GOVERNMENT OF INDIA

POST WAR RECONSTRUCTION

REPORT

OF

THE TECHNICAL SUB-COMMITTEE

TO

THE SUBJECT COMMITTEE ON TRANSPORT ON THE FUTURE OF ROAD TRANSPORT

AND

ROAD RAIL RELATIONS

November 1943



N. B.—" This report is published for general information. Government are not committed to and have not reached any decision on the views expressed in this report."

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REPORT OF THE TECHNICAL SUB-COMMITTEE TO THE SUBJECT COMMITTEE ON TRANSPORT ON THE FUTURE OF ROAD TRANSPORT AND ROAD-RAIL RELATIONS.

CHAPTER I-INTRODUCTION.

In presenting the previous report on the initiation of road planning, the Sub-Committee suggested that it should be authorised to report further on what it briefly described as "a plan for the future of road transport and road and rail relations". This suggestion was accepted. Subsequently, the departure on leave of Mr. L. H. Swain, Director of Civil Engineering, Railway Board, created a vacancy on the Committee, now filled by Mr. S. E. L. West, Director of Traffic, Railway Board. Mr. T. M. S. Mani, Deputy Secretary, W. R. C. C., was subsequently nominated as an additional member of the Committee.

2. We have approached this subject from the standpoint that the object of any transport policy must be to provide transport, and we quote the following from the Introductory *Report submitted in 1933 by the Committee of Independent Experts to the International Chamber of Commerce, which we consider to be as true a statement of the principles of the matter today as it was when

written ten years ago.

"1. Industry, trade and the general user require cheap, efficient and rapid"

transportation, adapted as closely as possible to their specific needs.

2. The transformations that have taken place in the de facto monopoly of land transport, held until recent years by the railways, and the interdependence of the various means of communications call for a comprehensive policy in each country.

3. The principal aims of such a policy should be to co-ordinate all the means of transport in such a way as to secure for each of them the traffic for which it is best suited, and to avoid overlapping, the financial consequences of which

the community would ultimately have to bear.

4. Public action becomes necessary in so far as the efficiency of the various means of transport is compromised by competition among themselves, parti-

cularly road and rail competition.

5. The function of the State is not to maintain the status quo or to favour one means of transport at the expense of another, but to create the requisite conditions for securing the maximum efficiency of all means of transport and to further their evolution in the interests of the general welfare of the community and of technical progress.

• 6. These aims can only be attained by a series of measures, the nature and scope of which will be influenced by the conditions existing in each country.

The importance of a rationalized transport policy has been thrown into relief by competition between motor and railway transport. This problem is more or less the same in all civilized countries."

3. (1) Before proceeding, we think it necessary to refer briefly to the evolution of the conditions existing in India today and the developments to be expected. The executive authority in respect of roads and road transport is Provincial; the pace at which road transport became mechanised was unexpected; the then existing motor vehicle law contemplated and provided for no regulation of competition; and in a very short time the internal competition in road transport for the carriage of passengers led to rate cutting, which in turn diverted large numbers of passengers from the rail to the road. It was not until about 1931, however, that the full effect on railway revenues of the financial depression became apparent, and the possible further losses of railway revenues to the roads assumed alarming proportions. The Central Road Fund was first voted.

^{*}The Road Rail Transport Introductory Report submitted by the Committee of Independent Experts to the International Chamber of Commerce, published by the International Chamber of Commerce, International Headquarters, Paris, as Brochure No. 85. October 1932. The Independent Experts nominated were from the United States of America, Belgium, China, Czechoslovakia, France, Germany, Great Britain, Italy, Japan, Jugoslavia, Netherlands, Poland and Switzerland.

in 1929, and by 1932 the Central Government felt unable to pursue any definite policy of road development without some assurance that the money so provided from Central Revenues would not be applied unduly to the construction or improvement of roads directly competitive with railways and thus become a subvention from one source of Central revenues seriously affecting another. Various investigations and conferences followed, and it was not until July 1939 that the resulting new Motor Vehicles Act came into force. The provisions of that Act mark a very substantial step forward in the direction of creating conditions of fair competition; but in the years preceding its enactment, it had been stated, on the one hand, by the Wedgwood Committee that the losses of railway revenues to the roads had increased from Rs. 2 crores in 1933 to Rs. 41 crores in 1937, while, on the other, by counter-competition and by opposition to certain schemes of road development, railway administrations had unfortunately created an atmosphere in which it was honestly believed by Provincial Governments, businessmen and transport operators that the Central Government were actuated by a desire to suppress road and road transport developments in the interests of railway revenues. The railways on their part claimed that they only demanded a fair deal. Development of motor transport had, in combination with bullockcart traffic, proved destructive to the existing type of road, and Provincial Governments, whose own revenues had been seriously affected by the depression, claimed that they must reconstruct their existing road system, much of it in competition with railways, before they could embark on complementary developments. The opposition of railway administrations to expenditure on competitive roads was a source of constant irritation to the Provinces, who also were beginning to regard their revenues from the taxes on motor transport as a substantial addition to their resources. Conditions thus developed in which the Legislature and the Ministry of a Province were almost openly in revolt against the Central Government in a matter which clearly needed mutual adjustment on a rational basis by a suitable compromise. The form, moreover, in which the Motor Vehicles Act eventually passed the Central Legislature reflected the suspicion attached to the motives of the Central Government in framing it.

(2) Fortunately, this competition, these disputes, and that atmosphere have for the time being ceased to be of importance, since in war conditions there is enough traffic for everyone and, for various other reasons, acute competition has ceased. It is, in our opinion, necessary at all costs that timely steps should be taken to anticipate and prevent-a recurrence of that situation and mutual antagonism, the more so since the problems which will arise immediately upon demobilisation and with the disposal of surplus army trucks will be of a far greater magnitude than any which arose in the past. As far as can be foreseen, with the now rapidly increasing deliveries of new motor transport vehicles for civil use, India will at the end of 1944 have a substantially larger number of civil transport vehicles on the roads than in 1939, and it is understood that the post-war releases of Army trucks available for disposal in India may amount to a number not less than the total number of civil vehicles on the roads at the end of the war. In other words, within a year of the cessation of hostilities, India may have on the roads more than twice the number of transport vehicles which existed in 1989, and which were then creating acute road-rail difficulties. There will also be a very large number of demobilised soldiers, who have been trained to drive and who will be needing employment. The seeds of immediate trouble inherent in such a position are obvious, and if the available vehicles and man-power cannot be diverted into channels profitable to the community, then there will be a relapse into road-rail anarchy from-which it may take very many vears to recover.

(3) A rational approach to the problem is, in our view, only possible if it is accepted—

⁽a) that the interests of individual providers of transport, whether State or private owners, and of individual users of transport must be subordinated to the provision of efficient transport for the whole community;

- (b) that transport problems transcend administrative borders and that their solution will require the consent and co-operation of the Governments concerned; although.
- (c) in the execution of any plan, too sudden or great a disturbance of existing revenues, whether Central or Provincial, must be avoided.
- 4. (1) We are impressed with the fact that the functions of the State as outlined by the International Committee of Experts, with whom we agree, cannot be discharged by two independent water-tight administrations. Indeed, if the past is any guide, the problem is not so much a conflict between road and rail as one of Central vs. Provincial revenues and prerogatives. The uncoordinated and unregulated expansion and development of alternative means of transport is likely to lead to an unbalanced and ineffective system, with all its attendant evils. In short, any road-rail conflict will be more an effect or a symptom than a cause. Fundamentally, there is and can, in these matters, be no conflict between Central and Provincial financial interests. The revenues of both are dependent upon the prosperity or otherwise of the country, which in turn depends upon the economic efficiency or otherwise of inland transport as a whole. If the existing fiscal arrangements raise barriers to progress by creating artificial, but none the less acute, conflict, involving sacrifices, or apprehension of them, beyond what can reasonably be borne in the common cause by one or other of the parties, then some adjustments are necessary. In our view, the artificial and irrational conflict that was manifest before the war prejudiced the issues, and will, if ignored, continue to do so: We strongly urge, therefore, that very serious consideration be given to possible adjustments.

(2) The two main alternatives are the provincialisation of railways or the centralisation of motor transport. We think that any suggestion of fragmentation of railway management by Provinces and States (quite apart from local problems of interlaced fragmentation of territories) has only to be imagined to be rejected. But adjustments within the general framework of the constitution to give Provinces an interest in railways and the Centre an adequate voice in

road transport are, in our opinion, both necessary and possible.

- (3) Although we have given considerable thought to this matter, we find ourselves unable to suggest specifically what form those adjustments should We are a part-time Committee, without a representative of finance, and the questions involved are most difficult and complex. We can only say that we believe that the necessary adjustments are 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 profits and losses of railways, the Centre having already a large share of the total receipts in taxes derived from motor transport. We further feel that capital expenditure on both roads and railways should be contemplated and embarked upon as part of the consolidated transport budget since such capital is to be raised from the same sources. Such a pooling of revenue and balancing of capital expenditure will promote the development and maintenance of a comprehensive well balanced and efficient transport system, in which each means of transport can play its appropriate part. It will also prevent over development of one to the prejudice of the other and of national interests.
- (4) The suggestion that Provinces should have, an interest in railway fortunes is not new. Something of the kind was attempted in the earlier years after the commencement of Provincial autonomy. As regards the creation of a Central Transport Budget, it is a fact that during the years of greatest controversy, and when motor transport was yet comparatively undeveloped, the gress central receipts from duties on motor spirit, and customs on vehicles and parts, were comparable with or exceeded the standard contribution expected from railways. With the development of motor transport and the augmented duties and taxes on petrol, these receipts have increased and there is no doubt they will be even larger after the war. We have not been able in the time at our

disposal to separate the figures relating to transport vehicles as opposed to private cars, but we emphasize that apart from any question of hypothecation of revenue, these receipts in respect of transport vehicles directly reflect the general transport policy, while a proportion of them relate to the road transport employed in combination (which, and not in competition, will, we hope, give a truer picture in the future) with railways. We feel that this aspect was overlooked in the past, but that it is a reality which should be brought into, and kept in, the right perspective in a Central Transport Budget, and in the financing of any scheme of road development.

(5) Whatever other things may be done, whether as a result of our recommendations or otherwise, we believe that the removal or mitigation of the apparent financial conflict is a matter of the very greatest importance which should be actively pursued now by the appointment of a small expert Committee. It is a poison which extends not only to road-rail questions, but also, as for example in Eastern India, to the relations between inland water and the other forms of transport. Left as it is, it will, we believe, seriously impede the healthy development of a correlated system of inland transport. The co-ordination of transport will, in our opinion, present one of the major problems in the post-war era, the difficulties of which will be very greatly increased by the road transport position that will be reached immediately after the war. The problem or problems—for there are many—will not yield to patch-work treatment.

(6) These problems are so vast and intricate that it is impossible for us, a part-time Committee, to indicate more than the outline of a long term plan while making specific recommendations for the critical period immediately after the termination of the war. We consider that the recommendations made by us in this Report, if given effect, will lay a solid foundation on which those concerned with the problem can build and plan in detail for the ultimate future. The machinery we have recommended in a subsequent Chapter for the development of road transport and road-rail co-ordination is, we think, well suited to undertake the responsibility for further detailed examination and planning.

Summary.

- 1. The object of any transport policy must be to provide and develop cheap and efficient transport for all by the means best suited for the kind of traffic involved.
- 2. The interests of individual providers and users of transport must be subordinated to the interests of the whole community.
- 3. There should be a Central Transport Budget, in which the Provinces should share, for pooling of revenues and balancing of capital expenditure.
- 4. A small expert Committee should be appointed immediately to make recommendations as to the structure of the Central Transport Budget, designed to remove the financial conflicts which were manifest before the war and which will otherwise recur. The consent and co-operation of the Governments concerned is essential.
- 5. Our specific recommendations are intended primarily to cover the critical years after the war and to lay foundations for the future.

 CHAPTER II—GENERAL CONDITIONS FOR PARTYLLE TO PARTYLE TO PART

CHAPTER II—GENERAL CONDITIONS FOR RATIONAL DEVELOPMENT OF MOTOR TRANSPORT AND ROAD-RAIL CO-ORDINATION.

