its favour. Motor vehicles can supply services over public highways between any two points in the country, if necessary from door to door, on difficult gradients or on poor roads. Road transport has been found particularly suited for certain special jobs, such as for pick up and delivery purposes, in handling small loads and in carrying traffic between places not directly connected by rail, to replace trains on unprofitable railway lines and in providing services to off-rail points. To quote from a report of the Committee on Transport Economic Research relating to Road and Rail Transport set up by the Australian Transport Advisory Council in 1955:—*

> "In dealing with the economics of movement by rail and road it is essential to bear in mind the fundamental difference between the operation of these two forms of transport, which primarily centres in flexibility. It is only in respect of a minority of types of freights that the railway systems are able to pick up their traffic directly at the point of production or manufacture, transport it to and directly unload it at the factory, warehouse, or point of consumption or distribution".

3. Speed and certainty of delivery time which are essential in the transport and marketing of particular commodities *e.g.*, fresh fruits, vegetables and other perishables and semi-processed materials etc., are other important considerations in favour of road transport. The business

*Part I of the Report "*Road Transport Costs and Road Construction and Maintenance (September, 1956)*" para 66.

firms could find it possible to have a quick turnover of their capital through speedy haulage by road transport. Traffic in 'smalls' can be sent daily and easily by road service while the railways have to wait till the wagon load is available. The truck can supply a comparatively frequent service; it is well adapted to special hauls. To quote from a speech made by Mr. S. H. Turner, Chairman, Hindustan Lever Limited at the Annual General Meeting of the Company, held on 6th April, 1960:—

> "Last year about 50 per cent of our despatches were made by road; another 2 per cent were made by Quick Transport Service (by rail), a service the railways simply did not offer ten years ago. Our average transit time has been reduced from the 21 days of 1950 to 5 days now. At our present rate of sale, that means we are saving perhaps Rs. 1½ crore of scarce capital".

4. One of the most important characteristics of road transport arising primarily because of the small size units is that a personal service is frequently developed. This is not so easily developed by the railways, since as a large public undertaking they necessarily suffer from an impersonal approach to business. To quote again from the speech of Mr. S. H. Turner:—

> "With road contractors we are usually able, at a price, to get them to accept responsibility for damage: the railways are very chary of accepting responsibility, and their employees are frequently correspondingly careless. When we make a claim on our road carriers, it is settled within days and usually in full. When we claim on the railway, it takes an average of six months before a decision is obtained and we do not recover more than half our losses".

Limitations of Road Transport

5. The characteristics which make road transport specially suitable for short-distance small traffic also, for obvious reasons, constitute its inherent disadvantages for bulky or long distance traffic. As the operating units are small and their carrying capacity limited, motor vehicles are generally not suitable for handling voluminous shipments as economically as rail transport except on short distances where low terminal costs give them an advantage. Motor transport does not generally follow the 'tapering principle' and, therefore, the long distance haul by motor transport is not so economical as rail transport; and where motor transport handles long distance traffic, the service is in many cases limited to high-rated freight.

6. There is, moreover, the problem of growing traffic congestion on the roads particularly near the big cities and mounting road accidents which put a severe limitation on the capacity of roads. This aspect of road transport is being viewed with increasing concern in some leading foreign countries. At a seminar on road safety held in Bombay in 1959 under the auspices of the Economic Commission for Asia and the Far

East, Mr. Wichrzycki, speaking on behalf of the ECAFE Secretariat, referred to the alarming extent of accidents on the road in the following terms:—

> "....the fact must be faced that in spite of the very valuable economic and social service it performs, it may still prove to be one of the dangerous modes of transport. Throughout the world, rapid improvement in the technical standards of highways is taking place, and better and bigger vehicles with higher speeds of operation are being used in increasing numbers; yet these technical improvements, at the same time, have brought in their wake an alarming increase in the number of accidents and economic and social losses caused by the increased accidents".

J. E. Allen in his article *'Railways or Roads'* published in the March 1959 issue of the *Economic Journal* has made the following observations on this aspect of transportation by road in the United Kingdom:—

> "So far I have said nothing about road casualties, but they are undoubtedly a part of the cost of road transport, and have been estimated at £150 million a year. If rules for the safety of the public, which Parliament imposed on the old railways, were imposed on road traffic, road transport, as we have it now, might come to an end".

In several advanced countries the need for heavy investments in roads is being felt having regard to the limitation of capacity of the existing road system to take the traffic. This aspect of the matter has to be given due consideration in any assessment of road transport. Referring to the problem of road congestion, Arthur J. White in his article entitled *"The Future of Coordination between Rail and Road"** makes the following comment:—

> "Road improvements will doubtless be carried out at a faster pace—new motor roads, widenings, by-passes, underpasses, viaducts and so on. Road capacity will be increased, but the additional capacity is likely to be absorbed faster than it can be created, especially in the cities.....".

> "It is really rather obvious that our greatest error in recent years was to act as if we believed that motor vehicles could meet all our transport needs; that our road system, with a little tinkering, could carry the vehicles; and that we could, with impunity, allow traffic ideally suited for rail conveyance to be transferred to the roads in large quantities. It is clear that the balance must be redressed; that we must make better use of our existing resources, especially the railways; and that we should employ rail and road in combination rather than in competition, in order to prevent the railways from dying of starvation and road transport of strangulation".

**Journal of the Institute of Transport*, September, 1960.

Inherent Advantages of Rail Transport

7. The railways are commonly recognised to be particularly suited for carrying long distance traffic especially in heavy and bulky items of freight such as coal, mineral ores etc. Because of the significant technological advances made in recent years by way of introduction of electric and diesel traction, improved signalling devices and mechanised handling, the railways have significantly improved their capacity for haulage of bulk traffic and their speed of delivery. The railways are also considered more suitable than road transport for long haul passenger service. It is considered to offer the advantages of greater safety, better reliability, and more comfort and convenience.

8. The railways are considered especially suitable for suburban passenger services in the larger cities. The following extract from an article by Gilbert Walker on "*Prospect for Transport in the* 1960*'s*" which appeared in the *Westminster Bank Review* for May, 1960, is of interest:—

> "A special problem is presented by the congestion of the towns, particularly of the streets morning and evening, as traffic enters and leaves the city. That congestion could be eased if factory and office workers were induced to commute by rail and not by road. It is surely worth the cost of improving, even subsidising suburban services by rail, in order to avoid, or just to diminish the expense of urban road works, and in Mr. Marple's graphic phrase, to prevent the heart from being torn out of our towns. It may be a grave mistake in the circumstances to charge more for season tickets. There might be a case also for devising a special licence fee—a toll—to discourage commutation by road!"

However, the bus is an effective competitor of the railway on medium distance and on short distance (excepting suburban services). In certain foreign countries, the railways themselves often use bus service for substituting all rail service on branch lines or local trains on main lines.

9. In respect of goods services, the railways are obviously at a disadvantage in regard to speed of delivery, particularly for short and medium distance traffic, or door to door delivery services, or personal attention being paid to the consignments of individual customers. There are also complaints from the users about the loss or damage to goods in transit and pilferage of goods and delays in settling claims on the part of railways. Many of these disadvantages are such as will be inherent in any big organisation like the railways. It is necessary for the railways as a commercial undertaking, however, to organise its working in a manner so as to mitigate, to the extent possible, these inherent weaknesses in their operations. The Indian Railways recently have taken several steps which may be mentioned in this connection. These include (i) introduction of quick transit services and express goods services, (ii) supply of container services, (iii) collection and street delivery services and (iv) opening of out-agencies and city booking agencies, etc. The note at Appendix 18 gives the details of such facilities provided by the Indian Railways.

Comparative Costs of Railway and Road Transport

10. The inherent advantages of railway and road transport must reflect themselves in the comparative costs of these two modes of transport, provided that the 'costs' are interpreted in wide terms so as to include not merely economic but also social costs to the community at large. The Inland Transport Committee of the Economic Commission for Europe *vide* Resolution No. 163 defined the aim of coordination as follows:—

> "....to determine what factors are likely to lead to utilization of the means of transport at the minimum economic and social cost to the community; this cost comprises the economic and social cost in respect of transport operations proper and of ancillary operations and should take into account any advantages and disadvantages entailed for the community in the use of a particular means of transport".

11. It is not an easy matter to determine 'the economic and social cost to the community' of any particular service performed by the railways and road transport. A report of the Secretariat of the Economic Commission for Asia and the Far East on Coordination of Transport (TRANS/81, dated January 25, 1957) discusses the principles of costing in relation to transport coordination. "The social and economic costs", or more simply "the economic cost", according to the report, "is the sum total of the costs of production factors (labour, material, energy, etc.) utilised for operating a particular means of transport".

As regards the general approach to determination of the minimum economic cost, the following extract from the report will be of interest:

> "In a completely new country, where everything has yet to be created, it is possible to conceive an ideal solution of the transport problem by applying the most economical traffic methods. However, the case never arises in practice. In all countries there developed concurrently several modes of transport with their own infrastructure and equipment, which have reached a varying degree of saturation and which share the traffic between them. The optimum distribution of traffic should be endeavoured with this factual situation as a starting point."
>
> "....coordination cannot be based on the comparison of the average costs of each transport medium, since they correspond to traffics which, taken as a whole, are not substitutive."
>
> "Economic studies should, therefore, bear either on well-determined traffic flows or on traffic transfers from one mode of transport to another."
>
> "In all cases, the costs to compare are, on the one hand, the total additional costs to be borne by the mode of transport receiving the traffic transferred, and on the other, the total savings likely to be achieved by the mode of transport relieved of the afore-mentioned traffic".

In regard to the determination of the respective fields of each mode of transport, the report concludes as follows:

> "No economic study, be it so complete, may presume to determine the field of each mode of transport. The parameters involved are far too numerous and too variable, according to the implications considered. At the utmost, it may be possible to undertake a comparison of average economic costs for large segments of road and railway traffic (traffic classified by ranges of tonnage and distance), but the results obtained will yield only a first approximation and may, at best, guide the choice of specific cases, which would become the subject of more detailed studies on transfers of traffic".

12. There are thus numerous difficulties involved in any elaborate cost analysis of rail and road operations, if such an analysis is to be attempted for determining the relative role of the two means of transport. We have come across some such studies made in foreign countries and it may be useful to mention here briefly the broad conclusions reached in these studies. We may refer, in this connection, to the report of the Australian Committee on Transport Economic Research (also referred to in para 2 above) which gives a comprehensive table based on studies of costs of operations for various types of vehicles with different combinations of mileages, wages and overheads and other factors such as different licence and permit fees, different nature of employment of vehicles, etc. The report indicates broadly the reasonable limits of operating costs for various categories of vehicles under various conditions of operation. Certain extracts from the table on costs (Table No. 8—Part I) are reproduced at Appendix 19 to give some idea of these limits. In the opinion of the Australian Committee, it is of little value to indicate merely the average cost per ton mile for various classes of vehicles under average mileage and costing circumstances. As regards the rail costs, the Committee worked out three sets of figures of costs to compare with the average cost of road transport. The first shows an estimate of average railway operating cost on all systems for all lines for the competitive freight traffics, the second shows the costs for these traffics on the heavily trafficked lines and the third shows the estimated average railway costs for all types of freight on heavily trafficked lines. The broad result of this study is that while at all distances of haul road transport is higher in terms of cost per ton mile than rail transport on the heavily trafficked lines, the same is not the case when all lines are taken into account. The Committee takes account of the transport and handling charges at each end of rail movement and shows by analysis that for haulage over a distance of 300 miles, terminal charges for a number of commodities form a comparatively small proportion of the total transport cost. The Committee observes that it is undoubted that "based on operating cost, railway transport is the more economical form of transport for most commodities over long distances". The broad conclusion of the Committee is as follows: "It is doubtful whether any expert examination of Australian land transport costs could go further than conclude that basic costs of operation, together with other economic considerations and transport attributes, indicate that these factors favour the use of rail transport as being the more economic and practicable over long distances, whilst for shorter distances the use of road transport is the more economic and practicable."

13. Elaborate costing techniques have been developed by the British Transport Commission. The broad conclusions of studies on freight costs issued by the Costing Department of the Commission were reproduced in the Annual Report of the Commission for the year 1951 as follows:—

> "In present circumstances the cost of rail transport is likely to be lower than the cost of road transport and *vice versa*, according to conditions as follows:—

Rail	*Road*
Direct route	Cross-country route
Heavy flows	Light flows
Long distance	Short distance
Direct rail access (*e. g.* siding connections)	No easy access to rail
Mechanised handling	Personal handling
Heavy bulk (train load)	Small bulk (up to lorry load)
Robust commodities	Fragile commodities.

14. No detailed cost studies are done at present by the Indian Railways. The present system of expenditure accounts on the Indian Railways is determined by the needs wholly of budgetary and general administrative control. The expenditure is booked under heads like maintenance, replacements, additions, staff, fuels, stores, etc., and this system of accounting does not lend itself to any scientific analysis of costs of haulage of any particular type of traffic hauled by the railways. Most of the expenses incurred in the traffic operations are treated as a whole and are not allocated between the various types of traffic. What we have on the railways are the figures of overall average cost of hauling a ton of goods per mile. These average figures have not much meaning for purposes of comparison of costs of specific types of traffic handled by the railways with corresponding costs of haulage by road transport.

15. On the basis of the figures of average cost of haulage per ton mile for all goods traffic, the Railway Board have attempted to make rough calculations of cost of haulage of coal after allowing for some of the peculiar features of coal haulage and then derived the average cost of haulage of all goods other than coal. The more important characteristics of coal transportation taken into account in these calculations which have a bearing on the transportation cost of coal are: (a) greater incidence of empty running, (b) heavier loadability per wagon, (c) movement in train loads with comparatively longer hauls and (d) less incidence of compensation claims payments as well as smaller handling

charges—of which factor (a) makes for higher costs while the other factors have the effect of lowering them.

The following are the figures which indicate the results of these calculations:—

(Naye paise per ton mile)

	Broad Guage	Metre Guage
A. Overall average cost* of haulage per ton mile of all goods	4·48	8·46
B. Average cost* of haulage of coal as estimated	3·85	5·70
C. Average cost* of haulage of other goods, as derived on the same basis . .	5·28	9·18

*Including interest at 3½ per cent only.

According to these calculations, the average cost of haulage of coal on broad gauge system is as low as 3·85 naye paise per ton mile while the highest figure for haulage of goods other than coal on metre gauge is 9·18 naye paise per ton mile. These calculations are admitted to be very rough in character; for, under the existing system of accounting on the railways, it would be extremely difficult to make any precise allowance for the numerous factors peculiar to haulage of coal and other commodities. The Railway Board were requested by the Committee to make an attempt to work out the actual cost of haulage in respect at least of coal and iron ore on selected sections. The Board, however, has informed the Committee that under the existing system of accounts and allocation of expenditure, it is not possible for them to work out the actual cost of haulage of specified commodities on selected routes.

16. In regard to road transport, the Committee has made an attempt to have an *ad hoc* study made of the costs of operation of a few transport undertakings in the country. The study has been done with the help of the Chief Cost Accounts Officer of the Ministry of Finance. For the purpose of this study a few vehicles were selected belonging to three different undertakings. Care was taken to see that these vehicles were in different age groups and had different makes and were operating on scheduled routes. The figures of costs were computed from the actual records kept by the undertakings concerned in respect of these vehicles for a period of one year. In the table below we give the highest and the lowest cost per vehicle mile and per ton mile for the three firms which are designated as A, B and C.

(In naye paise)

	A		B		C	
	Highest	Lowest	Highest	Lowest	Highest	Lowest
(i) Cost* per ton-mile . .	18·5	12·3	17·9	14·8	47·6	21·0
(ii) Cost* per vehicle mile . .	105·4	73·6	78·7	57·6	87·1	65·8

It will be seen that there are wide variations in the figures of costs of operation for the three undertakings. The cost per vehicle mile varies from 57·6 naye paise to 105·4 naye paise, and that per ton mile from 12·3 naye paise to 47·6 naye paise. The variation in the cost per ton mile is larger than that in the cost per vehicle mile, owing to the great difference in the authorised load and the load factor achieved on different vehicles. The highest cost is in respect of a vehicle performing parcel service—the authorised load of the vehicle is 112 maunds (or 4 tons) and the average load factor obtained on it 60 per cent. The lowest cost is for a vehicle operating on a route 271 miles long with the authorised load of 220 maunds (or 8 tons) and with a load factor of about 90 per cent. These results pertaining as they do to only a few vehicles of just three undertakings, could not be expected to indicate fully the range of variation that possibly could be obtained in the cost calculations.

17. According to the rough calculations presented above, the cost of haulage by the railways is significantly below the minimum cost of haulage by road transport. These calculations also indicate that the maximum cost of haulage by road might well be many times more than the cost of haulage by the railways. These broad observations, however, are subject to several limitations. As regards the figures of cost of haulage by road transport, one important point for consideration is how far these include the cost of maintaining the road or any return on the capital invested on the roads. We have taken note of the several studies done in the past in regard to incidence of taxation of road transport. The latest one is that by the National Council of Applied Economic Research entitled *'Contribution of Road Transport to the Public Exchequer'* (1960). The broad conclusion reached in this study is that the net contribution made by road transport industry in the form of taxes works out at 16.58 per cent on the capital invested in roads, considering the operational payments only and to 19·1 per cent considering all payments. By operational payments is understood to be the payments made by the industry in the course of its operations, while other payments are from the profits of the industry as, for instance, income tax etc. We do not propose to go into the merits of the figures presented by the National Council of Applied Economic Research. All that we

*The cost computations take account of the depreciation on capital (on the basis of seven years' life of vehicles), but no interest on capital is included in these figures. These include all taxes paid by the vehicles. Moreover, the computations relate to haulage from booking office on the one end to delivery office on the other and do not include costs of door to door delivery.

wish to say is that this study like other studies done on the subject in the past, does not provide an answer to the main question which needs to be considered in any comparison of the costs of haulage by railway and road transport; namely, whether and to what extent the cost of wear and tear caused to the roads by the operation of commercial vehicles and also their share of interest on the capital investment in the construction of roads are, in practice, met from the taxes which these vehicles pay to the Exchequer. This question does not easily lend itself to any scientific examination. In the first place, not all the taxes paid by road transport can be taken to represent the contribution of road transport to the cost of maintenance and construction of roads. In this connection, it may be relevant to quote the following from the report of the Australian Committee on Transport Economic Research*.

> "....because Governments have to raise substantial revenue to cover a vast range of activities, the motor vehicle field among others has been selected as a source of general revenue taxation over many years, and that present government policy requiring the collection of general revenue funds from motor vehicle owners must be accepted".

Secondly, an important basic question that needs to be studied is the extent of damage to roads caused by the use of various types of vehicles. We shall refer later in the Report to the studies being undertaken on the subject in the United States of America since the passage of the Highway Revenue Act of 1956 by the U.S. Congress.

18. As explained earlier in this chapter, the cost calculations which are important for any policy decisions regarding allocation of traffic between various modes of transport, have really to be based on the specific traffics in view which are to be transferred from one mode of transport to another and have to make allowance, among other things, for the degree of saturation reached in regard to the utilization of capacity on these means of transport. These calculations, therefore, could be usefully made with reference to the specific cases of traffic over specific routes in view. The studies of average costs of haulage by road transport and railways such as we have cited above, are useful in so far as they indicate broadly the types of traffic for which railways or road transport may be more economical in general. The Committee wished to pursue further the studies of average costs by these two means of transport in the conditions obtaining in India but the existing system of accounting of the railways or, for that matter, of the road transport undertakings sets serious limitations to these studies being made very scientific

*Part I of the Report "*Road Transport Costs and Road Construction and Maintenance (September, 1956)*" para 97.

CHAPTER XI

MORE IMPORTANT METHODS OF CO-ORDINATION AND THEIR APPLICABILITY IN INDIA

In this chapter we endeavour to describe the various approaches to the problem of road-rail coordination and to consider their applicability under the conditions obtaining in India. As indicated in the earlier chapters, the basic approach to the problem of coordination in some of the free enterprise countries appears to be that competition should be the principal factor in determining the allocation of traffic between railways and road transport, but that conditions of competition should be equalised between the two means of transport. It is generally recognised that in the absence of equalisation of conditions of competition, the distribution of traffic between the two means of transport will be irrational. It is, in fact, suggested that one of the tasks for public authorities should be to establish equal conditions of competition. The following are the various essential ingredients of this approach:—

(a) Adjustments of freight rates of transport undertakings in accordance with the cost of haulage;

(b) Neutrality of the fiscal legislation between the two means of transport;

(c) Elimination of direct and indirect subsidies to the undertakings; and

(d) Reimbursement to undertakings of costs of unremunerative services and other public service obligations to the extent that these cannot be recovered through the pricing system.

We shall attempt to deal with these in some detail in the paragraphs to follow.

Adjustment of Freight Rates on the Basis of Costs

2. There have been notable developments in railway rate making in the United Kingdom and Canada. To quote from James C. Nelson's book *'Rail-Road Transportation and Public Policy'* (1959):

> "British railways since the early 1930's have been permitted to grant shippers agreed charges or contract rates. Until 1953, safeguards for shippers and competing agencies required publication of agreed charges, gave the agreed charges to small shippers offering the same type of traffic under similar circumstances, and allowed competing agencies to oppose an agreed charge on a showing of substantial reduction of competition. Under the British Transport Act, 1953, agreed charges no longer need be published if less than maximum rates, shippers are given regulatory protection only if proof can be given that no alternative forms of transport are available, and competing agencies may no longer oppose agreed rates since they are currently conceived as devices to meet rather than to reduce competition".

Under the "New Charges Scheme" introduced in Great Britain in July 1957, maximum charges are prescribed by the Transport Tribunal which are based upon cost (in terms of consignment weight and loadability) rather than on the value of merchandise. Within the maximum rates prescribed by the Tribunal under this Scheme, the regional managements have the freedom to negotiate charges with the individual traders. The British Railways are thus empowered to make agreed charges according to commercial considerations except in certain cases where only reasonable charges are required to be fixed in consultation with the Transport Tribunal. The British Railways are also absolved of equality and undue preference restrictions and of the obligation to publish these charges. The Committee has not been able to collect detailed information as to how the scheme of charging adopted by the British Railways has worked in practice and to what extent it has helped them in competing effectively with the road hauliers. One view is that the new classification of rates has not completely broken away from the old one which was based on the value of goods rather than on the cost of their carriage. The new classification, however, takes into account such elements of costs as loadability, regularity of traffic and the quantum of traffic, etc. to a much larger extent than before.

The following comment on the New Charges Scheme from a paper published by PEP (Political and Economic Planning) on December 19, 1958 is instructive:—

> "Although the new scheme and the lifting of restrictions allow the railways much more flexibility than they have ever had before, there are still serious limitations on their freedom of operation. For instance, changes in the *maximum* rates must still be authorised by the Transport Tribunal and considerable cuts were imposed on the B.T.C.'s first freight charges scheme. Further, maximum rates are now based on operating costs in 'adverse but not extreme' circumstances, so that although the railways have the power to charge a considerably higher rate to the traffics which they find more costly to carry they do not have the power to price out of the market those traffics which are carried in 'extreme' circumstances at a very high cost to the railways. Since they still have obligations as common carriers they cannot refuse to carry such traffics. Nor can they refuse to cater for the marginal requirements of firms who send the bulk of their traffic in their own 'C' licence vehicles. Many such firms use the railways as a standby service in special circumstances, but even under the new scheme they cannot be asked to pay the full cost of providing this service in extreme cases, though the railways now have the power to charge them rates well in excess of those which they are now paying. Thus, even under the new charges scheme, there will still be the need for some high cost traffics to be subsidised by others which the railways carry more cheaply. . . . The Transport Tribunal is still able to exert a considerable influence over the structure of the new charges scheme and its operation, and will have the power to intervene in cases where a trader is able to submit that he has not been charged "a reasonable rate"...."

According to the White Paper on "Reorganisation of the Nationalised Transport Undertakings" presented by the U.K. Minister of Transport to the British Parliament in December, 1960, "the present restrictions on the ability of the railways to adjust quickly and adequately their freight charges and passenger fares are, in the Government's view, no longer justified in the present competitive conditions". Accordingly railways are proposed to to be "freed from statutory controls over their charges, except for fares in London Passenger Transport Area where the London Transport Executive and British Railways have a virtual monopoly of public passenger transport", and "this change will substantially reduce the functions of the Transport Tribunal".

3. As practised in Canada, 'agreed charges' are mutually settled between railway and any shipper who will agree to ship a percentage of his product by rail. The rate quoted is based on the percentage of traffic that is to go by rail, with better rates for higher percentages. Railways must make a similar rate available to any other shipper of the same product who wishes to enter into a similar agreement. With some exceptions, agreed charges can be increased only by negotiation with the shippers. They must be compensatory. There has been a steady increase in the quotation of agreed charges in Canada in recent years. It is understood that the railways in Canada desire further extension of the practice of quotation of competitive rates without any restrictions from Government so that they can freely compete with road transport.

4. In the United States of America, the Interstate Commerce Commission exercises an effective control over fares and freights by road and rail. The Commission has been authorised to provide the maxima and minima rates and also the precise charge where a particular rate is found to be unlawful and unreasonable. The railway rates are based on the traditional principle of what the 'traffic would bear'. The Transportation Act of 1958 "directs the Interstate Commerce Commission to give the various modes of transportation greater freedom in establishing competitive rates." The Commission, however, "has the power to deny a proposed rate reduction, if in its judgement, the rate does not conform to the objectives of the National Transportation Policy declared in the Interstate Commerce Act. In other words, a proposed rate may be non-discriminatory among shippers and profitable to the carrier proposing it and yet denied if the Commission feels it would give the carriers 'undue advantages' or deems a rate to be 'unfair' or savouring of 'destructive competitive practice' ".*

In a Report entitled *'Federal Transportation Policy and Program'* submitted by the U.S. Department of Commerce to the President of the United States of America in March, 1960, the general approach suggested with a view to solving the problem of coordination in the field of transportation is somewhat similar to the one adopted in 1953 in the United Kingdom. The following quotation from the Report sums up the findings of this study:—

> "Two major approaches are possible. One is the Government-regulation philosophy with centralised thinking from Washing-

*Paper No. TRANS/WPCT/5 dated the 24th November, 1958 of ECAFE, Inland Transport and Communication Committee (pp . 6-7).

ton. It would require stricter regulation of present carriers, extension of regulation to the private and exempt area, and allocation of traffic by the Government rather than the shippers. It would be slower to adjust to rapid technological change. This we reject, believing that another alternative will work.

The other alternative is that in the long run the transportation system should be regulated by the same forces as the rest of the American free enterprise system: fair competition in price and service to the customers. Regulation in the long run should remain only where monopoly or the threat of destructive competition remains. This approach requires greater freedom for the carriers in setting their own rates and determining and developing their routes and services. The tighter regulation that was well adapted to protecting the public under the predominant monopoly of the railroads is no longer well suited to highly competitive transport networks. Common carrier rates of all kinds are rapidly becoming regulated by competition whether the common carriers like it or not—the competition of highly developed private and exempt carriers. And conditions in the transportation industries once a larger degree of market and cost information becomes available, promise workable results under substantially reduced regulation. Concurrent with this reduction should come reduced exemption from the antitrust laws applicable to the transportation industry in general".

The Report, however, adds that "At present, too little is known about the relative costs of transporting traffic via the several modes and routes typically available to shippers. A comprehensive study should be made to explore the cost-finding methods most likely to afford proper comparisons between the several forms of transport". While recommending the long range objective of restoring free competition between the various means of transport, under equalised conditions, the Report suggests a gradual approach to be adopted in this direction. According to the Report, "the timing of recommended action is of key importance..... Transportation has always been operated under a shifting balance between Government public—utility regulation and the normal economic freedom of other commercial enterprise." The Report adds "long-range goals should be approached step-by-step, with steady pressure in the right direction. Gradualism, with adequate time to adapt to change, is one major key to the approach recommended".

5. The fundamental question which arises in considering the adjustment of rates on the basis of costs* is how the overhead costs are to be accounted for and apportioned between the various services provided by any means of transport. There is, in the first place, the difficulty of putting railways and road transport at par in respect of overhead costs. The railways as exclusive owners and users of their track can include in their tariff both the direct expenditure on track as also an appropriate share of the fixed cost of laying the track. The position of roads, however, is different inasmuch as they are built and maintained in most countries as a public service and it is difficult to determine and to recover fully the cost of

*The term 'cost of haulage' used in the context of the suggestion to base freight charges on cost, obviously does not mean the bare cost, but also includes a reasonable amount of return on the capital.

uses by different types of users. Secondly, an important factor which complicates the task of allocating indirect costs to the various types of traffic moved by rail and road transport is the great difference in degree of capitalisation of the two means of transport*. As stated in Chapter III, on purely commercial grounds, the railways have to have a differential rating policy with a view to recovering the indirect costs including the interest on the fixed capital from the various categories of traffic carried by them. Road transport, even if it can be made to reimburse the full cost of uses of road, because of the comparatively smaller incidence of overhead costs, will not need to have the same type of differential rating structure as the railways. The railways will thus be placed at a disadvantage in competition with road transport in respect of some of their services because of the higher incidence of indirect costs. To the extent that the railways and other transport undertakings acting as strictly commercial undertakings are compelled to have differential charges on different services provided by them, the charges in the case of every service will not reflect the cost of providing that service and will, therefore, not be a correct measure of the inherent advantages or disadvantages of these undertakings for providing the service in question.

6. The practicability of the suggestion to treat railways as a commercial undertaking and to enable them to levy charges based on costs, depending upon their competitive position *vis-a-vis* road transport under the conditions obtaining in India has to be considered with due regard to the peculiar circumstances of this country.

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*J.R. Sargent in his book '*British Transport Policy*' while opposing the method of railways realising indirect costs through indiscriminate charges has suggested that "the most workable form of common policy for road and rail is one which aims at even distribution (per mile run) of the indirect cost of each agent over all its services". According to Sargent, therefore, "the railways should be instructed to cover their indirect cost by fixing their charges for every service so that it exceeds the direct cost of the service by a uniform amount". ..As a necessary ingredient of his scheme, Sargent suggests that to defray the indirect cost of road transport all road users should be charged a uniform tax per ton-mile and uniform tax per passenger mile and the present registration duty on motor vehicles should be abolished, unless there was a convincing case that differential taxation on different classes of vehicles was necessary on the grounds that some wear out the roads more quickly than the other. Sargent, of course, is himself doubtful about the possibility of this scheme being put in practice because of the powerful public demand for continuance of unremunerative services, for which " the public will frequently refuse to allow the charges..... even to cover direct costs". Apart from the practical possibility of adjusting rates in this manner, there are some theoretical objections to this which merit consideration. J. L. Carr in an article entitled "*The case for Discriminatory Rail Charges*" published in the *Journal of Institute of Transport, London (1958)* has commented lucidly on Sargent's scheme. The main points made by Carr are : Firstly, road transport undertakings will escape fuel tax if they reduce vehicle mileage, but the railways are not in a position to escape their indirect costs unless the route mileage is closed. Secondly, the averaging of indirect rail costs will lead to cross subsidisation of some rail services by others on a scale considerably greater than that on which fuel tax makes for cross subsidisation between road services. The railways clearly will be placed at a disadvantage in competition with road transport in respect of some of their services because of the higher incidence of a uniform indirect costs surcharge. Carr in his article has supported discrimination in freight rates particularly when discrimination is subjected to double limitation imposed by road competition and publicly regulated maximum charges. According to Carr, discrimination will enable the railways to compete effectively for traffic which they can carry cheaply and to recover indirect costs not attributable to particular services from traffic for which demand is less elastic. The author adds "Moreover, while some unremunerative lines have to be kept in being, discrimination offers a means both of financing their deficits without raising charges while demand is elastic and of minimising these deficits by extracting the maximum revenue from traffic carried on the unprofitable lines."

