

ROAD AND RAIL  
IN FORTY COUNTRIES



INTERNATIONAL CHAMBER OF COMMERCE

---

ROAD AND RAIL  
IN FORTY COUNTRIES

REPORT PREPARED FOR  
THE INTERNATIONAL CHAMBER  
OF COMMERCE

BY

Dr. PAUL WOHL

AND

*Prof. A. ALBITRECCIA*

OXFORD UNIVERSITY PRESS  
LONDON : HUMPHREY MILFORD

1935

OXFORD  
UNIVERSITY PRESS  
AMEN HOUSE, E.C. 4  
London Edinburgh Glasgow  
New York Toronto Melbourne  
Capetown Bombay Calcutta  
Madras Shanghai  
HUMPHREY MILFORD  
PUBLISHER TO THE  
UNIVERSITY

PRINTED IN GREAT BRITAIN

## PREFACE

THE main object of the *Introductory Report*<sup>1</sup> published in November 1933 was to determine the possible solutions which can be applied to the road and rail problem, and to describe the advantages and drawbacks of each.

The object of the present volume is to make a comparative survey of the actual conditions under which road and rail transport are respectively operating at the present time in the majority of countries, thus supplying the necessary background of facts for the question of the co-ordination of these two means of transport.

The *Introductory Report* and the present volume are complementary publications and were undertaken by the International Chamber of Commerce following its Congress at Washington in 1931, when a resolution was adopted recommending that an inquiry should be undertaken 'to determine the effects of the development of motor traffic upon railroad traffic in its various classes, and particularly in those classes of goods traffic that are most affected', and further 'to consider the nature of the resulting modifications which may be desirable in the fundamental principles governing the railroad rate schedules'.

The fact is that the co-ordination of railway and motor transport constitutes a problem of first-rate importance in the organization of economic life to-day. It is to the direct interest of every producer and consumer that goods carried by rail or by motor should arrive at their destination in the best possible condition and at the least possible expense. But it is equally to their interest that the railways and motor transport should be organized on a sound basis, for the cost of allowing or obliging them to run under a wasteful or inefficient system must, in the final analysis, fall on the general public. The International Chamber of Commerce does not, therefore, regard the road and rail question merely as a transport problem, but looks at it from the standpoint of the

<sup>1</sup> *Introductory Report on Road and Rail Transport submitted by the Committee of Independent Experts to the International Chamber of Commerce*. Brochure No. 85 of the International Chamber of Commerce, International Head-quarters, 38 Cours Albert Ier, Paris (VIII).

general economic welfare and is concerned with the wider reactions which any solutions adopted may entail.

The present study, consequently, avoids discussions of too technical a nature, and is addressed to that great proportion of the public which is affected by and interested in a sound organization of the transport system.

The question is undoubtedly one which can profitably be approached from an international angle. In the first place, any change made by a country in the structure of its railway tariffs reacts on its traffic with other countries. But there is a second reason why the question should be studied internationally. In every country, of course, the problem presents special characteristics, owing to differences in geographical, social, legislative, and administrative conditions. But nevertheless almost everywhere development has taken place on similar lines and the possible solutions which can be taken into account are usually comparable.

Road competition has in most cases, as the reader will be able to observe, led the railways to introduce new methods and service of a progressive character. Some of these are merely an extension or acceleration of measures which the railways were already taking in normal times, but others break entirely new ground. The public authorities, on the other hand, have been obliged to relax the strictness of regulations established at a time when the existence of a virtual monopoly of transport by the railways justified measures aimed at protecting the user against possible abuses. In most cases the railways now operate under a more elastic and liberal system than formerly which enables them to introduce more modern methods of operation based to a greater extent on commercial principles. The various rates charged are more closely related to the cost price of transportation.

Again, governments trying to distribute traffic equitably between the leading means of transport are bound by the same considerations, whatever part of the globe is concerned. Railways and motor transport each have different technical advantages qualifying them respectively for certain kinds of traffic.

The highway, which after about three-quarters of a century has come into its own again as a great artery of transport, raises

identical problems in most countries of the world. An international exchange of experience can therefore prove of the greatest utility.

In order to enable the reader more easily to compare the situation of one country with another and the various solutions suggested or already adopted, the studies contained in this volume have as far as possible been made according to a uniform plan.