5. (1) In our Report on Road Development, a precis of which is attached to this Report as Appendix I, we stressed the importance of road plans being so formulated as to promote a much greater use of road transport than at present, particularly in rural areas now inadequately served by road or rail. We also pointed out that the main object must be to get motor transport into the heart of the countryside where it has not so far gone, in order to serve competition inter se and with other forms of transport, and incidentally to reduce The well-being and prosperity of a country is, in modern conditions, measured by the adequacy and efficiency of its communications and transportation

systems, and in India, whose mainstay is agriculture, the importance of rural communications and transport for the ryots as well as for what they produce cannot be over-emphasized. There are many gaps within the net-work of Indian Railways which only road transport can fill. Without however entering into any controversy over the relative merits and effects of bullock cart and motor traffic on the roads, either by themselves or in combination we have no doubt that the introduction and development of motor transport in the rural areas will be of very great advantage and benefit to the rural population as well as tothe trade, industry and general prosperity of the country as a whole. We have ne hesitation in saying that this development is easily possible, with the large number of vehicles and drivers which will be released after the war. Incidentally, it will greatly assist in re-settling demobilised drivers and providing them with employment for which they have been specially trained at the expense of the State. We also trust that a good proportion of the vehicles and drivers which will be available at the end of the war will be absorbed by the various Governments in India themselves, in the construction of public works, for the carriage of mails, and for agricultural, educational and other administrative purposes as well as in the development of social services. If India is to be a progressive country, the use of motor transport for the purposes mentioned to a greater extent than hitherto is essential.

- (2) Civilization demands that all modern amenities which contribute to national well-being and a better standard of life should be brought within the reach of all sections of the population and this will be possible, in our opinion, only with adequate communications and modern means of transport. It would, however, be mockery to provide such transport at rates beyond the reach of the average user; Transport, if it is to be effective and beneficial, should be cheap and accessible to all.
- (3) The desideratum of cheap and efficient transport for all can be achieved only if the transport resources available and to be made available are utilized to the best advantage possible. This necessarily involves the employment of each means of transport for the traffic for which it is best suited, with, of course, due regard to the specific needs of the various sections of the community, and avoiding overlapping with consequent waste both of transport capacity and the financial resources of the country. In the past, attempts at such co-ordination led to some conflict and suspicion, but there is no reason why this should recur if there is a unified and co-ordinated transport policy, administered with the concurrence and co-operation of the Provinces, and with the single purpose of providing efficient transport. This policy necessarily requires regulation and control of all forms of transport. It is unfortunate that in the administration of Transport "Regulation and Control" have often been assumed to imply an undesirable interference with the laws of Supply and Demand and a stifling of laudable private enterprise. We hasten to add that we mean by "Regulation and Control" something positive to assist and develop each means of transport to fulfil the role for which it is suited, although restrictive measures of "Regulation and Control" will undoubtedly have to be invoked in certain cases in the interests of transport generally and the community
- (4) The roles to be played by motor transport in the carriage of passengers and goods and the measures necessary for the balanced development of such carriage are dealt with in the succeeding Chapters. The rational development of motor transport generally may call for active encouragement and assistance, such as preferential taxation, controlled monopolies or even initial subsidies, with a view to securing its efficient operation in interior localities where the conditions obtaining, particularly in the off seasons for traffic, would otherwise be unattractive to operators. This, coupled with proper regulation and control to prevent undue overcrowding and cut-throat competition on the better developed and more profitable routes, will make for balanced development and operation.

(5) The social, material and political advantages of adequate rural communications and transport have been adequately emphasised by the Indian

Roads Development Committee of 1927-28 and by the Royal Commission on Agriculture. We do not think it necessary to stress these several advantages and indeed we consider that the case is not so much one of weighing the advantages as of removing obstacles to progress. Our picture of the future of rural India is one in which motor transport will penetrate to the remotest villages connecting them with the main transport system; and will play a gradually increasing part in marketing between village and market town and in distribution between town and village. Thus the villager will have at his disposal modern means of transport, readier communication with the outside world, medical attention and other social services to no less a proportionate degree than the town dweller. To attain this result, active development of roads and constructive development of road transport are necessary.

(6) We strongly recommend that a start should be made now, during the war, to develop motor transport on sound lines. The Central Government is distributing new motor vehicles for uses and under conditions approved by it. Circumstances are therefore favourable for introducing and establishing motor transport where it is needed and subject to the sort of salutary regulation and control which we advocate for rational and co-ordinated development. A start now made will, besides lessening the magnitude of the post-war problem, lay

a strong foundation for future progress.

6. (1) Against the background indicated in the preceding Chapter and the general observations made in the previous paragraph, we now turn to the specific questions of the future of road transport and road and rail relations, and of the appropriate spheres of each. Here, it is at once necessary to examine separately

the carriage of passengers and of goods, for the following reasons.

- (2) There is, adventitiously, near parity between the remunerative fare, based on cost of proper operation, for a bus passenger and the normal third class railway fare of approximately three pies per mile (we are not dealing with urban or suburban conditions). That parity may be disturbed by changes in the operating costs of either agency, due, for example, to improvements in the conditions of labour, or, on the other hand, to technical improvements in equipment. But we do not expect this near parity to be seriously disturbed during the next five years, during which such stability will, we hope, have been reached as will enable new problems, if they arise, to be met with rational treatment. But in the case of goods transport, the charge by road is and will, we think, continue to be based on cost of each operation, and thus be more or less constant, irrespective of the nature of the goods carried. This charge may be as low as 18 pies per ton mile with highly efficient operation and full load in both directions: but may have to be as high as 48 pies on the goods carried one way if there is no return load at all and the operation is less efficient. Railway rates on the other hand are based on "what the traffic will bear" since, once the capital is invested, any freight which covers dependent costs and leaves a minute margin to go towards overheads, will, if the traffic will not bear more, still he in itself remunerative. The average rail charge for general merchandise on Class I Railways in 1938-39 (all goods traffic, excluding coal) was 8 pies per ton mile* and the cost for handling and carriage between station and godown is estimated at about Rs. 3/8 per ton. Thus road-rail competition for goods can only be on very short hauls or for the very high rated or "cream" of rail traffic, qualified by the commercial value of speedy delivery or savings in packing.
 - (3) While, therefore, there is much in common in the need for regulation of motor transport at large, in respect of road use and third party safety, the public utility and economic considerations that govern the carriage of passengers and of goods, respectively, are separate and distinct. Regulation by the State of the carriage of passengers should be in respect of public need, convenience

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and safety; but regulation of the carriage of goods should be mainly in respect of public or economic need.

Summary.

1. Transport should be theap and accessible to all.

- 2. The main object should be to get motor transport into the heart of the countryside and to prevent undue overcrowding and competition on the better developed routes.
- 3. Motor transport should be used to a greater extent than hitherto by the Governments in India for administrative and "development" purposes.

4. The expansion of motor transport will provide employment for demobilised

drivers.

5. Public need, convenience and safety should govern the regulation of passenger motor transport the regulation of the carriage of goods should mainly be with reference to public or economic need only.

CHAPTER III—DEVELOPMENT AND REGULATION OF PASSENGER TRAFFIC BY MOTOR TRANSPORT.

- 7. (1) Aviation, the private motor car and, possibly, the "luxury" road coach will in time greatly attract those who in the past constituted the upper classes of rail travel. On the other hand, the number of people with the means and the inclination to travel upper class on the railways may possibly be in excess of the pre-war normal. The question of reducing the number of railway classes is, we believe, being considered as part of railway post-war planning. Economy of railway operation again may involve the removal of upper class accommodation on many branch line trains. The possible loss of upper class traffic to other forms of luxury transport is a matter which will have to be considered in adjusting railway operating costs but is not one of the magnitude of the problem of the lower class passenger. We therefore confine ourselves to the latter.
- (2) Taking as a rough correction to the figures given in the Mitchell-Kirkness report in respect of British India—

(a) that 878 miles of railway of all gauges have been dismantled during the war, almost wholly on routes served by road, and assuming for the moment that they will not be restored; and

- (b) that approximately 1,000 miles of metalled road directly parallel with railways, have been added since that report and mainly during the war; the percentage of railway mileage in British india, having a metalled road parallel and within 10 miles, is increased from 48 to 54. With the exception of the area in Bihar and Bengal, North and East of the Ganges, however, we feel that the proportion of railway route mileage that is, and will come, under effective road competition between pairs of points, although the road and rail routes may be more than ten miles apart, is substantially greater. We therefore examine the matter on the basis that while everything possible should be done to develop the use of passenger motor transport on routes complementary to the railway and main road system, the section of railway wholly free from liability to road competition, either parallel or short-circuiting, will be the exception. Whether or not there is eventually some amalgamation of ownership which, we think, should be encouraged, competition to satisfy public need and convenience in the matter of passenger transport will be inevitable and, if healthy, desirable.
- (3) But short-circuiting roads are also feeders to and distributors from the main rail and road mesh, and there is also an immense mileage of rural roads along which motor transport has not so far developed, but must develop if it is really to serve rural India. The reason lies partly in the condition of the roads, but also in the failure of the State in other ways to create the requisite conditions to secure the maximum efficiency of motor transport and to further its evolution. Flat rates of taxation, laissez fairs in respect of competition between hus owners, the existence on routes served by rail of a stream of paying traffic ready to be attracted and the disposition of Indian enterprise to overcrowd

on to a good thing, have all combined with road conditions to canalize buses on routes already served by railway, to the neglect of others. We recognize that it will be some time before the effect of any road plan can be apparent in any large degree in relation to this problem. But the crisis for the future of road transport will come immediately after the war. Conditions must therefore be created in which, despite the temporary handicap of poor roads, motor transport will spread over the countryside. It is by no means easy, but we believe that it can be done. It is of vital importance that it should be.

- (4) The objective in broad outline is, therefore, so to regulate motor transport as to create on the main routes conditions of healthy competition on the basis of public need and convenience, and to provide on the others the necessary encouragement and protection from mutually destructive competition, so that on every road the community may have civilised facilities for travel commensurate with the density of the traffic and the service which that traffic can support. The conditions requisite must inevitably, on the main routes, result in the replacement of the "small owner" by large companies; these latter may eventually extend, or be made to extend, their services to less remunerative routes, or even to locally unremunerative services, "carried" by the general earnings of the company. But there are very many routes that will provide traffic sufficient for the operation of one or two buses only, which no one can be expected to operate and "nurse" throughout the bad seasons unless protected from competition at the good. To run an efficient service requires a reserve of vehicles and drivers, a workshop or shops, stocks of tyres and parts, and managerial and inspection establishment. The small man running a service needing only two buses on the road at one time should have a reserve of one, or 50 per cent. The large company can do with a reserve of not more than 20 per cent. In other respects, "overheads" bear more lightly on the big than on the little concern. Again, the relative density of traffic on different routes varies from time to time according to season, local fairs, festivals and so forth. If each of the separate companies operating different routes has to hold the necessary reserve of vehicles, there is, in the aggregate, an excess of vehicle and driver idle-time which is paid for ultimately by the passenger. We unhesitatingly say, therefore, that, given adequate control to prevent exploitation by too powerful interests, against which in India the State has the strong protection of State-owned railways, the principles of maximum amalgamation on main routes and controlled monopolies on the very light traffic routes should be accepted as the basis of policy. The theory at one time advanced, that the public benefits from cheap fares in remshackle buses manned by the dregs of drivers and conductors, uncertain of arrival, liable to fatal accidents, and financed by bankruptcy, is we hope extinct.
- 8. (1) The problem therefore is to create in the case of road motor transport for passengers "the requisite conditions for securing the maximum efficiency of all means of transport, and to further their evolution in the interests of the general welfare of the community and of technical progress". Public need, convenience and safety and the general welfare of the community demand, in the case of road passenger transport, the following conditions:—
- (i) prevention of flooding of the roads by motor transport concerns resulting in cut-throat competition inter se;
- (ii) provision of regular, speedy and comfortable services to published time-tables as frequent as the traffic justifies;
 - (iii) enforcement of proper maintenance and other safety measures;
- (iv) precautions against the over-development of certain roads at the expense of others; and
- (v) since ultimately the public need for low rates for goods traffic cannot be ignored in dealing with passenger traffic, the avoidance of too sudden or great a disturbance of total railway revenues from both passengers and goods. For example, if the passenger earnings of any railway line were largely extinguished, the commercial justification for the retention of the line might disappear.

(2) Subject to the fulfilment of the above conditions, we recommend that there should be no restriction either on the range of operation of passenger road

transport or its numbers

(3) To secure the end in view, the control of passenger road transport must be directed at public safety, public convenience and reasonable comfort and protection from exploitation. The labour employed in this public service should, as any other labour, have the benefits of social legislation as to hours of work, compensation for injury, and collective bargaining as to pay and amenities: and there should be reasonable assurance that passengers and third parties, or their dependents, should receive reasonable compensation for injury or death. These things may not all be possible at once, but are necessary and should be the accepted target. Clearly, also, where two forms of providing public serviceroad and rail-are operating side by side, "the function of the State is not to favour one means at the expense of another" but, other things being equal, to apply the same conditions of control to each. Those which we outline above already apply to railways.