The resources of basic commodities like coal in India are concentrated in certain regions only and this necessitates movements of these commodities over long distances. Thus, the average lead of coal traffic on the Indian Railways is about 422 miles and about 25 per cent of the total coal hauled by the railways moves beyond a distance of 500 miles. The share of coal in the total rail traffic in India is as high as 38 per cent. The basic importance of coal in the economy of the country will be realised from the fact that while in India coal accounts for 79 per cent of the total energy supply, the corresponding percentage of energy supply from coal in United States of America is only 28·8. It has been stated earlier that the rates of coal almost from the very beginning have been fixed in a manner so as to keep the burden of freight on coal over the long distances within reasonable limits. The freight rates on coal thus have been allowed to taper off with the increase in distance of haulage. Any adjustment in freight rates on coal so as to make these rates correspond to cost would not permit of reduction in rates with increase in the distance of haulage to the extent that this is done under the present system of freight rates on coal. As explained in a subsequent chapter, the average lead of rail movement of coal may be reduced in the long run on account of the increased production of coal in regions other than Bengal and Bihar. Also, the increased use of alternative forms of fuel, e.g., oil and fuel gas and the establishment of coal washeries to wash coal, are likely to influence considerably the importance of coal as a source of energy supply and its capacity to bear heavier freight rate. However, the effect of these developments in the next 5 to 10 years could not be expected to be very significant. In addition to coal, there are several low-rated commodities which are moved over long distances and at comparatively very low rates. The notable examples are: mineral ores, limestone, gypsum, manures (organic and chemical), foodgrains, stone marble, cement, etc., etc. Having regard to the long leads of haulage in coal and other basic commodities, the imposition of rates on the basis of costs is bound to result in considerable dislocation of the industrial cost structure in different regions of the country. A detailed study of the implications of any such adjustment in rates will require to be made having regard to the peculiar circumstances of each region. This will entail collection of elaborate factual data. It will be appreciated that prices of these basic commodities have a major influence on costs and prices in general and industrial costs in particular. It is important, therefore, to know precisely the incidence of the railway freight rates in the costs of the more important industrial products in the country.

7. As mentioned in the preceding chapter, no precise information is available about the cost of haulage of individual commodities by rail. All that we have is the average costs per ton mile of all freight traffic carried by the entire railway system. In the table below, we have

compared the figures of average costs of haulage, with the rates charged for various distances of haul in respect of a few low-rated commodities:—

(In Rupees)

Miles	Freight charges per ton						Average cost of haulage of a ton of goods (BG & MG together) of all commodities*
	Coal	Manures	Oil cakes	Bone-meal	Food-grains	Ores Common	
	Special Scale	Scale 2·5A	Scale 25·A	Scale 27·5A	Scale 30·A	Scale 32·5A	
100	6·87	5·99	6·55	7·35	7·89	8·71	6·00
300	13·69	12·52	13·38	15·24	16·60	17·97	18·00
500	16·86	17·97	19·87	21·78	23·95	25·86	30·00
750	20·44	23·41	26·13	23·58	31·30	33·75	45·00
1000	24·00	28·31	31·58	34·84	37·84	41·10	60·00
1500	30·00	37·02	41·10	45·19	49·54	53·62	90·00

We may, for the present, overlook the fact that adjustment of rates on the basis of the average costs will itself lead to reduction in the volume of traffic in these commodities and, therefore, will result in increases in the average cost of haulage of these commodities. Even without allowing for any such increases in the average costs, it will be noticed that for a haul of 750 miles, the freight rates will have to go up by 120 per cent in the case of coal, 92 per cent in the case of manures, 72 per cent in the case of oilcakes, 57 per cent in the case of bone-meal, 44 per cent in the case of foodgrains and 33 per cent in the case of ores common, over the rates obtaining under the present system. Increases of these dimensions will necessarily have far-reaching consequences on the economy.

8. As explained in the preceding chapter, the cost of haulage of coal could be assumed to be somewhat lower than the cost of haulage of other commodities and there are also considerable differences between the cost of haulage between broad gauge and metre gauge lines. In the above table we have worked on the basis of a uniform cost per ton mile for all commodities over the entire railway system. However, even if we take the cost of coal separately, the average cost for a distance of 750 miles would work out to Rs. 28·27 on broad gauge lines and Rs. 42·75

* These are rough figures and assume uniform proportionate increase in he cost, with an increase in the distance of haul. The cost of haulage is expected in actual practice to taper off to some extent with the distance of haul but in the absence of precise calculations, it is difficult to allow for this factor.

on metre gauge lines. The corresponding figures for a distance of 1,500 miles will be Rs. 57.75 and Rs. 85.50 respectively. Adjustment of freight rates on the basis of costs will, therefore, mean considerable increase in the present rates and, moreover, the rates may have to be higher on the metre gauge as compared with the broad gauge lines.

9. Similarly, the implications of any adjustment in the freight rates on high-rated commodities need to be clearly understood. If the railways have to reduce their rates on all commodities which are at present charged more than their cost of haulage so as to equate them with the average costs of haulage, it will involve, on a rough assessment, a loss of Rs. 40 crores per annum to the railways. This is on the basis of the existing volume of traffic in these commodities carried by the Indian Railways. The significance of any such step from the point of view of railway finances has to be considered with due regard to the recent trends in the railway finances and the obligations placed upon them in regard to payment of dividend to the General Exchequer and to contribute resources for the Plan. As brought out in Chapter IX, the future of railway finances seems to be difficult, due mainly to the impact of the five year plans on the pattern of railway traffic. In the Second Plan, the railways have relied on the General Exchequer to an appreciable extent for expenditure which should normally be met from the Railway Development Fund. In the last year of the Second Plan, the railways levied a flat surcharge of 5 per cent on freight rates (except on certain export commodities and railways' own stores including loco coal) in order to enable them to meet their financial obligations. This step makes the railways more vulnerable to competition from road transport in respect of high-rated commodities. While the short-term requirements of railway finances could possibly be met by such *ad hoc* increase in freight rates, it may be inevitable in the long run to make a change in the railway freight structure itself. If it is found that adjustment of a major character is required, this will raise very vital and complicated questions of policy.

Neutrality of Fiscal Legislation and Elimination of Subsidies

10. How far the fiscal legislation in any country can be made neutral between the two means of transport, namely, railways and road transport, and direct and indirect subsidies on these means of transport abolished, are questions which are difficult to answer. In several countries of the world, these questions have exercised the imagination of public authorities for quite some time. As already indicated in the preceding chapter, the studies made so far in India do not provide answer to the question whether and to what extent the taxes paid by the commercial vehicles could be said to repay the cost of wear and tear caused to the roads by these vehicles and their share of interest on the capital invested in the roads.

In USA, the Highway Revenue Act of 1956 established a formal connection between the taxes on motor fuels, along with a few other motor vehicle excise taxes, and highway expenditure. This Act, along with another Act passed in the same year, *i.e.*, the Federal Aid Highway Act, sets in motion research that "may eventually bring federal highway charging policies into closer accord with the economics of the entire transport

situation"*. Section 108 (k) of the Federal Highway Act of 1956 requires that the Secretary of Commerce expedite the road tests of the American Association of State Highway Officials and report to Congress, not later than January 3, 1961**, on the maximum desirable sizes and weights of vehicles and also on the effects of weight upon highway design and upon investment and use costs. According to Section 210 of the Highway Revenue Act, 1956, the U.S. Congress expects to be furnished

> ".....information on the basis of which it may determine what taxes should be imposed by United States, and in what amounts, in order to assure, insofar as practicable, an equitable distribution of the tax burden among the various classes of persons using the Federal-aid highways or otherwise deriving benefits from such highways".

Reimbursement to Transport Undertakings of the Cost of Unremunerative Services and other Public Service Obligations

11. For equalisation of conditions of competition between road transport and railways, it is necessary that either both means of transport should undertake similar public service obligations or the costs of these obligations should be reimbursed to the extent that these are placed upon either of these two means. From the results of the studies done in other countries such as the Committee has been able to obtain, it appears that neither of these alternatives could possibly provide a complete answer to the problem of equalisation of conditions of competition between road transport and railways. In Chapter VII we have explained how the question of imposing any public service obligations on road transport in India has to be considered with reference to the state of organisation of the industry. As regards the reimbursement to the undertakings of the cost of public service obligations, the note of the Secretariat of the U.N. Economic Commission for Europe, referred to in Chapter VII observes that the reimbursement cannot "provide a complete and universally effective solution; for the cost of some obligations is difficult or even impossible to assess; this is more especially true of the obligations affecting the general structure of goods tariffs". Attempts have been made in Great Britain to curtail the unremunerative services provided by the railways. The report on British Railways of the House of Commons Select Committee on Nationalised Industries (1960) which is referred to earlier in Chapter IV, makes the following observations in regard to the need to operate uneconomic branch lines by the British Railways:—

> "However, the consideration of direct profitability is not the only one which applies in this case. Because of the cost of the roads, and of the congestion on them, the national interest may require railway services which do not in fact directly pay for themselves, but which may cost the nation less than the alternatives".
>
> ".....A service may be justified on other than economic grounds, because for example the less populous parts of Britain might

*James C. Nelson : "*Rail Road Transportation and Public Policy (1959)*", The Brookings Institution, Washington, D.C.

**Only an 'interim report' was submitted on January 3, 1961. It is understood that a further and final report will be submitted in the summer of 1961.

otherwise be left without a railway service. Account may, in other words, need to be taken of social considerations."

In regard to the provision of such services by the British Transport Commission, the Committee observed as follows:—

"But if the Commission are to know which of their services are justifiable on grounds of direct financial return, they must first have some form of accounts by which the profitability of Regions and services can be judged.

The consideration of profitability,..... should be left to the Commission. But if decisions are to be taken on grounds of the national economy or of social needs, then they must be taen by the minister, and submitted by him for the approval of Parliament.

Furthermore, if Parliament is to specify that certain services should be undertaken, despite the fact that the Commission cannot profitably undertake them, then the additional cost of them should be provided, in advance, out of public funds.

If subsidies of this kind are to be paid to the Commission, then they should be paid for specific purposes, and they should be paid openly. They should not be disguised as, for instance, a payment of the track costs (which are an integral part of railway operations), nor as the writing-off of the burden of interest, and they should not be hidden away in the Commission's accounts".

The British White Paper of December, 1960, referred to in paragraph 2 above, has the following brief comment which may be of interest in this connection:

"A railway system of the right size is an essential element in our transport network and will remain so for as long as can be foreseen. The development of other forms of transport and new techniques have faced British Railways, like the railways in other countries, with problems of competition and adaptation to modern circumstances and public demand. .....The practical test for the railways, as for other transport is how far the users are prepared to pay economic prices for the services provided. Broadly, this will in the end settle the size and pattern of the railway system. It is already clear that the system must be made more compact ....."

The British Government, however, has deferred consideration of the recommendation on uneconomic services of the Select Committee on Nationalised Industries. According to the White Paper:—

"The Select Committee on Nationalised Industries (in paragraphs 421 to 427 of their Report) suggested that uneconomic services which the railways were required to provide on grounds of the national interest or of social needs should be met by specific grant from public funds. This question also affects other nationalised undertakings, and the Government will consider it in that general context and in the light of the Select Committee's comments. For the time being, railway

losses on any such services will in practice be covered by the contributions proposed from public funds".

12. In Chapter III, we have described in detail the various obligations placed on the Indian Railways. It will be a matter for careful consideration whether it is possible to make an assessment of the financial burden placed on the railways on account of these obligations and whether Government can undertake to reimburse the cost of these obligations to the railways in the near future. Moreover, if the railways are to be treated as a purely commercial undertaking, an important question to consider will be whether they can adopt strictly economic and commercial criteria while opening up new lines and whether and to what extent Government should directly subsidise the railway lines which are unremunerative and have to be opened or maintained by the railways on considerations other than commercial.

Integration of Transport Services

13. In the above paragraphs, we have discussed the implications of the approach which is being considered in some of the free enterprise countries towards the problem of road-rail co-ordination, namely, the approach of competition being used as the principal force in determining the allocation of traffic between road transport and railways. Diametrically opposed to this is the idea that the various means of transport should be integrated with a view to achieving coordinated operations. This is the approach adopted in countries with planned economies. Development of various means of transport in these countries forms an integrated part of the national plans. The tariff policies in a planned economy are formulated in a manner so as to enable each individual undertaking to maintain certain social tariff rates and generally to adjust the rates in such a way that in any given transport operation, the form of transport for which the economic cost is lower also has the lower tariff rate. Transport for hire or reward in these countries is almost entirely in the hands of State Undertakings and the public authorities are free to adopt differential rates not only on the railways, but also in the case of roads and other means of transport. Direct measures for distributing traffic between these means of transport are often applied in these countries to obtain the most economical allocation. We have not been able to undertake a detailed study of the transportation policies in fully planned economies partly for lack of material and partly in the belief that these policies may not be applicable, at any rate immediately, in an economy like ours which depends to a significant extent on private ownership of means of production. It will be interesting, however, to refer in some detail to the experiments in integration done in some of the free enterprise countries.

14. In 1947, the British Government passed a Transport Act which sought to bring about integration of the means of transport under a single and national ownership. The British Transport Commission set up as a public authority under the Act was to provide efficient, adequate and integrated system of public inland transport, both for passengers and goods. The Commission was to arrange for the gradual acquisition of privately owned firms providing long distance road haulage. The integrated system of transportation was given a trial in U.K. from 1947 to 1953 when the Conservative Government decided to abandon this policy. Under the Transport Act of 1953, the long distance road transport was

denationalised and the British Transport Commission was required to dispose of its existing road haulage undertakings. However, denationalisation of road haulage was brought to an end in 1956 when under the Transport (Disposal of Road Haulage Property) Act, the British Transport Commission was enabled to retain a nucleus of nationlised long distance road haulage for operation on trunk routes. These services were retained by the Commission not from the point of view of securing road-rail coordination* but because the Commission could not find private operators who would be prepared to take over these services without breaking them into very small units. The British Road Services had established a good organisation for long distance transport and it was considered wasteful and against the interest of the country to break up the organisation.

The British Road Services (Nationalised) have to compete with the private road hauliers and have, therefore, to quote competitive rates. These rates at times are keenly competitive to the rates quoted by the British Railways. Where necessary, however, goods are carried for part of the distance by the British Railways and for the rest by the British Road Services. The two thus provide integrated services.

15. Apart from U.K. no other free enterprise country has seriously attempted to integrate the rail and road services. In Canada, the railways are allowed to engage in trucking, water and air transportation and the Canadian Pacific Railway has come to acquire Canada's largest fleet of trucks for hire and is a big operator in the ocean and in the air. The Canadian Pacific Railway, in fact, is described as "the world's most complete transportation system". The Canadian National Railway is also moving in a similar direction and has established coordinated railway, highway and piggy-back services. However, the licensing of trucks in Canada is subject to provincial control and, although there are no serious restrictions on the rights of the railways to buy existing trucking companies, there may be difficulties in the railways acquiring the operations of new routes under licences granted by the provincial Governments.

In West Germany, the railways have not yet gone in for road freight services on a large scale, though they possess a number of lorries used for variety of purposes including a limited amount of long distance work. The total number of licences issued to long distance road hauliers has been limited by an Act of 1952, and the railways are entitled to hold 3.5 per cent of the long distance licences in operation, but in point of fact have not taken up this proportion fully. The railways provide passenger services by road where branch lines have been closed.

16. In India, as mentioned earlier, as far back as 1943, the Technical Sub-Committee of the Subject Committee on Transport set up by the Department of War Transport, recommended that, in so far as passenger road transport services in this country were concerned, the railways should

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*William A. Robson in his book *'Nationalised Industry and Public Ownership (1960)'* has observed as follows :

> "In point of fact, the British Transport Commission carried out very little coordination of real importance between road and rail during the six years prior to the passing of the Transport Act, 1953....."

develop closer cooperation and ultimately acquire a commanding interest. The Committee also recommended that within the frame-work of the Constitution, adjustments should be made so as to give the Provinces an interest in railways and the Centre an adequate voice in road transport. The Committee was of the view that the necessary adjustments had to be found in the direction of a consolidated Central Transport Budget. The policy recommended by the Committee with regard to the railways' participation in passenger road services was finally embodied in the Road Transport Corporation Act, 1950, and is discussed in detail in the next chapter. Goods transport in regard to which the competition between rail and road transport is likely to grow in future is at present almost entirely in the hands of private operators. The Planning Commission, in 1954, recommended that programmes for nationalisation of goods transport be postponed until the end of the Second Five Year Plan *i.e.* the end of 1960-61 but later the moratorium on nationalisation of goods transport was extended to the end of the Third Five Year Plan. The State Governments, on the whole, have not shown any keen interest in nationalisation of goods transport. The Chief Minister of a State, in the course of an informal talk, expressed his readiness to consider the possibility of the railways taking over all long distance road transport. Another suggestion which has come up for consideration in the Committee in this context, is that long distance goods transport, particularly on inter-State routes, should be nationalised and taken over by a corporation in which the State Governments, railways and private operators participate. It has been suggested that the railways should have a substantial share in this corporation say, about 35 per cent or more, and that the corporation should be required to have a reasonable rate structure so that it could not under-cut the railways. It is claimed that, under this arrangement, unhealthy competition will be prevented and at the same time the railways would be assured a share in the profits of the corporation which would compensate them for loss of traffic in any region of the country. There are several aspects of the proposal which need to be carefully studied. It will, for instance, have to be considered whether there should be one such corporation to operate road transport services all over the country or there may be several such corporations. Then again, what should be the extent of participation of the State Governments and the private operators in the corporation and how the share allocated to the State Governments should be distributed among different States. Another important question to consider is how the proposed corporation would function *vis-a-vis* private operators who will still be operating the comparatively short distance routes or, say, intra-State routes in case the operations of the corporation are confined to inter-State routes only.

Co-ordination through Suitable Organisation and Regulation of Road Transport

17. The need for appropriate regulation and organisation of transport undertakings with a view to coordinating their operations is hardly disputed in any of the studies on the problem of coordination which have come to the hands of the Committee. Opinions, however, differ as to the extent and form of regulation. The regulation of road transport to protect the interests of the nationalised railways seems to be almost a univer-

sal practice*. Even in countries where railways have not been nationalised as, for instance, USA and partly Canada, motor transport is sought to be regulated through governmental control measures, though these do not go so far as in some of the European countries, where the railways are nationalised. The regulation of motor transport industry which is the third alternative solution to the problem of coordination, can take various forms, of which the most important are the following:

(a) Regulation of rates and fares,

(b) Regulation of entry into the industry through appropriate authorisation or licensing by the State, and

(c) Restrictions on the operation of goods vehicles beyond certain distances or restrictions on the types of services to be provided etc., etc

Indirect regulatory measures like taxation have also been adopted in certain countries in order to encourage or discourage certain types of operation. In several countries the tendency is to combine these measures with a view to regulating competition between railways and road transport undertakings or competition within the road transport industry itself.

18. The Committee has been trying to collect material so as to be able to study in detail the experience of some of the industrially advanced countries in securing coordination between different means of transport, particularly railways and road transport, by suitable regulatory measures. A study of the experience of the countries which have nationalised railway systems may be particularly relevant to the conditions in India. The Committee has not been able to complete the study. The more important features of licensing policies applicable to road transport industry in some of these countries are summarised below:

United States of America

The Motor Carriers Act which was enacted as Part II of the Interstate Commerce Act 1935 provides the framework of Federal regulation of motor carriers and authorises the Interstate Commerce Commission to regulate road transport on interstate routes. The Act recognises three types of carriers, namely, (i) common carriers which carry for the general public for compensation; (2) contract carriers which carry for compensation, but limit their service to certain customers under special and individual contracts or agreements; and (3) private freight carriers which carry their own goods. As a condition of operation, the common carriers must secure

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*To quote from '*Economics of Transportation*' by Marvin L. Fair and Earnest W. Williams, Jr. (1950):

"It appears to be the almost universal practice to regulate other forms of transport in the interest and for the protection of nationalised railways. The pattern is unmistakable in such variant locales as France, Germany, Australia the Union of South Africa, and in the recent British nationalisation. There controls, particularly of motor transport, go much farther than has even been contemplated in this country (U.S.A.). It would appear that state railroads have found even more difficulty in meeting competition than have privately owned railroads.....Enforced coordination on a pattern which ascribes an extremely limited role to motor transport has usually followed." (Page 724)

from the Commission a "certificate of convenience and necessity" which is issued only if the proposed service "is or will be required by the present or future public convenience and necessity". The certificate, if issued, must *indicate the service to be rendered and the route or area to be covered.* The charges levied by the carriers are required to be just and reasonable and not to discriminate unjustly. The carrier is required to publish freight and rate schedules and the Interstate Commerce Commission is empowered to prescribe both maximum and minimum rates for common carriers although in practice the Commission has usually established only the minimum rates. To demonstrate 'public convenience and necessity' an applicant for common carrier authority must show that the present service is inadequate or has failed to meet the needs of the customers. The system of regulation envisaged in the Act, however, imposes no restraint on the number of vehicles operated by any haulier; the regulation being entirely in terms of the service rendered and the route or the area of operation and the charges levied. The certificate given to a common carrier authorises him to operate *over specific routes and only over those routes.* Terminal and intermittent pick-up towns are specified in the certificates. In the case of the contract carriers, a permit has to be obtained from the Commission and the permit must specify the business covered and such conditions as the Commission may deem it necessary to attach. The contract carriers do not have to publish their rates. However, they must establish and preserve minimum reasonable charges and their schedule of charges must be filed with the Commission and kept open for public inspection. The laws relating to discrimination do not apply to contract carriers and the amount a contract carrier charges from any given shipper can vary with the volume of traffic the shipper will offer and the regularity of the traffic, etc., etc. Private carriers are not subject to control. Private carriers, as also the carriers exempt from control under the so-called "grandfather clause" and the carriers engaged in the exempt transportation of freight such as agricultural commodities, fish and livestock etc., have been free from control and have posed the most serious problems of competition for the regulated carriers in U.S.A. The Transportation Act of 1958 puts a freeze on the expansion of the list of exempt commodities to halt future inroads by exempt carriers into the traffic carried by railroads and regulated motor carriers. The Act also attempts to eliminate what the Commission terms 'illegal private carriers' by defining a true private carrier as one "whose primary business is other than transportation".

The jurisdiction of the Interstate Commerce Commission in respect of motor vehicles is confined to inter-state commerce. The permission granted to a carrier by the Commission to operate in inter-state commerce does not carry with it the right to do an intra-state business and the State Governments have the exclusive right to regulate intra-state commerce by motor

carriers. The State laws differ very widely in scope and in specific details. But generally under the State regulations, common carriers on intra-state routes are required to obtain certificates of public necessity from the appropriate authority as a pre-requisite of operation and, in general, the authority of the State regulatory body over intra-state common carriers by highway is similar to that exercised by the Interstate Commerce Commission over railroads. It includes, in some States, the regulation of rates, fares and charges, the usual provisions with reference to the filing and publishing of tariffs and abiding by them; prohibition of discrimination, control over accounts etc. As regards contract carriers, the State Governments sought from the very beginning to regulate them in much the same way as the motor common carriers. The laws in regard to contract carriers provide *inter alia* for control over minimum rates etc., with a view to preventing such traffics from undercutting railroad rates. Only a few States have attempted regulation of private carriers and where such regulation has been attempted, it is usually limited to requiring a permit or restricting the hours of service of drivers etc., etc.

In view of the freedom enjoyed by the hauliers to extend vehicle fleets, the *prima facie* inference is that the regulation of public road haulage operations in the U.S.A. is not so severe. However, it seems in practice that the Interstate Commerce Commission has imposed narrow limitations on operations in certificates and permits and according to one view "definitions of authorised traffic were so narrow that virtually the only hope for a haulier to extend his operations lay in a growth in the authorised traffic. Subsequent extensions of operating authority were hard to acquire.....Authorised routes were often circuitous instead of direct, empty running was increased by restricting of back hauls and specifications of commodities*. The system of regulation in the U.S.A. seems to have encouraged amalgamation of small carriers into large carriers.

United Kingdom

The Road and Rail Traffic Act 1933 established a system of licensing for road haulage vehicles in the U.K. which is still in operation. The system is designed to restrict vehicle operations to approved needs and to eliminate wasteful competition. A licence has to be secured from the licensing anthority before a goods vehicle can be used on the road. There are three types of licences: 'A' licence is given for general public haulage and is valid for operation anywhere in the U.K.: 'B' licence carries several restrictions, for example, it may be given to a truck for being used only for a particular party or for particular type of goods or being run within limited distance or during particular parts of the year only; 'C' licence is given for the carriage by the traders solely of their own goods—

*"*Federal Regulation of Road Haulage in USA*" by A.A. Walters, *British Transport Review, August, 1957.*

this licence is granted on application as of right. The fundamental objective of the licensing system in the Act of 1933 in the U.K. was to provide no more transportation than was necessary, and it was for the applicant for licence to show that there was need for the service which they proposed to provide. In paragraph 14 above, we have described briefly the nationalisation and denationalisation of road haulage undertaken in the U.K. under the Acts of 1947 and 1953 respectively. According to the system of licensing adopted under the Act of 1953, it is not the applicant that has to prove the need for goods vehicles, but it is the objector or the objectors that have to prove that the proposed licence should not be granted. Another important change introduced by the Act was that the charges which were being made by the established operators and the charges which were to be made by the applicant should also be taken into account in deciding the grant of licences.

It will be seen that the British licensing system regulates the number of public haulage vehicles and has very little control over the kind of work on which they are subsequently engaged or over the rates which are charged. The system thus is quite different from the system of regulation in the U.S.A. which is entirely in respect of the work done and the charges levied.

West Germany

In West Germany the motor transport is regulated under the Road Haulage Act of 1952. Under the system of regulation adopted in that country a distinction is drawn between short and long distance goods transport, the short distance transport being confined to a radius of 50 kilometres from where a vehicle is stationed. For short distance commercial transport operations a formal registration is required together with some general provisions as to fitness of vehicles, etc., while no restrictions are imposed on short distance private transport on own account. For long distance haulage, licences are granted in respect of the vehicles for a period of not more than 8 years, but the total number of these licences is fixed by the Federal Government. Thirty per cent of all long distance licences are allowed to haul within a distance of 150 kilometres of the place where the vehicle is stationed and the remaining 70 per cent carry no distance restrictions and cover the carriage of goods to any place on German Federal territory. The long distance transport of goods by road is subject to fixed tariff rates which are almost the same as on the railways, except in the case of coal and ore for which railways have special rates. Under the Act of 1952, a Federal Institute known as B.A.G. was set up for regulating long distance goods transport. The Institute is in-charge of tariff control and the enforcement of other regulatory measures on road transport industry and depends for this purpose on what are known as freight control agencies. No new licences for long distance public goods transport by road are issued without the consent of this Institute.

France

By a Decree of the 14th November, 1949, the French Government sought to bring about close coordination between rail and road services in the metropolitan territory. In regard to goods transport, the Decree seeks to achieve coordination by (a) the general regulation of conditions of operation, (b) replacement of one means of transport by another *i.e.* replacement of railways by road etc., and (c) protection of rail services by suitable modification of road services. This Decree was, however, applied only in so far as it dealt with public road transport licensing and the reduction of railway services by closing light traffic lines. Transport of goods by public road services is divided into two zones (1) a long distance zone covering the whole metropolitan territory and (2) a short distance zone, one for each 'department' (*i.e.* district). All public transport services, with the exception of private transport or transport on own account, are subject to measures of coordination and are restricted by licence. All public transport operators are listed in a Department Register for the zone in which they have been authorised to operate, subject to the limitation of their carrying capacity. A certificate of registration is issued to the operator for all the vehicles he is permitted to operate within the limit of total tonnage authorised. Additional short and long distance rights can be granted to the hauliers by the Minister of Public Works and Transport.

Measures have also been considered in recent years to enforce coordination of freight rates between the railway and road transport undertakings in France. It is understood* that the French Government is planning to control freight rates of long-distance road transport with effect from July 1, 1961. The rates fixed are expected to reduce the cost of road transport in areas not served by rail or water, and increase it in cases where it is stated to be taking away traffic from the railways sometimes at a loss to itself.

Italy

The operation of public motor transport in Italy is subject to a "Concession", that is to say, an administrative provision recognising the effective necessity to establish the services taking into account the existing rail and road services. Besides, with a view to coordinating the rail and road transport, the Railway Administration has reached an agreement with the Association of Road Transport Concessionaires on a voluntary basis which provides, among other things, for the constitution of a Commission of high officers and representatives of the parties concerned presided over by the Minister of Transport or his representative. This Commission has the function of examining proposals for the establishment of a motor service or the alteration of an existing motor service which might have met with the opposition of the State Railways.

The Financial Times dated January 19, 1961.

The transport of goods by road, on behalf of third parties, is subject to regulations which limit its free operation by means of preliminary authorisation in respect of the numbers to be authorised. Thus, the licensing system safeguards the interest of not only the State Railways but also of the existing road transport companies. A policy of almost complete freedom is, however, adopted in respect of transport effected as a complement to an industrial or commercial activity, to satisfy the needs of the firms themselves.

In the interest of coordination, the State controls the rates charged by the transport services through the Ministry of Transport. A common rate is applied to the various services which is determined by taking into account the need for control of competition among themselves and between them and the State railways. The Italian Railways are authorised to run road transport services to replace or to supplement certain railway lines.

Australia

Under the Federal system of government in Australia the various States have sovereign rights in relation to matters of transport within their own borders. To prevent wasteful duplication of rail services, the State authorities carry out strict regulation and licensing of motor transport. The restrictions vary from State to State. In New South Wales, the commerical vehicles are required to obtain a licence which does not authorise the carriage of goods other than exempt goods beyond fifty miles, if that service competes with railways, unless the operator obtains a special permit on payment of a prescribed charge. In Victoria, all goods vehicles must be licensed, but vehicles which operate within a radius of 25 miles from a specified place are licensed "as of right". In Queensland, the licences generally stipulate that fares and freights for road services should not be less than the corresponding railway charges. In South Australia, licence has to be obtained for those goods vehicles which are engaged in permitted operations in 'declared' areas or on "declared" routes (*i.e.* routes competitive with rail) and carry goods beyond a radius of 10 miles from the General Post Office, Adelaide. In Western Australia, the Board granting licences can determine the conditions under which a service will be operated when granting a licence. There is no distinction between the private operators on own account ("ancillary" operators) and carriers for hire or reward. In Tasmania, commercial vehicles are licensed to run over a specified route. The State is divided into traffic areas. Each area is so defined that operations within that area do not constitute long-haul operations in competition with the railway services. However, a vehicle is authorised to operate on a route extending beyond one area on payment of a charge depending on the nature of the journey and degree of competition with the railways.

It would seem that the guiding consideration in the matter of regulating road transport, goods or passenger, is its impact on the corresponding service by rail and largely the States are keen on preserving the interests of the railways. Where, however, the road transport operations, in the opinion of the administering authority (the Board or the Commissioners), are supplementary or non-competitive in nature to the rail services they are easily licensed and allowed to expand their operations.

19. The above brief description of the licensing system in U.S.A., U.K., West Germany, France, Italy and Australia will indicate the broad features of regulation of road transport industry in these countries. There are wide variations in the system of regulation of road transport from country to country. Brig. A. E. M. Walter, in a paper entitled *'European Transport Policies'* read by him before the Scottish Section of the British Institute of Transport on February 16, 1960*, referred to the broad features of the licensing policies in European countries as under:—

"In all countries the volume of road transport is controlled through licensing but the way of granting licences varies. In some countries the total number of licences to be granted in any year is pre-determined by the central government and licences up to this limit are granted regionally. In cases where the licences are for vehicles (as opposed to vehicles of specific sizes), the size and axle loading of the vehicles has grown steadily and trailers have been attached so that a much greater volume of work is done by the same total number of licences. In other cases, the pre-determined total number of licences covers the sizes of the vehicles and there is thus a closer check of the volume of work which can be got out of the total park of vehicles".

"In other countries the number of vehicles of different sizes is decided regionally in accordance with general principles or conditions laid down at the centre. The system of control is thus more flexible and there is more attempt to balance local demand with local supply".

Special Problems in regard to Regulation of Transport Agencies in India

20. In Chapter VI we have described in detail the existing policy and practice with regard to the licensing of road transport industry in India. From what is stated there, it is quite clear that the existing position is unsatisfactory from the point of view of securing road-rail coordination. Apart from the question what should be the appropriate system of regulation of road transport in India with a nationalised railway system and with a developing economy, it needs to be considered how best any regulatory measures that may be considered appropriate in the overall interests of the country can be enforced in practice under our Federal Constitution. Two specific issues will require to be considered in detail in this connection: (a) the division of responsibility between the Centre and the States as regards regulation of road transport and (b) the need for and the form of any Central Organisation to be entrusted with the responsibility of coordinated development of all means of transport in the country. Both these issues are of basic importance. We referred in

*Journal of the Institute of Transport, September, 1960.