It was no easy task to get together all the material which forms the basis of this publication. In order to obtain it a special questionnaire was addressed to the National Committees of the International Chamber of Commerce and to the national member associations of the international organizations<sup>1</sup> which collaborated in this inquiry. The replies received were analysed and classified. The data thus obtained were checked with the assistance of several qualified experts acting in the capacity of technical advisors. The International Labour Office and the International Institute of Statistics also lent their assistance. Mention must further be made in this connexion of the Committee of Independent Experts<sup>2</sup>

<sup>1</sup> International Labour Office, Alliance Internationale du Tourisme, Conseil Central du Tourisme International, International Air Traffic Association, International Association of Rolling Stock Builders, International Association of Recognized Automobile Clubs, International Federation of Commercial Motor Transport, International Federation of Forwarding Associations, International Permanent Association of Road Congresses, International Permanent Bureau of Motor Manufacturers, International Union of Railways, International Statistical Institute, International Union of Tramways, Local Railways and Public Motor Transport, World Power Conference.

<sup>2</sup> The Committee was composed as follows: *Chairman*: Professor Dr. Otto Most, President of the German Mixed Commission, instituted by the Association of Chambers of Commerce and Industry of Germany for the study of co-ordination between road and rail, Duisburg-Ruhrort.

*Rapporteur*: Brig.-Gen. Sir Osborne Mance, K.B.E., C.B., C.M.G., D.S.O., Technical Adviser to the Ottoman Bank, London.

*Technical Advisers*: Prof. A. A. Barriol, Secretary General of the Statistical Society of Paris, Delegate of the International Statistical Institute; Prof. E. Lhoste, Inspecteur-Général des Régions Économiques au Ministère du Commerce, Professeur de Statistiques Économiques au Centre de Préparation aux Affaires, Paris.

*Members*: Col. A. B. Barber, Manager of the Transportation and Communication Department of the Chamber of Commerce of the United States of America, Washington (United States of America); Mr. Arthur

appointed by the President of the International Chamber of Commerce for the purpose of carrying out the programme laid down in the Washington Resolution. Sir John Sandeman Allen, J.P., M.P., Chairman of the General Committee on Transport and Communications of the I.C.C., also gave his valued support to the work. Our thanks are due to all those who have collaborated directly in the preparation of this work as well as to the Standing Committee on Rail Transport and the Highway Transport Committee of the I.C.C., whose expert knowledge frequently proved specially valuable.

The preparation of this survey was entrusted to Dr. Paul Wohl (Director of the I.C.C.'s Transport and Communications Department from January 1927 to the 25th May 1934), who, with Professor A. Albitreccia, assured the drafting of it: their persevering and thorough work deserve our thanks and appreciation. In the Introduction they themselves describe the plan and the contents of the different parts of this volume.

Basse, Membre du Conseil Supérieur des Transports de Belgique, Vice-Président de la Chambre de Commerce de Liège (Belgium); Mr. K. Y. Woo, Member of the Advisory and Technical Committee for Communications and Transit of the League of Nations, Delegate of the Chinese National Committee of the International Chamber of Commerce (China); Mr. Vojtech Mixa, Chief of the Transport Section of the Federation of Czechoslovak Manufacturers, Prague (Czechoslovakia); Mr. M. Mottet, Directeur de l'Office des Transports de la Chambre de Commerce de Paris; Mr. A. Nanin, Secrétaire-Général de la Première région économique, Palais de la Bourse, Lille; Mr. G. Rague, Secrétaire-Général de l'Union des Offices de Transports et des P.T.T., des Chambres de Commerce et d'Agriculture de France, Paris (France); Mr. Adolf Waibel, Berlin-Charlottenburg (deceased); Mr. H. Stahler, Kgl. Bergmeister und Generaldirektor a.D., Berlin-Halensee (Germany); Gr. Uff. Avv. Gino Olivetti, Secretary General of the General Fascist Confederation of Italian Industry, Rome; Avv. Amleto Pavone, Chief of the Transport Office of the General Fascist Confederation of Italian Industry, Rome (Italy); Mr. T. Saito, Manager, Nippon Yusen Kaisha Ltd., London (Japan); Dr. L. Karmanski, Advisor on Communications questions of the Chamber of Commerce and Industry of Zagreb (Yugoslavia); Dr. M. H. de Jong, Manager of the 'Scheepvaart Vereeniging Noord', Amsterdam (Netherlands); Dr. L. Rasinski, Secretary General of the Polish National Committee of the International Chamber of Commerce, Warsaw (Poland); Dr. Junod, Directeur de L'Office National du Tourisme, Zurich (Switzerland).



The road and rail question is a complex one, and obviously therefore no single immediate solution of the problem is possible. Inevitably, one will have to proceed by stages. Although to-day, more than ever, statistics grow out of date rapidly, we believe that this study, which covers forty countries of the world, will constitute a useful contribution to this socially important problem.

Professor Dr. OTTO MOST

*Chairman, Special Committee on  
Road and Rail of the I.C.C.*

Brig.-Gen. Sir OSBORNE MANCE

*Rapporteur General, Special Com-  
mittee on Road and Rail of the  
I.C.C.*



## INTRODUCTION

THIS work has been compiled on the initiative of the International Chamber of Commerce which considered that the time was ripe to undertake a far-reaching inquiry into the road and rail situation and publish a report of world-wide scope, giving as clear a picture as possible of conditions in the various countries and showing the broad lines along which road and rail transport have developed during recent years.