(4) We further suggest that it will be necessary to stabilise by regulation. the existing near parity between the economic bus fare and the standard third class rail fare. Rate cutting was at the root of much of the past trouble, and if started in future on one side it will be followed by the other, and the resources of the railways for this are the greater. We do not suggest a rigid all-India flat rate for all routes, but stabilisation of minimum fares by the competent authority, after consulting the interests concerned, at about three pies on normal plains routes. We admit the practical difficulty of enforcing any minimum bus fare, but we think that the attempt must be made in view of the obvious and lasting advantages of an enforced truce during the first few years following the The difficulties involved in the stabilisation of bus fares should become progressively less with the elimination of the small operator and the estab-

lishment of large companies.

9. (1) We have said that there will be few sections of railway to which the road will not offer the third-class passenger alternative means of travel; and it may be thought that we infer that there will in the immediate post-war period be far greater diversions of passenger traffic from rail to road than in the past. Any estimate must of necessity be speculative, but we note the following figures. In the Mitchell-Kirkness Report, it was calculated that about 38 per cent of the gross third class passenger earnings were in the zone 1-50 miles which is clearly the most likely to be diverted to efficient road services. In 1938-39, third class passenger earnings (Class I Railways) amounted to Rs. 26 crores, and 38 per cent of that is Rs. 10 crores. The Wedgwood Committee, whose estimate some of us think to have been excessive, put the railways "losses" of passenger revenue in 1936 at 34 crores. Some proportion of the short-haul third class passenger traffic is suburban; and some again is over sections of railway affording better facilities than the road. We are unable to estimate the precise proportion 'of the vulnerable Rs. 10 crores that is unlikely to be affected by road competition, but for some years at least it will probably be substantial. On the other hand, while passenger travel by road in preference to rail is not likely, as a general rule, to exceed 100 miles, it will certainly in many cases exceed 50. Other factors are (i) an indeterminable saving in railway operation resulting from the diversion of short haul passenger traffic to the road; (ii) a general increase of travel on certain routes by both road and rail; (iii) the increased attraction of express trains rendered possible by relief from short-haul traffic; (iv) the fact that with petrol duty even at 12 annas, about 20 per cent of the "losses" of railway revenue from third class passengers returns to the Central Government in petrol duties; and (v) a possible reduction of bus operating costs by 15 to 20 per cent if the better organised road operators continue to use charcoal as a fuel.

(2) In all the probable circumstances, we believe that under the conditions of control which we advocate, railways and the Central Government must be prepared for a very substantial increase in travel by road of potential third class rail passengers, although we are unable to estimate what will be the net effect on the Transport Budget as a whole. We have said [para. 3 (3) (c)] that a rational transport policy must be conditioned by avoidance of too sudden or great a disturbance of existing revenues. We believe that, in the best interests of co-ordination of both means, and, incidentally, as a further method of balancing Transport revenues, the railways should "get on to the roads" for passenger traffic, as soon as possible but not independently. Whether or not India will ever adopt a policy of State-ownership of all public passenger transport, we are clear that conditions are not at present ripe for such a proposal. We therefore recommend that, side by side with the encouragement of the formation of substantial bus companies, railways should be encouraged to enter into closer co-operation with them with the ultimate object of acquiring a commanding interest. This highly desirable fusion of financial interests, will not, in our opinion, stifle healthy competition between the two agencies on the basis of which can serve the public best.

(3) The war has created circumstances in which the restoration and expansion of road passenger services on certain routes has become an urgent public need. We believe that in the early future a substantial number of new vehicles can be made available. Such an opportunity for railways to "get on to the road" jointly with road operators will not recur and should not now be missed.

(4) We see no advantage in State ownership and management of road transport unless closely linked with the management of State railways, and any development which aligned a Provincial Government, or a local body, as a competitor with a railway would, in our opinion, be disastrous. We mention this because a proposal for district board ownership and operation of road transport was made some years ago in Madras, although at present in abeyance.

10. For the purposes described in this Chapter, the Central Government must be properly equipped and in good time. We consider therefore that the early creation of an Indian Road Board is necessary. We shall deal more fully with that question after we have discussed the question of carriage of goods.

Summary.

1. Few portions of railways are likely to escape road competition for passengers, but healthy competition is desirable.

2. The principle of maximum amalgamation of road transport operators to form substantial concerns on main routes and controlled monopolies on light traffic routes should be the basis of policy.

3. Railways should now develop closer co-operation with road transport and ultimately acquire a commanding interest. A beginning should be made now. There is no advantage in State ownership divorced from railways.

4. Subject to certain salutary conditions, there should be no restriction on the range or numbers of passenger motor transport.

5. Minimum fares for both road and rail should be stabilised by agreement.
6. The early creation of an Indian Road Board is necessary.

CHAPTER IV—DEVELOPMENT AND REGULATION OF GOODS TRAFFIC BY MOTOR TRANSPORT

11. (1) We have in Chapter II referred in general terms to the future uses of motor transport and its part in post-war reconstruction including the construction of public works, and other Governmental activities and we will now deal, in rather more detail, with its particular applications to goods transport.

(2) Agriculture being the main industry, the first question is how far motor transport can help it in the marketing of crops. Here we feel that attractive as is the vision of a service of goods vehicles, burning locally grown charcoal, carrying the crops to market and returning with chemical manures and the needs of the village, it is at present a distant vision. We are not agricultural experts, but we believe that so long as agriculture remains fragmented, mechanical tillage

and harvesting will make slow headway, and that so long as the prime mover of agriculture is the bullock, the bullock will haul the crops to market. We believe that the bullock cart should and will be improved, but that so long as marketing transport is off-season load for the farmer's cattle, the cattle and not motor transport will haul the main staples, with the possible exception of sugarcane grown at distances from a mill. That is the immediate picture. But given a real improvement of the roads, we think that mechanical transport for marketing will gradually develop, possibly by the use of relatively slow moving tractors and trailers, low cost being more important than high speed, and that this will commence in areas of two harvests a year where the strain on cattle

(3) But even today, there is scope for motor transport to assist special forms of agriculture. By its use, the area round the larger centres of population in which market gardening, dairy farming and poultry farming can thrive could be greatly extended to the benefit alike of the wealth of the producer and the health of the consumer. There must be many areas also particularly adapted to fruit growing, where that has not developed because the markets are too distant in time. In that case as in the development of fisheries, the rapid transit provided by motor transport may well have far reaching effects. There are also of course potentially productive areas at such a distance from any railway as to preclude the growing of money crops. Here also, motor transport could help, but we must emphasise that its relatively high cost may prove an obstacle to the development of any but specialised farming, although even here road and rail co-ordination could help by the grant of through road-rail rates. Also preferential rates of taxation or even a subsidy could be considered. We conclude that there is a considerable opening for goods motor transport in rural India, but we must repeat that if, as is alleged, the cost of rail transport is out of parity with the national agricultural income, motor transport is unfortunately at present even more so. All possible steps must be taken to reduce the cost and among these, the provision of better roads and the organisation of the transport business itself are the first.

(4) Local "trucking" in industrial areas and for many urban and suburban purposes will undoubtedly increase. There remains the field of general goods

transport in which road-rail questions at once arise.

is greater.

12. (1) We have pointed out [para. 6 (2)] why road motor transport is an alternative means to a railway for the carriage of goods, only on short-haul leads, or for the high rated rail traffic or "cream". Given reasonable control of road use in the interests of the community and on adequate contribution towards the cost of the roads, we consider that any natural transfer of short-haul goods traffic up to a lead of about 50 miles, or up to about 100 miles where rail transhipment is involved, would constitute an improvement of transport facilities which should be encouraged.

- (2) Beyond those approximate distances, however, the matter becomes one of public need, which may be often opposed to the desire of private gain by transport operators or traders, and we support the view that there is in this case no natural or rational basis of correlation of the two forms of transport without interference by the State to an extent unnecessary in the case of passenger transport. The question is how far such intervention is necessary and what form it should take.
- (3) If a considerable proportion of the higher rated goods pass from the railways to the roads, then, unless there is such an all round increase in other traffic as to offset this, two things must follow, that is, either—
 - (i) the freight charged on the lower rated commodities must be increased; or
- (ii) the railways will cease to make any contribution to Central revenues and even, in the extreme case, have to be subsidised by the general tax-payer.
- 13. (1) We may here refer in passing to the allegation sometimes made that the railways could cover the loss by more efficient and economical operation, or that until they put their house in order, they deserve to lose traffic. While we recognize that there is always room for improvement and greater efficiency.

we think it desirable to reproduce here an extract from para. 15 of the Wedgwood Report:

"In the volume of statistics published by the International Union of Railways for 1935 a comparative table is given showing the average charge for passengers and for goods traffic respectively in all the more important countries of the world. The figures are given, on a comparable gold basis, in centimes per passenger kilometre and per ton kilometre. We extract the following:—

							Average rece	receipt per		
							Passengor	Ton		
			•				Kilometre	$\mathbf{Kilometre}$		
Italy .	•						. 4.14	4 56		
Germany .							. 2.96	4.32		
Great Britain		•					. 2 · 39	4 83		
France .			•				. 241	4.49		
South Africa			•		•			3 · 26		
Canada .					•		. 3.98	1.84		
U. S. A			•		•		. 3.69	1 84		
Argentine Re	public						$. 2 \cdot 02$	2.57		
India .							. 1 · 25	2 50		
Japan	•		٠	•	•	•	. 1;00	`1.39		

The statement shows that, as judged by average unit charges, the railways of India compare favourably with those of any other country with which a comparison can profitably be made."

(2) As regards railways "putting their house in order", war conditions and the necessity for meeting the country's economic needs concurrently with unprecedented demands for military and other essential war traffic have stimulated and accelerated measures taken by railways to improve operational efficiency. It is unnecessary to reproduce efficiency statistics in detail, but a few may be quoted as indications of the improvements effected in the broad gauge wagon turn-round, engine usage and operation generally. To avoid any misunderstanding, it is well to note that the number of broad gauge wagons sent overseas is negligible.

Net tor	miles	per le on lir		tive	Wagon miles per Wagon day†.						
1938-39			•		15144	1938-39			40.2		
1941-42		•	• •		18380	1941-42			47 0		
*1942-43			•		17779	*1942-43		•	42 5		

The following figures are of special interest as they display the combined influence of the average lead and load, the miles per wagon day, the "traffic balance", i.e., the proportion of loaded wagons to empties, and of the number of wagons available:

Net ton r	nilos	per wag	gon	day.
1938-39				351
1941-42				442
1942-43				451

The various measures adopted have resulted in raising the "average load per wagon" from 12.5 in 1938-39 to 15 tons in 1942-43. This largely accounts for the sustained improvement in the net ton miles per wagon day.

(3) The Indian Railway system in the post-war period will find itself equipped, as a windfall from the war, with increased line capacity, doubled tracks, enlargement and improvement of yards—all of which will assist railways in their endeavours towards further efficiency and better service. Against this, which may be termed "unearned increment", the expenditure side of the railway budget may be appreciably heavier than pre-war by reason of factors inherent in the general uplift of standards of life, such as improved scales of pay and cost of social services. Many post-war measures designed to increase railway efficiency and to render improved public service are, we understand, already under examination.

^{*}The figures for 1942-43 reflect the effect of the disturbances and also probably some deterioration under the prolonged strain of the war.

† The figure for all Class I American Railways in 1941 was 38.7.