Chapter VI to the role of the Inter-State Transport Commission which has been constituted under the Motor Vehicles Act 1939, as amended in 1956, for the purpose of developing, coordinating and regulating the operation of road transport vehicles in respect of inter-State routes. The State Governments do not, in practice, consult the Inter-State Transport Commission before deciding the number of permits to be allowed on inter-State routes under reciprocal agreements. Moreover, the existing arrangement referred to in Chapter VI (paragraph 9) under which disputes have to be referred to the Zonal Councils is bound to lead to delays in the Commission issuing directions to the State Governments where such directions are considered necessary. This arrangement which is not stipulated under the law would indicate the peculiar constitutional difficulties involved in the problem of coordination between railways and road transport in so far as the rights of the parties concerned under the Constitution have to be respected in any regulatory measures which might be taken for the purpose.

21. The Inter-State Transport Commission, even if it can be an effective body, is concerned with regulation of motor transport only and that also in respect of inter-State routes only. The Ministry of Railways is responsible for the administration of the railways. The executive authority in regard to road transport being vested with the State Governments, the Ministry concerned with this subject at the Centre is responsible merely for broad policy matters relating to this mode of transport. As far as we have been able to find out, the division of responsibility in respect of road transport and railways as it obtains in India, is not to be found in any other country.

The Transport Development Council constituted in 1958, is expected to advise the Government of India on all matters relating to roads, road transport as well as inland water transport. The Council is also expected to advise on problems relating to coordination between different forms of transport that may be referred to it by the Government of India. The membership of the Council is restricted to Transport Ministers of the States and Lt. Governors/Chief Commissioners of the Union Territories. From the Centre, the Ministers of Commerce and Industry and Railways, Minister of State in the Ministry of Transport and Communications, Deputy Minister of Transport and Communications and Member incharge of Transport in the Planning Commission are its members. The Union Minister of Transport and Communications is the Chairman of the Council and the Transport Secretary to the Government of India acts as its Secretary. The Council is a high level body, but its role is of an advisory character. The Council is expected to meet at least once a year.

The Road and Inland Water Transport Advisory Committee which was also constituted in 1958 provides association of non-official interests on a regular basis and consists of 15 official members and 15 non-official members. Of the official members, nine belong to the Central Government and the remaining six are nominated from amongst the Transport Commissioners/Controllers of States by rotation. The Committee is expected to advise on all matters relating to roads, road transport and inland water transport, but not the railways. The meetings of the Committee are arranged about two months in advance of the meeting of the Transport Development Council so that the Council has the benefit of the results of the thinking given by the Committee to the problems placed for consideration before the Council. The Committee thus has only an advisory function to perform.

22. Under the present set-up, therefore, there is no agency at the Centre which has adequate responsibilities in regard to coordination of all means of transport in the country. Whether under the existing set-up it is possible to ensure day-to-day administration of a unified policy with regard to road-rail coordination or for that matter coordination between all means of transport, is a question that requires serious study. In several countries of the world, suitable organisations exist at the Centre for regulation and administration of transport agencies. The Committee has been endeavouring to study the constitution and functions of such organisations in other countries. If necessary, further detailed studies will be made of the experience of working of these organisations.

CHAPTER XII

ROAD-RAIL COORDINATION IN RESPECT OF PASSENGER TRAFFIC

The broad trends in regard to distribution of passenger traffic between railways and road transport over the period 1948-49 to 1960-61 have already been discussed in Chapter VIII (Paragraph 2). While the figures for railways pertain to the actual traffic carried by them, those for road transport represent rough estimates of traffic worked out on the basis of the total number of passenger buses in the country. These figures, however, indicate that the estimate of passenger-miles on road transport has shown a more than proportionate increase as compared with passenger-miles on the railways during the last decade. Passenger traffic, including other coaching traffic on the railway system in 1958-59, resulted in an overall loss of Rs. 10 crores. The net earnings on goods traffic amounted, on the other hand, to Rs. 28·0 crores. The passenger traffic on the broad gauge yielded a profit, the total net earnings during the year 1958-59 being of the order of Rs. 1.9 crores. The highest earnings in respect of passenger traffic on broad gauge during the last 5 years were attained in the year 1956-57 and were of the order of Rs. 8.14 crores. The year 1958-59 was particularly a bad year from the point of view of passenger earnings and the latest figures indicate that the year 1959-60 ended up with better results, the loss during the year being approximately Rs. 2·9 crores. The total passenger miles on the broad gauge had been increasing gradually over the last few years until 1958-59 when there was a slight set-back. The latest trend is again upwards.

On the metre gauge, the losses in respect of passenger traffic have had a tendency to increase significantly over the last few years. The loss in 1958-59 was Rs. 10.5 crores against Rs. 3.5 crores in 1956-57. On the narrow gauge, again, the total loss on passenger traffic in 1958-59 was Rs. 1.4 crores.

2. The Committee has not been able to get any detailed figures to show the extent of diversion of passenger traffic from rail to road and the types of traffic being lost by the railways on account of competition from road transport. The crucial question, of course, to consider is what categories of passenger traffic the railways, as a commercial undertaking, might profitably retain in the long run, considering the trends in the economics of passenger services operated by the railways in this country as also in the advanced countries of the world.

3. Almost all the State Governments have been anxious in the last few years to extend the sphere of nationalised road transport services. On account of lack of sufficient resources, however, the progress in the extension of these services has been slow. Nevertheless, there is a great demand from State Governments for large provisions being made for this purpose in the five year plans. It is roughly estimated that about 30 per cent of the total passenger services have already been covered by nationalised undertakings. The share of nationalised undertakings in

the passenger services is expected to increase further during the third plan period and it might reasonably be expected that the nationalised undertakings in the States, except in the few regions, may take over almost the entire field of passenger transportation in the next about 10 years. For this reason, we have not considered it necessary to examine in detail the problem of coordination between the passenger services provided by the private operators and the railways. We confine our observations in this chapter to the problems of coordination between the nationalised road transport undertakings and the railways.

4. A notable feature of the expansion programmes of some of the nationalised transport undertakings is the introduction of long distance bus services. Several State Government undertakings have introduced long distance services in recent years. The Committee has not been able to get data about these services, but are given to understand by the Railway Board that, in several cases, the long distance services provided by these undertakings have had a tendency to affect the railways adversely. A recent case in point is that of the long distance passenger services introduced by the Madras Government on several routes, *viz.*, Madras-Salem, Madras-Tiruchirapalli, Tiruchirapalli-Coimbatore, Tiruchirapalli-Tirunelveli and Madurai-Nagercoil. The Minister concerned made an announcement in the State Assembly on March 22, 1960 of the decision to introduce these services during 1960-61. The management of the Southern Railways, having come to know of this decision as a result of this announcement, made representations to the State Government against the introduction of the proposed services on the ground that adequate rail transport capacity existed on the routes in question. Notwithstanding the objection of the railways, however, the bus services were introduced on the routes by the State Government. According to Section 68 D of the Motor Vehicles Act, the State Government, after notification of a scheme regarding the operation of a service by the State Transport Undertaking, are required to give one month's time to the parties affected to file objections, and these objections have to be considered and an opportunity given to the objectors or their representatives to be heard, before any such scheme is finally approved. On the basis of the information supplied by the Southern Railway, it appears that the Madras Government launched on these schemes within a few days of their notification in the Gazette. The Madras Government were addressed for information on this point but this has not so far been received. The Southern Railway, as compared with the other railways, is more of a passenger-carrying railway and, on balance, it has been showing losses in its operations during the last few years. Thus for 1960-61, its losses are estimated at about Rs. 7 crores. The Railway Board apprehends that the financial position of the Southern Railway would worsen as a result of the State Government's programme to introduce long distance passenger road transport services.

5. Under the present system, the State or Regional Transport Authorities have to be relied upon for ensuring coordination between the services provided by the State Transport Undertakings and private operators, on the one hand, and between these undertakings and the railways, on the other. These Authorities should ordinarily be expected to determine the number of services provided by the State Undertakings, having regard to the requirements of traffic on the routes operated by these undertakings. This arrangement, however, is not found to be adequate to ensure coordination between the nationalised undertakings in the States

and the railways. It may be noted in this connection that in the case of Uttar Pradesh, exemption has been granted under a State Act to the nationalised transport services for obtaining permits in respect of the routes notified by the State Government. There was, however, recently a case of a Regional Transport Authority having permitted the U.P. Roadways to operate buses on routes which had not been notified, without obtaining permits and the following extract from the judgement of the Allahabad High Court in this case may be relevant in this connection:

> "The facts of this case reflect adversely not only on the working of the U.P. Roadways but also of the Regional Transport Officer, Kanpur.....What the Regional Transport Officer has done, in the present case is, to permit the General Manager of the Roadways, Kanpur Division, Kanpur, to flout the law and to ply the Roadways buses on routes, which had not been notified, without obtaining any permit. When a department of the State Government, namely, the Roadways, can disregard the law, how can another department of the same Government think of punishing the members of the public who commit a similar offence".

The learned Judge observed that he had made these observations, so that in future the Regional Transport Authority might act impartially and independently.

6. The Committee has given detailed thought to problems of co-ordination between railways and nationalised road transport undertakings in the States which at present cater largely for passenger services. The Committee, in fact, took up this question on a special request from the Planning Commission. In a letter sent to the Committee in May 1960, the Planning Commission informed the Committee that the Commission for some time had been pursuing with the State Governments the question of transforming their departmental road transport undertakings into corporations to be set up under the Road Transport Corporations Act 1950, in which the railways and, if possible, the private operators should participate. According to the letter, the principal reason underlying the policy decision of the Commission was "the need to ensure that the State Government undertakings which are likely to grow into large monopolies in future, do not come into unfettered competition with the Railways which are a Central Government monopoly; the corporation form of management ensured some safeguard against undue competition between them". The letter added that...."as the entire subject of road-rail coordination is now under review of your Committee, it will be an advantage if the Committee could examine the policy relating to the transformation of State transport undertakings into corporations and make recommendations to the Planning Commission". As the Commission was expecting to receive in the near future the proposals of the State Governments for the nationalised undertakings during the Third Plan, they desired to have an advance recommendation on the subject from the Committee.

7. The Committee has studied in some detail the genesis and historical development of the idea of the railways' participation in road transport undertakings. As mentioned earlier, the Technical Sub-Committee of the Subject Committee on Transport in 1943, in so far as the problem of coordination in respect of passenger services was concerned, recommended

the fusion of financial interests of railways and road transport services and favoured the formation of large bus companies in which the railways could participate with the ultimate object of acquiring a commanding interest in them. This question was later discussed at the seventh meeting of the Transport Advisory Council held in January, 1945 and while most of the States were in favour of the railways' participation in road transport, the idea that they should acquire a dominating position was not favoured. Subsequently, the White Paper of 1946 enunciated the policy of organising road transport services in the form of tripartite companies and recommended a share of 25 to 45 per cent. for the railways. The White Paper was discussed at the ninth meeting of the Transport Advisory Council in November, 1946, and all the then Provincial Governments accepted the policy of the railways' financial participation in road transport companies operating in the Provinces. Further, it was agreed that the policy of railways' financial participation in the road transport industry should also apply to the nationalised undertakings. The policy was eventually embodied in the Road Transport Corporations Act, 1948, which was replaced later by the Act of 1950. It is thus clear that the idea of the State Transport Undertakings being managed as corporations with the railways' participation was evolved after prolonged deliberations and with the concurrence of the then Provincial Governments.

8. In reviewing the policy at this stage, the Committee considered it desirable to ascertain from the Railway Board their experience of the results of association with such corporations as have been in operation for some time. At the Committee's request, the Railway Board consulted the Zonal Railway Administrations which are represented on the corporations and asked them to report on their experience of association with the corporations. The Railway Board after a study of the material supplied by the Zonal Railways have expressed themselves emphatically in favour of the idea of the railways' participation in road transport corporations. They are of the view that by being represented on the Board of Directors of the corporation, though having only a minority interest,* they are able to influence decisions of the corporations and thereby secure road-rail coordination in the regions concerned to a greater extent than would otherwise have been possible.

9. The Committee considered whether the objective of road-rail coordination could not be achieved through some alternative means, *i.e.*, by setting up Advisory Boards in the States with the railways represented on them. In this connection, the Railway Board have expressed the view, which is shared by the Committee, that there is a great deal of difference between the railways being represented on an Advisory Board and their being on the Board of Directors of a corporation. In the latter case, they would have a formal *locus standi* and their representative could deal with the other Directors on an equal footing.

*Under the Road Transport Corporations Act, 1950, the shares of the Central Government and the State Government concerned in the capital of the Corporations may be in such proporation as may be agreed to between the two. Corporations have been set up so far in the States of Andhra Pradesh, Bihar, Gujarat, Maharashtra and Punjab (for the former Pepsu region and the Kulu-Manali route only) and West Bengal (for Cooch-Behar area). The share of the Indian Railways in these Corporations varies from 20 to 33⅓ per cent. of the total. The road transport services in part of the Orissa State are operated by the Orissa Road Transport Company Limited, which is a tripartite company. The State Government own 79 per cent share of the company, the Railways 20 per cent and the private parties the remaining 1 per cent.

10. In the Committee's opinion, the most important consideration in favour of the corporation form of management is the need to achieve, by mutual agreement, coordination between two public undertakings namely, State road transport on the one hand and the railways on the other. The utility of the corporation lies mainly in the fact that this form of management provides a forum for the two public authorities to arrive at a mutual understanding and enables the railways to put forward their views effectively in an informal atmosphere.

11. Having regard to what is stated in the preceding paragraphs, the Committee supports the policy of corporations being constituted with the railways' participation for the management of nationalised road transport undertakings in the States.* The Committee, in fact, after thorough examination of the issues involved, is merely confirming the policy adopted by Government quite some years back. It will be relevant to note in this connection that at the meeting of the National Development Council held in April, 1959, Shri Raj Bahadur, Minister of State for Transport and Communications while initiating discussion on the subject of 'Management of State Road Transport Undertakings' had observed that "from the long run point of view, the Centre felt that it would not be proper to allow State Government road transport monopolies to offer unrestricted competition to the Railways which was a Central Government undertaking. The corporation form of State road transport management was further necessary for ensuring proper coordination between rail and road transport services". The Prime Minister had also at the meeting expressed himself emphatically in favour of the idea of departmental organisations being transformed into corporations "to manage the expanding commercial activities of the State".

12. The Committee would like to make it clear that it supports this policy simply from the point of view of securing coordination between the railways and the nationalised road transport undertakings of the State Governments and that it has not been influenced by considerations relating to the comparative efficiency of corporations *vis-a-vis* departmental undertakings. This may be a relevant consideration, but does not fall within the purview of the Committee.

13. The Committee is aware of the difficulty which the Government have had in the past in getting this policy implemented by some of the State Governments. It is understood that the main reason for some of the State Governments being disinclined to accept this policy is that corporations would be subject to income tax. It will, however, be appreciated that if some of the State Governments do not set up corporations and thus avoid payment of their share of income tax leviable on the road transport undertakings, they may be said to benefit themselves at the expense of the other State Governments who have set up corporations and pay income tax on their earnings, while sharing in the divisible pool of income tax. This point may well deserve to be examined by the Finance Commission so that any differentiation in the practical operation of the formula relating to sharing of the income tax proceeds by individual State Governments may be removed by necessary adjustments of their share of the pool.

*The Committee conveyed its recommendations on the subject to the Planning Commission in September, 1960, in advance of the Preliminary Report.

CHAPTER XIII

REQUIREMENTS IN REGARD TO THE FUTURE DEVELOPMENT OF RAILWAYS AND ROAD TRANSPORT

The objective of coordination is described in the Report of the Working Party on Coordination of Transport of the Economic Commission for Asia and the Far East (Eighth Session, January, 1959) as follows:—

> "To plan the development of the various modes of transport in such a manner as to afford the maximum satisfaction of the transport requirements of the national economy at the lowest cost in terms of the nation's real resources, preserving at the same time the elements of healthy competition and the inherent advantages of each mode".

Measures for coordinating the various means of transport have necessarily to be considered against the background of the overall transportation demand of the economy in future. In order to plan the optimum distribution of transportation requirements between various modes of transport it is necessary to forecast both the extent and the nature of these requirements. In this chapter we shall discuss the various considerations relating to the assessment of needs for future growth of railways and road transport in the conditions obtaining in India.

The Trends in Transportation Demand in India over the Period of the First Two Plans

2. Before we come to the long-term projections of transportation requirements in India, we may refer briefly to the trends in the transportation demand witnessed in the country under the first two five year plans. The Indian Railways which carry the bulk of goods and passenger traffic have been working under a measure of strain during the last one decade despite the considerable expansion that has taken place, thanks to the sizeable proportion of the total Plan outlay which was allocated for the development programmes of the railways both in the First and the Second Plans. The railway development programmes in the First Plan provided largely for rehabilitation of overaged assets. No provision was made for expansion of the railway facilities for passenger traffic and as regards goods traffic the programme provided only for a 10 per cent. increase over 5 years of the Plan. It was anticipated, however, that the execution of major development projects "will impose heavy additional demands on the transport system"*. The actual increase in the traffic during the 5 years of the Plan was 24·7 per cent, *i.e.*, from 91 million tons in 1950-51 to 114.1 million tons in 1955-56. The average lead of traffic on the railways gradually increased from 292 miles in 1950-51 to 317 miles in 1955-56 and the increase in ton miles on the railways over the 5 years was of the order of 35 per cent. That the

* *The First Five Year Plan*, 1952, Government of India, Planning Commission Page 466.

provision in the Plan was grossly inadequate for railway development programmes became apparent soon after the commencement of the Plan and more particularly in 1953-54. Numerous complaints were received during the year from various quarters about difficulties experienced by industry and trade in securing adequate railway transport for the carriage of raw materials and finished goods. Suggestions were made that road transport should be expanded so as to fill the gap between the demand for transport and the availability of railway wagons. The departmental Study Group set up in 1953-54 which is referred to in Chapter V came to the conclusion that the shortfall in terms of wagons required for meeting the current demands was roughly of the order of 10 per cent. of the actual average loadings over the entire railway system. This was on the assumption that the railways would continue to impose restrictions on bookings to several places which were served through limited junctions and transhipment points. In the event of removal of these restrictions, the demands were expected to go up much higher. Moreover, the additional provision of 10 per cent. did not provide for the busy period demands which were substantially in excess of those in the slack period. Taking into account these factors, the Study Group recommended a 31 per cent increase in the wagon holdings (*i.e.*, additional 48,000 wagons) and a corresponding increase in the number of locomotives on the railways. The provision for the railway programme in the Plan was augmented so as to enable the railways to acquire this additional stock. The Study Group also made several recommendations with a view to encouraging rapid expansion of road transport. As a result of the action taken by the Central and the State Governments to augment the railway rolling stock and to liberalise the licensing policies for road transport, the transport position in the country improved significantly towards the end of the plan period. It was not until the year 1957, however, that the outstanding indents of wagons with the railways receded to what might be treated as normal levels. The statement at Appendix 20 shows the number of outstanding registrations of indents at the end of the months of March, June, September and December each year from 1950 to 1960, and the average daily loadings of wagons during these months. It will be seen that the outstanding registrations touched the highest possible levels about the middle of 1955. On the broad gauge railways, these amounted during the month of June, 1955 to about 12·2 days' loadings while on the metre gauge railways, they were equivalent to about 21.9 days' loadings. From the second half of 1957, the level of outstanding registrations came down significantly.

3. In the Second Five Year Plan a large provision had to be set apart once again for rehabilitation of over-aged assets on the railways. However, the emphasis in the Second Plan shifted to the programmes required to augment line capacity on different sections of the railways and to procurement of additional rolling stock to meet the growing demand for rail transport arising from increased production in the agricultural and industrial sectors of the economy. Attempts were made to formulate the development programmes of railways in the Second Plan in line with the developments in the industrial field and in respect of important industries like iron and steel, coal and cement, the estimates of transport requirements were based on the anticipated targets of production and future pattern of movement having regard to the possible locations of additional output and the sources of supply of raw materials. The total originating traffic on the railways was estimated to increase from

120 million tons in 1955-56 to 181 million tons or 51 per cent. Of the total increase of 61 million tons during the 5 year period, coal, steel and its raw materials and cement are expected to account for an increase of 43 million tons *i.e.*, about 70 per cent of the total. The actual originating traffic on the railways in 1955-56 came to 114 million tons which was short of the anticipated figure for the year by 6 million tons. The revised estimate of traffic in 1960-61, after reappraisal of the Plan, was put at 162 million tons which was considerably below the original estimate of 181 million tons. The scaling down of the estimate was attributed mainly to the shortfall in the production of basic industries, *viz.*, coal, iron ore and cement. There will be a shortfall of about 7 million tons in output of coal, about 2.5 million tons in steel and pig iron for sale and about 1.7 million tons in cement. The actual traffic likely to be reached in 1960-61 is now estimated at 156 million tons. On account of the increase in the average lead of traffic, however, the volume of transportation in terms of ton miles would appear to be greater than was anticipated. The railways thus have recently been working under some strain. There have been complaints about shortage of wagons particularly in regard to movement of coal and iron ore and the outstanding registrations have shown an upward trend in 1960. This shortfall is described to be due, among other reasons, to the shortfall in the procurement of broad gauge wagons in the year 1959 which, in turn, is ascribed to the inadequate supply of steel to the railways. Thus whereas the total number of broad gauge wagons expected to be procured in the Second Five Year Plan was 84,476, the actual procurement in the first 4 years is estimated to be of the order of 58,494 which is about 69 per cent. of the target.

The Experience of 10 Years in Retrospect—the Relationship between Transport Requirements and Economic Growth

4. *Trends in Freight Traffic*: The table below shows the growth of the volume of freight traffic on the railways as also the number of motor vehicles (goods) over the period of the first two plans:—

Table 1

Trends in Traffic

Year	Railway tons originating.	Railway ton Miles	*No. of motor vehicles (goods)
	(In millions)		(In thousands)
1950-51 . .	91	26,980	81·9
1955-56 . .	114	36,434	119·0
1958-59 . .	135	46,709	145·0
1960-61 (Estimated)	156	53,700	160·0

*As explained in Chapter VIII, only very rough estimates of volume of traffic carried by road transport could be formulated since the available data were very sketchy.

The freight traffic in terms of ton miles during the period will have doubled. The number of goods vehicles on the road also will have nearly doubled during the period. The increase in the volume of traffic carried by road transport will be substantially more than this because there has been a significant increase in the capacity of vehicles over the period; the proportion of heavier type of diesel vehicles to the total number of vehicles having increased substantially in recent years. In fact, the increase in the number of motor vehicles could have been greater if the targets set out for the automobile industry in the Second Plan would have been achieved. As against the target of 40,000 vehicles set out in the Second Five Year Plan, the actual production in 1960-61 is expected to be of the order of 30,000. Insufficient supply of new vehicles particularly during the last few years which is attributed to shortage of foreign exchange, is the principal factor which has stood in the way of more rapid expansion of road transport during the period.

5. In the table below are cited figures showing indices of freight traffic carried by the railways side by side with the indices of agricultural, mining and industrial production and of national income as a whole in the country over the period from 1950-51 *i.e.,* the year just preceding the First Plan to 1958-59, *i.e.,* the last year for which the figures are available.

Table 2

Trends in freight traffic and agricultural, industrial, mining production and national income

Index Numbers
(Base 1950-51 = 100)

Year	Railway Freight Traffic		National Income @	Industrial Production @@	Mining and Quarrying Production @@	Agricultural Production*
	Tons originating	Ton Miles				
1950-51 . .	100·0	100·0	100·0	100·0	100·0	95·6
1951-52 . .	105·8	107·4	102·8	103·6	105·6	97·5
1952-53 . .	106·3	107·2	106·9	105·6	104·2	102·0
1953-54 . .	107·3	109·5	113·3	112·9	107·2	114·3
1954-55 . .	115·6	118·9	116·2	122·1	111·7	117·0
1955-56 . .	124·6	135·0	118·4	132·1	115·0	116·9
1956-57 . .	135·6	148·9	124·3	137·3	126·8	123·6
1957-58 . .	144·7	169·1	123·1	139·7	133·7	114·6
1958-59 . .	147·3	173·1	132·1	151·1	142·0	131·0

@ At 1948-49 prices.

@@ The figures are for calendar years; the base year 1951 = 100.

* The figures are for crop year ending June; the base year 1949-50 = 100.

As is evident from the footnotes under the table, the figures in all the columns are not strictly comparable but could be used to indicate general trends over the entire period under study. It will be seen that the railway traffic increased by 73 per cent over the period as compared with 32 per cent increase in national income, 51 per cent increase in industrial production, 42 per cent increase in mining and quarrying production, and 31 per cent increase in agricultural production. In other words, the increase in railway ton miles was, on the whole, about 43 per cent more than the increase in industrial production, 75 per cent more than that in mining production, 136 per cent more than that in agricultural production and about 128 per cent more than the increase in the national income as a whole during the period*.

6. *Trends in Passenger Traffic*: In regard to passenger traffic, the figures in the following table indicate the trends over the period. The table also shows the trends in growth of population and national income as also in the number of industrial workers (in factories and mines only).

Table 3

Year	Rail Traffic		Number of Passenger Buses	Population	Number of industrial workers	National Income at 1948-49 prices
	Passengers originating	Passenger miles				
	(Index Numbers: Base 1950-51 = 100)					
1950-51 . .	100·0	100·0	100·0	100·0	100·0	100·0
1951-52 . .	94·1	94·8	100·7	101·5	103·7	102·8
1952-53 . .	92·6	89·7	112·5	103·2	105·2	106·9
1953-54 . .	93·1	90·1	114·2	104·9	104·7	113·3
1954-55 . .	96·3	92·7	119·1	106·7	106·0	116·2
1955-56 . .	99·3	98·8	135·0	108·5	110·1	118·4
1956-57 . .	105·9	101·3	129·3	110·4	115·8	124·3
1957-58 . .	109·8	104·1	130·8	112·5	134·9	123·1
1958-59 . .	110·7	102·2	133·7	114·6	133·2	132·1

* Professor James H. Blackman in a paper included in the volume '*Soviet Economic Growth*' edited by Abram Bergson (Row, Peterson & Co., New York 1953), refers to the experience of U. S. A. and U. S. S. R. as follows:—

"For the thirty year period in the United States ending 1920, the composite freight turnover of all carriers grew about five-fold, whereas total commodity output increased less than three-fold. This means, on the average, that freight traffic volume grew at over 1·5 times the rate of commodity production. Roughly comparable figures for the U. S. S. R. for the period 1928-50 reflect similar disparities. The smallest gain of freight traffic in each country took place in relation to industrial or manufacturing production; the greatest gain in relation to agricultural output."

It will be seen that the passenger traffic on the railways had a tendency to decline between the years 1950-51 and 1952-53. Since then, however, there has been a consistent increase in the traffic. It is difficult to bring out the exact statistical relationship between the volume of passenger traffic carried by the railways and the various other factors listed in the above table. Broadly, it seems that the increase in the aggregate passenger traffic on the railways since 1952-53 has been in keeping with the growth of national income. The suburban traffic, however, has expanded much faster than the inter-city traffic. It will be interesting to note that between the years 1950-51 and 1958-59, the suburban traffic on the railways in terms of passenger miles increased by about 54 per cent as against about 32 per cent increase in the national income and 33 per cent increase in the number of industrial workers during the period.

Estimates of Traffic Requirements in the Third Five Year Plan

7. The development programmes for railways presented in the Draft Outline of the Third Five Year Plan provide for an estimated originating traffic of 235 million tons in 1965-66 *i.e.*, the last year of the Third Five Year Plan. This figure, however, does not include the traffic requirements of the Bokaro Steel Plant which is included in the Plan. The total estimate of traffic including the requirements of the Bokaro Steel Plant is 243.5 million tons. The broad details of the estimated traffic are as follows:—

Table 4

(Figures in million tons)

Commodity	1955-56 Actual Traffic	1960-61 As anticipated in the Second Plan.	1965-66 As anticipated in Draft Outline
(a) Indigenous steel including raw materials other than coal.	6	16	36
(b) Coal (*i*) for Steel plants	3	9	18·5
(*ii*) Other	32	42	69·0
(c) Cement	4	7	12
(d) All other commodities; or traffic in Misc. goods	69	88	108
Total	114	162	243·5

During the period of the Third Five Year Plan the traffic is expected to increase by about 81·5 million tons or by about 50 per cent. The increase in traffic relating to steel and raw materials, coal and cement is estimated at about 61·5 million tons which is about 75 per cent of the total increase in traffic expected on the railways during the Third Plan period while the balance of 25 per cent is on account of other goods.

8. In regard to the three basic industries, namely, iron and steel, coal and cement, calculations of transport requirements have been made on the basis of estimated production and the possible locations of production units. In regard to steel, in working out the targets of traffic, the Railway Board have assumed that the total quantity moved would be equivalent to the total output. However, according to past experience the total quantity moved is much more than the total production and imports because of double and treble movements involved as, for instance, from the steel plants to the stockists and to the fabricators and then to the traders and consuming centres etc. The estimate of rail traffic in respect of coal has been worked out after allowing for the consumption at collieries at the rate of 5 per cent of the total output and the movement by road to the extent of 3 million tons by the last year of the Third Plan as compared with a little over 2 million tons moving by road at present. As regards miscellaneous traffic, the Railway Board have made an assessment of the anticipated traffic on the basis of the past trends in production and rail movements of several important commodities like cotton raw, textiles, jute manufacturers, salt, paper, sugar, iron ore, foodgrains etc. The increase in this traffic works out to about 6.0 per cent per annum in the Third Plan as compared with the actual rate of increase of about 5 per cent per annum during the first three years of the Second Plan. It has been assumed that 20 per cent of the increase in this traffic during the third plan period would be carried by backloading of empty wagons.

9. In regard to passenger traffic, the provision in the Third Plan is proposed on the basis of 3 per cent per annum increase in the non-suburban traffic. As regards the suburban traffic, the increase is likely to be of a substantially heavier magnitude but the intention is to provide the maximum number of train services which could be provided by the railways during the peak period. It is not proposed to lay any additional lines for suburban traffic.

Targets in Regard to Commercial Road Transport

10. The targets in regard to commercial road transport mentioned in the Draft Outline are based on the programme of manufacture recommended by the *Ad Hoc* Committee on the Automobile Industry (1960). The production target for commercial vehicles for 1965-66 recommended by the Committee is 60,000 as against the estimated production of 30,000 in 1960-61. It is roughly estimated that the total number of commercial vehicles in the country after providing for replacements of the over-aged vehicles will increase from about 2,00,000 in 1960-61 to 3,65,000 in 1965-66, *i.e.*, an increase of 82 per cent. The number of goods vehicles will increase from about 1,60,000 in 1960-61 to 2,80,000 in 1965-66, and the number of passenger buses from about 50,000 in 1960-61 to about 85,000 in 1965-66. The increase in freight traffic by road, according to these targets—on the assumptions about the utilisation of vehicles mentioned in Chapter VIII (Paragraph 1)—is estimated roughly to be of the order of 120 per cent over 5 years *i.e.*, from about 10.6 billion ton miles in 1960-61 to about 23.2 billion ton miles in 1965-66.

These figures do not take into account the additional capacity that may be available as a result of the introduction of truck-trailer combinations during the third plan period. An important limiting factor in the development of truck-trailer combinations in the country is the condi-

tion of roads and bridges. The Ministry of Transport and Communications, however, have advised the State Governments to conduct surveys of the State highways so that the strengthening and reconstruction of weak bridges and culverts may be undertaken without delay. They have been further advised to issue permits for truck-trailer combinations on roads and bridges which are considered safe for heavy traffic.