The authors had no illusions as to the difficulties confronting them and the limits necessarily imposed upon their work. In order to collect the required data, the National Committees of the International Chamber were asked to send in reports on the road and rail situation in their respective countries. As frequently happens in inquiries of this kind, the reports did not always follow the same lines, despite the common plan agreed upon for their preparation. There was therefore a certain diversity at the very foundation of the work, and an effort was consequently required in order to present it in as uniform a manner as possible. With this end in view, documents other than the national reports had sometimes to be consulted: books, reviews, and various statistics.

Special thanks are due to the various economic organizations who agreed to undertake inquiries to complete the original data. The authors are confident that the investigation as a whole has been carried as far as possible within the limits of the available information. They hope that their work has not been in vain. They realize, however, that any work of this nature must always be to a certain extent provisional. The land transport problem is one of the most acute ones of our civilization and, like all the other problems in life, is in a state of continual evolution. The present work only deals with one stage of that evolution and shows the situation at a given moment. The authors fully realize that almost as soon as their work is completed it will have to be followed up by further years of study.

The countries covered by the inquiry have been grouped according to continents. In the case of *America*, three North-American countries and one South-American country have been selected, i.e.: *The United States of America, Canada, and Mexico* for the

northern part of the Continent and the *United States of Brazil* for the southern part.

This choice makes it possible to form some idea of transport development in countries of the Anglo-Saxon type and those of Latin colonization.

In the case of *Europe* the choice was more difficult and nearly all countries have therefore been included. They have been taken in geographical order by lines of longitude from west to east, irrespective of their relative importance, as follows:

<i>Great Britain</i>	<i>Italy</i>	<i>Baltic States (Lithuania, Latvia, and Estonia)</i>
<i>Irish Free State</i>	<i>Germany</i>	<i>Finland</i>
<i>France</i>	<i>Czechoslovakia</i>	<i>Scandinavian countries (Denmark, Sweden, and Norway)</i>
<i>Spain</i>	<i>Austria</i>	<i>Poland</i>
<i>Belgium</i>	<i>Hungary</i>	
<i>Luxemburg</i>	<i>Jugoslavia</i>	
<i>Netherlands</i>	<i>Rumania</i>	
<i>Switzerland</i>		

Information regarding the Continent of Asia is incomplete in respect of Western Asia. The authors have therefore been obliged to limit themselves to giving the broad lines of the situation and have taken the *Syrian* and *Persian* railways as concrete examples. In the case of *India*, the *Dutch East Indies*, *French Indo-China*, *China*, and *Japan*, the same methods have been employed as for Europe.

In regard to *Africa*, a certain number of countries have been included, i.e. *Morocco*, *Tunisia*, *Madagascar*, and the *Union of South Africa*.

The survey concludes by giving a picture of the situation in *Australia*.

In accordance with the recommendation of the Committee of Experts on Road and Rail appointed by the International Chamber of Commerce, which laid down the general lines along which the work was to be undertaken, this descriptive study (Part I) has been completed by synoptic tables and an analytical study, constituting Part II. The following tables were drawn up:

I. *A comparative table showing the legal bases of the organization of rail and road transport.*

This table is subdivided into eight columns, each of which deals with the situation of both means of transport, with regard to the following points:

1. Concession and licence systems.
2. Obligation to operate on a permanent basis.
3. Obligation to carry.
4. Tariff systems.
5. Publication of time-tables.
6. Levies for purposes of national defence.
7. Postal levies.
8. Levies for other purposes.

II. *A table showing the fiscal charges imposed on railway and motor transport.*

III. *A table showing the measures taken by the railways with a view to meeting the situation created by the development of motor transport.*

Part II forms so to speak a commentary on these tables. It consists of four chapters. The first three cover the same ground as the above-mentioned tables and are subdivided into sections corresponding to the various columns. Each of these sections is in two parts: a general part analysing the main principles and features of the situation without special reference to specific countries, and a second part giving concrete illustrations from the actual practice in certain countries.

The fourth and last chapter is a description of the provisions governing labour conditions in railway and motor transport, and the social charges placed upon the two means of transport.

The time at our disposal and the framework set for this report has made it impossible to present an exhaustive scientific work. The science of transport, and in particular the science of transport economy, is only in its beginnings. Some indication of the vastness of the field in which the research has been conducted may be gleaned from the brochure on the methods of highway finance in nineteen countries, to be published shortly,<sup>1</sup> which completes our

<sup>1</sup> For copies apply Head-quarters, International Chamber of Commerce, 38 Cours Albert Ier, Paris (VIII). Price, Fr. fr. 20 (German edition already published).

study by a more detailed review of one specific aspect of the problem.