- (4) We are also aware of the argument that, while it may be true that the general level of railway charges in India compares favourably with that in other countries, it is, nonetheless, high in relation to the wealth of the country. We do not think it necessary to argue the point, but it must be remembered that speed in goods services is expensive.
- (5) In our view, however, no practicable additional outlay on the provision of improvements and facilities and no degree of efficiency in railway operation, however high, can per se sterilize road competition for the carriage of the higher rated classes of goods. If, under a policy of laissez faire, the railways are 1 ft to protect themselves, the only defence open to them is rate cutting. This, if uncontrolled, may easily become indiscriminate and irrespective of the general public good. We prefer regulation designed to assign the appropriate function to road and to rail; and within the framework of that regulation, to prevent merely combative rate cutting.
- 14. (1) The Wedgwood Committee recommended that railways should "get on to the roads" for passenger traffic both parallel and complementary. They were emphatic that nothing would be gained by the railways operating road motor services for the carriage of goods parallel with themselves. We consider that this recommendation is correct in general principle, although we would not exclude the possibility of railways combining with road operators for the carriage of certain traffics on routes parallel to themselves where it was in the public interest that they should do so. The general question is, however, what measure of potential competition the control to be imposed will have to regulate.
- (2) We have stated [in para. 3 (2)], that the total number of civil transport vehicles available in the period immediately following the end of the war may be double that at the beginning. The increase will be largely, if not wholly, in goods vehicles. We have referred to the various uses, constructional, governmental, rural, urban and suburban for which these goods vehicles will be required, but we believe that there will still be a surplus available for general goods transport, and that that surplus will be very large and a possible embarrassment if there is delay in starting public works and in reharnessing industries to civil needs. We have spent much time and thought on an examination of the possible impact of motor transport upon the cream of railway goods traffic in an attempt to estimate the extent of the threat to railway earnings. This is fundamentally a matter of relative charges, and the remunerative charge by road is of course directly proportional to the amount of return load that offers.
- (3) In the course of our examination, we have studied the probable road charges in relation to railway class rates in an attempt to estimate what rate classes would be affected and we have compared these with motor transport charges and railway class rates in the United Kingdom. But the investigation has been largely sterile, except that it shows that in the United Kingdom, there is a larger number of railway class rates that can be undercut by motor transport than is the case in India. The fact is that discussion on the basis of class rates is purely academic. Assuming that the cost of operation of a 4 ton capacity lorry will, post-war, be 8 annas a lorry mile, the ton mile cost with a full return load will be 24 pies. Highly efficient operation and mechanical improvement might enable that to be reduced to say 18 or 20 pies, and the apparently simple deduction is that apart from any other advantages that motor transport may have, any goods in a railway class for which the class rate is 18 pies and over may be attracted to the road. But for this purpose class rates are meaningless. There are for Indian railways five classes for which the common minimum rate is 2.7 pies per ton mile and the maxima from 10.3 to 14.7; and eleven classes for which the common minimum is 4.5 pies per ton mile and the maxima from 15.8 to 50.9. Coal for the public, to which a special tariff applies, was carried over Class I Railways in 1938-39, at an average rate of 3.2 pies per ton mile, grains and oilseeds at an average rate

of 7.6 pies per ton mile, while all "other commodities" averaged, as we have said, a rate of 8.1 pies per ton mile—or lower than the maximum for the lowest class and less than half the maxima of 10 out of 16 classes. We had therefore to discard class rates as useless and were thrown back upon an attempt to ascertain actual rail charges for various commodities, and in particular, for those which we know were carried by road in competition with railways before the war, for example, cotton raw pressed. We append (Appendix II) two statements, (a) of the tonnage and earnings from goods traffic in main commodities on all Class I Railways in 1938-39 and (b) of the average freight charges levied on some of the higher-rated commodities by certain railways. From these it would naturally be inferred that, without the weightage on the one hand of the cost of double handling at rail terminals, of the difficulty of obtaining wagons and of graft; and on the other of the money value of quick delivery, saving in packing and evasion of octroi and terminal charges, there are few commodities that would leave the railway for the road. But there was, in the past, on certain routes, substantial diversion of long distance goods traffics to the roads and in the years 1938-40, road rates were advertised for distances up to 1,500 miles which averaged about 12 pies per ton mile, impelling the railways to resort to wasteful rate cutting. These rates could only have been possible with overloading and finance by bankruptcy. The recurrence of such conditions must be prevented in the national interest. Moreover, heavier capacity lorries, technical improvement and more efficient operation, may in the future produce similar conditions and regulation will be necessary.

15. (1) The foregoing examination confirms the general statement we have already made that it is as a rule only the short-haul traffic which can economically be diverted to the roads and, as we have already stated, we consider that there should be no restriction on such diversion up to about 50 miles, or up to about 100 miles where rail transhipment is involved. There remains for consideration the method of control which should be applied to preventundesirable cream skimming of traffic beyond those distances. Four methods have been suggested in our discussion-

(i) arbitrary determination of the merits or public need in each case by an expert authority, resulting in the gradual evolution of an empirical code;

(ii) a system of zoning;

(iii) a slab or sliding scale system of road tolls or taxation, rising with increasing leads; and

(iv) a proposal that railway rates should be revised so as to bring the ceiling down to about the lowest level at which motor transport can compete on cost and that the trader should then be free to use whichever means he pleases, the loss to railway revenues being made good by increased receipts from taxes and duties on the motor transport used.

(2) Taking the foregoing methods in the reverse order, since ton mileage statistics are not available for all the higher rated traffics individually, we are unable to estimate what would be the sacrifice involved through the application of such a ceiling by loss of railway revenue which those traffics are at present Whether the loss to railway revenue involved in this proposal would be balanced in the Transport Budget as a whole, without disproportionate taxation of the road transport used, is extremely doubtful. We consider that the natural effect of a substantial reduction in the higher railway rates . would be to retain the traffic to the railway and it would then be carried at charges well below what it could bear. In that case, there would be a substantial loss of revenue without corresponding public advantage. We also understand that the railway rates policy and tariffs are likely to be reviewed soon after the war and it may be that some of the higher rates will be reduced. It will be essential that those responsible for this revision shall have before them a clear statement of Government's road-rail policy.

(3) As regards the proposal for enhanced tolls or taxation on longer distances, we have examined separately the connected question whether motor

transport is at present paying adequately for its use of the roads. We think that it is, but the immediate question here is the proposal that it should pay more when used for the carriage of goods over long distances. The object behind this proposal is to reduce, as far as possible, the amount of direct prohibition that may be necessary and to leave the traffic to elect for the form of transport most suited to it and for which it is able to pay. Any simplification of control is desirable, but we doubt whether in practice this particular proposal leads to simplicity. For one thing, and this is common to any form of restriction of range, temptation is offered for evasion by transhipment at intermediate points. Again, if it is in the public interest that, say, fresh fruit and vegetables should be carried for very considerable distances by road, we see no reason why this should be surcharged with an additional toll; and once the toli has to be regulated to the class of commodity, the complications and the evasions which follow are apparent. In any event, we consider that a to simplification of the scheme of vehicle taxation in different Provinces and States and of the arrangements for reciprocal exemption would first be necessary. While in special circumstances this method might be used as an adjunct to the others discussed below, we feel, on the whole, that the better approach is on the merits of each case and that if it is in the public interest that certain things should move by road for certain distances, they should not be subjected to an additional penalty: whereas if it is not in the public interest, we think it doubtful whether certain traders or classes should be placed in the position of buying exemption.

- (4) We are thus left with arbitrary judgment and zoning and we think that a combination of the two is required. We have already said that, in broad outline, we consider that there should be no restriction on carriage by road up to about 50 miles, or up to about 100 miles if transhipment is involved in the railway journey. Beyond those distances, there may be classes of traffic which should, in the public interest, be carried by road, e.g., perishables and fragile goods. Such road transport should be encouraged. But the carriage of such traffics at reasonably low rates involves also the carriage by road of any traffic that offers on the return journey. There will be many border line cases in which the appraisement of public need and benefit will require scientific examination and judgment. From the practice of these, we foresee the evolution of an empirical code which will include a formula for the zoning of the transport by road of different classes of commodities:
- (5) Long distance carriage of goods by road must be regulated in accordance with public need and in the light of alternative facilities. The parallel road and rail trunk routes must, in our opinion, be subject to unified policy and control. Quite apart from the drawbacks of local fragmentation, we strongly recommend, on grounds of high policy, that the development and maintenance of the National Highway system should be a direct charge on the Central Transport Budget; and that the control of traffic on that system should be directed by the Indian Road Board.
- 16. (1) The foregoing paras, deal with the long-range problems. But, with the strain being placed upon railways during the war, which is likely to continue in the years immediately following the war, it will, in our opinion, be necessary to carry goods by roads parallel with railways, either for the relief of congested routes, or in order to relieve railway locomotives and rolling stock, to a greater extent than will be economically justifiable in the normal future. With the expected arrival of new lorries during 1944, the means will be available and will be largely increased on the cessation of hostilities, if our expectations are correct. If these means are made over to independent operators, then, either they will have to be permitted to continue with cream skimming after the necessity for such goods transport has ceased to exist; or, if the authorities in control consider it necessary to put a stop to cream skimming, the position will be that the operators will have been permitted to invest in a

short term business as a war measure which will subsequently fail as a result of Government action. No one is likely to invest in lorries for this class of work on the stipulated condition that the permit will be withdrawn as soon as railways are able to carry the traffic. It follows, in our opinion, that railways should as far as possible retain some control over the additional motor transport which has to be employed for the carriage of goods during and immediately following the war. This can be done in three ways:—

(a) The railway owning and operating the lorries.

(b) Through joint companies as in the case of passenger services, and,

- (c) By the release of lorries to approved operators bound by agreements to work, for a railway at a pre-arranged rate per lorry mile plus a daily allowance for idle time.
- (2) The essence of the matter, in our opinion, is to limit as far as possible the capital which has to be invested for this purpose by private enterprise. We doubt whether in practice many railways will have the staff and equipment for direct operation. As between the other two methods, we consider that the mileage rate arrangement is the more simple. In that case, provided the operator had some staff and garage facilities to start with, his investment would largely be limited to the first cost of the lorries. An agreed rate of depreciation could be specified in the agreement, so that, when the time came to terminate the arrangement, the railway concerned could buy back the lorries and cut its losses. The lorry operator would have known his position throughout and would suffer no loss. Since the arrangements we contemplate are purely temporary, we see no substantial advantage in the more elaborate method of forming a joint road-rail company which would have to be voluntarily wound up after a few years. Where however a joint company exists or is about to be created for passenger traffic, it might also operate goods vehicles as a temporary arrangement. We consider that these questions should be faced now, because we understand that during 1944, there is likely to be a sufficient number of lorries available which, if not used in one of the ways which we suggest, would have to be released to private operators, freight charges would not be susceptible of direct control; whose investment would be substantially greater than the cost of the lorries; who would have to be given a permit for a considerable period; and who would, in consequence, develop a vested interest to operate on that route which it would be difficult later to abolish. Morally, if such a permit were granted, there would be some obligation to protect the operator from subsequent rate cutting by the railway.
 - 17. The development of new uses for goods lorries, particularly in rural areas; the allocation of available lorries for Governmental and other purposes; the estimation of the probable surplus and the regulation of the rate of disposals; the special employment of motor transport during and immediately after the war, in relief of congested railway routes; and the preparation for transition from immediate post-war, to normal peace conditions; will all require close attention and detailed planning. We therefore reiterate the necessity for the early creation of the Indian Road Board.

Summary.

1. While there is little prospect, in the near future, of motor transport being used for marketing crops and supplying village needs, it will develop gradually with a real improvement of roads and a reduction in its cost: Even now, it can assist special forms of agriculture, e.g., market gardening and fruit growing and should be encouraged to do so.

2. Local "trucking" will undoubtedly increase in industrial and urban areas.
3. An immediate urgency for action is in the field of general goods transport

in which road-rail questions at once arise.

4. No improvements in operation or efficiency of the railways can sterilise road competition for the carriage of the higher rated goods traffic.

5. Motor transport can compete economically with railways only in respect of short-haul goods traffic: the transfer of such traffic to the roads would be an

improvement of transport facilities and should be encouraged.

6. In the past, overloading and finance by bankruptcy enabled motor transport to compete uneconomically with railways for long distance goods traffic and impelled railways to resort to wasteful cutting. The recurrence of this should be prevented, except where long distance traffic by road is in the public interest, by a system of regulation combining expert judgment of the merits of each case on the basis of public and economic need and scientific zoning.

7. A definite road-rail policy must precede any general revision of railway

rates and tariffs.

- , 8. There is, in general, no advantage in railways operating or participating in motor transport of goods on parallel routes. However, during the war and in the years immediately following, direct, joint, or co-ordinated use of motor transport by railways, on a short-term basis, will be necessary.
 - 9. The control of traffic on the National Highway System should be central.
 - 10. The early creation of the Indian Road Board is necessary.

CHAPTER V-TAXATION OF MOTOR TRANSPORT.