Element of Uncertainty in the Estimates of Traffic for the Third Plan

11. There are some important considerations which introduce an element of uncertainty in the calculations of traffic requirements over the Third Plan period. First, the locational pattern of some important industries like coal, fertilizers and mineral oils is likely to change of which the exact impact on the transport system cannot be forecast at this stage. In the case of the coal industry, substantial programmes were included in the Second Five Year Plan for raising production in the fields other than those in Jharia and Raniganj as, for instance, Karanpura in Bihar and the coalfields in Madhya Pradesh, Orissa, and Andhra Pradesh. In the Third Five Year Plan, except for coking coal required for the steel industry, and the high-grade non-coking coal required for railways and certain other industries, which have to come mainly from the Jharia and Raniganj coalfields, the additional production required in regard to the other grades of coal is likely to come largely from the outlying coalfields. The programme for production of lignite in the South which is now under implementation will be carried further and the output of lignite will be increased substantially in the Third Five Year Plan. These measures are likely to result in some changes in the pattern of coal movements, but a precise assessment of these changes will take time to be made. Similarly, in regard to mineral oils, significant developments are anticipated. At present except for a small production from Digboi area in Assam, almost the whole of the requirements are being met by imports. Steps have been taken to exploit reserves of oil from Naharkatiya in Assam and an annual production of 2.7 million tons of crude oil is expected from this area. Two new refineries are being set up, based on this reserve—one in Assam and the other in Bihar. Exploration for oil is being carried on in other areas, notably the Cambay area in Gujarat. In the event of oil resources in this area being exploited there will be significant changes in the future pattern of oil movement in the country. A considerable stepping up of fertilizer production is envisaged in the Third Five Year Plan and it is contemplated that almost every region will have a production unit. The setting up of fertiliser plants at Naharkatiya in Assam, Kothagudium in Andhra Pradesh and at a site in Rajasthan has already been decided upon and the sites for factories in Uttar Pradesh, Madhya Pradesh, Mysore and Gujarat are under consideration. With the completion of these projects, the pattern of fertilizer movement in the country is likely to undergo significant changes.

Second, we have to take into account the likely changes in the pattern of movement of commodities like foodgrains, and iron and steel in respect of which the objective in the Third Five Year Plan is to attain a measure of self-sufficiency.

Third, it is difficult at this stage to make an assessment of the impact of expansion programme of the road transport industry on the railways and *vice versa*. As stated in the earlier chapters, there are indications that the share of road transport in the long distance traffic has had a tendency to increase recently although it is difficult to estimate how much of the increase in such traffic by road is at the expense of the railways. The traffic in certain commodities as, for instance, coal and iron ore as also the long distance bulk traffic in foodgrains, may be expected to be carried largely by the railways during the third plan period. The rest of the field may, however, be shared by both road transport and railways and their respective shares will depend, not merely on the number of commercial vehicles to be put on the road, but the manner in which they are to operate under the licensing policies followed in various parts of the country. The Railway Board in planning the more important line capacity works on the railways, will obviously have to take account of the possible development of road transport in the regions concerned during the third plan period. As the Third Plan gets finalised, it may be possible for the railways to collect detailed information about the pattern of commodity movements in the country and formulate their line capacity works in the light of such information. It will also be necessary in this connection to know the programmes for road construction and improvement in various regions of the country. Information on these programmes may take time to be available. The detailed information in regard to road development programmes in the States is not yet available at the Centre.

Projections of Traffic Requirements in Future

12. The factual data set out in the preceding paragraphs give an indication of the extent and nature of transportation demands arising from the process of economic development which was initiated in the country since the commencement of the First Five Year Plan. The estimate of future transportation requirements has obviously to be based on the projected developments in the various sectors of the economy in future. In other words, what is required is to study the impact of each project and programme of economic development on the commodity movements in the country. While it may be possible and, in fact, necessary to adopt this approach of detailed estimation of transportation requirements over a relatively short period, say, period of a particular five year plan, it is very difficult to have this type of estimation over a longer period, say, of 10, 15 or 20 years because the necessary detailed data with regard to the size and the locations of output in respect of each important commodity may not be available. In the absence of detailed information about individual projects or programmes of economic development, the estimates of transportation requirements may be based upon the past relationships between the gross national product (or national income) and the total demand for transportation, on the assumption that it could be established that there is a broad regularity of relationship between the two over a reasonable period of time. It should be emphasised, however, that such estimates could, at best, be used to indicate the broad magnitudes of transportation requirements in future.

13. The relationship between the aggregate traffic measured in ton miles and gross national product is influenced by a number of factors and is, therefore, not likely to be stable over a very long period in any given

country and, for that matter, is not likely to be identical in all countries. The share of primary goods such as agricultural and mineral products in the total national product may differ from country to country, depending upon the stage of economic development reached, and this will influence the ratio of volume of transportation to the aggregate national product. If, as happens in the relatively early stages of development, the process of economic growth in a country leads to the expansion of economically useable areas, and the widening of the markets in general, the average distance of haul may tend to increase and the volume of transportation may thus tend to grow with greater intensity than the aggregate national product. The recent experience in India shows that the expansion of transportation demand has been at a substantially faster rate than the increase in national income or the growth of production in any sector of the economy. These trends may well be expected to continue in the near future unless the economy undergoes certain significant structural changes. On the other hand, factors like the following may be expected to reduce the intensity of growth of transportation in relation to national income*: (i) any substantial increase in the share of services in the gross national product, (ii) refinements in the production techniques leading to the creation of relatively greater value per unit of output, (iii) a significant change in the form of energy used involving a shift from the primary source of energy like coal and oil to products of coal as gas or thermal electric power or to hydro-electric or atomic power etc. It is only in the long-run period that such developments may be expected to have a significant impact on the rate of growth of traffic in this country.

14. The Secretariat of the Committee has worked out certain long term projections of the transport requirements of the country which are given in a detailed note at Appendix 21. These projections, although of a somewhat speculative character, indicate roughly that the railway traffic as also the aggregate traffic may be expected over the next 10 to 15 years to increase at a relatively faster rate than the national income, but the relative intensity of growth of traffic may be reduced in the periods of the successive five year plans. The following observation from the Report of the Working Party of the United Nations Economic Commission for Asia and the Far East on Coordination of Transport (No. E/Cn 11/TRANS/137, dated the 2nd January, 1959) may be of interest in this connection:

> "The Working Party emphasised that it was not enough for transport merely to maintain a rate of development that just equalled that in the other economic sectors. In a developing economy, the rate of expansion in transport had to be greater than in the other sectors, as the total demands for transport tended to be progressive, not proportionate to the increase in production."

It will be appreciated that the element of uncertainty in the long-term projections will be much greater than that pertaining to the projections of traffic for a relatively short period of the Third Plan. Thus, for instance, while the pattern of production of coal in the country is changing, the effect of this on the quantum of coal traffic and its overall lead

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*Prof. James H. Blackman in his paper referred to on page 112 has made certain interesting observations on the experience of U.S.A. and U.S.S.R.

in the country may not be so significant in the next few years as over the long run. Also over the long run, changes in the sources of energy supply may materially affect the quantum of coal movement. Moreover, it is almost impossible to forecast the impact on the transportation system of the long term changes in the locational pattern of industries like iron and steel, fertilizers, cement, textiles, sugar etc., etc.

The Difficulties Involved in the Allocation of Future Traffic Between Railways and Road Transport

15. Apart from the limitations of future forecasts of traffic there are serious difficulties involved in the allocation of traffic between railways and road transport. First, as explained in Chapter X, apart from the relative economics of railways and road transport there are several factors which influence the users' preferences for one mode over the other and the allocation of traffic between the two. It will not be enough for future planning, therefore, to go by just the relative costs of development of capacity on the two means of transport and it will be necessary to take into account the appropriateness of each mode of transport for particular type of traffic or the distance of haul. Second, the cost calculations themselves are difficult to make and if they are to form the basis of any policy decision regarding the allocation of traffic between railways and road transport, they have to relate to specific traffics in view which are to be distributed between these two means of transport. The cost calculations, therefore, should take into account the degree of saturation already reached in the capacity of the two modes in the regions concerned. Moreover, in an underdeveloped country like India which is confronted with the problem of conservation of foreign exchange resources, it is important to consider specially the foreign exchange element in the cost of development of each mode of transport as also the recurring burden of foreign exchange expenditure placed by each mode for haulage of a given quantum of traffic. The calculations of foreign exchange element of cost are particularly relevant for the next few years when the indigenous capacity for the manufacture of equipment and the indigenous supply of the fuel required by the two means of transport will not have been developed adequately, and reliance will have to be placed on external sources for equipment as also for fuel. Third, as discussed earlier, it is a matter for consideration whether road transport as at present organised could be allocated a definite traffic pertaining to any project or any region as part of a five year plan and could be relied upon to carry this traffic at a reasonable cost to the community. Finally, we have also to take into account the possibilities of technological advances both in railways and road transport in future which may materially influence the economics of the two means of transport and their capacity to carry traffic in the country.

16. All these factors have to be borne in mind in considering the allocation of traffic between railway and road transport in future. In this connection, it may be useful also to keep in view the experience of some of the industrially advanced countries. In the statement at Appendix 22, we have given figures to show the distribution of freight traffic between railways, road and water transport in some of the advanced countries of the world. It will be seen that during the last about 30 years, the share of road transport in the total traffic has increased substantially in European countries except for East Europe and USSR where the increases

appear to be very small, relatively speaking. While the share of road transport in the total traffic in India may be expected to increase in future, it is a crucial question to consider what types of traffic should be catered for mainly by road transport and what by the railways.

Considerations Relating to the Extension of Railway and Road Network in Future

17. In connection with the long term development in railways and road transport there are two specific questions of basic importance to be considered: (a) what should be the policy criteria to be followed for extension of new railway lines in the country and (b) what should be the broad priorities in the road development programmes in future. We shall briefly refer to these in this chapter.

Considerations Relating to Opening up of New Lines

18. The density of railway mileage in India is very low as compared with some of the advanced countries in the world. Whereas there is a kilometre of railway track for every 50 square kilometres of area and for roughly every 5,000 people in the country, the corresponding figures for some of the advanced countries are as under:

Table 5

Per one kilometre of railway track

Country	Area (square kilometres)	Population (number of persons)
U.S.A.	12·8	277
U.K.	7·5	1,613
Japan	10·6	2,588
France	13·9	1,075
West Germany	8·1	1,613

There is no question that in several regions of India which are not served by the railways at present, there may be need for opening up railway lines in future. The railways, and, for that matter, all means of transport have a dynamic or promotional role in the economy and the opening up of railways leads to general economic development of the regions or the areas concerned. Priority was given in the first two Plans to programmes intended to provide additional transport capacity on the existing railway network, and on account mainly of limitation of resources, the programmes included in the Plans for construction of new lines have been modest. Over the 10 year period from 1951-52 to 1960-61, the total mileage added comes to 1,200 only. A sizeable part of this mileage is on account of the lines which were dismantled during the war but restored under the first two Plans. In the Third Five Year Plan, it is proposed

to add about 1,200 miles of new lines. Several of the lines added in the period of the first two Plans or proposed to be added in the third plan period are stated to be required either for operational reasons or for requirements of coal and other mineral traffic expected to be generated as a result of development programmes in the Plans.

The State Governments are understood to have asked for construction of new lines totalling 10,000 miles in the Third Five Year Plan. The demands for these lines are generally sought to be justified for reasons of general economic development of the regions concerned. On account of lack of resources, however, the Ministry of Railways has not been able to include these projects in the Third Plan.

19. Apart from the developmental role which the railways could be expected to have in the regions opened up by them, the railways are also recognised to serve strategic needs. To quote from the evidence reproduced in a recent Report of the Special Sub-Committee of the Committee on Armed Services, U.S. House of Representatives* (July, 1959).

> "The versatility and adaptability of rail transport, as thoroughly demonstrated on a worldwide basis under all kinds of conditions, is but one of the reasons why military logistical planning is built around the railroads for the bulk of its freight and passenger movements. The other forms of transport, important as they are to the total need, are auxiliary and supplemental to the railroads".

20. While the developmental and strategic roles of the railways must no doubt be important considerations in considering future expansion of the railway system in any country, it will be relevant in this connection to study the recent development in some of the industrially advanced countries of the world. We have referred in Chapter XI (Paragraph 11) to the tendency on the part of the railways in some advanced countries to close down unremunerative branch lines or unremunerative services in an effort to maintain their financial solvency. The statement at Appendix 23 gives the annual average rates of expansion or contraction of rail track mileage in several countries for which figures are readily available. It will be seen that in quite a few countries there has been a contraction in railway route mileage in recent years. In some of these coun-

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*That the railways are given a special importance in USA from the point of view of defence is also revealed in the proceedings of a case which was decided by the Interstate Commerce Commission on September 6, 1950 and on which the Commission denied the Pacific Inter-mountain Express Co. authority to acquire control of the "Keeshin System" and thereby to establish a large continental trucking operation. The following quotation from the conclusion reached by the Commission will be of interest:

> "The soundness of the argument of railroads that their financial strength and potential for expansion to meet the needs of national defence must be preserved is beyond question. It is apparent that neither normal needs nor emergency needs could be met by other modes of transportation alone; nor can these needs continue to be met by the railroads, with other modes of transportation unless the railroads could continue to receive a sufficient traffic volume to maintain their plants and services".

Thus, the Commission held the view that if the railroads had to exist for defence purposes it was necessary that they should also receive sufficient traffic volume to be able to maintain their plants and services.

tries several sections of railway lines though not abandoned altogether have been closed to passenger traffic as is shown by the following figures:

Table 6

Railway lines no longer open to Passenger Traffic

Country	*Percentage of total net work*
France	24
Netherlands	22
U.K.	13
Belgium	13

The recent thinking in the U.K. appears to be in favour of reducing the size of the British Railways so that eventually the country has only that size of the railways which it can afford.

21. It is a known fact that most part of our railway and road network run parallel to each other. The table below indicates the route mileage on each zonal railway which is parallel to and within short distance of motorable roads.

Table 7

Railways	Total route mileage	Mileage of railway lines parallel to and within short distance of motorable roads	Percentage of (3) to (2)
1	2	3	4
Central Railway	5,346	3,356	62·8
Eastern Railway	2,319	1,433	61·8
Northern Railway	6,435	4,184	65·0
North Eastern Railway	3,082	2,415	78·4
North-East Frontier Railway	1,773	725	41·8
Southern Railway	6,161	5,827	94·6
South Eastern Railway	3,496	2,324	66·5
Western Railway	6,064	4,065	67·0
Total	34,636	24,309	70·2

It will be seen that in the case of Southern Railway about 95 per cent of the total route mileage has motorable roads parallel to it or within short distances of it. On an average 70 per cent of the route mileage of the railway system as a whole falls in this category.

22. The conditions in India at present are very different from those obtaining in the industrially advanced countries. It is nevertheless true that in the past several railway lines have been added in this country mainly on considerations other than commercial. In the statement at Appendix 24 we have shown the capacity and volume of traffic handled on certain new railway lines constructed and the dismantled lines restored since the commencement of the First Five Year Plan. It will be seen that on several lines not more than one half of the capacity available is being utilised in practice while in some cases utilisation is below 20 per cent of the capacity. Several of these lines according to the calculations worked out by the Railway Board are found to be financially unremunerative. A few of the relatively small lines included in the Third Five Year Plan appear to be of uneconomic character and are wanted for considerations other than economic or commercial. Several State Governments particularly those in the southern part of the country are still urging inclusion of more new lines in the Third Five Year Plan and several demands for new lines come from the regions which are well served by roads.

23. As mentioned in Chapter II according to the procedure laid down in the Government Resolution of 1925, the branch or feeder lines or the lines required purely for local purposes by the local Governments or local bodies, which were not remunerative from the railway point of view, were to be constructed only if the Local Government guaranteed the Railway Administration against the losses in working plus the amount payable to the General Revenues. This procedure, however, was revised on the recommendations of the Convention Committee (1949). The Committee while recommending the creation of the Railway Development Fund for financing expenditure on unremunerative projects, among other things, made the following observations:—

> "Quite apart from expansion necessary to meet the growing needs of trade and industry in zones hitherto either not served or inadequately served by rail transport, there are undeveloped areas rich in resources which can be explored and exploited only when a rail link is established. In the majority of these cases no financial justification exists, or can exist, at any rate in the first phase of development. As a result, this nationalised undertaking is compelled by circumstances to play a passive, if not a negative role in the development of the country".

According to the present policy, therefore, the Railway Board do not insist on the proposals for new lines being necessarily remunerative and each case is decided having regard to the overall considerations relating to the "industrial, agricultural, social, economic and political development of the country". It may be noted that the new lines which we have referred to in paragraph 22 above and which are of unremunerative character, have all been built after 1949. In respect of strategic lines, according to the original Resolution of 1924 on the separation of Railway Finance from the General Revenues of the country, both interest on capital-at-charge and loss in working on these lines were to be borne by the General Revenues.

The Convention Committee of 1949 while laying down that "no dividend shall be payable on the capital out of the General Revenues on unremunerative strategic lines" made no reference to the allocation of operating losses on working of such lines. The 1954 Convention Committee deferred its recommendations on this issue in view of the fact that the annual losses on the lines then existing were insignificant. The Convention Committee (1960) however, has recommended that the annual losses on the working of such lines should be borne by the General Revenues. The Committee accepted the suggestion of the Railway Board that the capital-at-charge on the North-East Frontier Railway, other than the clearly strategic portions thereof, should be regarded as unproductive, and that the rate of dividend payable on the capital-at-charge on this railway should be at the average borrowing rate of Government which was less than the normal rate of dividend. This position will hold good till such time as the line becomes productive or the next Convention Committee reviews the position.

24. The point to consider in this connection is whether any well defined criteria could be laid down on the basis of which the proposals for new lines could be selected from time to time as part of the railway development programme. Where particularly a choice exists between a railway line and a road, careful examination may be required before a decision is taken. It is a matter for detailed consideration what technical studies should be undertaken to decide such cases and what should be the organisation to undertake the studies. One approach that could be considered is that in respect of the lines which on technical studies are found to be of an unremunerative character, and have to be taken up either on strategic grounds or for other social or political considerations, Government or the parties concerned should subsidize the railways directly. This is more or less similar to the practice that obtained on the railways from 1925 to 1949 which has been referred to above. Also as mentioned in an earlier chapter, it is identical to the approach suggested by the Select Committee of the British House of Commons (1960) in regard to the maintenance by the British Railways of the unremunerative services. It is a matter for consideration whether it will be desirable and feasible to adopt any such approach in regard to construction of new lines or, for that matter, continuance of unremunerative lines on the Indian Railways in future.

Considerations Relating to Road Development Programme

25. The road development programmes in the First and Second Five Year Plans were formulated in the perspective of a 20-year road development programme which was drawn up as far back as 1943. The Chief Engineers of the States and Central Government have recently formulated a 20-year road programme for the period 1961 to 1981. The broad objective of this Plan is that no village in a developed and agricultural area should remain more than 4 miles from a metalled road and more than 1½ miles from any type of road. In working out targets for various types of roads in this Plan, several factors have been taken into account such as the area, the population, the state of present development of the region concerned and the possibilities of future development. With the completion of the mileage target set out in the Plan, India is expected to have 52 miles of roads (including metalled and unmetalled) per 100 sq. miles of area as against about 30 miles at the end of the Second Five Year Plan.

26. The broad order of priorities envisaged in the 20-year Plan is: (a) on all arterial routes, missing bridges should be provided and the surface of the road improved at least to one-lane black topped specification; (b) the main roads in the vicinity of large towns should be widened to two lanes or more, and (c) the major arterial routes should have at least two-way road.

27. The mileage position in India in relation to area or population is very low as compared with most advanced countries of the world. This will be borne out by the following figures:

Table 8

Country	Year	Road mileage	
		Per hundred sq. miles of area.	Per one lakh of population.
India	1956-57	26	85
U.K.	1957	215	382
U.S.A.	1957	114	2,018
France	1957	338	1,630
West Germany	1957	169	314
Italy	1957	106	256
Japan	1956	63	100

There is undoubtedly a need for the extension of new road mileage in the country and there are many areas which need to be opened up by motorable roads. There are, however, several deficiencies on the existing road network. According to the Ministry of Transport and Communications, about 60 per cent of the total mileage consists of earth roads only and the surface of these roads needs to be upgraded particularly on sections where traffic is increasing. Except for what are classed as 'other district roads and village roads', it may be necessary to provide at least water-bound macadam surface on all roads, while those which have comparatively heavier traffic will have to have black-topped surface. About 15,000 miles of roads are classified as National Highways. About 2,230 miles of these have two lanes, while the rest have only one-lane cement concrete or bitumen surface. About 1,000 miles of National Highways have only one way water bound macadam or low surface. The position of State Highways which have a mileage of nearly 30,000 is similar to that of National Highways.

28. Apart from the width and type of surface, an important point to consider in connection with the capacity of roads for heavy traffic is the thickness of the hard crust. Almost all the Highways in India have a total thickness of 9 to 10 inches which according to the technical experts of the Ministry of Transport was considered adequate for the volume and intensity of traffic 20 years back. According to these experts, for the

modern vehicles, the minimum necessary thickness for flexible pavement (black-topped surface) is 18 to 20 inches. Almost all new roads, however, are being made 9 to 10 inches thick with the result that they become undulated in a short period.

Above all, there is the problem of missing bridges on arterial routes. On the National Highways alone, 80 major bridges will remain to be provided at the end of the Second Five Year Plan of which 47 will be in various stages of progress.

29. Having regard to the limitation of resources, it will be a matter for consideration what priority should be given to the programmes relating to the upgrading of surfaces of the arterial and other important roads in the country and the provision of missing bridges on them and whether these roads will have the necessary capacity to carry all the traffic that is likely to be generated in the next 5 to 10 years as also in the long run. This question has an important relevance in any consideration of the allocation of traffic in future between railways and road transport.

CHAPTER XIV

MAIN QUESTIONS AT ISSUE

We have, in the earlier chapters, presented the factual material about the organisational, operational and economic aspects of road and rail transport as far as we have been able to collect it. In this chapter, we shall attempt to set out the main issues which require consideration particularly from the point of view of coordination.

2. In India today, there is a shortage of transport generally. There is more traffic than railways and roadways put together can carry. It might, therefore, seem on a superficial view that no major problem of coordination is confronting us. As explained earlier in the Report, however, there are, in certain sectors, indications of what might be regarded as unhealthy competition. We have also pointed out that there is a tendency on the part of the interests concerned to ask for extensions of the railway system which are not always justified on economic or commercial considerations. Likewise, road transport facilities are also being sought to be extended without proper thought being given to needs of coordination. Although the overall resources available both for railway and road development are limited, because of local pressure demands for unnecessary duplication of facilities in certain regions are not easy to resist.

Furthermore, we are very conscious of the fact that, as has been the experience of other countries, there will come a time when serious problems may arise. It would be a pity if we did not, with the experience of other countries to guide us, and particularly when we have adopted a policy of planned development, take steps from now on to prevent such a situation developing. The road transport system in the country is still in an early stage of development, and as the output of vehicles from indigenous sources goes up, there will be much greater opportunities for the transport of goods by road. At the same time, the movement of goods which seem basically more suitable for rail transport either because of their bulk or the length of haulage *e.g.*, ores for export as well as for our metallurgical plants and other similar industries, will also go up steadily. It is necessary to consider the factors which determine the appropriateness of railways and road transport for different types of goods and passenger traffic. It is much better to direct investment in right channels with a clear-cut conception of our objectives and policies than to seek remedial measures after infructuous investment has been made. Such an approach to the problem necessitates a consideration of some fundamental issues.

3. In the past, certain measures have been taken to avoid unhealthy competition between railways and road transport through the existing channels and machinery for coordination. These measures are not a substitute for a long-term policy for coordinated development of railways and road transport and are in the nature of pragmatic improvisations. Any rational scheme of coordination between road transport and rail-

ways can be put forward only as part of a sound long-term policy. In the formulation of such a policy, it will not be right, we think, to take the existing framework which has evolved through historical forces referred to earlier, as being sacrosanct and to consider the problem of coordination entirely within that framework. The Committee, according to its terms of reference, in fact, has been asked to define the role of the various means of transport in the country during the next five to ten years "in keeping with" the long-term transport policy which the Committee might recommend for the country. Before considering a suitable scheme of coordination for the next five to ten years, therefore, it is necessary that we should give careful thought to all the various questions which are relevant in formulating a long-term policy for the country.

4. We have, in Chapter XI of the Report, referred to three alternative approaches to the problem of coordination. First, there is the possibility of allowing free unrestricted competition between different forms of transport. Second, the necessary coordination may be achieved through appropriate Government regulation. In this approach, thought has to be given not only to the objectives of the policy to be followed but also to the machinery to be used to implement it. The third alternative is of the rail and road services being integrated into one single unit, when the problem is of coordination not from outside but within the authority responsible for the joint management of all forms of transport.

5. It may, at first sight, seem that in Indian conditions only the second of the three alternatives discussed above has any relevance, at any rate, in the immediate future. The railways have a large number of obligations. Their freight structure is intended to assist economic development of the country by carrying certain basic raw materials and foodgrains at low rates over long distances. The railways also very often have to maintain and open lines which in themselves are not remunerative. Then again, the railways are under an obligation to make a specific return to the Central Revenues, which is over and above the contribution made by them on account of the various social obligations. On the other hand, it has already been announced that the transport of goods by road will not be nationalised during the Third Five Year Plan which rules out the adoption of the policy for integration of road and railways in the sphere of goods services for the period of the Plan. It might, on these grounds, be argued that for the time being it may be worthwhile concentrating only on the second alternative referred to above—as, in fact, is the case in most countries which have a nationalised rail transport system. We are emphatically of the view that it would be wrong to dismiss summarily the first and third alternatives, particularly because it cannot be claimed that the second has met with complete success in the other countries. Our transport system has to develop a great deal during the next ten years if it is to keep pace with the programmes of industrial development on which we have embarked. It is essential that we should take a long-term view of the question and, in doing so, we should not hesitate to consider any changes in respect of our existing policies regarding the railways and roadways, however radical they may seem, if they are likely to secure a more efficient and economic development of our transport system as a whole. To rely on regulatory measures, to be devised *ad hoc* as and when any signs of unhealthy competition appear will not, in our view, be the right answer to the questions confronting us. Having regard to

our wide terms of reference, which cover long-term policies, we consider it desirable to elicit public opinion on each of the three alternatives discussed above and to draw the attention of the Planning Commission and the Government to some of the fundamental issues which have to be considered and on which a long-range view has to be taken before a national transport policy can be formulated.

6. In the course of our work, we have, on more than one occasion, been given fairly categorical views in support of each one of the three alternatives outlined above. We have felt, however, that in most instances, such judgements and opinions are formed without a full appreciation of the implications of the view taken. Supporters of railways, for example, do not always recognise the special role of road transport in the economy. Likewise, not many people who complain about the existing restrictions on the road transport system, seem to be aware of the obligations imposed on the railways in their operations. It may be relevant to mention that recently a view has been expressed at an international expert level that in India "road transport should be equipped to handle more of the traffic which is usually carried by road in other countries—marketing of agricultural produce, distribution of factory products, local bus services and so forth.... There may be some loss of revenue to the railways but this can be made up by raising rates for bulk commodities". Another view expressed by an Economist* of International repute is as follows:—

> "In parts of the country not now served by rail lines, there may be investment economies in developing long distance road haulage. With this exception, however, investment in this industry should be viewed with scepticism. India has a chance to avoid the mistake, which elsewhere is reasonably evident as such, of making duplicating investments in long distance road haulage which could be performed more economically by concentrating resources on the railroads alone".

A detailed study of the implications of these suggestions in all aspects has yet to be made.

The Road Transport Reorganisation Committee (1959) which recommended an approach substantially similar to the first alternative mentioned above, does not appear to have given adequate thought to the public service obligations of the railways. In this connection, however, it may be relevant to quote the following extract from the address given by Rajkumari Amrit Kaur, President, All-India Motor Unions' Congress, while inaugurating the 12th session of the Congress at Indore on December 16, 1960:—

> "The task of the Neogy Committee is by no means a simple one, because even after admitting that road transport has to be given its due share, some way has also to be found for protecting our largest national industry *viz.*, the railways. There may not be any danger today to their revenues or even in the near future but any long-term national transport policy has to keep in view what the position may become in the years ahead.....It is here, therefore, that coordination becomes necessary".

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*'*Railroads and Transportation*' a note by John Kenneth Galbraith.

We hope that by placing before the public a fairly detailed analysis of the present situation, we shall get the kind of informed criticism and advice which is most valuable in the formulation of a long-term policy.

7. We have, in the questions set out at the end of this chapter, tried to pose squarely the question of allowing railways the freedom to operate as a purely commercial undertaking and competing on equal terms with other forms of transport. This is followed by a second set of questions relating to policy of regulation. These questions arise out of the experience gained in working the existing system of coordination to which reference has been made in Chapters V and VI earlier. The third set of questions refers to the possibility of eventually achieving coordination through integration of rail and road services. Nationalisation of the entire road transport system will itself raise many problems, though it may be achieved by suitable stages. We feel that this question also should be considered along with the other two possibilities referred to above.

Our final questions relate to what, after all, is the most important issue, *viz.*, the criteria which should govern future investment in the development of different forms of transport in the country. The more carefully this policy is thought out and implemented, the less serious is the problem of coordination likely to be.

8. The questions that we have listed in this chapter are of basic importance and will require to be given detailed thought in any consideration of long-term policy for coordinated development of railways and road transport. While discussing several matters of policy in the earlier chapters we have raised other relevant questions as well. To avoid repetition, we are not recapitulating them in this chapter, although some of them are extremely important. In giving further thought to all these issues we shall be greatly helped if we have before us the reaction of all sections of the community.

QUESTIONS

1. Could railways and road ransport, and for that matter, all other means of transport be treated as commercial undertakings and be enabled to compete with each other on equal terms? If so,

(a) Is it possible for the railways to be relieved of their obligation to provide services which do not pay, or alternatively, is it possible to assess the cost to the railways of providing uneconomic services and to reimburse them this cost from public revenues? If a distinctive section of a railway such as a branch line is proved to be a source of continuous loss, will it be possible to permit the railways to discontinue the sections?

What reforms, if any, will be needed in the present accounting practice of the railways so as to enable the railways to ascertain the profitability or otherwise of their operations in respect of different sections of a zone or individual lines etc?

(b) Is it possible to relieve the railways of their statutory obligations to accept all traffic offering without discrimination and their obligation not to discriminate between customers in regard to charges payable, leaving them free to quote competitive rates, which may differ in different areas and for different customers?

(c) As an alternative to (a) and (b) above, is it possible to impose similar obligations on other forms of transport?

2. What should be the financial obligation, if any, of the railways towards Central Revenues under such a system?

3. If the railways are to function as a purely commercial undertaking with complete freedom to quote competitive rates, would this policy involve any significant change in the organisational set-up of the railways and their relationship with Government; and if so, what would be the nature of such changes? Will there be a special case for the railways being managed through a corporate body in such a set-up?

4. If the road transport system is not restricted to certain areas by permits, how would it be possible to ensure the availability of adequate transport facilities at a reasonable cost in the less-developed and rural areas and hilly tracts where short-distance transport is involved and where rail communication may not be available?

5. What increase will be required in railway rates on the low-rated commodities like coal and other raw materials for industries and food-grains, such as may be necessary to enable the railways to make a reasonable margin of profit on their over-all operations after taking into account effect of possible reduction in the rates on the high-rated categories of traffic? How might such adjustments in the railway rating structure, react upon the economy in general and the costing pattern of important industries in the various regions of the country?

6. To what extent could the Inter-State Transport Commission be made an effective body to ensure coordination between railways and road transport in respect of (a) inter-State operations and (b) intra-State operations?

7. Would it be possible under the existing Constitution to set up a central organisation entrusted with adequate responsibility for coordination of all forms of transport? If so, what form should this organisation take?

If not, what change in the Constitution may be necessary to secure effective coordination through regulation and to set up an appropriate coordinating body?

8. If any such organisational reforms be adopted, would it be advisable to entrust the overall control, at policy level, of all forms of transport (including railways) to a single Ministry so as particularly to facilitate effective coordination? Could the Ministry directly responsible for the

detailed administration of the railways be entrusted with the responsibility of controlling, at policy level, other forms of transport also?

9. If coordination is to be achieved through regulation, then in what manner could it be ensured that regulation would result in a rational distribution of traffic between road transport and railways having regard to their respective suitability for particular types of traffic?