- 18. (1) We now come to the question whether motor transport is paying adequately for the use of the roads, in addition to a reasonable contribution to public revenues. Those of us who have been more closely connected with this question believe that it is, and we give some approximate figures below. We are, however, confronted with the difficulty that India has never faced and answered the question of what part of the total taxes derived in various ways from motor vehicles is supposed to represent a reasonable contribution to public revenues and what part can be recognized as a toll for the use and improvements of the road. We recognise that import duties on vehicles, parts, and accessories are part of the general customs tariff and that the petrol duties afford a convenient means of raising revenue for general purposes, but the facts lend some support to the view that, albeit adventitiously, the total taxation is discriminatory against motor transport, and contrary to the principle that "the function of the State is not to favour-one means of transport at the expense of another".
 - (2) It was shown in the Mitchell-Kirkness Report (diagram facing page 46) that, in the case of railways, the contribution to Central Revenues (5.42 per cent) and taxes (0.47 per cent) amounted to 5.89 per cent. of working expenses, while interest (13.7 per cent) and maintenance (8.9 per cent) in respect of track amounted to a further 22.6 per cent. In the case of motor transport, all taxes then amounted to 29 per cent and upwards of operating costs and have since been increased by enhanced central petrol duties and Provincial Petrol Sales taxes to a minimum of 25 per cent or more.
 - (3) With mixed traffic of so many sorts on the road, it is difficult to assess the proper commercial toll for any particular class. Indeed the Salter Committee in the United Kingdom were unable to assess upon motor transport any proportion of the probable capital cost of the road and set that off against "community use", proposing on the other hand that motor transport, as a whole, including private cars, should carry the whole cost of future expenditure on construction, improvement, extension, maintenance and policing of the roads. This simple solution cannot apply in India where the current expenditure is so largely due to bullock eart traffic. But, we think that a rough indication can be obtained as follows: The present book value of a road carrying 1,000 tons of mixed traffic per 24 hours of which 500 tons is in motor transport vehicles (buses and lorries) may be put at about Rs. 30,000 per mile, the interest on which at 4 per cent is Rs. 1,200 per year; and the annual maintenance cost we put at Rs. 1,000 per mile. Cost of policing cannot readily be estimated or related to road milage but it is supposed to be covered by fees and not by taxes, and, in any case is, we think, relatively small. Assuming that motor transport, being half the total tonnage, has to carry half the total annual cost of Rs. 2,200 per mile, then, over that mile 500 tons gross daily, or say 2/3rd of that or 350 tons

- daily of pay road, has to provide Rs. 1,100 per year. This amounts to $\frac{1,100 \times 16 \times 12}{350 \times 365} = 1.65$ pies per net ton mile. The present cost of operating a four ton truck amounts, as we have said, to 24 pies per net ton mile; of that 1.65 pies or 6.9 per cent is a rough measure of the appropriate road toll for the use of the road as it exists with no margin for improvement*. Of the minimum of 25 per cent on turnover which motor transport pays in all taxes, there thus remains a margin of 18 per cent contributed to public revenues compared with the contribution by railways of 5.89 per cent. The foregoing does not purport to be more than a rough and ready answer to an obvious question. The matter needs more precise examination. In 1925, the duties on petrol were 4 annas a gallon, while the Central duties are at present 15 annas and the Provincial Sales Tax not less than an anna. Out of the 11 annas Central increment only $2\frac{1}{2}$ annas is "put back into the business" through the Road Fund.
- 19. (1) We urge that the time has come for a full survey of the existing taxes on motor transport and a determination of the proportions which should be regarded as a contribution for the use of the road, a contribution for the financing, directly or indirectly, of future road development, and a fair contribution to Central and Provincial revenues. An early difficulty will be the variation in the method of assessment and the great variation in the level of the tax on different classes of vehicles in different Provinces. As regards the basis of assessment, there is, in our opinion, one correct method, viz., unladen weight in the case of cars, seating capacity in the case of buses and laden weight in the case of goods vehicles, and several incorrect methods which are at present being followed, and we see no reason why a uniform fair method should not be adopted.
- (2) We also consider that the remaining anomalies in the matter of reciprocal exemption from taxation (when a vehicle already taxed in one Province is used in another) should be reviewed and removed.
- (3) As regards the level of taxation, we do not think that complete uniformity is at present a practicable proposition. We would not suggest that Provincial, taxes generally should be raised to the level of those in Madras, while we recognize that it will probably for some years be extremely difficult for that Government to surrender any part of this revenue, the more so as the scale of taxation was designed, but failed to confpensate for the loss of provincial and local bodies' revenues through the abolition of road tolls on all forms of transport.
- (4) In a scientific analysis of what motor vehicles should pay towards the cost of roads, there are various elements. The element of 'availability' means that the road is there for everyone, including the casual pleasure user, who should pay appropriately through a vehicles tax which is irrespective of the amount of use. The best measure of wear and tear is undoubtedly the fuel tax, which with some contribution from the vehicles tax, should provide also a portion at least of the cost of development and improvement. The import duties on vehicles, parts and accessories are part of the customs tariff and a normal contribution to Central Revenues, although cognisance must be taken of the fact that they will be substantially affected by any transport policy. The scheme of taxation thus requires to be regarded as a whole and a scientific review might suggest adjustments in the relative taxation of different classes of vehicles and probably ar increase of the vehicles tax on transport vehicles in certain Provinces, leaving the excess over normal maxima at present levied in other Provinces, untouched.
- Summary.

 1. Motor transport is paying adequately for the use of roads, in addition to a reasonable contribution to public revenues.
 - 2. A scientific review of motor vehicles taxation is necessary.

^{*}We have in Appendix III worked out an actual example from a road near Delhi carrying a high intensity and proportion of motor transport. The cost of the road to be recovered from motor transport vehicles in this case works out to 1.235 pies per net ton mile or 5.15 per cent of the operating cost. This is less than in the case of the "average" which we have assumed

CHAPTER VI—MACHINERY REQUIRED FOR DEVELOPMENT OF ROAD TRANSPORT AND ROAD-RAIL CO-ORDINATION.

- 20. (1) In our opinion, machinery should be set up as soon as possible, to promote the rational development of motor transport and road-rail relations. As a general observation applicable to the whole range of authorities dealing with the regulation of motor transport, we must emphasise our view that particularly in the post-war transitional period, the problems will be so complex that expert administration will be necessary. There is no code of the principles and practice of control such as would render expert interpretation unnecessary. The issues involved are so large as to call for the highest standard of administration.
- (2) We now deal with the machinery required in the Provinces where, under the Motor Vehicles Act, 1939, regulation and control of motor transport is effected by a Provincial Transport Authority and a number of Regional Transport Authorities. So far as passenger motor transport is concerned, we consider that the constitution of the existing Regional Authorities is adequate. But, in the co-operative atmosphere which it is essential to create, it will, in our view, be a source of continuing weakness and mutual misunderstanding if representatives of railways and road transport interests continue to be excluded from the Provincial authority. These, and representatives of inland water transport and coastal craft, where their interests are important, should be added to the Provincial Transport Authorities.
- (3) In the case of goods fransport, the considerations to be weighed are those related to public or economic need; little or no element of convenience is involved; and the decisions, whether they involve the encouragement of feeder uses by protection from undue competition, or the more difficult appreciation of public need in the road-rail field, must be based on scientific appreciation of the factors involved. We therefore recommend that the Transport Authorities dealing with goods permits should be the Chairmen of the Provincial and Regional Transport Authorities, sitting alone. These officers should in every case be selected for their special knowledge of these subjects. In their capacities as Chairmen of the Provincial or Regional passenger authorities, they will in practice be able to obtain any advice which they wish and be subjected to healthy criticism-but the responsibility and the decisions concerning goods transport should be theirs. We are further of opinion that the post of Chairman of the Provincial Transport Authority and Provincial Controller of Goods Transport, which might be designated "Provincial Transport Commissioner", should be whole-time. He should personally control the grant of permits for goods traffic over distances exceeding 100 miles, and give general directions to the regional chairmen regarding the principles to be applied in the issue of permits in the zone 51-100 miles. from the orders of the Regional officers by the providers of transport, or by business interests, aggrieved, should lie to the Transport Commissioners and appeals from the orders of Transport Commissioners should lie to the Indian Road Board who would normally appoint an officer to hear them locally,
 - (4) We strongly recommend that the Provincial Transport Commissioners should be nominated by the Central Government with the concurrence of Provincial Governments and that their pay and the cost of their establishment should be charged to the consolidated Transport Budget. The Regional officers should continue to be appointed by Provincial Governments.
- (5) In Chapters II, III and IV, we have stressed the necessity for making an immediate start in the matter of promsting the development of road transport and road-rail co-ordination. With the recent shortage of transport, control over the use of goods lorries has, we think, been largely waived and we doubt whether the appropriate authorities are fully aware of what is going on. If, as the numbers of vehicles grow, the matter is allowed to drift, the future salutary regulation of transport will be impaired. We therefore strongly recommend that the regulation and co-ordination of transport should be brought under close observation immediately and the machinery required set up well before the end of the war.

(6) We wish to add that the distinction we draw between the authorities to control passenger and goods traffic accords with the English law, under which the Chairmen of the Area Traffic Commissioners for Road Passenger Traffic are whole-time officers and are the sole authorities in the regulation of goods traffic.

by motor transport.

(7) We have indicated that it is in the immediate post-war period that the need for effective control will be critical. However perfect the scheme for regulation and co-ordination, there will be acute problems of actually placing the surplus vehicles and having them operated in accordance with the plan. If the law is successfully defied or is prostituted into a means of graft by unscrupulous subordinates, control will be lost and the spiral of cut-throat competition again reappear. The small man has little to lose, and every pirate journey gives him a little money for his hand to mouth existence. When stability is attained, the cost of control will diminish, but even then we believe that it will be an advantage on the main routes, and elsewhere as far as practicable, to create special traffic police as has been done in Bombay, and to remove this work from the purview of the regular police. We urge that the organization that will be necessary be worked out and set up in nucleus beforehand. We also recommend that the ordering of weigh bridges, patrol vehicles and other equipment be taken up at once.

21. (1) We now proceed to deal with the Indian Road Board to which we have made frequent references in the course of this Report. It seems to us inevitable that, to provide what has long been lacking in rural India, to afford employment in the transitional period and above all to counter threatened food scarcity, the Central and Provincial Governments should make a very early and substantial beginning on large scale comprehensive road development, and that this will have to be before the complete plans for such development are ready. This will impinge on Central finances or Provincial borrowings, and will closely affect the Central Government by reason of the effect of any part of the plans on railways and on development generally. The Central Government cannot therefore fail to be very closely interested and concerned, and should, we consider, create immediately the machinery necessary to watch its interests and to co-ordinate this with other aspects of reconstruction, more particularly at the beginning of road development when a start must be made without the complete picture of the ultimate plan and its full implications.

(2) In the matter of the development of road transport and the relations between road and rail, we have, throughout our Report, been forced to leave many complicated questions for future examination and have emphasised the need for early study of these points. We consider that it is essential that there should be a Central Road and Road Transport Authority, to deal with the development of roads and road transport, which, we suggest, should be designated the Indian Road Board, working directly under a Transport Member and Department. We take it as axiomatic that there must be such a Member. and Department charged with the promotion of co-ordinated development and use of all transport by land, water and air. The Indian Road Board should implement and administer the general road transport policy, direct the regulation of road transport on the National Highway System and instruct Provincial Transport Commissioners regarding the policy to be pursued by them. It should also deal with appeals from the decisions of Provincial Transport Commissioners as indicated in the preceding paragraph.

(3) We recognize that this suggestion cuts across the existing constitutional distribution of subjects between the Centre and the Provinces and that Provincial Governments are likely at first sight to oppose it. We venture some observations on the constitutional position in a succeeding Chapter. Notwithstanding the very real constitutional difficulty, we believe that the future of land transport will be in grave danger of lasting damage during the transitional period with consequences possibly disastrous to the Provinces and the Centre alike, unless there is a unitary policy centrally organized and applied by arrangements of this nature. We hope that, if the magnitude of the difficulties and the issues involved and the imperative need for making an

immediate beginning in the matter of developing, regulating and co-ordinating all forms of transport, are placed before the Provincial Governments and if this is accompanied by some definite indication that it is the intention of the Central Government to be constructive rather than restrictive and to afford substantial assistance in the development of roads and road transport, the Provinces will accept the proposal. The number of administrative units is so large that we see no possibility of any form of rotational representation on the Indian Road Board. We appreciate also the limitations, as a policyguiding body, of the existing Transport Advisory Council, the composition of which precludes frequent meetings. We therefore suggest that between the infrequent meetings of the Transport Advisory Council, there should be interposed more frequent general or zonal meetings with Provincial Transport Commissioners. Through these and periodical meetings of the Council, there will be preserved that unity and concurrence in policy and practice which is essential.

(4) We realise that until the nature of the future Constitution takes more definite shape, it may not be possible to plan Central machinery of this sort on a long terms basis. We are emphatic, however, that the crisis in inland transport in India will take place during the five years immediately following the war and that the whole future of transport will depend on how the various problems involved are administered during those critical years. The machinery suggested by us may therefore, if necessary, be regarded as a temporary expe-

dient, subject to review later.

22. (1) We firmly believe that, to attain the ends in view, it is necessary that the Provinces should concede in generous measure to the Centre the right of direction and centrol to be exercised through the Indian Road Board. But the need for an efficient Road Board will, in our opinion, be the greater if, unfortunately, Provinces are reluctant to concede any prerogative. The Centre would then have to continue to seek for co-ordination by argument and persuasion; and the best hope would be a strong, impartial and constructive body which would win the confidence of the Provinces and be able to manage, by convention, some part at least of what we think it should be entitled to effect by conceded right. We cannot regard the latter as a satisfactory a ternative and we trust that the constitutional difficulties will be resolved.

(2) The body we propose is:-

(i) a Chairman to direct and control both the road and road transport sides;

(ii) a member to deal with road transport;(iii) a member to deal with road development;

(iv) a financial adviser and member;

(v) a secretary with administrative experience and, if possible, prior experience of these subjects;

and the necessary staff.

The Board should absorb the existing roads organisation under Posts and Air Department, the office of Consulting Engineer (Roads) being merged with that of member for road development; and also the organisation in the War Transport Department at present dealing with road transport. The Financial Adviser (Communications) would presumably be the member for finance. The Board should be responsible for the carrying through of the general policy of Government under a Transport Member of Council and Transport Department, but the Board should have clearly defined powers, duties and responsibilities of the nature indicated in the previous paragraph. It should also be in close touch with the other Departments concerned, and in particular with the organisations set up for post-war rural development, demobilisation and disposals. On its creation, the Board would immediately, have to take up the detailed examination of the various intricate questions, the nature of which we have indicated, with the possible exception of the scheme for a Central Transport Budget, the details of which should be worked out by the expert Committee which we have suggested in para. 4 (5).

(3) We wish to add that the Board which we propose is not merely blindly modelled on the Railway Board but represents, in our opinion, a rational

arrangement to co-ordinate in itself road development and control of road transport and to give effect to the policy of co-ordination with other forms of transport. There is much preparatory work to be done. It is very desirable that, as far as possible, there should be no break in continuity of planning and policy between what is done during the war and what is planned for the post-war period and we recommend that the Indian Road Board be created as soon as possible, say, with effect from April 1944.

Summary.

1. The existing Transport Authorities under the Motor Vehicles Act, 1939 are adequate for the regulation and control of passenger motor transport, but the Provincial Authority should have a whole-time Chairman and should include representatives of road, rail and, where necessary, other forms of transport.

2. Goods transport on National Highways should be controlled by

3. Subject to the above, the regulation and control of goods transport should be in the hands of a whole-time Provincial Transport Commissioner [who will also be the Chairman of the Provincial (Passenger) Transport Authority], to be nominated by the Central Government; and of the Chairmen of

the Regional Transport Authorities under him.

4. An Indian Road Board should be created from April 1944, to examine in greater detail the complex problems involved, to prepare for the launching of the road plan, and to make a beginning in the regulation and co-ordination of transport, even before the termination of the war. This Board should be responsible generally for the development of roads, of road transport and closer road-rail relations.

5. The existence of a Member and Department of Transport is axiomatic.

CHAPTER VII—LEGISLATION.

23. We have made frequent references in this Report to the necessity for close co-operation and mutual understanding between the Central and Provincial Governments in the development, of road transport and road-rail co-ordina-In this connection, we note that the Government of India Act contains no suitable provision for the adjustment of differences which have arisen and may arise between these Governments on matters connected with transport. The nearest approach thereto is contained in section 126(1) of the Act, which empowers the Centre to give a direction to a Province so to exercise the evecutive authority of the Province as not to impede or prejudice the exercise of the executive authority of the Centre. This provision was indeed, we believe, suggested by those responsible for framing the Act as being appropriate for this purpose. We doubt however whether it could properly be so used even in a general way, and we are satisfied that it could not, in practice, be used in dayto-day administration. The difficulties involved in invoking the provision contained in section 103, regarding legislation by consent, are obvious. remains the provision in section 135 for the appointment of an Inter-Provin-Council, but it is doubtful whether it would cover the setting up of the Indian Road Board which does not, under our proposals, include representatives of the Provincial Governments. We recommend early examination of the question of giving the Indian Road Board a constitutional backing, within the frame-work of the existing Act if possible or by amending its provisions.

24. (1) In the main, the necessary conditions of regulation and control of motor transport are provided by the Motor Vehicles Act, 1939, including Chapter VIII on Insurance not yet in force. But, the war will, in a few years, have spanned many years of normal evolution, and amendments will be necessary to this Act. What precise amendments will be required will have to be. worked out, we suggest, by the Indian Road Board, and here we will refer to

- the salient points which occur to us.

(2) The Transport Authorities under the Act have wide statutory discretion to interpret the Act in the light of their conception of what the transport policy should be. The Provincial Transport Authority has [section 44 (3)] comprehensive powers of direction and control over the Regional Authorities; but the powers of the Provincial Government to give directions in conformity with any all-India policy to which it has subscribed are (section 43) unnecessarily and undesirably restricted. For example, the Provincial Government may decide that, in the public interest, it is necessary first to attack the extension of the improved road system into rural areas and to postpone the widening or other improvement of certain Provincial main roads. In pursuance of such a policy, it might be necessary for some years to restrict the number of buses on certain main roads between places served by rail, not "to protect the railways" but in the interests of public safety, convenience and finance. Section 43 does not extend to the giving of a direction in this matter: It is true that, in practice, the Provincial Transport Authority would be unlikely to obstruct accepted policy. It is also true that the independence of the Provincial Transport Authority from day to day interference on political considerations might at times prove to be a source of strength. But, we think that on balance, it is undesirable that the subordinate authority should have greater power than the Provincial Government.

(3) The Act [section 44 (2)] expressly excludes from membership of any Transport Authority any person having a financial interest in any transport undertaking. The English law (section 63 of the Road Traffic Act, 1930) provides that any person whom the Minister of Transport proposes to appoint to be a traffic commissioner (corresponding to a member of a Transport Authority in India) shall declare if he has any, and if so what, financial interest in any transport undertaking carrying passengers; and any commissioner who after his appointment acquires such interest has to declare it. There is no absolute bar, and it is apparently left to the Minister to decide whether the interest, if any, is prejudicial to the proper discharge of the commissioner's functions. In para. 20 (2) of Chapter VI, we have suggested the desirability of including in the Provincial Transport Authority representatives of railways and road transport interests and, if necessary, of inland water transport and coastal-craft. We recommend that section 44(2) of the Act should be amended somewhat on the lines of the English Law.

(4) The maximum period of validity of five years for a permit [section 58(1)] may discourage the formation of substantial concerns. Again, in their anxiety to protect transport vehicle owners from undue harassment, the Legislature provided in section 38(2) that the certificate of fitness shall be valid for a period of not less than six months. In that period, a bus may travel 20,000 miles, and the provision is alike embarrassing to the inspecting officer and dangerous to passengers. The Act needs amendment to cover these

(5) The power to fix maximum and minimum fares which now vests in the Provincial Government [section 43(1)] should, we think, be vested in the Provincial Transport Authority under section 44 (3); and the provisions of sections 46, 47, and 48 in respect of fares, need tidying up. Section 48 (d) (iii) provides that the Regional Authority may attach to the permit a condition that the fare-table must be exhibited on the bus; but no provision is made in the other two sections either for declaration by the applicant of the fare he proposes to charge, or, specifically, for the authority to take this into consideration when granting a permit. While we advocate equalisation of rail and road fares on common routes, there should be discretion to fix higher fares on the less trafficked routes over bad roads, and in such cases the element of competition between applicants for permits should come in, so that, other things being equal, the applicant who quotes the lowest reasonable fares should get the permit. The authority would not of course grant a permit to an applicant quoting a rate to which obviously he will not be able to work.

(6) Competition for long distance goods traffic will occur, as in the past, on the National Highways traversing several administrations, the exercise of whose jurisdiction must be regulated by a single authority. This is one of the reasons why we recommend that legislation should be undertaken to provide that the ultimate control of traffic on the National Highways must rest with

the Central Government.

- (7) Whether or not it is ultimately necessary to make any provision in the Act, we think that the question of the limit of weight of goods vehicles which may be allowed unrestricted use of the National Highways and Provincial main roads needs further examination. An attempt was made when the Motor Vehicles Act was under consideration to reach an agreement on the maximum laden weight of a lorry which might be allowed free movement over Provincial metalled roads. This attempt unfortunately failed, but for the healthy development of transport it is necessary that, as far as possible, the standard of laden weight to be allowed should be levelled up in and within different Provinces.
- (8) As regards compulsory insurance, the Motor Vehicles Act now provides that Chapter VIII thereof relating to the subject shall come into force on the 1st July 1946. We are emphatic that it ought not to be further postponed. The target should be to have everything in order and ready twelve months in advance so that forms etc. may be printed. It is probable that the provisions of Chapter VIII may need amendment in the light of subsequent experience in the United Kingdom and elsewhere. This question also will have to be taken up.
- 25. We also recommend that legislation should be undertaken to give effect to our proposals in Chapter V on the taxation of motor vehicles.

Summary.

- 1. Legislation may be required to give the Indian Road Board a constitutional backing and to provide for the adjustment of differences between the Central and Provincial Governments.
 - 2. The Motor Vehicles Act, 1939 needs amendment in a number of respects.
- 3. The various Motor Vehicle Taxation Acts in force need amendment to rectify anomalies.

CHAPTER VIII-OTHER ROAD TRANSPORT.

- 26. (1) Our terms of reference include "a plan for the future of road transport", and while our main concern is with road motor transport, we may refer briefly to other forms.
- (2) The most important of these is the bullock cart, which has remained unchanged for centuries. So long as agriculture is fragmented and mechanical tillage impossible, cattle will be available after the harvest has been raised and must, we believe, remain the principal motive power for agricultural marketing. Bullock carts will therefore stay, but the present cart is an inefficient transport machine and is destructive to roads. In the absence of statistics, we can only state that it is the belief of some of us that the number of carts which exists is greatly in excess of the number necessary, if fully employed, to cart the crops to market and return with the requirements of the village. This smaller number of carts should, we feel, be improved. So far no suggested improvement approaches in merit the use of pneumatic tyres. These not only save the roads and allow of better roads for the same money, but also with the cushioning action of the tyres enable the use of modern frictionless bearings, thus immensely reducing the strain on cattle. The whole is thus a road saver and a far more efficient machine. The tyres are manufactured in India and the carts should be. To start with, the vehicle salvage available after the war will. include much that cannot be re-conditioned as motor vehicles or trailers, but which should be utilized for building improved carts at the cost of scrap material. Development of the use of four wheeled rubber tyred carts in cities should be pursued. It might start with this material.
 - (3) The horse-drawn passenger vehicle will, we think, in the main be eliminated by the motor bus. There remains only the humble bicycle which will, we expect, multiply greatly with the improvement of rural roads. It is an important means of locomotion for the people and the provision of cracks on the main roads approaching towns should be regarded as a standard necessity. This, however, is a matter for the road planning side.

Summary.

1. The bullock cart will be the principal means of transport for agricultural

marketing for some time to come.

2. The development of pneumatic tyred carts must be pursued. The tyres are and the carts should be manufactured in India; a start might be made from the salvage available after the war.

CHAPTER IX-MISCELLANEOUS.

27. In this Chapter, we refer to certain miscellaneous questions affecting

the future of transport which have to be cleared up.

- 28. Future use of producer gas.—(1) There is at present considerable reluctance to convert vehicles to producer gas. This is due to the extra initial outlay, to the greater trouble and care necessary in maintenance, and in places to the short supply and the rising prices of charcoal. Possibilities of technical improvements to plants and of the use of coke as a fuel near the coal fields. are being examined. There is little question that, given the will and skill, fleets properly serviced can be run on producer gas at a saving, compared with petrol. Given an assured post-war market, the better manufacturers would continue research to improve their plants. But, as petrol revenue considerations effectively prevented the manufacture of power alcohol before the war, -so there is a feeling that, in order to balance receipts, vehicles with gas plants will be taxed (as was once proposed for diesel engined vehicles) to the point where it does not pay to use them. The incentive to develop this fuel is therefore dying out as the war position seems to improve, although about 12,000 transport vehicles have so far been converted, and if the target is attained, that number may be increased to over 20,000 by the end of 1944.
- (2) We have repeatedly stressed the need for cheap transport, particularly in rural areas at present without any modern means of transport. Where supplies of suitable timber are plentiful, we suggest that it is more logical as well as less costly to use local fuel than to carry petrol many hundreds of miles This development should therefore be encouraged by Governfrom seaboard. ment and we think that an early pronouncement is necessary that Government does not intend to impose a countervailing tax on producer gas for transport purposes. In Chapter V [para. 18(3)], we have stated that petrol driven motor transport appears to be paying adequately for the roads as well as making a substantial contribution to general revenues. We do not suggest that producer gas driven vehicles should be subsidized by exemption from adequate payment for the use of the roads and from a reasonable contribution to general revenues also. But, we do urge that the contribution to general revenues should in their case be less, and that this form of transport should not be stifled by the imposition of taxation calculated to balance the loss of revenues from petrol.
- 29. Branch line Railways.—In para. 2(2)(b) of the Committee's Report on the road plan, a reference was made to the future of the branch lines dismantled during war. The Subject Committee decided that the question of restoration could not be considered until after the war. We conceive that it is at any time open to the Central Government to close any branch that does not its way. In arriving at such a decision, the existence of an alternative road is an important consideration. In many of the cases in question, we believe that the consent of the Provincial Government was given only on condition of post-war replacement. But, this is only a part, and possibly a small part, of the matter. In para. 8(1)(v), we have referred to the possible loss of passenger traffic rendering a branch line wholly unremunerative. With the development of motor transport, we think that cases of this may be com-This aspect was in the past frequently represented to Provincial Governments, but in the prevailing road-rail atmosphere the representation was regarded by them as a retributive threat rather than as a logical sequence. the service offered by the road is such that it is not economically justifiable to run passenger trains on the railway then, if after all possible economies, the line does not pay on goods traffic, three courses are open:-

(i) to continue to run it in the public interest at a loss;

(ii) to dismantle it and sell land and buildings; or
(iii) to dismantle it and make over land, formation and bridges for use as a

With the railway as a partner in the road passenger service, and with community of interest reflected in a Central Transport Budget, a rational and amicable arrangement should be possible. These questions will have to be studied, and if possible, a solution in principle arrived at, before the question arises acutely of the restoration of lines dismantled during the war.