(a) To what extent may any type and bulk of freight traffic and the distance to be traversed broadly constitute elements of suitability for road and rail transport respectively? and

(b) in the case of passenger traffic, are there any distinct elements of respective suitability for road and rail transport?

10. Which of the following forms of regulation would suit the conditions in India?

(a) Should the licensing policy to be adopted be modelled on a system prevailing in the United States of America in respect of inter-State operations under which the service to be provided and the route or area to be covered and the charges to be levied by the carriers are regulated, but there is no restriction on the number of vehicles to be acquired on each licence for the service prescribed?

or

(b) Should the licensing policy be designed on the model obtaining in West Germany under which the total number of long distance licences valid for distances over a given radius (50 kilometres in West Germany) is fixed by the Federal Government and the long distance road transport industry is subject to fixed tariff rates which are almost the same as the railway rates?

or

(c) Should the system be more in line with the one obtaining in Great Britain which aims at regulation of the number of public haulage vehicles, but has very little control over the type of work on which they are subsequently engaged or over the rates which are charged but which permits the railways to quote competitive rates without any restrictions in regard to non-discrimination of rates or the publication of rates etc.?

or

(d) Should the licensing system, as in some of the States in Australia, aim at restrictions on distance or areas over which road transport services should be provided?

or

(e) Should the licensing policies in India broadly represent a combination or modification of some of the features mentioned above?

11. To what extent can the taxation of road transport vehicles be used as an alternative to, or to supplement the system of regulation through permits? To what extent could the present system of taxation on the road transport industry be modified so as to increase the taxes on vehicles carrying particular types of goods or those operating over long distance and correspondingly to reduce the taxes for the other types of traffic or for short distance operations?

12. Should a broad-based scheme be contemplated for the integration, rather than mere coordination, of road and rail services under a nationalised system, in which the Central and State Governments may participate on suitable terms?

13. Should nationalisation of long distance road transport services be undertaken on selected routes with a view to securing coordination between rail and road services on these routes?

14. If nationalisation of goods transport services is contemplated as a method of coordination, what should be the form of organisation to operate these services? More particularly, will it be appropriate to manage these services through a corporation or corporations in which the railways, State Governments and private operators participate?

Could the railways, in any circumstances, be entrusted with the operation of road transport services as an integrated part of the railway operations?

15. As regards the future extension or development of roads and railways in the country, what should be the guiding criteria in deciding on such extensions? Should the effort be to develop either road transport or rail transport only, having regard to the suitability for rail or road transport of the bulk of the traffic offering in any particular area?

16. Before any road or rail project is undertaken in any area, should technical and economic surveys be made for the purpose of ascertaining whether road or rail transport, exclusively would meet the needs of the situation at lesser cost than the other, and should decision be taken on the result of such surveys so as to avoid the provision of the costlier service?

17. What should be the guiding principles that should be followed in choosing the alignments of new roads and railways?

18. Should the railways be expected to provide new lines even if they are unremunerative from a commercial point of view? If such services

have to be provided, should the financial burden be debited to the sponsoring authorities rather than to the railways?

K. C. NEOGY
Chairman

B. N. JHA
Member

R. L. GUPTA
Member

S. RANGANATHAN
Member

KRIPAL SINGH
Member

L. K. JHA
Member

G. V. AYYAR
Member

K. L. LUTHRA
Secretary

New Delhi:
The 2nd February, 1961.

APPENDICES

APPENDIX 1

Government of India Resolution dated the 22nd July, 1959 regarding the appointment of the Committee

The Planning Commission and the Ministries of Railways and Transport & Communications have had under consideration for some time past suggestions relating to the coordination of different means of transportation, especially rail and road transport, and their future development having regard to the needs of the growing economy of the country. It has been felt that a comprehensive examination of these problems at this stage will be of material assistance in the formulation of plans of future development in the field of transportation. It has accordingly been agreed in consultation with the Ministries of Railways and Transport and Communications to constitute a Committee to study the problems involved, and to make recommendations on the measures required to secure the necessary coordination between different means of transport and on long-term policies and considerations which should guide their future development.

2. The Committee will consist of the following:—

Chairman

Shri K. C. Neogy.

Members

1. Shri Vishnu Sahay, I.C.S., Secretary, Planning Commission.
2. Shri R. L. Gupta, I.C.S., Secretary, Department of Transport, Ministry of Transport and Communications.
3. Shri K. B. Mathur, Chairman, Railway Board, Ministry of Railways.
4. Shri A. K. Roy, Secretary, Department of Economic Affairs, Ministry of Finance.
5. Shri S. Ranganathan, I.C.S., Secretary, Ministry of Commerce & Industry.

Shri K. L. Luthra, Director, Transport Division, Planning Commission will be the Secretary of the Committee.

3. The terms of reference of the Committee will be as follows:—

Taking into account the existing stage of development of the various means of transport and the economic, political, social and strategic purposes which the transport machinery is designed to serve, the Committee should recommend;

(a) what broadly should be the long-term transport policy of the country, so that the development of the transport machinery may be effected in consonance with our growing needs, with economy and efficiency, avoiding duplication to the maximum extent practicable;

(b) in keeping with the policy defined under item (a) what should be the role of the various means of transport in the country during the next 5 to 10 years; and

(c) what is the best mechanism for the regulation and coordination of the various means of transport, so that the transport needs of the country are met in an efficient and economic manner consistent with the larger interests of the country?

4. The headquarters of the Committee will be at New Delhi but the Committee may visit such places as may be considered necessary for its work.

ORDER

Ordered that a copy of the Resolution may be communicated to all concerned and that it be published in the Gazette of India for general information.

Sd/- TARLOK SINGH,
Additional Secretary to the Government of India.

APPENDIX 2

Progress of railway mileage opened since the introduction of railways in India

Year	Open mileage at the end of the year	Year	Open mileage at the end of the year
1853	20	1940-41	41,052
1860	838	1944-45†	40,509
1870	4,771	1945-46	40,518
1880	9,162	1946-47	40,524
1890	16,401	1947-48††	33,985
1900	24,752	1948-49	33,861
1910	32,099	1949-50	34,022
1919-20*	36,735	1950-51	34,079
1920-21	37,029	1954-55	34,705
1929-30	41,724	1955-56	34,735
1936-37	43,128	1956-57	34,744
1937-38**	41,076	1957-58	34,889
1938-39	41,134	1958-59	35,081

*During the First World War seven lines aggregating 463 miles were dismantled to meet urgent military requirements.

**On 1st April, 1937 the Burma Railways, with a length of 2,060 miles, were separated from the Indian Railway system.

†During the Second World War, more than two dozen selected branch lines involving over 1,000 miles of rail length were dismantled to provide for military operations.

††On 15th August, 1947, due to the Partition of the country, a length of about 6,958 miles of railways was retained in Pakistan.

APPENDIX 3

Number of commercial vehicles registered in India*

Year	Buses	Trucks
1948-49†	27,275	72,926
1949-50†	30,317	78,537
1950-51†	34,411	81,88
1951-52†	36,637	84,01
1952-53†	38,728	91,425
1953-54	40,276	98,902
1954-55	40,987	1,04,389
1955-56	46,461	1,19,097
1956-57	38,415	1,23,386
1957-58	42,008	1,36,460
1958-59	44,744	1,45,048

* Excluding motor cabs.

† Figures relate to taxed vehicles only. Figures for 1953-54 and onward include taxed and tax exempted vehicles.

Source—Ministry of Transport and Communications.

APPENDIX 4

Extracts from the Seventh Schedule of the Constitution of India

List I—Union List.

22. Railways.

23. Highways declared by or under law made by Parliament to be national highways.

24. Shipping and navigation on inland waterways, declared by Parliament by law to be national waterways, as regards mechanically propelled vessels; the rule of the road on such waterways.

25. Maritime shipping and navigation, including shipping and navigation on tidal waters; provision of education and training for the mercantile marine and regulation of such education and training provided by States and other agencies.

26. Lighthouses, including lightships, beacons and other provision for the safety of shipping and aircraft.

27. Ports declared by or under law made by Parliament or existing law to be major ports, including their delimitation and the constitution and powers of port authorities therein.

28. Port quarantine, including hospitals connected therewith; seamen's and marine hospitals.

29. Airways; aircraft and air navigation; provision of aerodromes; regulation and organisation of air traffic and of aerodromes; provision for aeronautical education and training and regulation of such education and training provided by States and other agencies.

30. Carriage of passengers and goods by railway, sea or air, or by national waterways in mechanically propelled vessels.

31. Posts and telegraphs; telephones, wireless, broadcasting and other like forms of communication.

42. Inter-State trade and commerce.

56. Regulation and development of inter-State rivers and river valleys to the extent to which such regulation and development under the control of the Union is declared by Parliament by law to be expedient in the public interest.

89. Terminal taxes on goods or passengers, carried by railway, sea or air; taxes on railway fares and freights.

List II—State List

13. Communications, that is to say, roads, bridges, ferries, and other means of communication not specified in List I; municipal tramways; ropeways; inland waterways and traffic thereon subject to the provisions of List I and List III with regard to such waterways; vehicles other than mechanically propelled vehicles.

56. Taxes on goods and passengers carried by road or on inland waterways.

57. Taxes on vehicles, whether mechanically propelled or not, suitable for use on roads, including tramcars subject to the provisions of entry 35 of List III.

58. Taxes on animals and boats.

59. Tolls.

List III—Concurrent List

31. Ports other than those declared by or under law made by Parliament or existing law to be major ports.

32. Shipping and navigation on inland waterways as regards mechanically propelled vessels, and the rule of the road on such waterways, and the carriage of passengers and goods on inland waterways subject to the provisions of List I with respect to national waterways.

35. Mechanically propelled vehicles including the principles on which taxes on such vehicles are to be levied.

NOTE

According to the Constitution of India, 'Carriage of passenger and goods by railway, sea or air or by national waterways in mechanically propelled vessels' is in the Union List. The entry does not include carriage of passengers and goods 'by highways'. There is provision in the Constitution for declaration of selected highways as National Highways. Under the National Highway Act, 1956, it is laid down that:

> "It shall be the responsibility of the Central Government to develop and maintain in proper repair all national highways; but the Central Government may, by notification in the Official Gazette, direct that any function in relation to the development or maintenance of any national highway shall subject to such conditions, if any, as may be specified in the notification, also be exercisable by the Government of the State within which the national highway is situated or by any officer or authority subordinate to the Central Government or to the State Government." (Section 5).
>
> "The Central Government may give directions to the Government of any State as to the carrying out in the State of any of the provisions of this Act or of any rule, notification or order made thereunder". (Section 6).

The carriage of passenger and goods by National Highways is not, however, a matter of Central Legislation. According to a constitutional lawyer* "the Union Parliament has exclusive and complete legislative authority in respect of the highways within the territories of the constituent States declared by or under a law made by the Union Parliament to be national highways; and in the exercise of this legislative power, the Union Parliament may enact laws which may ultimately affect the control of traffic on such highways. The control of traffic being within the executive power of the States, the authorities in charge may fail to comply with the provisions of the Union law. In such a case, the Union Government will, under the Constitution, be competent to issue directions to the State concerned" (presumably under article 257 (2) of the Constitution).

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*Sirdar D.K. Sen : *A Comparative Study of Indian Constitution* (1960).

APPENDIX 5

The position of reciprocal agreements between States regarding the issue of public carrier permits for inter-State operations

Sl. No.	State	Neighbouring States	Date of conclusion of the reciprocal agreement	Remarks
1	2	3	4	5
1.	Andhra Pradesh .	1. Madhya Pradesh	2-9-59	
		2. Madras	13-3-58	
		3. Maharashtra (erstwhile Bombay)	10-2-58	
		4. Mysore	26-2-58	
		5. Orissa	24-3-60	
2.	Assam . . .	1. Manipur	..	Details of agreement already settled, but agreement not yet reduced to writing.
		2. Tripura	19-9-59	
		3. West Bengal	..	Ditto.
3.	Bihar . . .	1. Madhya Pradesh	20-1-59	
		2. Orissa	1-3-60	
		3. Uttar Pradesh	20-3-59	
		4. West Bengal	20-3-59	
4.	Delhi . . .	1. Punjab	26-5-60	
		2. Rajasthan	25-7-58	
		3. Uttar Pradesh	24-10-57	
5.	Gujarat . .	1. Maharashtra	6-7-60	
		2. Rajasthan	5-2-57	
6.	Himachal Pradesh .	Punjab	22-7-60	
7.	Jammu & Kashmir	Punjab	4-7-60	
8.	Kerala . . .	1. Madras	..	Agreement under consideration.
		2. Mysore	30-8-57	
9.	Madhya Pradesh .	1. Andhra Pradesh	2-9-59	
		2. Bihar	20-1-59	
		3. Maharashtra	1-7-58	
		4. Orissa	30-10-60	
		5. Rajasthan	4-11-57	
		6. Uttar Pradesh	29-7-60	
		7. West Bengal	2-9-59	

APPENDIX 5—(*contd.*)

1	2	3	4	5
10.	Madras. . .	1. Andhra Pradesh	13-3-58	
		2. Kerala	..	Agreement under consideration.
		3. Mysore	20-7-57	
11.	Maharashtra . .	1. Andhra Pradesh	10-2-58	
		2. Gujarat	6-7-60	
		3. Madhya Pradesh	1-7-58	
		4. Mysore	1-7-60	
12.	Manipur	Assam	..	Details of agreement already settled, but agreement not yet reduced to writing.
13.	Mysore. . .	1. Andhra Pradesh	26-2-58	
		2. Madras	20-7-57	
		3. Maharashtra	1-7-60	
		4. Kerala	30-8-57	
14.	Orissa . . .	1. Andhra Pradesh	24-3-60	
		2. Bihar	1-3-60	
		3. Madhya Pradesh	30-10-60	
		4. West Bengal	4-8-60	
15.	Punjab . .	1. Delhi	26-5-60	
		2. Himachal Pradesh	22-7-60	
		3. Jammu & Kashmir	4-7-60	
		4. Rajasthan	13-5-60	
		5. Uttar Pradesh	15-2-55 and 21-2-57	
16.	Rajasthan . .	1. Delhi	25-7-58	
		2. Madhya Pradesh	4-11-57	
		3. Punjab	13-5-60	
		4. Uttar Pradesh	27-7-60	
		5. Gujarat	5-2-57	
17.	Tripura . .	Assam	19-9-59	
18.	Uttar Pradesh	1. Bihar	20-3-59	
		2. Delh	24-10-57	
		3. Madhya Pradesh	29-7-60	
		4. Punjab	15-2-55 and 21-2-57	

APPENDIX 5—(*concld.*)

1	2	3	4	5
18.	Uttar Pradesh (*contd.*)			
		5. Rajasthan	27-7-60	
		6. West Bengal	20-3-59	
19.	West Bengal . .	1. Assam	..	Details of agreement already settled, but agreement not yet reduced to writing.
		2. Bihar	20-3-59	
		3. Madhya Pradesh	2-9-59	
		4. Orissa	4-8-60	
		5. Uttar Pradesh	20-3-59	

APPENDIX 6

Number of long distance temporary permits (i.e. permits for distances over 300 miles) issued in different States from January to June, 1960

	State	1960 January	February	March	April	May	June	Reasons for granting temporary permits
1.	Andhra Pradesh*	..	..	..	..	..	..	
2.	Maharashtra .	796	764	828	786	837	779	
3.	Orissa . .	10	20	34	53	55	50	To carry rice, paddy, furniture, forest goods, iron ores, betel leaves, stationery goods, fruits, vegetables, miscellaneous goods.
4.	West Bengal**	6	7	7	16	15	7	To carry machinery, electric goods, other essential public goods.
5.	Kerala . .	(———			502		———)	For urgent transport of goods.
6.	Madras . .	205	125	134	148	116	116	Section 62(c) of the Motor Vehicles Act, 1939.
7.	Punjab . .	5	2	3	3	3	3	To carry empty vehicles and household effects.
8.	Himachal Pradesh	6	2	..	..	..	..	To carry empty vehicles.
9.	Uttar Pradesh	126	162	170	154	264	N.A.	
10.	Mysore . .	288	322	252	306	271	221	(i) Under Section 62 (b) & (c) . (ii) To carry general goods. (iii) To carry essential goods. (iv) To carry goods and coffee seeds, foodgrains and other articles.
11.	Madhya Pradesh	1,346	1,608	1,328	1,829	1,608	1,759	(i) For carrying commercial/general/seasonal goods. (ii) To meet temporary particular need. (iii) To carry bidi leaves, machinery, forest produce etc.

12.	Bihar . .	518	542	540	491	497	624	Under reciprocal agreements with the neighbouring States.
13.	Delhi . .	384	399	384	290	419	427	For one return trip for carrying specific goods of particular parties on forward journey and public goods on return.
14.	Assam* . .	..	..	..	..	..	..	

* No temporary permits are issued for long distances in Andhra Pradesh and Assam.

** The figures relate to the permits issued by the State Transport Authority.

N.A.—Figures of permits issued by the Regional Transport Authorities are not available.

APPENDIX 7

Distribution of road transport industry according to the size of the unit

STATE	Individuals Owning			Companies or Partnerships Owning			Co-operative Societies Owning		
	One vehicle	2 to 5 vehicles	More than 5 vehicles	One vehicle	2 to 5 vehicles	More than 5 vehicles	One vehicle	2 to 5 vehicles	More than 5 vehicles
1	2	3	4	5	6	7	8	9	10
Public Carriers									
1. Assam	993*	..	..	29	12	2	..	..	..
2. Kerala	2,283	360	25	46	34	9	4	5	2
3. Madhya Pradesh	2,971	301	..	41	3	..	5	..	..
4. Madras	4,301	499	31	30	36	10	5	7	3
5. Mysore	1,252**	166	7	12	8	7	8	4	..
6. Orissa	2,343	1,135	23	..	5	15	5	1	..
7. Rajasthan	3,800	134	..	470	24	..	53	3	..
8. Uttar Pradesh **	6,211	63	2	114	22	9	3	2	..
9. West Bengal	3,464	365	4	109	225	13	..	..	..
10. Manipur	381	28	..	..	5	36	..	..	..
11. Andaman & Nicobar Islands	8	..	..	5	..	..	1	..	.
Stage & Contract Carriages									
1. Assam	761	..	..	17	2	4	..	..	..

2. Kerala	151	179	78	2	7	22	3	1	2
3. Madhya Pradesh	600	211	11	9	14	18	1	7	2
4. Madras	1,011	255	89	19	42	74	..	4	4
5. Mysore	1,446**	334	42	3	26	33	3	..	..
6. Orissa	149	27	5	2	1	1	..	..	..
7. Rajasthan	1,130	159	17	308	103	21	54	28	3
8. Uttar Pradesh	2,749	92	1	99	13	5	..	3	..
9. West Bengal	1,550	123	4	144	173	32	9	1	4
10. Manipur	68	4	..	..	..	3	1	3	..

* Figures for two districts are not available.

** Excluding figures for one region for which information is not available.

APPENDIX 8

Assumptions made for estimating the volume of goods traffic carried by road transport

		Railway Board	I.R.T.D.A./Masani Committee		C.T.P.C. Secretariat	
			Diesel lorry	Petrol lorry	Diesel lorry	Petrol lorry
Average load carried	Outward trip	4 tons	5 tons	4 tons	5 tons	3 tons
	Return trip	4 tons	3½ tons	3 tons		
Average annual mileage		30,000	35,000	30,000	30,000	20,000
Fleet utilisation rate of performance (Percentage of vehicles utilized to total on the road)		100		80	66	66
Average annual performance per truck		1·2 lakh ton miles	0·88 lakh ton miles		1·00 lakh ton miles	0·40 lakh ton miles
Ton miles performed by total number of trucks in 1958-59@		17,400 million	12,800 milion		8,500 million	

IRTDA.—Indian Roads and Transport Development Association. CTPC—Committee on Transport Policy & Coordination.
@ The total number of trucks in 1958-59 was 1,45,048.

APPENDIX 9

Percentage share of passenger traffic (passenger miles) carried by Railways and Commercial Motor Transport in India*

Year	Railways	Road	Total
1948-49	77·1	22·9	100
1949-50	75·3	24·7	100
1950-51	74·2	25·8	100
1951-52	71·6	28·4	100
1952-53	68·7	31·3	100
1953-54	67·3	32·7	100
1954-55	66·2	33·8	100
1955-56	63·1	36·9	100
1956-57	67·9	32·1	100
1957-58	65·4	34·6	100
1958-59	62·5	37·5	100
1960-61	59·5	40·5	100

* The Passenger miles by road relate to commercial buses only and have been worked out on the following assumptions :

	Diesel Buses	Petrol Buses
(i) Average seating capacity—Passengers	40	30
(ii) Average annual mileage	30,000	20,000
(iii) Load factor	66 per cent	66 per cent

APPENDIX 10.1

Statement showing the movement of Vehicles according to different distance zones

Name of the route	Total number of vehicles counted	Vehicles moving								
		Beyond 25 miles	Beyond 50 miles	Beyond 75 miles	Beyond 100 miles	Beyond 150 miles	Beyond 200 miles	Beyond 300 miles	Beyond 500 miles	Beyond 1000 miles
1	2	3	4	5	6	7	8	9	10	11
1. Amritsar-Delhi . .	4,700	4,047	3,265	2,615	2,215	1,514	1,005	59	12	1
		(86·1)	(69·5)	(55·7)	(47·1)	(32·2)	(21·4)	(1·3)	(0·3)	(0·02)
2. Delhi-Amritsar . .	5,143	4,410	3,568	3,011	2,536	1,670	1,063	58	4	1
		(85·7)	(69·3)	(58·5)	(49·3)	(32·5)	(20·7)	(1·2)	(0·2)	(0·1)
Sub-Total (1+2)	9,843	8,457	6,833	5,626	4,751	3,184	2,068	117	16	2
		(85·9)	(69·4)	(57·1)	(48·2)	(32·3)	(20·9)	(1·1)	(0·1)	(0·02)
3. Delhi-Kanpur . . .	5,249	3,654	2,218	1,738	1,362	950	629	149	67	
		(69·7)	(42·4)	(38·2)	(25·9)	(18·1)	(12·0)	(2·8)	(1·2)	(0·05)
4. Kanpur-Delhi . . .	5,314	3,942	2,429	2,020	1,602	1,050	703	155	83	8
		(74·2)	(45·7)	(38·0)	(30·1)	(19·7)	(18·2)	(2·9)	(1·5)	(0·1)
Sub-Total (3+4)	10,563	7,596	4,647	3,758	2,964	2,000	1,332	304	150	11
		(71·9)	(44·0)	(35·6)	(28·1)	(19·0)	(12·7)	(3·0)	(1·5)	(0·2)
5. Patna-Calcutta . . .	7,939	6,867	4,874	3,946	3,641	1,623	868	437	161	12
		(86·5)	(61·4)	(49·7)	(45·8)	(20·4)	(10·8)	(5·5)	(2·0)	(0·2)
6. Calcutta-Patna . . .	8,898	7,246	4,680	3,683	3,415	1,509	965	404	159	23
		(81·4)	(52·6)	(41·4)	(38·4)	(17·0)	(10·9)	(4·6)	(1·8)	(0·3)

Sub-Total (5+6)	16,837	14,112 (83·8)	9,554 (56·7)	7,629 (45·3)	7,056 (41·9)	3,132 (18·6)	1,833 (10·9)	841 (5·0)	320 (1·9)	35 (0·2)
7. Bombay-Bangalore	7,992	7,622 (95·4)	5,462 (68·4)	4,980 (62·4)	4,532 (58·8)	2,220 (27·9)	1,709 (21·4)	617 (7·7)	328 (4·1)	17 (0·2)
8. Bangalore-Bombay	8,116	7,281 (89·7)	5,546 (68·3)	5,047 (62·2)	4,596 (56·6)	2,453 (30·2)	2,030 (25·0)	758 (9·3)	367 (4·5)	11 (0·1)
Sub-Total (7+8)	16,108	14,903 (92·5)	11,008 (68·3)	10,027 (62·2)	9,128 (56·6)	4,673 (29·0)	3,739 (23·2)	1,375 (8·5)	695 (4·3)	28 (0·2)
9. Madras-Bangalore	4,704	2,918 (62·7)	2,534 (53·9)	2,233 (47·5)	1,877 (39·9)	1,259 (26·8)	1,003 (21·3)	291 (6·2)	51 (1·1)	2 (0·1)
10. Bangalore-Madras	4,837	3,051 (63·1)	2,602 (53·8)	2,274 (47·0)	1,947 (40·2)	1,353 (27·9)	1,055 (21·7)	339 (7·0)	36 (0·7)	.. ..
Sub-Total (9+10)	9,541	5,999 (62·9)	5,136 (53·9)	4,507 (47·3)	3,824 (40·1)	2,612 (27·4)	2,058 (21·6)	630 (6·6)	87 (0·9)	2 (0·2)
GRAND TOTAL	62,892	51,067 (81·2)	37,178 (59·1)	31,547 (50·2)	27,723 (44·1)	15,601 (24·8)	11,030 (17·5)	3,267 (5·2)	1,268 (2·0)	78 (0·1)

NOTE :—Figures in brackets indicate percentages of vehicles in each distance category to the total number of vehicles counted.

APPENDIX 10.2

Statement showing the tonnage of important commodities moved according to different distance zone.

(Figures in brackets indicate percentages to the total quantity moved.)

Commodity	Name of the Route	Total tonnage moved	Tonnage moving								
			Beyond 25 miles	Beyond 50 miles	Beyond 75 miles	Beyond 100 miles	Beyond 150 miles	Beyond 200 miles	Beyond 300 miles	Beyond 500 miles	Beyond 1000 miles
1	2	3	4	5	6	7	8	9	10	11	12
Finished goods	Calcutta-Patna	920·03	855·66 (93·0)	821·55 (89·3)	796·64 (86·6)	773·53 (84·1)	379·87 (41·3)	324·33 (35·3)	123·31 (13·5)	62·24 (6·9)	13·79 (1·5)
	Bombay-Bangalore	915·89	914·05 (99·8)	842·71 (92·0)	810·74 (88·5)	794·86 (86·8)	407·89 (44·6)	353·65 (38·7)	192·87 (21·1)	165·69 (18·1)	27·76 (3·0)
Sugar & Gur .	Delhi-Kanpur .	2,293·30	2,279·23 (99·4)	2,174·52 (94·8)	2,116·93 (92·3)	1,771·98 (77·3)	1,167·52 (50·9)	529·31 (23·1)	44·10 (1·9)	.. ..	.. ..
	Kanpur-Delhi .	6,830·98	6,277·06 (91·9)	3,216·65 (47·1)	2,186·03 (32·0)	2,033·26 (29·8)	1,487·84 (21·8)	1,048·66 (15·4)	109·83 (1·7)	7·16 (0·2)	.. ..
	Bangalore-Bombay	1,727·01	1,649·52 (95·5)	1,501·99 (87·0)	1,467·36 (85·0)	1,307·71 (75·8)	773·60 (44·9)	565·33 (32·8)	39·56 (2·4)	4·63 (0·4)	. ..
	Delhi-Amritsar	4,822·16	4,661·50 (90·0)	4,534·33 (94·1)	4,318·59 (89·6)	3,752·47 (77·9)	2,952·69 (61·3)	1,817·05 (37·7)	13·96 (0·3)	.. ..	.. ..
Mineral oil .	Delhi-Amritsar.	1,128·82	1,106·79 (98·0)	989·67 (87·6)	894·64 (79·2)	861·1 (76·2)	728·35 (64·4)	579·37 (51·2)	15·60 (1·3)	.. ..	.. ..
	Bombay-Bangalore	5,542·60	5,521·46 (99·6)	5,099·38 (92·0)	4,890·34 (88·2)	4,819·64 (86·9)	1,060·41 (19·1)	936·09 (16·9)	13·29 (0·3)	4·16 (0·1)	.. ..

Wood and Timber	Amritsar-Delhi	2,297·33	2,280·06 (99·2)	2,065·89 (89·9)	1,919·01 (83·5)	1,822·12 (79·3)	1,250·00 (54·4)	938·92 (40·9)	..	33·98 (1·5)	
Coal, soft coke etc.	Patna-Calcutta	11,746·68	11,690·98 (99·6)	11,487·72 (97·8)	10,179·18 (86·7)	9,457·92 (80·6)	901·46 (7·8)	11·00 (0·2)	4·00 (0·1)	.. ..	.. ..
	Calcutta-Patna	3,489·53	3,481·86 (99·8)	3,465·22 (99·3)	3,439·72 (98·6)	3,402·78 (97·5)	3,281·81 (94·0)	1,729·44 (49·5)	.. ..	.. ..	.. ..
Textiles	Bangalore-Bombay	828·94	.. ..	741·19 (89·4)	724·41 (87·4)	705·63 (85·1)	630·45 (76·0)	592·80 (71·5)	326·27 (39·4)	245·22 (29·6)	.. ..
	Bombay-Bangalore	795·50	789·99 (99·3)	703·67 (88·4)	700·36 (88·0)	693·36 (87·1)	566·04 (71·1)	513·68 (64·5)	228·61 (28·7)	119·14 (15·0)	.. ..
	Delhi-Kanpur	855·46	777·96 (90·9)	624·37 (73·0)	524·34 (63·4)	506·62 (59·2)	426·18 (49·8)	343·29 (40·1)	131·45 (15·3)	37·76 (4·3)	.. ..
	Kanpur-Delhi	1,202·20	1,116·12 (92·8)	966·68 (80·4)	938·83 (78·1)	833·77 (69·4)	779·53 (64·9)	710·20 (59·1)	124·99 (10·4)	79·58 (6·6)	16·93 (1·4)
Iron & Steel	Bombay-Bangalore	1,257·88	1,251·04 (99·5)	1,095·09 (87·1)	1,056·99 (84·0)	1,017·16 (80·8)	658·92 (52·3)	603·09 (47·9)	190·68 (15·1)	60·86 (4·8)	.. ..
	Calcutta-Patna	1,693·84	1,589·85 (93·9)	1,460·01 (86·2)	1,397·10 (82·5)	1,387·82 (81·9)	396·14 (23·4)	338·13 (20·0)	200·16 (11·9)	52·46 (3·2)	.. ..
Cotton & Jute raw	Bangalore-Bombay	981·24	979·40 (99·8)	888·31 (90·5)	868·48 (88·5)	858·58 (87·5)	684·15 (69·7)	630·94 (64·2)	278·87 (28·3)	75·03 (7·6)	.. ..
	Amritsar-Delhi	1,148·33	1,117·07 (97·3)	1,036·95 90·3)	967·51 (84·3)	896·56 (78·1)	745·73 (65·0)	334·15 (29·2)	26·15 (2·4)	6·87 (0·7)	.. ..
	Delhi-Kanpur	1,749·90	1,405·67 (80·3)	1,293·00 (73·8)	1,263·29 (72·4)	1,211·17 (69·4)	1,114·51 (63·9)	963·03 (55·1)	248·75 (14·3)	150·38 (0·1)	.. ..
Foodgrains	Delhi-Amritsar	2,782·91	2,625·96 (94·36)	2,021·97 (72·66)	1,719·36 (61·79)	1,302·13 (46·80)	431·24 (15·51)	229·96 (8·27)	7·53 (0·28)	.. ..	.. ..
	Amritsar-Delhi	2,823·16	2,629·32 (93·13)	2,145·35 (75·99)	1,373·89 (48·66)	1,112·52 (39·40)	552·04 (19·55)	363·75 (12·88)	.. ..	.. ..	.. ..