- 30. Decked Railway Bridges and Combined Road and Rail Bridges.—(1) Railways are built from capital and (in the past) roads from revenues, and the roads often have only pontoon bridges or ferries at river crossings, although there may be a nearby railway bridge. In a number of cases in the past, railway bridges were decked and the road linked up. Often the decked railway bridge is only used by road traffic in the monsoon, a pontoon bridge serving for most of the year. A number of bridges previously undecked have been adapted for use by military traffic only, during the war. The attitude of railways to this question is that the bridges were not built for road traffic; their use for this involves not only decking, but substantial initial and recurring expenditure on additional block signalling and other safety precautions; the responsibilty for any accident is on the railway; the road traffic causes interference with railway operation, which becomes more serious as railway or road traffic develops; and the opening of their bridges to road traffic means loss to railway revenues. The attitude of the Provincial Governments and the public is that a State railway is public property; if such-a railway bridge carries, suy. a total of twenty trains daily necessitating, in their view, the closing of the bridge for, say, 15 minutes on each occasion, the bridge is unused for 80 per cent of the time; if decking of it will serve the road traffic for a number of years, it would be a waste of public money to build a separate road bridge. They point to instances where decked bridges are serving the road without seriously affecting the railway, and where the total traffic both road and rail could not possibly justify the provision of two bridges. Here again, the argument on both sides has been prejudiced by the road-rail atmosphere of controversy and misunderstanding. We recognize that there are many cases where the density of rail traffic or the railway gradients at the bridge approaches render combination on one deck impracticable and dangerous; we recognize also that in the past railways could not be expected to provide additional facilities for an uncontrolled competitor. But we consider that in the new atmosphere which we trust will exist, it will be possible to re-examine this question from the angles of public service and the combined transport budget.
 - (2) There has, in the past, been some difficulty about the financing of combined road and rail bridges aggravated by the fact that it was not the custom to spend capital on roads and that the contribution required from the Provincial Government concerned was liable to be quite beyond its revenue means. Under a Central Transport Budget and within the arrangements which we contemplate, a way will doubtless be found out of these difficulties.
 - 31. Statistics.—For the proper study and management of transport matters, reliable statistical information is necessary. Motor vehicles statistics were in the past defective, and, although within recent in the has been improvement compilation, they are on a very simple basis. We know, for example, the total number of buses and lorries in the different Provinces, but we have been handicapped in this Report by lack of any information as to the number of vehicles working in urban areas as opposed to open road transport and, a greater refinement, as to the number working in direct competition with railways. On the other hand, railway statistics, elaborate as they are, do not give us all the information which we would have liked for the purposes of this Report. We have stated that calculations based upon railway goods class rates do not assist us and we have not been able to obtain readily a complete statement of the actual earnings per ton mile of goods carried at the higher rates. We recommend

therefore that for a proper management of these matters in the future there should be an overhaul of motor vehicles statistics, and that the Indian Road - Board should have a small statistical branch capable of furnishing at any time information necessary to the work of that body. Likewise, we consider that the possibility should be examined of preparing special abstracts from the railway statistics which would facilitate the study of road-rail problems relating to goods traffic.

Summary.

I The use of producer gas should be encouraged.

2. The future policy regarding the closure or retention of branch line railways should be determined before the question arises of the replacement of those dismantled during the war.

3. The questions of the use of decked railway bridges by road traffic and the finance of combined road and railway bridges will be more easily resolved under the arrangements proposed in this Report.

4. For the proper study of transport questions fuller road-rail and other

traffic statistics will be necessary.

CHAPTER X—INDIAN STATES.

32. Our Report has necessarily been directly concerned with British India, but transport questions transcend administrative borders and it is clear that a uniform transport policy for the whole country will require the active co-operation of the States. We are aware of the constitutional difficulties and also of the fact that if British India cannot agree on some centralisation of control, it can hardly be expected that the States will be prepared to surrender prerogative in the general national interest. We can only trust that both Provinces and States will accept the necessity for a unified policy and some centralised direction. In this matter, we doubt whether much is to be gained by an approach to the States before any arrangements for British India have been agreed upon.

CHAPTER XI-SUMMARY OF MAIN CONCLUSIONS AND RECOM-MENDATIONS.

(N.B.—References at the end of each item are to paragraphs of the Report.)

1. The object of any transport policy must be to provide and develop cheap and efficient transport for all, by the means best suited for the kind of traffic involved, with due regard to the public interest and without favouring any one means at the expense of another (paras. 2, 4 and 5).

2. The interests of individual providers and users of transport must be sub-

crdinated to the interests of the community (para. 3).

3. As the bullock cart will be the principal means of transport for agricultural marketing for some time to come, the development of pneumatic tyred carts must be pursued, a start being made from the salvage which will be available after the war (paras. 11 and 26).

4. Motor transport is not likely to be used to any appreciable extent in the near future for marketing staple crops; it should be encouraged to assist special forms of agriculture, such as market gardening and fruit growing (para. 11).

5. Every effort should be made to carry the benefit and service of motor transport into the heart of the countryside and to use it to a greater extent

than hitherto for administrative and development purposes (para. 5).

6. The transfer to the roads of short-haul goods traffic, in which field motor transport can compete economically with railways, should be encouraged. Except where long distance goods traffic by road is in the public interest, competition between road and rail should be prevented by a system of regulation, combining expert judgment of the merits of each case on the basis of public and economic need with scientific zoning. Control of goods traffic on National Highways should be Central (paras. 6, 12, 14 and 15).

7. Healthy competition between road and rail in the carriage of passengers is desirable. 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. Subject to salutary conditions, there should be no restriction on the range or numbers of passenger motor transport. Minimum fares for both road and rail should be established

by agreement (paras. 7 and 8).

8. Railways should now develop closer co-operation with road transport and ultimately acquire a commanding interest. There is no advantage in State ownership, divorced from railways, of passenger motor transport. There is in general no advantage in railways operating or participating in motor transport of goods on parallel routes. During and immediately following the war, direct, joint or co-ordinated use of motor transport by railways, for the carriage of goods, on a short term basis, will be necessary and a beginning should be made now (paras. 9 and 16).

9. In addition to the branch railways that have been closed during the war,

the case of many others will have to be reviewed (para. 29).

10. The questions of the use of decked railway bridges and of the finance of combined road and rail bridges should be reviewed from the point of view of public service and the general Transport Budget (para. 30).

11. A scientific review of motor vehicles taxation is necessary. An early pronouncement should be made that Government does not intend to introduce a countervailing tax on the use of producer gas, for motor transport (paras. 19 and 28),

12. There should be a Central Transport Budget for transport as a whole, in which Provinces should share, for pooling of revenues and balancing of capital expenditure on both road and rail. A small expert Committee should be appointed immediately to make recommendations as to the structure of the Central Transport Budget (para, 4).

13. There should be a whole-time Transport Commissioner in each Pro-He would be Chairman of the Provincial Transport Authority for passenger motor transport and controller of goods transport (para. 20).

- 14. The existence of a Member and Department of Transport at the Centre Under them, an Indian Road Board should now be created. Its functions would be to examine in greater detail the complex problems involved; to prepare for the launching of the road plan; to make a beginning now in the regulation and co-ordination of transport and the development of closer roadrail relations; and ultimately to be responsible for the development of roads and road transport and to implement the policy of road-rail co-ordination (paras. 10, 17, 21 and 22).
- 15. Arrangements should be made for the maintenance of reliable statistical information on all transport matters (para. 31).
- 16. The Indian States should in due course be associated with the evolution and administration of a uniform transport policy (para. 32).
- 17. Action should be initiated for the legislation required to give effect to the recommendations in this Report (paras. 23 to 25).

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SECRETARIAT, NORTH BLOCK; New Delhi, 30th November 1943.

APPENDIX L

[Vide para, 5 (1).]

ROADS AND ROAD TRANSPORT.

Precis of Report of Technical Sub-Committee.

- 1. The Present position.—There has been no road planning in India and the evolution of road administration has been on the assumption that roads are suitable for devolution. Roads are a Provincial subject and the responsibility for the bulk of the roads upon which rural welfare depends has been thrown to local bodies with bad results. "Provincial" metalled roads have been developed as the skeleton of a system convenient to the administration and the more influential classes while rural roads have generally been neglected. There has been no expansion or improvement commensurate with the growth of the population and the movement of commercial crops. That more and better roads are a necessity that will make for social, political and economic progress cannot be disputed.
- 2. Classification of roads for planning.—The policy laid down by the Transport Advisory Council in the matter of road development and construction is to the effect that in future road plans should give more weight than heretofore to improvements in rural areas now inadequately served while at the same time, despite objections to the duplication of existing means of transport, there must be an adequate system of national trunk roads (called the skeleton system of trunk roads by that Council). Starting from this it follows that there must be a uniform road classification based on primary objects and usage. The road plan should accordingly consist of plans for the following classes of roads:—
 - A. National Highways,
 - B. Provincial Main Roads,
 - C. District Roads,
 - D. Village Roads.

Each class has its function and the order in which the classes have been placed does not imply any order of priority or importance. But there can be no doubt that preference is due to classes C. and D.

- 3. National highways.—The National highways should be planned by the Centre, in consultation with the Provinces and States, upon national considerations including defence, security and general policy. In broad outline these roads will link Provincial capitals by the nearest reasonable rontes, main ports and international routes at frontiers. It is important that the Centre should have control over traffic on national highways and their maintenance and development should be a charge on Central revenues
- 4. Provincial main roads.—The Provincial main roads will include the bulk of the existing trunk roads which do not become national highways. For the road plan this is the class needing the least emphasis, since it has behind it the interests of the Provincial administration, of commerce, of transport operators, private motorists and the influential classes generally. Development of these roads is not likely to be neglected and they should be delineated and their improvements planned by Provincial authorities and considered separately from the bulk of the plan which must be directed towards rural development.
- 5. District Roads.—By this process of elimination we could reduce the somewhat alarming prospect of an all India road planning to a district-wise survey. The district roads which are mainly those under the charge of local bodies should be uniformly planned on a rational basis with reference to the criteria of accessibility and standard of work. By accessibility is meant how nearly the rural population has access to the rural road system in charge of public authority. It has been suggested that an arbitrary and prima facie reasonable criterion of bringing public roads to within half a mile of all large villages should be adopted provisionally and that the matter should be further investigated by random sampling in a few typical areas. The question of standards of work is more difficult and would depend on the volume of traffic to be carried.
- o. Village Roads.—There are hardly any proper village roads at present. Villages are scattered more or less evenly over the countryside and many fall within, rather than on, the existing mesh of roads maintained by public authorities. The track connecting the village with the nearest public road is not so much a thoroughfare as a private lane used, or abused, by the villagers. The tracks often follow the boundaries of fields rather than the most direct route and the actual alignment may vary from time to time with fragmentation or consolidation of holdings. Obviously to plan the development of the public roads and to ignore the last mile or so which the villager has to traverse, is to leave the work half-done. Where a survey reveals that there are large villages or groups of villages unreasonably far from the public road system, then that system must be extended to give better service. But there still remains the last link of the village road and great drive will be needed to bring about its improvement. The great bulk of these village roads must for many years remain merely graded or stabilised earth and their management might

have to be left to village panchayats subject to the necessary technical and other advice being made available.