APPENDIX 10.2—*concld.*

1	2	3	4	5	6	7	8	9	10	11	12
Foodgrains(*contd.*)	Delhi-Kanpur .	2,890·58	2,254·04 (78·00)	1,002·31 (34·70)	621·97 (21·50)	550·88 (19·00)	295·30 (10·20)	151·63 (5·2)	.. ..	.. ..	.. ..
	. Kanpur-Delhi .	1,413·70	1,238·88 (87·60)	1,058·48 (74·80)	957·91 (67·70)	794·06 (56·10)	450·40 (31·80)	7·35 (0·4)	.. ..	.. ..	.. ..
	. Patna-Calcutta	4,335·09	4,031·68 (93·00)	2,588·89 (59·72)	1,400·00 (32·30)	1,074·92 (24·80)	439·88 (10·15)	194·61 (4·49)	27·01 (0·60)	4·41 (0·08)	4·41 (0·08)
	. Bombay-Bangalore	2,489·96	2,444·19 (98·16)	2,053·16 (82·46)	1,881·74 (75·58)	1,701·79 (68·35)	809·46 (32·51)	518·57 (20·83)	121·47 (4·88)	4·41 (0·18)	.. ..
Provisions	. Bangalore-Bombay	2,093·66	2,087·04 (99·7)	1,959·53 (93·6)	1,830·27 (87·4)	1,719·53 (82·1)	1,303·36 (62·2)	1,208·77 (57·7)	744·97 (35·5)	212·37 (10·1)	.. ..
	Amritsar-Delhi.	2,327·17	2,300·53 (98·84)	2,165·72 (93·05)	2,075·43 (89·17)	1,835·87 (78·88)	1,625·34 (69·84)	1,242·91 (53·41)	104·75 (4·50)	27·95 (1·20)	.. ..
	Calcutta-Patna	1,018·32	968·83 (95·14)	856·20 (84·08)	735·60 (72·24)	697·44 (68·49)	338·22 (33·21)	279·05 (27·40)	173·52 (17·04)	34·01 (3·34)	.. ..
Fruits and Vegetables	Amritsar-Delhi	2,342·84	2,328·67 (99·40)	2,256·13 (96·30)	2,077·60 (88·68)	2,018·24 (86·15)	1,899·81 (81·10)	1,666·28 (71·13)	9·37 (0·41)	.. ..	.. ..
	Delhi-Amritsar	1,609·97	1,580·05 (98·14)	1,506·58 (93·58)	1,404·84 (87·26)	1,303·73 (80·98)	1,074·76 (66·76)	647·98 (40·25)	92·79 (5·76)	.. ..	.. ..
	Bangalore-Bombay	3,591·01	3,567·52 (99·3)	3,031·40 (84·4)	2,926·39 (81·5)	2,710·87 (75·5)	1,011·81 (28·2)	630·30 (17·6)	143·66 (4·0)	33·31 (0·9)	.. ..
	Patna-Calcutta	3,867·45	3,746·99 (96·89)	3,334·37 (86·22)	3,116·25 (80·58)	3,005·35 (77·71)	2,030·00 (68·00)	1,265·15 (32·71)	732·94 (18·95)	65·32 (1·69)	4·62 (0·12)
	Delhi-Kanpur .	3,251·91	3,212 30 (98·7)	1,891 88 (58·1)	1,238·48 (38·1)	533·16 (16·4)	288·14 (8·9)	135·17 (4·2)	48·16 (1·5)	7·68 (0·3)	.. ..
	Kanpur-Delhi .	2,37 ·37	2,991·87 (91·5)	1,881·98 (57·6)	1,675·42 (51·3)	1,117·20 (34·2)	348·37 (10·7)	174·96 (5·4)	27·03 (0·9)	22·77 (0·8)	.. ..

APPENDIX II

A round-up of replies from some firms in India regarding the mode of transport employed by them

From a perusal of the replies from some of the constituent firms of the Chambers of Commerce & Industry in the country to whom a questionnaire was issued by the Committee on Transport Policy and Coordination, it seems that there has been an increasing tendency on the part of the majority of these firms to use road transport for despatching their articles of manufacture, especially over the last 2 or 3 years. In a fairly large number of cases, the proportion of the products sent by road transport has increased as compared with that despatched by rail. Details are given at Annexure I to this note.

Examples of long distance haulage by road transport

Some of the firms despatch their products by road transport to fairly long distances. For instance, Enfield (India), Madras, despatch motorcycles to Ahmedabad—a distance of 1,110 miles. A few of the other instances of long distance haulage are given below:—

Despatches by road

	Firm	Principal commodities	Destination	Distance (miles)
1	British India Corporation Ltd., Kanpur .	Woollen piecegoods	Bombay	840
2	J.K. Jute Mills, Co. Ltd., Kanpur . .	Jute finished products	Bhatinda	500
3	Hindustan Lever Ltd., Bombay. . .	Soap, Vanaspati Ghee	Agra Katni	879 791
4	The Dunlop Rubber Co., Ltd., Calcutta .	Rubber tyres and tubes	Trichinapoly Bombay	1041 1300
5	The Bombay Dyeing and Manufacturing Co., Ltd., Bombay.	Textiles	Calcutta Madras	1300 850
6	Voltas Ltd., Bombay.	Machinery, Iron safes etc.	Srinagar Madurai	1400 900
7	The Bata Shoe Co., Ltd., Calcutta. .	Leather shoes & Foot wear	Bombay	1300
8	Madura Mills Co., Ltd., Madurai . .	Cotton textiles & cotton bales	Bombay	900

	Firm	Principal commodities	Destination	Distance (miles)
9	Imperial Chemical Industries (India) Private Ltd., Madras.	Paints and Chemicals	Secunderabad Hyderabad	500
10	Modi Spinning and Weaving Mills, Ltd., Modinagar.	Textiles	Calcutta	900
11	Kanpur Dyeing & Cloth Printing Co., Kanpur.	Textiles	Bombay	840
12	Buckingham & Carnatic Co., Ltd., Madras.	Textiles	Bombay	850
13	Brooke Bond (India) Private Ltd., Coimbatore.	Tea	Bombay	800
14	Premier Automobiles, Bombay.	Motor cars	Gauhati	1664

Reasons for preference for road transport

A number of reasons have been advanced by these firms for preferring road transport as compared with rail transport. These are enumerated below:—

1 One of the reasons is lower freight rates in the case of road transport as compared with rail transport. In addition, the firms save multiple handling and extra carting charges in the case of goods despatched by road as compared with the rail transport. A comparative statement of road and rail freight rates as furnished by some of the firms is given at Annexure II.

2. Quick delivery is another attraction. Hindustan Lever Ltd., Bombay, for instance, have stated that in the case of exports and imports, timely delivery from and to ships is ensured through road transport. Besides, road transport enables them to reach a wide net-work of selling centres with the minimum of cost. The following table shows the transit time taken by road and rail transport in the case of some of the firms:—

Name of the Firm	From	To	By rail	By road
Enfield (India) Ltd., Madras.	Madras	Poona	7 days	4 days
	—do—	Bombay	7 days	4 days
Aluminium Corporation of India, Ltd., Calcutta. . . .	Jay Kay Nagar. (Burdwan District)	Calcutta	4 to 5 days	1 day
Kanpur Dyeing & Cloth Printing Co., Ltd., Kanpur. . .	Kanpur	Bombay	10 days	4 days.
Gorden Woodroffe & Co. (P) Ltd., Madras.	Madras	Bombay	7 to 10 days	3 to 4 days
Madura Mills Co., Madurai. .	Madurai	Madras	3 days	8 hours
		Bombay	14 days	5 days
		Bangalore	8 days	2 days

Name of the firm	From	To	By rail	By road
Imperial Chemcial Industries (P) Ltd., Madras.	Madras	Bangalore Mysore Secundra-bad	4 days 5 days 6 days	1 day 2 days 3 days
Indian Tea Association Ltd., Calcutta.	Tea estates in Dooars, Darjeeling & Tarai Districts	Calcutta	10 to 11 days (by QTS)	5 to 6 days.

3. As there is not much of transhipment en-route, multiple and rough handling is avoided. This minimises the chances of damage and pilferage. There have been very few cases of loss or misdelivery of consignments in the case of road transport organisations.

4. Thorough and expensive packing is not required.

5. Goods are picked up from factory premises and delivered at the godown at the destination. This eliminates handling charges.

6. Goods are carried at the risk of the carriers and in case of loss or damage, the claims are settled promptly.

7. As the lorries are generally available at a few hours notice, goods are not required to be stored at the factory for long. The storing space required is, therefore, not much.

8. Even "smalls" can be sent daily and easily by road parcel service, while the railways have to wait till the wagon load is available.

9. Free storage is allowed at the destination by carriers for a certain period and hence no demurrage has to be paid.

10. Booking by road transport is available for all stations throughout the week.

11. Railway connections are not provided to all places where stockists are appointed and, therefore, road transport is the only mode of transport available. Moreover, as the whole quota of wagons indented is not always available, it has to be supplemented by road transport. Besides, the rural demand can be easily and quickly met by road transport.

12. There are no restrictions on loading time as in the case of wagons.

13. Road transport operators value their customers and the services are offered to suit their need and convenience.

14. One of the firms has stated "the corruption in railway sheds, causing unnecessary harassment has no place in road transport."

Details of arrangements with road transport undertakings

A number of companies have entered into contract with one or more transport organisations for the movement of their products by road. Some

of the more important terms of their contract are given below:—

1. The charges are paid on the basis of actual weight and not on the minimum weight. In the case of Enfield India, for instance, they pay only for 2 maunds and 30 seers per motor cycle, while the railways charge for a minimum of 4 maunds. In the case of Aluminium Corporation of India, Calcutta, the freight is paid for the actual weight of goods, i.e., excluding the weight of packing etc. In another case (Imperial Chemical Industries) freight is paid for the weight actually received at the destination.

2. The contract is for a specified period and is terminable on notice from either side.

3. In some cases (e.g., Cement Marketing Co.,) the carriers have to keep a security deposit with the concern. In certain other cases (e.g., Hindustan Lever) the contractor is to furnish a banker's guarantee for the value of goods as security.

4. In certain cases the area of operation is defined.

5. The contractor is responsible for all risks in respect of loss, fire, accident, pilferage, damage etc., for the goods in transit. Carriers are required to insure goods against all risks in some cases.

6. In some of the cases, the freight rates are periodically revised and fixed by calling tenders.

7. The requisite number of lorries has to be made available as soon as required. In the case of a firm (Hindustan Lever) demand for full truck loads has to be met within 24 hours and for 'smalls' within 48 hours. In the case of a firm (D.C.M., Delhi), the required number of trucks has to be provided at a fixed rate throughout the year. In the case of Bengal Paper Mills, with an advance notice of 24 hours, a transport operator is required to provide a maximum of 6 lorries in a day and in the event of a failure to do so, he is to pay a penalty of Rs. 25 per truck per day.

8. In certain cases (for example, Bata Shoe Co.,) carriers have to inform telegraphically of the safe arrival of the goods. Full compensation is required to be paid for loss etc., in transit.

9. Goods have to be delivered at destination within a specified time limit.

10. No demurrage is paid till the expiry of the period after the arrival of goods at destination.

Suggestions for improvement of road transport services

Generally speaking, the firms consider the service provided by road transport as satisfactory. Their suggestions to improve road transport are given below:—

1. The trucking industry should be organised into well-knit units. The transport companies should organise themselves into regional syndicates. They should also establish Claims Departments of their own to expedite settlement of claims. They should also have more offices in the regions of South India and Assam.

2. There should be free long distance and inter-State operations of the trucks. The permits should be issued liberally.

3. Roads and road conditions should be improved. Provision should be made for all-weather roads, and strengthened pucca bridges. The electric wires on the roads should be fixed high enough and narrow crossings should be done away with. New bridges should replace seasonal ferry services, slowly and gradually.

4. Rules relating to Government taxes should be simplified. Double taxation and other such measures that enhance the operational costs should be avoided. All matters relating to licences should be dealt with by the State of origin of the owner of a vehicle.

5. The rates should be reduced to a reasonable limit i.e., to the level of goods train freight rates.

6. Road transport should expand its carrying capacity and the use of trailers should be popularised. Load limits should be standardized so as to avoid over-loading.

7. An adequate supply of spare parts, tyres and other accessories should be made available at reasonable prices.

8. Surcharge on diesel should be removed and prices of vehicles should be brought down to 1952-53 level.

9. Octroi rules should be reviewed and regularised so as to avoid unnecessary delays.

10. The licensing rules should also make room for modifications like allowing goods on a single trip permit.

11. Harassment and annoyance caused by the customs and inter-State checking staff should be eliminated in so far as these hinder quick deliveries.

The cases of preference for railways and suggestions for improvement of the railway service.

The firms generally prefer railways for the transport of their goods over long distances and when the goods are bulky and also in cases where the time is not an important factor. The distances beyond which they would like to send goods by railways vary from firm to firm. Various limits have been mentioned for the distances over which they would like to despatch goods by rail; as for example, 120 miles, 200 miles, 500 miles and 600 miles. In some cases firms have mentioned that they would like to send their goods by rail to long distances only if the improvements suggested by them have been effected. Some of the suggestions made by the firms for the improvement of the railway service are given below:—

1. There should be quick delivery. In the case of an undue delay, the freight charges should be refunded to the users of railway service. The railway rates should be brought down especially in the case of parcel service.

2. Consignments should be handled with care at transhipment points. Transit thefts should be altogether avoided. Loading and unloading should be mechanised through cranes at transhipment points to avoid delays.

3. There should be regularity in allotment of wagons.

4. Closed wagons should have larger access doors to admit bigger crates.

5. The container service on the lines of the British Railways which can be attached both to flat-topped rail wagons and road trailers or lorries should be introduced so as to provide facilities of door-to-door service.

6. The minimum load limit of 250 maunds for the 4-wheeler wagon should be waived off so as to enable easier booking of smaller consignments.

7. Packing conditions should not be rigid and costly. Sometimes packing may be costlier than the material itself and the freight might have to be paid according to the class-rate on packing also.

8. Loading and unloading time allotted should be enhanced to 6 hours from 5 hours as at present.

9. Early settlement of claims should be ensured.

10. Storage facilities should be provided for longer periods.

11. Quick Transit Service should be provided at as many stations as possible. Besides, express services should also be run.

12. Wagons should be redesigned so that they can be utilised both on broad gauge and metre gauge.

13. Refrigeration facilities should also be provided by the railways.

14. The railways should provide facilities for payment of railway freight once in a month by big concerns or at least by those who have large business with the railways.

APPENDIX II—(*contd.*)

Annexure I—Statement showing the extent to which railways, road transport and other means of transport are used by the commercial firms

1. Enfield India Ltd., Madras.	The ratio of rail despatches to road in 1958 was about 8 : 1 and in 1959 5 : 1		
2. Cement Marketing Co. of India (P) Ltd., Bombay.		*By Rail* (in tons)	*By Road*
	August to July		
	1956-57 . . .	26,99,166 (95·2%)	1,38,610 (4·8%)
	1957-58 . .	28,14,535 (92·4%)	2,31,643 (7·6%)
	1958-59 . .	27,74,090 (88·6%)	3,59,399 (11·4%)
3. Aluminium Corporation of India Ltd., Calcutta.		*By Rail* (in tons)	*By Road*
	1957	326 (35·2%)	599 (64·8%)
	1958	395 (33·5%)	784 (66·5%)
	1959	772 (57·8%)	563 (42·2%)
4. Cawnpore Dyeing & Cloth Printing Co. Ltd., Kanpur.		*By Rail* (in maunds)	*By Road*
	1957	13,729	nominal
	1958	10,621	Do.
	1959	9,227 (66·5%)	4,643 (33·5%)
5. British India Corporation Ltd., Kanpur.		*By Rail* (in maunds)	*By Road*
	1956	17,365 (62·3%)	10,464 (37·7%)
	1957	15,687 (51·4%)	15,463 (48·6%)
	1958	14,713 (51·5%)	14,470 (48·5%)

APPENDIX II—(*contd.*)

		By Rail (in tons)	*By Road*
6. Buckingham and Carnatic Co. Ltd., Madras.			
	July 1959 . . .	504 (97%)	16 (3%)
	August 1959 . . .	665 (85·3%)	115 (14·7%)
	September 1959 . .	458 (79·7%)	117 (20·3%)
	October 1959 . . .	330 (75·2%)	109 (24·8%)
7. Brooke Bond India (P) Ltd., Coimbatore.		*By Rail* (in tons)	*By Road*
	1957	180 (2·1%)	8,790 (97·9%)
	1958	192 (1·3%)	10,224 (98·7%)
	1959 (ten months) .	128 (1·4%)	9,284 (98·6%)
8. Parry & Co. Ltd., Fertilizers Department, Madras.		*By Rail* (in tons)	*By Road*
	1957	60,000 (67·5%)	29,000 (32·5%)
	1958	67,700 (66·6%)	34,000 (33·4%)
	1959	72,400 (66·8%)	36,000 (33·2%)
9. India Cement Ltd., Madras.		*By Rail* (in tons)	*By Road*
	1957	1,91,847 (90·8%)	19,414 (9·2%)
	1958	2,22,712 (93·1%)	16,385 (6·9%)
	1959	2,04,756 (87·3%)	29,664 (12·7%)

APPENDIX II—(*contd.*)

10. Imperial Chemical Industries (P) Ltd., Madras.	Mainly despatches of Paint are made by road; other products are sent by road in urgent cases only. Despatches by rail and road in terms of freight paid during the year October, 1958—September 1959 are indicated below :	
	By Rail Rs. 4,00,000 (86·8%)	*By Road* Rs.61,000 (13·2%)

11. Indian Oxygen Ltd., Kanpur.	*By Rail* (in tons)	*By Road* (in tons)
1956-57	3,759 (80·5%)	915 (19·5%)
1957-58	4,540 (76·1%)	1,424 (23·9%)
1958-59	3,269 (46·9%)	3,705 (53·1%)

12. Tata Iron & Steel Co., Ltd., Bombay.

Despatches by road are made only within Jamshedpur and total 3,000 to 4,000 tons a month. Despatches by rail in the last three years were as follows :

(in lakh tons)

1957	*1958*	*1959*
9·77	9·17	11·50

13. Hindustan Lever Ltd., Bombay.	*By Rail* (Percentage of total traffic)	*By Road* (Percentage of total traffic)	*By Steamer* (Percentage of total traffic)
1957	58	39	3%
1958	45	51	4%
1959	46	50	4%

14. Smith Stanistreet and Co. Ltd., Calcutta.

In 1957, almost nothing was sent by road. Despatches in last two years were as under :

	By Rail (in tons)	*By Road* (in tons)
1958	374 (59·18%)	258 (40·82%)
1959 (ten months)	236 (37·6%)	393 (62·4%)

15. Bata Shoe Co. Ltd., Calcutta.	*By Rail* (in tons)	*By Road* (in tons)
1957	8,148 (63·8%)	4,632 (36·2%)
1958	8,631 (63·3%)	5,085 (36·7%)
1959 (nine months)	5,908 (51·1%)	5,658 (48·9%)

APPENDIX II—(*contd.*)

16. Bengal Paper Mill Co. Ltd., Calcutta.

	By Rail (in tons)	*By Road*
1956	10,490 (83%)	2,160 (17%)
1957	8,900 (71·2%)	3,610 (28·8%)
1958	9,760 (67·6%)	4,690 (32·4%)

17. D.C.M. Chemical Works, Ltd., Delhi.

	By Rail (in tons)	*By Road*
1956-57	3,900 (17·4%)	18,600 (82·6%)
1957-58	3,700 (16·6%)	18,600 (83·4%)
1958-59	N.A.	19,700

18. A. & J. Main & Co. Ltd., Calcutta.

	By Rail (in tons)	*By Road*
1957	2,284 (86·5%)	357 (13·5%)
1958	751 (52%)	694 (48·0%)
1959 (11 months) . . .	610 (29·4%)	1,466 (70·6%)

19. Martin Burn Ltd., Calcutta.

	By Rail	*By Road* (in tons)	*By Steamer or Steamer-cum-rail*
1956 . .	1,092 (66·5%)	437 (26·6%)	113 (6·9%)
1957 . .	1,079 (53·6%)	721 (35·8%)	210 (10·6%)
1958 . .	813 (46·1%)	338 (19·1%)	611 (34·8%)

20. Indian Engineering Association, Calcutta.

	By Rail (in tons)	*By Road*
1957	156 (75·7%)	50 (24·3%)
1958	174 (92%)	15 (8%)
1959 (nine months)	10 (19·7%)	41 (80·3%)

APPENDIX II—(*contd.*)

		By Rail (in tons)	*By Road*
11. Burn & Co., Ltd., Calcutta.			
	(a) *Despatches from Raniganj*		
	1956	22,361 (71·4%)	2,768 (28·6%)
	1957	20,021 (76·5%)	6,149 (23·5%)
	1958	23,090 (77·5%)	6,724 (22·5%)
	(b) *Despatches from Durgapur*		
	1956	5,214 (98%)	101 (2%)
	1957	7,564 (94%)	479 (6%)
	1958	7,529 (95·1%)	383 (4·9%)
	(c) *Despatches from Ondal*		
	1956	3,507 (94·0%)	221 (6%)
	1957	3,698 (81·7%)	825 (18·3%
	1958	1,766 (46·7%)	2,018 (53·3%
	(d) *Despatches from Gulfurbari*		
	1956	25,572 (92·1%)	2,175 (7·9%)
	1957	21,072 (89·2%)	2,525 (10·8%)
	1958	25,609 (91·5%)	2,363 (8·5%)
Becker Gray and Co. Ltd., Calcutta.		*By Rail* (in tons)	*By Road*
	1957	7,081 (100%)	..
	1958	3,767 (63·3%)	2,190 (36·7%)
	1959	3,642 (47·5%)	4,027 (52·5%)
Indian Copper Corporation Ltd., Ghatsila, Bihar.		*By Rail* (in tons)	*By Road*
	1956	9,783 (99·98%)	2 (0·02%)
	1957	10,297 (99·96%)	4 (0·04%)
	1958	10,961 (99·95%)	5 (0·05%)

APPENDIX II—(*contd*)

24.	Bridge Roof & Co. (India) Ltd., Calcutta.		*By Rail* (in tons)	*By Road*
		1957	6,885 (91·4%)	645 (8·6%)
		1958	3,108 (74·1%)	1,088 (25·9%)
		1959	2,100 (56·9%)	1,594 (43·1%)
25.	Diamond Products Ltd., Calcutta.		*By Rail* (in tons)	*By Road*
		1957	200 (100%)	—
		1958	200 (86·9%)	30 (13·1%)
		1959	200 (74·1%)	70 (25·9%)
26.	Brooke Bond India Ltd., Calcutta.		*By Rail* (in tons)	*By Road*
		1956	3,200* (42·4%)	2,900* (47·6%)
		1959	3,555* (48·4%)	3,800* (51·6%)
27.	Elgin Mills, Ltd., Kanpur.		*By Rail* (in tons)	*By Road*
		(*a*) *Export Goods* October to September		
		1956-57	2,120 (99·8%)	4 (0·2%)
		1957-58	1,178 (100%)	.. ..
		1958-59	324 (25·4%)	953 (74·6%)
		(*b*) *Local Sales* October to September		
		1956-57	2,125 (99·9%)	2 (0·1%)
		1957-58	2,270 (99·6%)	8 (0·4%)
		1958-59	2,274 (85·6%)	382 (14·4%)
28.	Madura Mills Co. Ltd., Madurai.		*By Rail*	*By Road* / *By Sea* (in bales)
		1956	17,968 (51·6%)	69,800 (13·2%) / 47,457 (35·2%)
		1957	15,974 (11·8%)	56,330 (41·6%) / 62,928 (46·6%)
		1958	16,857 (9·9%)	56,871 (33·5%) / 95,937 (56·6%)

*Average monthly despatches.

APPENDIX II—(*contd*)

			By Rail	*By Road*
19.	Glaxo (India) Private, Ltd. Bombay.		(in tons)	
		Bombay to Madras		
		July to June		
		1956-57 . . .	1,237 (71·6%)	489 (28·4%)
		1957-58 . . .	254 (19·4%)	1,061 (80·6%)
		1958-59 . . .	291 (17·3%)	1,391 (82·7%)
		Bombay to Vijaywada		
		July to June		
		1956-57 . . .	8 (0·6%)	213 (99·4%)
		1957-58 . . .	9 (0·6%)	541 (99·4%)
		1958-59 . . .	..	569 (100%)
		Bombay to Delhi		
		July to June		
		1956-57 . . .	531 (100%)	..
		1957-58 . . .	699 (81·7%)	156 (18·3%)
		1958-59 . . .	485 (42·8%)	648 (57·2%)
		Bombay to Calcutta		
		July to June		
		1956-57 . . .	2,331 (100%)	..
		1957-58 . . .	2,390 (100%)	..
		1958-59 . . .	1,771 (83·6%)	347 (16·4%)

			By Rail	*By Road*
20.	Carona Sahu Co., Ltd., Bombay		(in maunds)	
		1957	43,836 (96·8%)	1,415 (3·2%)
		1958	40,837 (88·3%)	5,461 (11·7%)
		1959 (upto Oct. only) . . .	3,988 (28%)	10,210 (72%)

APPENDIX II—(*contd*)

			By Rail (in tons)	*By Road*
31.	Kothari Textile Mills, Ltd., Singanallur	1957	822 (69·2%)	365 (30·8%)
		1958	536 (41·6%)	750 (58·4%)
		1959	411 (35·7%)	738 (64·3%)
		October to September	*By Rail* (in tons)	*By Road*
32.	The Tungabhadra Industries Ltd., Kurnool	1956-57	147 (5·8%)	2,420 (94·2%)
		1957-58	210 (6·8%)	2,893 (93·2%)
		1958-59	528 (16·8%)	2,607 (83·2%)
			By Rail (in tons)	*By Road*
33.	Bhopal Sugar Works, Ltd., Sehore (M.P.)	(*a*) *Sugar*		
		1956-57	206 (2·4%)	8,481 (97·6%)
		1957-58	1,037 (10%)	9,398 (90%)
		1958-59	762 (9·3%)	7,782 (907%)
		(*b*) *Molasses*		
		1956-57	799 (21·6%)	2,959 (78·4%)
		1957-58	1,638 (30·2%)	3,790 (69·8%)
		1958-59	1,633 (48·8%)	1,709 (51·2%)
			By Rail (in tons)	*By Road*
34.	Vasantha Mills Ltd., Singanallur	1956	7,588 (62·8%)	4,483 (37·2%)
		1957	4,927 (49·4%)	5,050 (50·6%)
		1958	1,591 (16·4%)	8,141 (83·6%)
			By Rail (in tons)	*By Road*
35.	Swadeshi Cotton Mills Ltd., Kanpur.	1957	5,826 (88·4%)	769 (11·6%)
		1958	4,781 (59·5%)	3,316 (40·5%)
		1959	1,952 (40·4%)	2,884 (59·6%)

APPENDIX II—(*concld*)

Annexure II—A comparative statement of road and rail freight rates between certain centres of trade*

	Name of the Firm	From	To	By rail	By road	Unit of freight rate
				Rs.	Rs.	
1.	Enfield India Ltd., Madras	Madras	Bangalore	22·30	18·00	Per vehicle
2.	Aluminium Corporation of India, Ltd., Calcutta	Jaykaynagar	Howrah	28·10	24·00	Per ton
3.	British India Corporation, Ltd., Kanpur	Dhariwal	Bombay	16·00	8·00	Per md.
		Dhariwal	Calcutta	16·00	8·00	do
4.	Madura Mills Co., Ltd., Madurai	Madurai	Madras	10·50	5·75	Per bale
		Madurai	Bangalore	12·71	7·00	do
5.	Premier Automobiles Ltd., Bombay	Bombay	Delhi	6·27	6·00	Per md.
		Bombay	Calcutta	8·50	8·25	do
		Bombay	Bangalore	5·57	4·50	do
		Bombay	Madurai	7·71	6·00	do
		Bombay	Nagpur	4·48	4·00	do
6.	J.K. Jute Mills, Co., Ltd., Kanpur	Kanpur	Lakhimpur	0·93	0·88	do
7.	Bengal Paper Mills Co. Ltd., Calcutta	Raniganj	Calcutta	20·00	21·00	Per ton
8.	D.C.M. Chemical Works, Delhi	Delhi	Panipat	0·56	0·54	Per md.
		Delhi	Karnal	0·69	0·67	do
		Delhi	Abohar	1·60	1·10	do
		Delhi	Ferozepur	1·66	1·01	do
		Delhi	Ludhiana	1·39	0·88	do
		Delhi	Hissar	1·29	0·82	do
		Delhi	Kotah	1·79	0·73	do
		Delhi	Ajmer	1·48	0·62	do
		Delhi	Jaipur	1·19	0·54	do
9.	Gordon Woodroffe & Co., Ltd., Madras	Madras	Bombay	12·00	6·25	Per md.
		Madras	Bangalore	1·69	1·35	do
10.	Buckingham and Carnatic Co., Ltd., Madras	Madras	Trichy	1·63	1·50	Per md.
		Madras	Tuticorin	2·81	2·75	—do—

*In addition to the lower freights by road, the concerns also save multiple handling and extra carting charges i.e., about 20 nP per maund.