- 7. Bridging.—The question of bridging is also important. A bridge is a permanent asset, relatively cheap to maintain, and major bridging may be useful in taking up the slack of steel and cement production in the early years after the war. Major bridge siting and designing is specialised work and technical advice will have to be given to those concerned.
- 8. Road-Rail Co-ordination.—In any plan for road development, the essential functions which railways alone can perform and the question of road-rail co-ordination or an appropriate division of functions must be taken into account. The possible effects of road building and road traffic on the Luances of railways and on the ability of the railways generally to continue the low rates on materials, e.g., coal, on which industries have grown and depend should be borne in mind. In particular the point whether a branch line dismantled during the war is to be restored or not would necessitate alternative road plans.

The release of large numbers of drivers and vehicles after the war will create new problems. The main object of any road plan must be to get motor transport into the heart of the countryside where it has not so far gone, not only to reduce competition on developed routes, but because it is in itself desirable. The problem of absorbing these vehicles in rural areas should therefore be planned for.

The Technical Committee is prepared to make proposals in this regard, if called off to do so.

9. Road administration and finance.—The Technical Committee is precluded from discussing the probable capital and recurring cost of the road plan and the problem of financing it. The question is whether the present distribution of responsibility for roads accords with the distribution of sources of revenue and powers to tax. If not, any road plan will be wrecked in the attempt to saddle inelastic revenues with necessarily expanding liabilities. In any case the methods of doles from the Centre to the Provinces (the allocation and grants from the Central Road Fund, comprising the proceeds of a part of the import and excise duty on motor spirit, are referred to) and from the Provinces to local bodies should stop and be replaced by arrangements based on the principle that the Government and the Legislature that impose the taxation should be responsible for the proper use of the money and for the maintenance of the roads provided with it.

These points need not hold up the preparation of the road plan but should be faced before it is ready.

- 10. Preparation of plan.—With a stereotyped form of recording information and proposals, the mechanics of compiling the plan on the lines indicated in paras. 1 to 7 above could be simplified. It is assumed that the plan should be ready for use by January 1945. It will probably have to be in two parts, providing respectively for immediate post-war work and a longer term plan. If possible, the general plan should be ready in skeleton outline by the end of March 1944 in order to take stock of the position.
- 11. Organisation at the Centre -- All this indicates the necessity for a Central organisation which would investigate the various issues involved deal with all administrative and technical problems and advise Provinces on all technical matters. More realistic rural road planning needs new angles of vision and new researches and traffic studies. These things if left to Provinces mean multiplication, waste of effort and delay. The Central organisation must therefore be adequate, not only to give the lead, but to step in where there is stagnation.
- 12. Summary of recommendations.—(i) For rational planning, roads must be divided into the four classes mentioned in para 2 above, the plan for each being self-contained and ready, in skeleton outline by 31st March 1944.
- (ii) As far as possible, the plan should take into account the probable future of branch-line railways.
- (iii) The Central Government should delineate and plan for class A, indicate the form and format of the plan for other classes, tender advice and assistance over the whole field, including various investigations by sampling and other preparatory work.
- (iv) The general outline of the proposals should be stated in a general letter to Provinces. More detailed letters should follow on each class.
- (v! The initiative must be taken by the Central Governmes and its organization must be adequate.
- (vi) The Technical Committee should be authorized to report further on a plan for the future of road transport and road-rail relations.
- (vii) The position of the States in relation to these plans (which the Technical Committee expect will result in the disappearance of the road fund in its present form) must be examined.

APPENDIX II.

[Vide pars. 14 (3).]

PART (A)

Tonnage of, and earnings from, goods traffic other than fuel, military traffic, live-stock and Railway materials and stores carried over Class I Railways during 1938-39.

No.	_ Commodity	y .	v	Tons.	Earnings (Rupees).	Percentage of total goods earnings.
• .				•	All figures are	in hundreds.
· 1	Rice in husk			- 9,621	42,842	0.65
2	Rice not in husk .			38,875	2,96,244	4-46
3	Gram and pulse /		·	26,401		3.44
• <u>,4</u>	Wheat			23,642	2,39,875	3.62
5	Jowar and Bajra .		·	7,212	52,607	0.79
6	Other grains		٠.	7,530	49,153	0-74
7	Marble and stone			× 38.047		1 · 37
8	Salt			21,952	1,77,534	2.67
9	Sugar	•		22,367		3 · 25
10	Wood, unwrought	• 1		18,175		1.27
,11	Metallic ores			38,468		1.59
12	Oil seeds	• • .		40,824	3,60,313	5.42
. 13	Cotton, raw, pressed .			12,242		4 · 12
14	Petrol (in bulk)	. :		3,879	1,03,938	1.56
15	Kerosene oil (in bulk).			6,082		1.15
16	Molasses (in bulk) .		` `	3,180		0.20
17,				1,766		0.23
~ 18 ·	Cotton manufactured			12,493	2,58,763	3.90
19	Fodder		• •	17,716	86,516	1 · 30
20	Fruits and vegetables, fresh	à .		35,332	1,27,257	1.92
21	Gur, jagree & molasses etc.	(not in b	ulk) .	. 10,134	88,130	1.33
22	Jute, raw	.` .		15,836	1,18,290	4.78
23	Iron & steel, wrought			24,250	2,63,367	3.97
24				5,965	82,116	1 · 24
25	Petrol in tins			726	13,203	0.20
26	'Tobacco			5,408	87,741	1 32
27	Provisions			20,444		
28	Manures	_ ,		3,990		0 · 29
29	Other commodities .			1,40,699		17.72
		0.	• •		 .	
		Total	• •		50,54,744	76-11
	Fuel, military traffic, liv	e-stock,			15.87,024	23.89
		e-stock, and store	e on Re-			
	materials and materials venue Account.	e-stock, and store	e on Re-	•	15.87,024	23.89
Serial No. in	materials and materials venue Account. Total Goods Earnin dement of average charges in 1	e stock, and store ngs (Class PA	s on Re- I Rys.) RT (B) n mile ove	er certain Rai pies per ton	15.87,024 66,41.768 lways in 1938-	23·89 100 39. Percentage of earnings of this
Serial No. in Part	materials and materials venue Account. Total Goods Earnin dement of average charges in 1	e stock, and store ngs (Class PA	s on Re- I Rys.) RT (B) n mile ove		15.87,024 66,41.768 lways in 1938-	23.89 100 39. Percentage of earnings of this commodity
Serial No. in	materials and materials venue Account. Total Goods Earnin dement of average charges in 1	e stock, and store ngs (Class PA	s on Re- I Rys.) RT (B) n mile ove	pies per ton	15.87,024 66,41.768 lways in 1938-	23.89 100 39. Percentage of earnings of this commodity to total goods earnings Class I
Serial No. in Part	materials and materials venue Account. Total Goods Earnin dement of average charges in 1	e stock, and store ngs (Class PA pies per to	s on Re- I Rys.) RT (B) n mile ove Rates in G.I.P.	E.I.R.* M (B.	15.87,024 66,41.768 Rways in 1938-, mile. 5.M. N.W.R. G.).	23.89 100 39. Percentage of earnings of this commodity to total goods earnings
Serial No. in Part (A).	materials and materials venue Account. Total Goods Earnin itement of average charges in a Commodities. Rice not in busk Wheat	e-stock, and store ngs (Class PA pies per to B.N.R.	s on Re- I Rys.) BT (B) n mile ove Rates in G.I.P.	E.I.R.* M (B.	15.87,024 66,41.768 Iways in 1938-, mile. S.M. N.W.R. G.).	23.89 100 39. Percentage of earnings of this commodity to total goods earnings Class I Railways.
Serial No. in Part (A).	materials and materials venue Account. Total Goods Earnin itement of average charges in p Commodities. Rice not in busk	PA pies per to B.N.R.	s on Re- I Rys.) RT (B) n mile ove Rates in G.I.P.	E.I.R.* M. (B.	15.87,024 66,41.768 Rways in 1938-, mile. 5.M. N.W.R. G.).	23.89 100 39. Percentage of earnings of this commodity to total goods earnings Class I Railways.
Serial No. in Part (A).	materials and materials venue Account. Total Goods Earnin dement of average charges in p Commodities. Rice not in busk Wheat Jowar & Bajra	PA pies per to B.N.R. 10.54 9.38 12.41	s on Re- I Rys.) RT (B) n mile over Rates in G.I.P. 9-40 7-38 7-92	E.I.R.* M. (B.	15.87,024 66,41.768 Rways in 1938 mile. 5.60 7.68 7.68 7.68	23.89 100 Percentage of earnings of this commodity, to total goods earnings Class I Railways. 4.46 3.62 0.79
Serial No. in Part (A).	materials and materials venue Account. Total Goods Earnin dement of average charges in p Commodities. Rice not in busk Wheat Jowar & Bajra Salt Sugar	PA pies per to B.N.R. 10.54 9.38 12.41 10.63 4.34	s on Re- I Rys.) RT (B) n mile over Rates in G.I.P. 9.40 7.38 7.92 8.31	E.I.R.* M.: (B.: 6.63	15.87,024 66,41.768 Rways in 1938 mile. 3.M. N.W.R. G.). 7.68 3.25 3.60 11.13 1.04 16.57	23·89 100 39. Percentage of earnings of this commodity to total goods earnings Class I Railways. 4·46 3·62 0·79 2·67
Serial No. in Part (A).	materials and materials venue Account. Total Goods Earnin thement of average charges in p Commodities. Rice not in busk Wheat Jowar & Bajra Salt Sugar Cotton, raw, pressed	B.N.R. 10.54 9.38 12.41 10.63	9 · 40 7 · 38 7 · 92 8 · 31 6 · 84	6.63 (B. 10 (B. 12.4* 14.12.8* 16.13	15.87,024 66,41.768 Rways in 1938 mile. 5.60 7.68 9.71 7.68 3.25 3.60 11.13 16.57	23.89 100 39. Percentage of earnings of this commodity to total goods earnings Class I Railways. 4.46 3.62 0.79 2.67 3.25
Serial No. in Part (A).	materials and materials venue Account. Total Goods Earnin dement of average charges in p Commodities. Rice not in busk Wheat Jowar & Bajra Salt Sugar	B.N.R. 10.54 9.38 12.41 10.63 4.34	9 · 40 7 · 38 7 · 92 8 · 31 6 · 84 11 · 09 7 · 94	6.63 (B. 10 12 12 12 12 15 16 16 16 16 16 16 16 16 16 16 16 16 16	15.87,024 66,41.768 Rways in 1938 mile. 5.60 7.68 7.68 3.25 3.60 11.13 3.44 16.57	23.89 100 39. Percentage of earnings of this commodity to total goods earnings Class I Railways. 4.46 3.62 0.79 2.67 3.25 4.12 3.90 1.92
Serial No. in Part (A).	materials and materials venue Account. Total Goods Earnin thement of average charges in p Commodities. Rice not in busk Wheat Jowar & Bajra Salt Sugar Cotton, raw, pressed Cotton manufactured	B.N.R. 10.54 9.38 12.41 10.63 4.34	9 · 40 7 · 92 8 · 31 9 · 90 11 · 09	6.63 (B. 10.5* 12.8* 14.10.5* 13.10.5*	15.87,024 66,41.768 Rways in 1938 mile. 5.60 7.68 9.71 7.68 3.25 3.60 11.13 16.57	23.89 100 39. Percentage of earnings of this commodity to total goods earnings Class I Railways. 4.46 3.62 0.79 2.67 3.25 4.12 3.90

27 · 29

Actual charges in pies per ton mile for certain other goods not named above. The percentage of total earnings from these (and many others) are included in item 29 of part (A).

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* These figures show the actual charges (pre-war) between certain important stations and may not represent the average for the entire system.

APPENDIX III.

[Vide para. 18 (3).]

Actual Example-Delhi Muttra Road, Mile 4.

•	٠.		٠			•		•	_	To per	ns day.	Percentage of Total.
Motor transport vehic Motor car and taxis Other vehicles		•	:	•	•	•	•	-*	•	16 28	2·78 9·93 8·29	72·3 10·3 17·4
Capital value at pres Interest at 4% Maintenance		day c	osts	:	•	:	:	:			1.00	Rs. 32,000 1,280 p.a. 1,300 p.a.
Total annual bill Share of motor t Gross ton miles i Nett @ 2/3rd Cost per ton mile	rans	r tra	napor	t =] =	192 · 7	8		•	•	•	•	2,580 p.a.
•						× 365	—= Ì	· 235]	pies.			

Cost per nett ton mile 24 pies. Of that 1.235 pies is 5.15 per cent.

The "average" case assumed was that 6.9 per cent of operating cost should go to pay for the road.