APPENDIX 12

Statement showing trends in low and high rated traffic on Government Railways

(Figures in brackets represent percentage of total traffic or earnings)

Sl. No.	Commodity	Classification	Tons Originating (in thousands)				Earnings (Rs. in thousands)			
			1955-56	1956-57	1957-58	1958-59	1955-56	1956-57	1957-58	1958-59
1	2	3	4	5	6	7	8	9	10	11
			I—Trends in low-rated commodities *							
1.	Coal for public	Special	22,335	23,395	24,422	26,938	2,14,516	2,61,165	3,30,513	3,90,115
2.	Marble	55-B	(b)	(b)	243	43	(b)	(b)	2,711	930
3.	Lime Stone	32·5-A	(b)	(b)	2,474	2,949	(b)	(b)	21,036	28,268
4.	Gypsum	32·5-A	(b)	(b)	1,078	943	(b)	(b)	18,272	22,606
5.	Other Stones	32·5-A	5,910	6,761	4,661	4,773	54,177	69,594	40,230	49,185
6.	Manganese Ore	40-A	1,378	1,647	1,620	974	22,480	26,305	34,228	22,733
7.	Iron Ore	32·5-A	(c)	(c)	5,034	5,512	(c)	(c)	51,873	62,505
8.	Other Ores	40-A	4,373	4,630	317	295	36,391	43,813	6,472	6,115
9.	Cement	37·5-A	3,959	4,291	5,077	5,012	58,904	62,978	74,033	81,072
10.	Manure Organic	22·5-A	803	961	255	248	14,201	16,018	3,411	4,337
11.	Manure Chemicals	32·5-A	(x)	(x)	985	1,040	(x)	(x)	21,711	26,015
12.	Salt	35-A	1,858	1,715	1,880	1,781	36,562	35,898	45,335	50,174
13.	Rice (in husk)	30-A	691	783	581	537	10,116	11,838	8,389	9,290

14. Gram and Pulses . .	30-A	2,701	2,645	3,065	2,571	64,470	56,456	78,374	70,957
15. Rice (not in husk) . .	30-A	2,658	2,799	2,768	2,817	47,517	46,808	53,778	56,716
16. Gram Flour . . .	35-A	@	@	43	37	@	@	1,401	1,359
17. Wheat	30-A	1,361	1,655	2,751	3,957	27,826	40,969	63,803	89,275
18. Wheat Flour . . .	35-A	188	218	239	192	5,433	5,547	6,028	4,810
19. Jowar & Bajra . . .	30-A	703	662	653	807	14,057	12,157	13,237	16,169
20. Fruits & Vegetables . .	40-A	4,258	4,513	812	676	28,258	33,855	23,442	21,387
21. Sugarcane . . .	35-A	@@	@@	3,324	2,627	@@	@@	12,516	8,071
22. Sand	32·5-A	650***	700***	756	750	4,895***	5,271***	5,697	6,977
23. Charcoal . . .	30-A	(d)	(d)	395	407	(d)	(d)	4,947	6,960
24. Other Fuels . . .	40-A	1,614	1,633	1,270	1,266	15,627	17,002	11,377	12,474
25. Wood-Unwrought, Bamboo	40-A	(e)	(e)	490	496	(e)	(e)	7,388	8,513
26. Wood-Unwrought, others .	37·5-A	1,848	2,143	1,976	1,985	32,782	39,882	40,477	44,946
27. Bones	32·5-A	100***	115***	128	145	2,307***	2,653***	2,954	3,434
TOTAL—I . . . (Low-rated)		57,388	61,266	67,306	69,778	6,90,519	7,88,209	9,83,633	11,05,393
		(63·2)	(63·2)	(66·9)	(68·7)	(39·1)	(39·6)	(43·7)	(46·7)

APPENDIX 12—(*contd.*)

1	2	3	4	5	6	7	8	9	10	11
			II—Trends in high-rated commodities (n)							
28.	Other grains . . .	57·5-B	743	923	975	1,027	13,706	14,139	18,917	21,631
29.	Groundnuts . . .	45-A	%	%	337	343	%	%	8,766	10,247
30.	Other Oil Seeds . .	45-A	1,766	1,642	1,304	1,154	39,597	39,803	37,107	37,212
31.	Cotton raw (pressed) . .	92·5-B	710	661	630	490	37,282	36,075	39,829	36,629
32.	Cotton raw (unpressed) .	145-B	30	42	50	51	1,283	1,684	2,227	2,735
33.	Fodder	52·5-B	1,545	1,474	1,528	1,492	20,583	20,677	23,055	23,931
34.	Jute raw (pressed) . .	70-B	**	**	680	720	**	**	19,852	24,033
35.	Jute raw (unpressed) . .	85-B	512	720	9	8	14,121	17,348	517	290
36.	Tobacco (unmanufactured)	92·5-B	266	240	129	130	12,359	11,657	7,553	9,287
37.	Livestock . . .	Special	247	233	262	206	19,597	20,146	22,008	23,270
38.	Hides & Skins . . .	70-B	156	147	86	90	7,288	7,660	5,344	5,474
39.	Mica	92·5-B	(a)	(a)	13	12	(a)	(a)	316	442
40.	Fuel Oil	57·5-B	1,243	1,321	1,188	1,394	40,359	41,276	38,068	41,732
41.	Kerosene (in bulk) . .	57·5-B	756	917	1,057	1,262	26,422	31,112	34,660	40,271
42.	Kerosene (in tins) . .	57·5-B	571	569	457	427	17,827	17,371	14,021	13,633
43.	Petrol (in bulk) . . .	110-B	646	711	699	638	39,154	36,068	37,413	36,526
44.	Petrol (in tins) . . .	110-B	108	101	84	104	4,203	3,068	3,116	6,134

45.	Other Mineral Oils . .	57·5-B	(m)	(m)	356	334	(m)	(m)	12,413	12,377
46.	Lac, refined . . .	92·5-N	4	5	4	4	159	181	152	198
47.	Lac, unrefined . . .	65-B	12	13	17	14	549	502	682	693
48.	Bidi leaves . . .	100-B	(a)	(a)	145	148	(a)	(a)	10,883	11,154
49.	Sugar	65-B	1336	1,536	1,515	1,383	38,219	46,156	60,177	55,732
50.	Khandsari Sugar . .	65-B	66	87	93	79	1,599	2,142	2,321	1,897
51.	Gur, Jaggery etc. . .	42·5-A	720	759	640	686	18,806	18,973	21,056	22,810
52.	Molasses etc. . . .	42·5-B	310	307	350	408	3,726	3,977	5,303	6,578
53.	Cotton manufactured .	92·5-B	548	482	484	430	38,052	34,533	41,742	45,575
54.	Jute manufactured (Gunnies)	85-B	261	244	239	206	12,718	11,234	14,199	14,299
55.	Other manufactures . .	92·5-B	29	26	20	55	1,552	1,556	1,321	2,444
56.	Ground nut Oil . .	65-B	391	322	360	356	15,441	13,670	17,511	18,296
57.	Mustard Oil . . .	65-B	109	102	86	81	4,585	3,507	3,643	3,599
58.	Other Oils : Hydrogenated	92·5-B	264	248	97	81	10,742	10,066	4,996	4,644
59.	Other Oils : Non-hydrogenated . . .	65 to 170-B	(f)	(f)	164	143	(f)	(f)	7,226	6,851
60.	* Cement manufactured products . . .	65-B	(g)	(g)	151	221	(g)	(g)	4,612	6,938

APPENDIX 12—(*contd.*)

1	2	3	4	5	6	7	8	9	10	11
61	Iron & Steel Division-A	75-B	(h)	(h)	91	67	(h)	(h)	5,788	4,821
62	Iron & Steel Division-B	65-B	(h)	(h)	2,603	2,945	(h)	(h)	99,522	122,159
63	Iron & Steel Division-C .	55-B	(h)	(h)	185	349	(h)	(h)	6,512	10,317
64	Pig Iron	40-A	(h)	(h)	305	334	(h)	(h)	6,119	7,651
65	Iron & Steel (wrought) .	92·5-B	3,655	4,237	1,678	1,899	1,26,361	1,51,318	68,414	78,706
66	Glassware . . .	145-B to 165-B	92	107	118	128	4,385	5,213	7,410	8,832
67	Paper . . .	85-B	256	267	306	364	10,594	11,202	16,142	19,715
68	Tea	105-B	258	274	297	285	14,506	15,119	20,847	20,946
69	Tobacco, manufactured .	100-B	(i)	(i)	87	90	(i)	(i)	7,094	7,451
70	Non-ferrous Metal, Aluminium . . .	92·5-B to 135-B	(a)	(a)	41	42	(a)	(a)	2,519	2,695
71	Non-ferrous Metals, Others .	do.	(a)	(a)	170	173	(a)	(a)	8,899	10,239
72	Leather & Leather manufactures . . .	120-B	(j)	(j)	26	31	(j)	(j)	2,198	2,753
73	Provisions . . .	..	881	759	663	656	36,423	33,470	35,128	35,523
74	Other Commodities .	..	14,331@@@	15,651@@@	11,622	9,493	4,30,872@@@	5,41,563@@@	4,31,047	3,50,835

75	Military traffic . .	..	530	581	856	730	12,961	14,710	28,379	26,413
	TOTAL—II .	..	33,352	35,708	33,257	31,763	10,76,031	12,17,176	12,67,004	12,56,618
	(High-rated)									
	.	..	(36·8)	(36·8)	(33·1)	(31·3)	(60·9)	(60·4)	(56·3)	(53·3)
	GRAND TOTAL .	..	90,740	96,974	1,00,563	1,01,541	17,66,550	20,05,385	22,50,637	23,62,011

@ Included under 'gram and pulses.'
@@ Included under 'fruits and vegetables'.
% Included under 'other oilseeds'.
** Included under 'jute raw (unpressed)'.
(a) Included under 'other commodities'.
*** Estimated.
(b) Included under 'other stones'.
(m) Included under 'fuel oil'.
(e) Included under 'wood unwrought, others'.
(f) Included under 'other oils—hydrogenated'.
(g) Included under 'cement'.
(h) Included under 'iron and steel wrought'.
(i) Included under 'tobacco unmanufactured'.
(j) Included under 'hides & skins'.
(x) Included under 'manure organic'.
@@@ After deducting the estimated traffic.

(n) The high-rated commodities are those which are above 40 per cent of scale-A under the Revised Freight Structure introduced on the Indian Railways from October 1, 1958.

*The low-rated commodities are those covered upto 40 percent of scale-A under the Revised Freight Structure introduced on the Indian Railways from October 1, 1958.

APPENDIX 13

Recent trends in the distribution of rail traffic between principal commodities

(in '000 tons)

	1950-51	1955-56	1958-59	1960-61 @	1965-66 @
1	2	3	4	5	6
1. Coal . . .	30,423	35,337	42,554	49,847	89,200
	(33·3)	(31·0)	(31·6)	(32·02)	(37·76)
2. Cement . . .	2,432	3,956	5,012	6,752	11,050
	(2·7)	(3·5)	(3·7)	(4·34)	(4·68)
3. Iron & other Ores . .	3,007	4,373	5,916	10,489	30,825
	(3·3)	(8·9)	(4·4)	(6·74)	(13·05)
4. Grains . . .	7,682	9,044	11,619	11,298	14,651
	(8·4)	(7·9)	(8·6)	(7·26)	(6·20)
5. Salt . . .	1,551	1,858	1,799	2,313	2,750
	(1·7)	(1·6)	(1.4)	(1·49)	(1·16)
6. Manganese ores .	867 (1·0)	1,378 (1·2)	1,087 (0.8)	1,680 (1.08)	2,850 (1·21)
TOTAL—(1—6) .	45,964	55,947	67,887	82,379	151,326
	(50·4)	(49·1)	(50·5)	(52·93)	(64·06)
All Other Commodities .	45,146	58,099	66,767	73,262	84,915
	(49·6)	(50·9)	(49·5)	(47·07)	(35·94)
GRAND TOTAL . .	91,110	114,046	134,754	155,641	2,36,241
	(100·0)	(100·0)	(100·0)	(100·0)	(100·0)

NOTE.—Figures in brackets indicate percentage of total traffic for the year.

@ Estimated figures on the basis of production targets.

APPENDIX 14

Statement showing average earnings per ton mile of various commodities carried by railways

1959-60 (Provisional)

Sl. No.	Commodity	Classification	Broad Gauge		Metre Gauge	
			Rate per ton mile	Average lead	Rate per ton mile	Average lead
1	2	3	4	5	6	7
			Rs. nP.	Mile	Rs. nP.	Mile
1.	Coal	Special scale	3·35*	352	3·35*	214
2.	Grains	30A	4·66*	480	5·03*	260
3.	Iron Ore	32·5A	7·52	134	5·71*	305
4.	Other Ores	32·5A	6·42	291	7·62*	192
5.	Lime stone and Stone N.O.C. as Marble & Stone	32·5A	5·80	199	6·10*	141
6.	Salt NOC	35A	5·09*	405	5·31*	345
7.	Cement	37·5A	7·37	224	7·59*	178
8.	Timber NOC as wood unwrought	37·5A	6·32	329	7·65*	198
9.	Fruits and vegetables, fresh	40A	5·61	563	7·20*	280
10.	Manganese Ore	40A	7·26	300	6·80*	192
11.	Oil Seeds NOC	45A	6·95	381	7·74*	201
12.	Oil fuel	57·5B	9·66	300	10·00	291
13.	Kerosene oil	57·5B	9·68	337	9·60	273
14.	Other mineral oils	57·5B	9·99	411	9·91	341
15.	Cement manufactured products	60B	9·83	351	10·1	207
16.	Sugar	65B	10·5	366	8·91*	239
17.	Iron & Steel wrought	65B	9·53	438	10·8	248
18.	Vegetable oils	65B	9·42	527	11·2	439
19.	Jute raw, pressed and unpressed	70B	14·7	206	13·3	101

APPENDIX 14—(*concld.*)

1	2	3	4	5	6	7
			Rs. nP.	Mile	Rs. nP.	Mile
20.	Cotton raw, pressed etc.	92·5B	15·0	390	14·4	213
21.	Cotton manufactured .	100B	15·3	685	17·9	256
22.	Petrol . . .	110B	17·1	329	15·1	414
23.	Other revenue earning commodities		7·07	493	8·88*	178
24.	All revenue earning commodities		5·92	365	7·38*	224

*In the case of each of these commodities the average earning per ton mile is less than the average cost of haulage per ton mile for all commodities taken together.

APPENDIX 15

Statement showing the average rate charged by the Government railways, average cost per employee and index of wholesale prices

Year	Average rate per ton mile (Pies)	Average rate per passenger mile (Pies)	Average cost per employee (Rs.)	Index of Wholesale Prices				
				Coal	Iron & Steel	Cement	Timber	Overall (all commodities)
1938-39	5·80	3·11	546	100	100	100	100	100
1955-56	11·10	5·34	1,478	350	319	279	350	355
1959-60	11·70	5·30	1,660	469	374	367	417	456

APPENDIX 16

Statement showing capital-at-charge, earnings and working expenses on Government Railways

(Rs. crores)

Railway	Year	Capital-at-charge at the end of financial year@	Earnings				Total Working Expenses	Net Revenue Receipts	Operating Ratio	Dividend paid to General Revenues	Net gain or loss	Percentage of net gain or loss to capital-at-charge
			Coaching	Goods	Miscellaneous	TOTAL						
1	2	3	4	5	6	7	8	9	10	11	12	13
Central	1954-55	171·78	24·18	31·66	1·19	57·02	41·83	14·33	72·26	6·74	7·58	4·41
	1955-56	183·10	25·38	36·72	1·36	63·45	46·28	16·49	71·73	6·87	9·62	5·25
	1956-57	197·45	26·33	41·62	1·31	69·27	49·98	18·21	71·49	7·42	10·79	5·46
	1957-58	219·47	28·38	41·94	1·62	71·92	53·59	16·80	75·02	8·13	8·67	3·95
	1958-59	234·51	27·57	44·16	1·85	73·59	55·29	17·13	75·87	8·95	8·19	3·49
	1959-60	236·74	29·48	49·80	2·00	81·28	56·67	22·57	69·86	9·44	13·13	5·56
	1960-61 (B.E.)	238·36	28·80	52·06	1·94	82·80	61·89	18·39	74·75	9·41	8·98	3·77
Eastern	1954-55	223·67	23·54	51·62	1·40	76·55	60·05	15·85	78·11	8·81	7·03	3·14
	1955-56*	134·44	14·98	31·43	0·91	47·32	36·74	9·81	77·99	5·16	4·65	3·46
	1956-57	144·95	15·84	30·65	1·10	47·59	40·42	5·93	84.63	4·58	1·35	0·93
	1957-58	168·09	15·67	34·49	1·35	51·51	43·88	6·40	85·38	6·07	0·33	0·02
	1958-59	184·36	15·80	37·23	1·57	54·60	45·41	8·15	83·27	6·81	1·35	-0·73

	1959-60	209·24	18·19	40·97	1·82	60·98	45·40	14·76	75·22	7·74	7·02	3·35
	1960-61 (B.E.)	209·74	17·77	50·52	1·89	70·18	52·51	16·62	74·82	7·76	8·86	4·22
Northern	1954-55	140·25	21·29	20·63	0·93	42·85	35·30	6·59	82·01	5·39	1·20	0·86
(Commercial)	1955-56	149·69	23·40	25·67	1·03	50·09	39·23	9·54	78·11	5·56	3·99	2·67
	1956-57	164·01	24·19	29·31	1·31	54·81	43·23	9·13	78·27	6·02	3·11	1·90
	1957-58	181·35	26·33	33·06	1·22	60·61	46·42	12·10	76·32	6·59	5·50	3·03
	1958-59	200·97	24·06	35·22	1·26	60·54	47·70	11·59	78·65	7·53	4·06	2·02
	1959-60	205·32	26·70	35·29	1·30	63·29	49·34	9·99	77·97	7·89	2·10	1·02
	1960-61 (B.E.)	217·62	25·87	42·23	1·26	69·36	54·21	12·98	78·20	8·06	4·92	2·26
Northern	1954-55	4·04	N.A.	N.A.	N.A.	0·16	0·16	0·01	88·95	..	0·06	0·15
(Strategic	1955-56	4·09	N.A.	N.A.	N.A.	0·15	0·34	—0·19	222·26	..	—0·19	—4·65
	1956-57	4·38	N.A.	N.A.	N.A.	0·15	0·34	—0·19	225·17	..	—0·19	—4·34
	1957-58	3·70	N.A.	N.A.	N.A.	0·17	0·24	—0·17	199·75	..	—0·17	—4·59
	1958-59	3·88	N.A.	N.A.	N.A.	0·17	0·29	—0·12	168·28	..	—0·12	—3·17
	1959-60	3·89	N.A.	N.A.	N.A.	0·20	0·31	—0.10	150·79	..	—0·10	—2·67
North Eastern	1954-55	93·83	12·17	10·81	0·51	23·84	28·37	—5·81	116·57	3·60	—9·42	—10·04
	1955-56	102·25	12·56	11·54	0·78	24·88	30·02	—5·30	112·04	3·82	—9·13	—8·93
	1956-57	120·63	14·21	14·58	0·67	29·45	32·56	—3·10	100·54	4·42	—8·00	—6·63
	1957-58	131·07	14·15	18·06	0·91	33·12	36·33	—4·63	109·38	4·84	—9·47	—7·23
	1958-59**	77·66	10·38	7·97	0·53	18·88	21·99	—2·83	117·25	2·96	—5·8	—7·47

APPENDIX 16—(*concld.*)

1	2	3	4	5	6	7	8	9	10	11	12	13
North Eastern	1959-60	80·28	9·68	6·19	0·49	16·36	23·24	—8·09	142·64	3·11	—11·20	—13·95
(*contd.*)	1960-61 (B.E.)	82·60	10·50	10·52	0·52	21·55	26·11	—5·53	121·16	3·25	—8·78	—10·63
North-East Frontier**	1958-59	62·43	4·39	7·54	0·46	12·39	16·77	—5·57	135·18	2·43	—7·99	—12·80
	1959-60	68·27	5·21	7·48	0·35	13·04	18·41	—5·63	137·43	2·53	—8·17	—12·03
	1960-61 (B.E.)	84·31	4·54	8·46	0·40	13·40	20·26	—8·21	151·19	2·75	—10·96	—13·00
Southern	1954-55	127·95	21·02	20·65	1·30	43·31	38·34	4·13	80·53	4·83	—0·70	—0·55
	1955-56	133·96	22·50	23·71	1·27	47·71	41·92	5·15	90·15	4·99	0·16	0·12
	1956-57	146·10	23·72	25·45	1·02	50·18	44·28	4·63	88·20	5·04	—0·41	—0·28
	1957-58	160·96	23·72	27·63	1·36	52·72	50·78	0·39	96·34	5·97	—5·58	—3·47
	1958-59	173·52	23·44	29·62	1·71	54·77	50·54	3·82	92·77	6·65	—2·83	—1·63
	1959-60	182·26	24·36	32·52	1·76	58·64	52·02	5·10	89·05	7·09	—1·99	—1·09
	1960-61 (B.E.)	185·03	24·02	34·44	1·57	60·07	57·46	0·06	95·72	7·22	—7·17	—3·88
South-Eastern*	1955-56	100·10	8·77	23·11	0·52	32·40	28·79	2·35	88·72	3·81	—1·47	—1·47
	1956-57	114·56	10·67	30·13	1·10	41·90	30·58	10·86	72·62	4·06	6·79	5·93
	1957-58	146·53	11·38	36·73	1·01	49·12	33·50	13·74	68·88	4·94	8·80	6·01
	1958-59	177·77	11·42	38·66	1·05	51·14	36·28	12·83	71·21	6·01	6·82	3·84
	1959-60	194·85	12·53	44·44	1·41	58·38	38·12	18·73	66·16	6·87	11·87	6·08
	1960-61 (B.E.)	218·30	12·92	56·52	1·09	70·54	42·32	25·80	59·99	7·28	18·52	8·48

Western	1954-55	115·30	19·66	23·33	0·68	43·67	30·20	10·66	73·65	4·53	6·13	5·32
	1955-56	125·77	20·99	28·11	0·96	50·06	35·24	13·94	70·75	4·64	9·31	7·40
	1956-57	145·34	22·45	32·23	1·01	55·70	38·96	14·74	69·31	5·20	9·55	6·57
	1957-58	161·66	23·70	37·76	0·96	62·42	44·94	15·16	71·30	5·93	9·23	5·71
	1958-59	183·56	23·27	40·42	1·19	64·88	47·47	16·39	74·09	6·65	9·73	5·30
	1959-60	189·47	24·88	43·79	1·73	70·40	51·12	17·09	73·42	7·40	9·69	5·11
	1960-61 (B.E.)	194·84	26·07	50·24	1·34	77·65	57·22	18·34	73·69	7·46	10·88	5·58

*Eastern Railway was split into Eastern and South Eastern Railways with effect from 1-8-1955.

**North Eastern Railway was split into North Eastern and North-East Frontier Railways with effect from 15-1-58.

@Including on open lines and on lines wholly or partly under construction.

@@Column Nos. 3 to 9, 11 and 12 include figures for Northern (Strategic) Railway and Column Nos. 10 and 13 relate only to Northern (Commercial) Railway.

APPENDIX 17

Summary of the principal recommendations of the Railway Convention Committee, 1960

S. No.	Recommendations
1.	In the opinion of the Committee the present mode of contribution, *viz.,* a fixed rate of dividend by the Railways to General Revenues should be fixed at 4·25 per cent during the five years.
2.	The rate of dividend to be paid by the Railways to General Revenues should be fixed at 4·25 per cent during the five years 1961–66.
3.	The annual loss in the working of strategic lines should be borne by General Revenues.
4.	The Committee accept the suggestion of the Railway Board that the Capital-at-charge of the North-East Frontier Railway, other than the clearly strategic portion thereof, should be regarded as unproductive and recommend that till such time as the line becomes productive or the next Convention Committee review the position, whichever is earlier, the rate of dividend payable on the Capital-at-charge should be at the average borrowing rate of Government.
5.	The total contribution to the Depreciation Reserve Fund should be Rs. 350 crores during the next quinquennium.
6.	The Committee are inclined to accept the suggestion that the existing rules of allocation of Railway expenditure between Capital, Revenue, Depreciation Reserve Fund and Development Fund might be retained without any modification during the next five years.
7.	The Committee are averse to the curtailment or limiting of expenditure on works met out of the Development Fund which in their opinion are as important as additions financed from Capital. They, therefore, see no alternative but to continue the facility of providing temporary loans from General Revenues to finance the Railway Development Fund during the next five years, unless the net surplus is able to meet in full the requirements of the Fund. The Committee endorse the proposal of the Financial Commissioner (Railways) that the outstanding liability of the Development Fund to the General Finance as on the 31st March, 1961 should be liquidated in the *ad hoc* manner indicated in the last sub-para of para II of this Report so that the Railways could start on the Third Plan period with a clean slate in regard to this liability.

APPENDIX 17—(*concld.*)

S. No.	*Recommendations*
8.	The Committee recommend that the Railway Development Fund, besides meeting the cost of Labour Welfare Works, etc., should include a minimum allocation of Rs. 3 crores per annum for Users' amenities as hitherto.
9.	The suggestion made by the Railway Board that the passenger tax at the existing rate might be merged with passenger fare from 1st April, 1961 and that the State Governments might be paid a fixed amount based on the average collections in the period 1957—61 is reasonable. The Committee recommend that the fixed amount payable by the Railways may be Rs. 12·50 crores per year during the quinquennium 1961—66 representing the average of the actual collections for the year 1958-59 and 1959-60.
10.	While the Committee appreciate that the financial position of the Railways during the next quinquennium will not be favourable for the creation of an Amortisation Fund, they nevertheless feel that this question should not be lost sight of inasmuch as in the context of the repatriation of all the dollar loans, it will assume importance.
11.	With reference to the recommendation of the Railway Convention Committee, 1954, contained in para 19 of their Report, the Committee are of the view that the deferred dividend on new lines should be paid from the sixth year onwards only if the net income of the new lines leaves a surplus after payment of the current dividend.

APPENDIX 18

A note on the facilities provided by the Indian Railways with a view to improving the quality of their service

1. *Out-agencies*

Out-agencies are opened in towns situated off the lines of a railway to facilitate the through booking of traffic to or from such towns in conjunction with the railways.

Out-agencies are usually opened for the transportation of goods and parcels. In some cases through booking of passengers is also arranged.

Separate charges are levied for the road transport which are included along with the normal railway freight and shown in the railway receipt.

The grant of contracts for working Out-agencies is usually on the open tender system in order to ensure that the rates quoted over the road portion are the cheapest possible.

The present policy of the railways is to encourage, to the maximum extent, the opening of Out-agencies, so that integrated rail-*cum*-road transport may be made available extensively.

The number of Out-agencies operating as on 1st April 1959 was 205, and the opening of 95 more Out-agencies is under examination by the railways.

2. *City Booking Agencies/Offices*

These are offices opened by Railways at different places in big towns to facilitate the booking of goods, parcels and passengers and their luggage in the city itself.

There are at present 105 such offices in 85 cities.

3. *Collection and Street Delivery Services*

Collection and street delivery services are at present in force at 27 cities including Calcutta, Bombay, Madras and Kanpur.

Under the Collection System, when the consignor informs the contractor concerned about any consignment which he desires to book, the contractor arranges to collect the goods from the consignor's premises, transports it to the railway station, books it on behalf of the consignor, takes the railway receipts from the booking staff and gives it to the consignor.

Under the Street Delivery Service, consignments which are specifically meant for delivery at the consignor's premises are delivered accordingly. In addition, usually any consignment which bears the clear address of the consignee, is also delivered at the consignee's premises in anticipation that such services would be appreciated.

The railway receipt and charges due are collected by the contractor at the time of delivery of the consignment.

Separate charges are levied for the transport of the consignments between the client's premises and the station.

It is the intention of the railways to introduce such services in all the big cities and steps are being taken towards that end.

Mention may be made here of the special arrangements that have been made for the transport of fresh fruits from Srinagar and Kotgarh by the road-*cum*-rail route in which the same contractor arranges for the transport of the fruits from the producing areas to the rail-head and also for delivery of the goods at Delhi at the consignee's premises.

4. *Quick Transit Service and Express Goods Services*

A special scheme for ensuring quick transit of goods consignments on important routes was introduced from 1st April, 1956. The basic feature of this scheme is that the goods are undertaken to be conveyed to their destinations within a guaranteed period. An extra charge of 3 nP per rupee is levied in addition to the freight. This additional charge is refunded if the consignment is not delivered at its destination within the guaranteed period.

This scheme was originally introduced on the following routes:--

(1) Delhi-Howrah,
(2) New Delhi-Bombay,
(3) Wadi Bunder-Shalimar,
(4) Shalimar-Madras, and
(5) Bombay-Madras.

This scheme has now been extended to additional routes and covers over 160 pairs of important stations.

Quite apart from the guaranteed Quick Transit Service, there is a general service of express goods trains over many sections, for conveyance of goods generally, booked at the normal rates.

5. *Containers*

In order to prevent mis-despatch and reduce train halts for loading and unloading of goods and to ensure safer transit the Central and Southern Railways have been asked to experiment with light containers and the Eastern Railway, with heavy containers, designed to carry 2 to 4 maunds and $\frac{1}{4}$ to 3 tons respectively.

It is expected that such containers will be useful for commodities such as pharmaceuticals, chemicals, cosmetics, small parcels, etc. and will facilitate the provision of integrated door to door services.

6. *Easier supply of Wagons*

In certain areas and in regard to certain commodities, where severe competitive conditions prevail, special arrangements are made for then supply of wagons on demand without the need for having to register a demand and wait one or two days for the supply. Wagons registration fees are also not levied in such cases.

7. *Reduction in the minimum weight for charge*

The wagon load rates that are applicable to commodities invariably have a weight condition attached to them. In respect of certain commodities, it was found that difficulty was being experienced by the trade in fulfilling the minimum weight conditions for obtaining a full wagon as the unit of trade was somewhat less than the minimum prescribed. In such cases the minimum weights for the wagon load rates have been reduced, either generally or on movements between specific points.

8. *'In Transit' Rates*

Traffic in plantains booked from stations on the Central and Western Railways (lying in East Khandesh) for stations in the Punjab, like Amritsar passing *via* Delhi, was substantially diverted to road transport for the movement between Delhi and Amritsar.

Enquiries revealed that on account of the long lead involved, it becomes necessary at some intermediate point like Delhi—itself a large consuming and distributing centre—to take out the ripe and overripe plantains, and then to rebook the rest of the plantains which can stand the onward journey to Amritsar etc.

Generally, plantains were booked from the growing centres in East Khandesh by rail upto Delhi, where they were sorted out for local sale and the balance was despatched onwards to Amritsar and other centres by road.

To offer similar facilities to the traffic by rail, the Northern Railway have, with effect from 15th June 1959, introduced on an experimental basis, special 'in transit' rates under which plantains can be booked in full wagon loads from the producing centres to Delhi where the fruits can be sorted out and the rest of the fruits rebooked in the same wagon from Delhi to Amritsar. This traffic is treated as through traffic 'in transit' to Amritsar, and the traders are allowed to avail themselves of the lower rates of freight payable from the forwarding stations on the Central and Western Railways to Delhi and Amritsar respectively. In other words, for the quantities moved from Delhi to Amritsar only the difference in the freight from the booking station to Amritsar and to Delhi is charged. In addition, for the facility of handling the goods at Delhi and to meet the cost of wagon detention, a sum of Rs. 50 only per wagon is collected.

The financial benefit per wagon accruing to the traders as a result of the introduction of the 'in transit' rates is evident from the following example.

Prior to the introduction of the 'in transit' rates, the cost of booking a wagon load of plantains (weighing 500 mds. approx.) from Bhusawal to Amritsar, with rebooking from Delhi to Amritsar was Rs. 1,751 whereas after the introduction of the 'in transit' rates, the total cost of booking a wagon including the additional sum of Rs. 50 for handling the commodity at Delhi, is only Rs. 1,468, thus involving a net gain of Rs. 283 per wagon.

APPENDIX 19

*Average tonnage, annual mileage performed and cost per ton-mile of various categories of vehicles in Australia**

Cost per Ton-Mile	Average load carried over Annual Mileage		Category of Vehicles	Average Annual Mileage
	Tons	Cwt		
2·5D	18	8	Articulated Vehicle 9 Tons and over . (Diesel)	50,000
3·0D	15	7	Do. . . (Diesel)	50,000
	15	7	Do. . . . (Petrol)	50,000
3·5D	13	3	Do. . . . (Diesel)	50,000
	13	3	Do. . . . (Petrol)	50,000
4D	11	10	Do. . . . (Diesel)	50,000
	12	15	Do. . . . (Diesel)	33,500
	11	10	Do. . . . (Petrol)	50,000
	13	15	Do. . . . (Petrol)	24,000
	7	10	Rigid Vehicle 5 Tons and Over . . (Diesel)	50,000
4·5D	10	4	Articulated Vehicle 9 Tons and Over . (Diesel)	50,000
	11	7	Do. . . . (Diesel)	33,500
	10	4	Do. . . . (Petrol)	50,000
	12	4	Do. . . . (Petrol)	24,000
	6	13	Rigid Vehicle 5 Tons and Over . . (Diesel)	50,000
5D	9	4	Articulated Vehicle 9 Tons and Over . (Diesel)	50,000
	10	4	Do. . . . (Diesel)	33,500
	13	12	Do. . . . (Diesel)	15,000

*Extracts from Table No. 8 in the Report of Committee of Transport Economic Research relating to road and rail transport (Part I, September, 1956) set up by the Australian Transport Advisory Council.

APPENDIX 19—(*contd.*)

Cost per Ton-Mile	Average load carried over Annual Mileage		Category of Vehicles		Average Annual Mileage
	Tons	Cwt.			
5 D—*contd.*					
	9	4	Articulated Vehicle 9 Tons and Over .	(Petrol)	50,000
	13	..	Do. . . .	(Petrol)	15,000
	7	16	Articulated Vehicle under 9 Tons. .	(Petrol)	30,000
	6	..	Rigid Vehicle 5 Tons and Over . .	(Diesel)	50,000
	7	12	Do. . . .	(Diesel)	22,160
6D	7	13	Articulated Vehicle 9 tons and Over .	(Diesel)	50,000
	11	6	Do. . . .	(Diesel)	15,000
	7	13	Do. . . .	(Petrol)	50,000
	9	3	Do. . . .	(Petrol)	24,000
	10	16	Do. . . .	(Petrol)	15,000
	5	..	Rigid Vehicle 5 Tons and Over . .	(Diesel)	50,000
	6	7	Do. . . .	(Diesel)	22,160
	8	..	Do. . . .	(Petrol)	12,950
7D	6	11	Articulated Vehicle 9 Tons and Over .	(Diesel)	50,000
	9	14	Do. . . .	(Diesel)	15,000
	7	17	Do. . . .	(Petrol)	24,000
	9	16	Do. . . .	(Petrol)	15,000
	5	11	Articulated Vehicle under 9 Tons . .	(Petrol)	30,000
	7	14	Do. . . .	(Petrol)	13,000
	5	9	Rigid Vehicle 5 Tons and Over . .	(Diesel)	22,160
	7	..	Do. . . .	(Diesel)	13,000
	6	17	Do. . . .	(Petrol)	12,950
	5	3	Commercial Vehicle 3 Tons and under 5 Tons		15,000
8D	5	15	Articulated Vehicle 9 tons and Over .	(Diesel)	50,000
	8	10	Do. . . .	(Diesel)	15,000
	5	15	Do. . . .	(Petrol)	50,000
	6	18	Do. . . .	(Petrol)	24,000
	8	3	Do. . . .	(Petrol)	15,000
	4	18	Articulated Vehicle under 9 Tons .	(Petrol)	30,000

APPENDIX 19—(*contd.*)

Cost per Ton-Mile	Average load carried over Annual Mileage		Category of Vehicle	Average Annual Mileage
	Tons	Cwt.		
8 D—*contd.*				
	6	15	Articulated Vehicle under 9 Tons . . (Petrol)	13,000
	4	15	Rigid Vehicle 5 Tons and Over . . (Diesel)	22,160
	6	3	Do. . . . (Diesel)	13,000
	6	..	Do. . . . (Petrol)	12,950
	4	10	Commercial Vehicle 3 Tons and under 5 Tons .	15,000
9D	7	11	Articulated Vehicle 9 Tons and Over . (Diesel)	50,000
	6	2	Do. . . . (Petrol)	24,000
	4	7	Articulated Vehicle Under 9 Tons . (Petrol)	30,000
	6	..	Do. . . . (Petrol)	13,000
	4	4	Rigid Vehicle 5 Tons and Over . . (Diesel)	22,160
	5	9	Do. . . . (Diesel)	13,000
	5	7	Do. . . . (Petrol)	12,950
	4	..	Commercial Vehicle 3 Tons and under 5 Tons .	15,000
1/-	5	13	Articulated Vehicle 9 Tons and Over . (Diesel)	15,000
	4	10	Articulated Vehicle under 9 Tons . (Petrol)	13,000
	4	2	Rigid Vehicle 5 Tons and Over . . (Diesel)	13,000
	4	..	Do. . . . (Petrol)	12,950
	5	8	Do. . . (Petrol)	8,000
	3	..	Commercial Vehicle 3 Tons and under 5 Tons .	15,000
	4	1	Do.	10,000
	4	12	Do.	8,315
	2	13	Commercial Vehicle 2 Tons and under 3 Tons .	15,000
1/3	3	12	Articulated Vehicle under 9 Tons . (Petrol)	13,000
	3	5	Rigid Vehicle 5 Tons and Over . . (Diesel)	13,000
	4	6	Do. . . (Petrol)	8,000

APPENDIX 19—(*concld.*)

Cost per Ton-Mile	Average load carried over Annual Mileage		Category of Vehicles	Average Annual Mileage
	Tons	Cwt.		
1/3—*contd.*				
	2	8	Commercial Vehicle 3 Tons and under 5 Tons .	15,000
	3	4	Do.	10,000
	3	13	Do.	8,315
	2	3	Commercial Vehicle 2 Tons and under 3 Tons .	15,000
	1	16	Commercial Vehicle 10 Cwt. and under 2 Tons .	15,000
1/6	3	..	Articulated Vehicle under 9 Tons . . (Petrol)	13,000
	2	13	Rigid Vehicle 5 Tons and Over . . (Petrol)	12,950
	3	12	Do. . . . (Petrol)	8,000
	2	14	Commercial Vehicle 3 Tons and under 5 Tons .	10,000
	3	1	Do.	8,315
	1	16	Commercial Vehicle 2 Tons and under 3 Tons .	15,000
	1	10	Commercial Vehicle 10 Cwt. and under 2 Tons .	15,000
2/-	2	14	Rigid Vehicle 5 Tons and over . . (Petrol)	8,000
	2	1	Commercial Vehicle 3 Tons and under 5 Tons .	10,000
	2	6	Do.	8,315
	1	7	Commercial Vehicle 2 Tons and under 3 Tons .	15,000
	2	7	Do.	6,650
	1	3	Commercial Vehicle 10 Cwt. and under 2 Tons .	15,000
	1	17	Do.	7,610

APPENDIX 20

*Statement showing outstanding registrations on the railways at the end of months of March, June, September and December each year from 1950 to 1959 and for each month of 1960 and the average daily loadings of wagons during these months**

	Outstanding registrations (Number of wagons)		Average daily loadings during the month (Number of wagons)		Outstanding registrations in terms of number of days' loadings	
	B.G.	M.G.	B.G.	M.G.	B.G.	M.G.
1	2	3	4	5	6	7
1950						
March . .	23,434	22,437	11,304	6,947	2·0	3·2
June . .	24,484	34,287	10,591	5,875	2·3	5·9
September .	12,982	29,836	10,842	5,994	1·1	4·9
December .	14,496	35,498	11,495	7,317	1·2	4·9
1951						
March . .	41,276	60,364	11,708	7,498	3·5	8·0
June . .	55,475	74,806	10,843	6,372	5·1	11·7
September .	39,166	46,605	11,538	6,641	3·4	7·0
December .	37,552	52,480	11,942	7,859	3·1	6·6
1952						
March . .	44,585	66,367	12,171	8,188	3·6	8·1
June . .	63,059	72,558	11,707	6,707	5·3	10·8
September .	28,813	40,312	11,550	6,444	2·0	6·2
December .	31,975	39,569	12,043	7,775	2·6	5·0
1953						
March . .	47,634	63,386	12,534	7,994	3·8	7·9
June . .	52,763	71,397	11,153	6,202	4·7	11·5
September .	17,056	29,370	11,700	6,405	1·4	4·5
December .	57,598	71,281	12,377	7,561	4·6	9·4

*Figures of outstanding registrations for the years 1950 to 1953 pertain to 20th day of each month.

APPENDIX 20—(*contd.*)

1	2	3	4	5	6	7
1954						
31st March . .	59,247	78,494	12,755	7,327	4·6	10·6
30th June . .	38,182	57,479	11,847	6,481	3·2	8·8
30th September .	30,124	41,058	11,934	6,617	2·5	6·2
31st December .	66,772	73,136	13,191	7,952	5·0	9·1
1955						
31st March . .	89,413	1,16,223	13,650	8,240	6·5	14·1
30th June . .	1,50,850	1,51,975	12,254	6,894	12·2	21·9
30th September .	73,889	1,12,747	12,970	7,447	5·7	15·1
31st December .	72,154	1,42,686	14,093	9,036	5·1	15·7
1956						
31st March . .	69,879	1,39,055	14,763	9,616	4·7	14·4
30th June . .	1,04,546	1,39,057	13,389	7,799	7·8	17·8
30th September .	35,647	86,083	13,121	7,714	2·7	11·1
31st December .	56,018	1,00,771	15,036	9,623	3·6	10·4
1957						
31st March . .	67,454	69,178	15,903	10,315	4·2	6·6
30th June . .	1,01,452	66,825	13,623	8,878	7·3	7·5
30th September .	42,403	19,729	14,247	8,441	2·9	2·3
31st December .	63,332	33,241	15,455	9,818	4·0	3·3
1958						
31st March . .	57,356	25,444	16,237	10,285	3·5	2·4
30th June . .	58,412	24,636	14,082	8,582	4·1	2·7
30th September .	20,554	30,195	14,339	8,112	1·4	3·7
31st December .	21,891	40,953	15,889	9,986	1·3	4·1
1959						
31st March . .	32,439	23,422	16,618	10,262	2·5	2·2
30th June . .	40,379	35,859	15,350	8,700	0·6	4·1
30th September .	10,292	14,997	15,037	8,360	0·6	1·7
31st December .	25,664	27,746	16,914	10,672	1·5	2·5

APPENDIX 20—(*concld.*)

1	2	3	4	5	6	7
1960						
January . .	39,359	30,428	17,061	10,946	2·3	2·7
February . .	46,359	33,126	17,973	11,265	2·5	2·9
March . . .	47,414	22,661	17,832	10,921	2·6	2·0
April . . .	58,202	29,516	17,222	10,549	3·3	2·7
May . . .	70,153	39,051	16,127	9,364	4·3	4·1
June . . .	80,700	39,300	15,983	9,206	5·0	4·2
July . . .	64,500	30,200	14,316	7,998	4·5	3·7
August . . .	59,600	27,500	15,708	8,825	3·7	3·1
September . .	43,700	26,900	16,134	8,797	3·3	3·0
October . .	35,700	23,400	16,739	8,910	2·1	2·6
November . .	52,200	30,800	17,900	10,233	2·9	3·0
December . .	86,100	50,100	18,092	10,882	4·8	4·6

APPENDIX 21

A note on the future forecasts of volume of rail and road traffic in India

Several techniques can be employed for forecasting the future demand for transportation. These forecasts based as they generally are upon the past relationship between the volume of transportation and national income as a whole, are subject to many limitations. Obviously, the relationship between the volume of traffic and the volume of production taken either as a whole or in the case of any individual commodity is not likely to remain uniform over all times. These forecasts, therefore, could at best be used to indicate the rough order of magnitude only. In this note we have adopted the following two approaches for projecting the traffic in India:—

(a) The 'National Income Approach'

(i) Linear regression* and

(ii) Non-linear regression**

(b) The 'Transport Co-efficient' Approach

The 'National Income Approach'—Linear regression.

2. In several countries the projections of future transport demands have been made on the basis of linear regression lines of freight traffic on national income fitted to the past data. A recent study in point is the one entitled "Structural Changes and Investment of Transportation in Japan", by the Economic Planning Agency of Japan (October, 1959) in which the forecasts of transport have been based on the linear regression equation of freight on national income, applied to actual statistics covering fiscal years 1951 to 1956.

3. The table below shows the coefficients of correlation between freight traffic and various indices of production in India for the period 1950-51 to 1958-59.

Table I

(Period 1950-51 to 1958-59)

Index of Production	Aggregate Ton miles	Railway Ton miles	Road Transport Ton miles
National Income	0·930	0·933	0·932
Industrial Production	0·959	0·961	0·970
Mining & Quarrying	0·982	0·969	0·527
Agricultural Production	0·791	0·795	0·821

* The linear regression is a straight line fitted to the data relating to two variables, in this case the volume of traffic on the one hand and national income on the other. The equation of the line takes the form $T = aY + b$. In simple words this means that a unit increase or decrease in national income (Y) is associated by a given absolute increase or decrease in the volume of traffic (T).

**The non-linear regression equation takes the form $T = AY^N$. This means that the ratio (N) between the rate of growth of freight traffic (T) to the rate of growth of national income (Y) is always constant. N, here represents the income elasticity of traffic.

It will be seen that there exists a high degree of correlation between the aggregate freight ton miles and national income. The regression equation between aggregate ton miles and national income for the period is as follows:—

$$T = 0.920\ Y - 53.651$$

where T = Aggregate freight in 10^9 ton miles.

Y = National Income expressed in 10^9 of rupees (at 1948-49 prices)

On the basis of the projections of the National Income published in the Draft Outline of the Third Plan, the projections of aggregate freight traffic work out as under:—

Table 2

Year	Aggregate ton miles (billions)*
1955-56 (Actual)	41·9
1960-61	61·9
1965-66	97·5
1970-71	141·9
1975-76	213·1

The percentage increases in national income and aggregate ton miles over these periods compare as under:

Table 3

Period	National Income	Aggregate ton miles
1955-56 to 1960-61	19·8	47·7
1960-61 to 1965-66	30·8	57·5
1965-66 to 1970-71	29·4	45·5
1970-71 to 1975-76	36·4	50·2

The 'Transport Co-efficient' Approach

4. The transport coefficient of a commodity is defined as the ratio between the quantity moved and the output of the commodity. This approach can be applied for the projections of the railway freight traffic only in India. The detailed data pertaining to commoditywise traffic by

*One billion = One thousand millions.

means other than the railways and more patricularly, road transport are not available. In the statement at Annexure to this note are given figures showing rail movements and production and transport co-efficients of 16 commodities for the period from 1950-51 to 1958-59. These 16 commodities together account for 60 per cent of the total railway freight traffic in terms of tons originating and about 70 per cent in terms of ton miles. For projecting the future traffic, certain assumptions have been made about the manner in which the transport coefficient of each commodity will change over the periods under study. These assumptions represent commonsense judgement based upon the past trends in transport cofficients and, to the extent possible, on the likely changes in the pattern of production and movement of the commodity including possible diversion from rail to road transport, depending upon the nature of traffic in question. The future trends in railway freight traffic have been estimated on the basis of the production targets of these commodities given in the Draft Outline of Third Plan for 1960-61 and 1965-66 and in the 'Perspective of Economic Development—India; 1955-1970', a paper prepared by Perspective Planning Division of the Planning Commission, for 1970-71. These estimates of traffic are also shown in Annexure to this note. We have assumed that the average overall lead* of the railway traffic during the period under study will remain more or less constant. This may not be a wholly unrealistic assumption for the reason that while in the earlier stages the average lead of traffic in some commodities might go up, in the long run, on account of regional development, the average lead is likely to go down in the case of some of the commodities. It is extremely difficult to have dependable estimates of average lead for each period separately. The projections of railway ton miles arrived at by this method are presented in the table below:—

Table 4

Year†	Railway Ton miles (billions)
1955-56 (Actual)	36·4
1960-61	53·7
1965-66	81·5
1970-71	119·9

†As the projections of production are not available for the periods beyond 1970-71, it is not possible to project railway traffic beyond this period.

5. Assuming that the aggregate traffic is made up of rail and road traffic and the traffic carried by the other modes of transport is negligible in comparison, the estimates of road traffic may be derived by deducting the estimates of railway traffic as presented in Table 4 above from

*For the purpose of our calculations, we have assumed 345 miles as the overall average lead on Railways.

the estimates of aggregate traffic as given in Table 2 above. The resultant figures for road traffic are as follows:

Table 5

Year	Road Transport ton miles (billions)
1955-56	5·5
1960-61	8·2
1965-66	16·0
1970-71	22·1

6. The estimates of rail traffic may also be worked out on the basis of national income projections. As will be clear from the figures in Table 1 above, there exists a high degree of correlation between railway ton miles and national income—the value of r, the co-efficient of correlation, being 0.933. The linear regression equation of railway ton miles on national income for the period 1950-51 to 1958-59 is as follows:—

where $T_1 = 0{\cdot}753Y - 41{\cdot}741$

T_1 = Railway freight in 10^9 ton miles.

Y = National income expressed in 10^9 of rupees (at 1948-49 prices)

On the basis of the national income projections employing the above equation, the projections of railway ton miles work out as given in the following table. The last column in the table shows for comparison purposes the estimates of rail traffic on the basis of transport co-efficient of 16 selected commodities.

Table 6

Year	Railway ton miles based on national income projections. (billions)	Railway ton miles based on 'transport co-efficient' of 16 commodities.
1955-56 (Actual)	36·4	36·4
1960-61	52·8	53·7
1965-66	82·0	81·5
1970-71	118·3	119·8
1975-76	176·6	N.A.

It will be seen that the two sets of estimates happen to be almost identical.

'National Income Approach'—Non-linear regression.

7. We shall now attempt to formulate the estimates of road traffic directly on the basis of the national income projections.

The linear regression equation of road ton miles on national income for the period 1950-51 to 1958-59 is as follows:

$$T_2 = 1 \cdot 816Y - 133 \cdot 866$$

where T_2 = Road freight in 10^9 ton miles.
Y = National Income expressed in 10^9 of rupees (at 1948-49 prices)

The estimates arrived at on the basis of this equation are presented in the table below:—

Table 7

Year	Road Transport ton miles (billions)
1955-56	5·5
1960-61	9·4
1965-66	16·4
1970-71	25·2
1975-76	39·3

It is, however, observed that the non-linear regression equation gives better results, when applied to the past data pertaining to road transport traffic and national income. The equation is of the type:

$$T_2 = AY^N$$

where T_2 = Volume of road Transport ton miles
Y = National Income
N = Income elasticity
A = Constant.

The income elasticity is defined as the ratio between the growth rate of transportation and the growth rate of national income. The non-linear regression curve fitted to the past data from 1950-51 to 1958-59 is:

$$T_2 = 53 \cdot 11 \times 10^{-7}\ Y^{2.469}$$

where T_2 = Road Transport ton miles in 10^8
Y_2 = National Income expressed in 10^9 of rupees (at 1948-49 prices)

On the basis of the national income estimates, employing the above equation the projections of road transport ton miles have been worked out and are presented in the table below. In the last column of the table are

reproduced estimates of road traffic which are deducted from the estimates of aggregate traffic and shown in Table No. 5 above.

Table 8

(billion ton miles)

Year	Based on non-linear regression on National Income.	Derived from aggregate traffic
1955-56	5·5	5·5
1960-61	10·2	8·2
1965-66	25·8	16·0
1970-71	63·0	22·0
1975-76	185·0	N.A.

8. We have separately worked out the estimates of traffic on railway and road transport on the basis of the targets mentioned in the Draft Outline of the Third Plan. These estimates are compared in the following table with the estimates of traffic for railway and road transport derived according to the methods described above.

Table 9

(billion ton miles)

Method	1955-56 (actuals)	1960-61	1965-66	1970-71	1975-76
Railways					
(*i*) Transport Co-efficient of 16 commodities .	36·4	53·7	81·5	119·8	N.A.
(*ii*) Linear regression .	36·4	52·8	82·0	118·3	176·6
(*iii*) Third Plan targets .	36·4	53·7	83·0	N.A.	N.A.
Road Transport					
(*i*) Derived from the aggregate traffic after deducting the estimates of rail traffic . .	5·5	8·2	16·0	22·1	N.A.
(*ii*) Linear regression .	5·5	9·4	16·4	25·2	39·3
(*iii*) Non-linear regression .	5·5	10·2	25·8	63·0	185·0
(*iv*) Third Plan targets .	5·5	10·6	23·2	N.A.	N.A.

Method	1955-56 (actuals)	1960-61	1965-66	1970-71	1975-76
Aggregate					
(*i*) As derived directly on the basis of linear regression on national income . . .	41·9	61·9	97·5	141·9	213·1
(*ii*) Railways (*i*) +Road (*ii*)	41·9	63·1	97·9	145·0	N.A.
(*iii*) Railways (*i*) +Road (*iii*)	41·9	63·9	107·3	182·8	N.A.
(*iv*) Third Plan targets *i.e.* Railways (*iii*) +Road (*iv*) . . .	41·9	64·3	106·2	N.A.	N.A.

It will be seen that the estimates of railway traffic by all these methods are more or less identical. As regards road transport, the estimate of traffic on the basis of the target for commercial vehicles assumed in the Draft Outline of Third Plan is 23.2 billion ton miles for 1965-66, as against the estimate of 16.0 million ton miles at (i) in the above table and 25.8 billion ton miles at (iii) in the table.

9. The estimate of demand for transportation on the basis of non-linear regression equation implies that the income elasticity of truck transportation as observed in the past will remain unchanged in future also. It is understandable that the relative intensity of growth of road transport as compared with national income or, in other words, the income elasticity of road traffic should be high in the early stages of development of the industry and should be reduced after the industry has attained a certain degree of expansion. It appears to be unrealistic, therefore, to assume a constant income elasticity of road traffic throughout the period under study. The estimate of road traffic derived by this method for 1970-71 appears to be quite on the high side while the one for 1975-76 appears to be of a highly speculative character. As the growth of road transport is likely to be affected by numerous factors in practice, it is almost impossible to make any realistic assumption about the possible change in the income elasticity of road traffic from one period to the other. The conclusion is irresistable, therefore, that this method could perhaps be best applied only for projections over relatively short periods.

APPENDIX 21—(*contd.*)

ANNEXURE

Statement showing production, imports and rail movement of principal commodities from 1950-51 *to* 1958-59 *and estimates for* 1960-61, 1965-66 *and* 1970-71

(Figures in thousand tons)

Commodity	1950-51	1951-52	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58	1958-59	1960-61	1965-66	1970-71
1. *Coal*												
(*a*) Production . . .	32,307	34,432	36,303	35,980	36,880	38,226	39,434	43,500	45,300	53,000	97,000	1,70,000
(*b*) Rail Movement . .	30,423	32,782	33,411	32,544	35,119	35,337	38,158	40,518	43,252	49,847	89,200	1,61,500
% of (b) to (a) . . .	94·2	95·2	92·0	90·5	95·2	92·4	96·8	93·1	95·9	94·05	92·0	95·0
2. *Cement*												
(*a*) Production . . .	2,613	3,195	3,537	3,780	3,927	4,487	4,929	5,602	6,062	7,750	13,000	20,000
(*b*) Rail Movement . .	2,432	2,794	3,023	3,382	3,345	3,956	4,291	5,077	5,012	6,752	11,050	16,000
% of (b) to (a) . . .	93·1	87·5	85·5	89·5	85·2	88·2	87·1	90·6	82·7	87·12	85·0	80·0
3. *Iron and Steel*												
(*a*) Production . . .	1,422	1,476	1,487	1,507	1,864	1,858	1,897	1,747	1,796	5,100	8,400	16,050
(*b*) Production plus Imports .	1,724	1,646	1,687	1,727	2,280	2,661	3,637	3,402	2,971	..	..	..
(*c*) Rail Movement . .	2,707	2,636	2,497	2,555	2,763	3,655	4,237	4,861	5,595	7,308	8,400	15,248
% of (c) to (a) . . .	190·0	178·6	167·9	169·5	148·2	196·7	223·4	278·2	311·5	143·30	100·0	95·0
% of (c) to (b) . . .	157·0	161·1	148·0	147·9	128·9	137·5	117·0	142·9	188·3	..	..	..

APPENDIX 21—(*contd.*)

Commodity	1950-51	1951-52	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58	1958-59	1960-61	1965-66	1970-71
4. *Iron & Other Ores*												
(*a*) Production	3,655	4,376	4,601	4,459	5,054	5,464	5,744	5,973	6,723	12,500	34,250	54,000
(*b*) Rail Movement	3,007	3,816	3,338	4,040	4,330	4,373	4,630	5,351	5,807	10,589	30,825	48,600
% of (b) to (a)	82·3	87·4	72·5	90·6	86·7	80·0	80·7	89·6	86·4	83·19	90·0	90·0
5. *Manganese Ore*												
(*a*) Production	883	1,292	1,462	1,902	1,414	1,584	1,687	1,650	1,200	1,800	3,000	5,000
(*b*) Rail Movement	867	997	1,468	1,987	1,291	1,378	1,647	1,620	974	1,680	2,850	4,750
% of (b) to (a)	98·2	77·2	100·4	104·5	85·6	87·0	97·6	98·2	81·2	93·35	95·0	95·0
6. *Foodgrains*												
(*a*) Production	50,022	51,175	58,266	68,718	66,960	65,794	[68,748	62,511	73,503	76,030	97,000	1,20,000
(*b*) Production *plus* Imports	50,235	51,175	58,266	70,178	67,770	66,494	70,168	66,091	76,673	..	..	..
(*c*) Rail Movement	7,682	8,753	8,345	8,311	8,122	9,044	9,685	11,076	11,945	11,298	14,550	12,000
% of (c) to (a)	15·35	17·10	14·30	12·09	12·11	13·70	14·10	17·71	16·25	14·86	15·00	10·00
% of (c) to (b)	15·30	17·10	14·30	11·75	11·98	13·60	13·80	16·76	15·58	..	..	..
7. *Oilseeds*												
(*a*) Production	5,076	4,949	4,659	5,285	6,208	5,643	6,176	6,051	6,919	6,992	9,200	13,000
(*b*) Rail Movement	1,570	1,389	1,509	1,359	1,521	1,766	1,642	1,641	1,497	1,890	2,484	2,600
% of (b) to (a)	30·93	28·07	32·39	25·71	24·15	31·30	26·59	27·12	21·64	27·03	27·00	20·00

8. *Vegetable Oils*													
(*a*) Production . . .	..	..	..	..	..	505	505	548	559	740	1,271	2,200
(*b*) Rail Movement . . .	..	..	..	..	..	264	264	261	224	345	393	880
% of (b) to (a) . . .	..	..	..	..	..	52·27	52·27	47·63	40·0	46·63	47·0	40·0
9. *Sugar*												
(*a*) Production . . .	1,037	1,152	1,418	1,297	1,086	1,615	2,008	1,957	1,918	2,450	3,500	4,000
(*b*) Rail Movement . . .	983	1,117	1,333	1,385	1,478	1,336	1,536	1,516	1,382	1,847	2,625	2,800
% of (b) to (a) . . .	94·79	96·96	79·90	106·80	136·00	82·73	76·49	77·46	72·05	75·39	75·0	70·0
10. *Raw Cotton*												
(*a*) Production . . .	509	548	559	690	744	700	829	832	866	941	1,198	1,750
(*b*) Production *plus* Imports .	714	761	697	806	867	818	966	914	892	..	..	..
(*c*) Rail Movement . . .	517	560	660	650	716	739	703	680	541	709	899	1,225
% of (c) to (a) . . .	101·6	102·2	100·2	94·2	96·2	105·6	84·8	81·7	62·47	75·32	75·0	70·0
% of (c) to (b) . . .	72·41	73·59	94·69	80·65	82·50	90·34	72·77	74·49	60·65	..	..	..
11. *Cotton Manufactures*												
(*a*) Production . . .	498	543	616	647	635	715	736	770	727	745	871	1,125
(*b*) Rail Movement . .	465	469	495	466	499	548	482	484	430	470	523	619
% of (b) to (a)	93·4	86·4	80·0	72·0	78·6	76·6	65·5	62·9	59·1	63·15	60·0	55·0
12. *Jute Raw*												
(*a*) Production . . .	586	835	820	552	523	712	766	724	925	944	1,246	1,339
(*b*) Rail Movement . .	463	562	497	466	485	512	720	688	728	802	1,059	1,071
% of (b) to (a) . . .	79·0	67·3	60·6	84·4	92·7	71·9	94·0	95·0	78·7	85·0	85·0	80·0

APPENDIX 21—(*concld.*)

Commodity	1950-51	1951-52	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58	1958-59	1960-61	1965-66	1970-71
13. *Jute and Jute Manufactures*												
(*a*) Production . . .	839	875	852	869	928	1,027	1,093	1,030	1,062	1,100	1,100	1,400
(*b*) Rail Movement . .	267	247	256	232	241	290	269	259	261	277	275	28
% of (b) to (a) . . .	31·94	28·23	30·05	26·70	85·97	28·14	24·61	25·15	24·58	25·16	25·0	20·0
14. *Salt*												
(*a*) Production . . .	2,620	2,732	2,824	3,171	2,715	2,979	3,265	3,620	4,135	4,400	5,000	6,000
(*b*) Rail Movement . . .	1,551	1,558	1,521	1,684	1,716	1,858	1,715	1,880	1,781	2,313	2,750	3,000
% of (b) to (a) . . .	59·20	58·13	53·86	53·11	63·20	62·37	52·53	51·83	43·07	52·56	55·00	50·0
15. *Tea*												
(*a*) Production . . .	271	286	301	263	288	284	298	303	316	324	379	446
(*b*) Rail Movement . .	261	272	239	293	256	258	274	297	285	304	356	419
% of (b) to (a) . . .	96·3	95·10	79·40	111·4	88·90	90·84	91·95	98·00	90·2	93·9	94·0	94·0
16. *Paper and Paper Boards*												
(*a*) Production . . .	108·9	131·9	137·5	139·7	155·3	184·9	193·4	210·6	253·0	360·0	820·0	1,500·0
(*b*) Production *plus* Imports .	214·9	218·9	239·5	265·7	286·3	323·9	323·4	332·6	332·0	..	..	..
(*c*) Rail Movement . .	189·4	190·0	183·2	206·2	235·9	256·0	266·8	306·0	364·0	310·0	705·0	1,200·0
% of (c) to (a) . . .	173·9	144·0	133·2	146·6	151·9	138·5	138·0	145·3	143·9	86·24	86·0	80·0
% of (c) to (b) . . .	88·13	86·80	76·50	77·61	82·40	79·04	82·50	92·00	109·60	..	..	..

APPENDIX 22

Statement showing changes in the distribution of freight traffic (ton-Kilometres) between various modes of transport in foreign Countries

	*1930				*1954			
	Rail	Road	Water	Total	Rail	Road	Water	Total
1	2	3	4	5	6	7	8	9
Great Britain France and West Germany	75	10	15	100	52	34	14	100
Other countries in Western and Southern Europe . . .	70	5	25	100	49	36	15	100
Eastern Europe . . .	89	1	10	100	90	5	5	100
U.S.S.R.	80	..	20	100	90	4	6	100
TOTAL . . .	75	5	20	100	80	12	8	100

II. U.S.A., U.K. and France

	Year	Rail	Road	Others	Total
1	2	3	4	5	6
U.S.A. †	1939	64	9	27	100
	1958	46	21	33	100
United Kingdom ‡	1954	53	46	1	100
	1958	44	55	1	100
	1959	42	57	1	100
France ‡	1952	67	22	11	100
	1956	65	24	11	100
	1959	60	29	11	100

**Source* :—U.N. Economic Commission for Europe, Economic Survey of Europe, 1956.

†*Source*:—Statistical Abstract of United States and Year Book of Railroad information.

‡*Source* :—U.N. Economic Commission for Europe, Annual Bulletin of Transport Statistics for Europe, 1959.

APPENDIX 23

Statement showing average annual rate of increase (+) or decrease (—) in rail track for different countries during the period 1946-56

Country	Rail Track Mileage	
	1946-56*	1949-55†
Austria	N.A.	—0·05
Belgium	—0·18	—0·36
Canada	+0·42	N.A.
Denmark	+0·63	—0·16
France	N.A.	—0·31
Italy	+0·42	+0·82
Germany	—0·20	—0·04
Hungary	—0·51	N.A.
Japan	+0·75(1)	N.A.
Netherland	+1·02	+0·22
Norway	+0·95	+1·09
Sweden	+0·25	+3·47
Switzerland	N.A.	+0·44
United Kingdom	—0·27	+0·26
U.S.A.	—1·30	—0·23
Yugoslavia	N.A.	—0·30(3)
U.S.S.R.	+1·50	+0·27(2)
India	N.A.	+1·24(3)

(1) Average rate refers to the period 1951-56

(2) Do. 1950-55 : *Source* : *Holland Hunter* : '*Soviet Transportation Policy*'.

(3) *Source* : '*Statistical Year Book of Yugoslavia*'.

**Source* : The International Railway Union, Paris : '*International Railway Statistics*'.

†*Source*: U.N. Economic Commission for Europe : '*Annual Bulletin of Statistics*'

APPENDIX 24

A statement showing the capacity and the volume of traffic on the new railway lines constructed and the dismantled lines restored during the First Plan which have been opened to traffic

Section	No. of trains per day each way				Percentage utilisation
		Actual utilisation			
	Capacity	Passenger	Goods	Total	
1. Bhimsen-Khairada	12	2	1	3	25
2. Bijnor-Chandpur-Siau	12	3	1	4	33
3. Unnao-Madhoganj-Balamau	14	2	..	2	14
4. Utraitia-Sultanpur-Zafarabad	8	2	2	4	50
5. Nagrota-Jogindernagar					
(*a*) Nagrota-Baijnath-Paprola	9	3	2½	5½	61
(*b*) Baijnath-Paprola-Jogindernagar	7	2	1	3	43
6. Mukerian-Pathankot	11	6	2½	8½	77
7. Gandhidham-Deesa					
(*a*) Gandhidham-Bhildi	10	2	4	6	60
(*b*) Bhildi-Deesa	14	3	4	7	50
8. Gandhidham-New Kandla	20	5	4½	9½	48
9. Gandhidham-Adipur	11	3	1½	4½	41
10. Gop-Katkola	17	1	3	4	24
11. Murliganj-Madhepura	6	3	½	3½	58
12. Diggi-Toda Raisingh	8	2	..	2	25
13. Chunar-Churk	7	2	2½	4½	64
14. Tinpahar-Rajmahal	17	5	2	7	41
15. Vasad-Kathana	18	2	1	3	17
16. Shoranur-Nilampur Road	16	2	½	2½	16
17. Bhagalpur-Mondar Hill	7	4	1	5	71
18. Madura-Bodinayakanur	7	2	½	2½	35
19. Arantagi-Karaikudi	12	3	1	4	33
20. Rail link to Chandigarh	11	4	4	8	73

APPENDIX 24— (*concld.*)

Section	No. of trains per day each way				Percentage utilisation
	Capacity	Annual utilisation			
		Passenger	Goods	Total	
21. Pathankot-Madhopur .	21	2 (mixed)	..	2	10
22. Pihij-Nadiad . . .	14	1	3 (mixed)	4	29
23. Rajkot Town-Rajkot Junction	10	7	2	9	90
24. Bhimgarh-Palasthali . .	10	2	1—6	3—8	30—80
25. Bobili-Salur . . .	8	5	1	6	75

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