It has not always been possible to bring the statistical data on transport development up to date; in many cases they only go up to 1931-2. This is due to the fact that comparable data for the following years were not always available and that, especially in the case of distant countries, reliable data were in any case difficult to obtain.

The number of motor vehicles and the 'motorization' of transport have not progressed since 1931 at the same rate as in previous years, while railway traffic since 1931 has been far more affected by reduced production and the shrinkage of commerce. The authors believe that it may be legitimately inferred from this that the economic consequences of road and rail competition were already apparent in 1931 and that statistical data on traffic development in more recent years would not therefore have made any very material difference to the main lines of the present report.

The authors venture to hope that despite certain unavoidable imperfections in their work they have contributed towards a better and clearer understanding of the road and rail problem.

Part I is essentially the work of Professor A. Albitreccia, while Part II is essentially the work of Dr. Paul Wohl, assisted by his collaborators, Messrs. Roger Conte, O. I. J. Herz-Mills, and S. Pressburger.

PAUL WOHL.

ANTOINE ALBITRECCIA.

# CONTENTS

PREFACE by Professor Dr. Otto Most and Brig.-Gen. Sir Osborne Mance . . . . .	v
INTRODUCTION by the Authors . . . . .	xi

## PART I

### SUMMARY OF THE ROAD AND RAIL SITUATION IN THE VARIOUS COUNTRIES CLASSIFIED IN GEOGRAPHICAL ORDER

America (United States of) . . . . .	1
Canada . . . . .	17
Mexico . . . . .	25
Brazil (United States of) . . . . .	28
Great Britain . . . . .	34
Irish Free State . . . . .	45
France . . . . .	56
Spain . . . . .	72
Belgium . . . . .	79
Luxemburg . . . . .	87
Netherlands . . . . .	91
Switzerland . . . . .	97
Italy . . . . .	106
Germany . . . . .	116
Czechoslovakia . . . . .	136
Austria . . . . .	141
Hungary . . . . .	147
Jugoslavia . . . . .	151
Rumania . . . . .	156
Poland . . . . .	162
The Baltic States . . . . .	
I. Lithuania . . . . .	168
II. Latvia . . . . .	170
III. Estonia . . . . .	172
Finland . . . . .	175
Denmark . . . . .	179
Sweden . . . . .	184
Norway . . . . .	192
Western Asia . . . . .	197
Syria . . . . .	198
Persia . . . . .	202
British India . . . . .	204

Dutch East Indies . . . . .	216
French Indo-China . . . . .	221
China . . . . .	226
Japan . . . . .	231
Tunisia . . . . .	235
Morocco . . . . .	241
Madagascar . . . . .	246
South Africa (Union of) . . . . .	248
Australia . . . . .	253

## PART II

ANALYSIS OF THE PRINCIPAL ASPECTS OF THE ROAD  
AND RAIL PROBLEM

<i>Chapter</i> I. THE LEGAL BASES AND STATUS OF TRANS- PORT ENTERPRISES . . . . .	260
I. CONCESSIONS AND LICENCES . . . . .	260
A. General Section . . . . .	260
B. Countries . . . . .	275
America (United States of) . . . . .	275
Canada . . . . .	276
Mexico . . . . .	276
Great Britain . . . . .	277
France . . . . .	277
Spain . . . . .	278
Belgium . . . . .	279
Luxemburg . . . . .	280
Netherlands . . . . .	280
Switzerland . . . . .	281
Italy . . . . .	281
Germany . . . . .	282
Czechoslovakia . . . . .	283
Austria . . . . .	284
Hungary . . . . .	285
Jugoslavia . . . . .	285
Poland . . . . .	286
Lithuania . . . . .	287
Latvia . . . . .	287
Estonia . . . . .	287
Finland . . . . .	287
Denmark . . . . .	288
Sweden . . . . .	288
Norway . . . . .	289
Syria . . . . .	290



# CONTENTS

xvii

Persia . . . . .	290
British India . . . . .	290
Dutch East Indies . . . . .	290
French Indo-China . . . . .	290
China . . . . .	291
Japan . . . . .	291
Tunisia . . . . .	291
Morocco . . . . .	292
Madagascar . . . . .	293
South Africa (Union of) . . . . .	293
Australia . . . . .	293
<b>2. OBLIGATION TO OPERATE ON A PERMANENT BASIS . . . . .</b>	<b>294</b>
<b>3. OBLIGATION TO CARRY . . . . .</b>	<b>295</b>
<b>4. TARIFFS . . . . .</b>	<b>297</b>
General Principles . . . . .	297
1. Railway Tariffs . . . . .	297
2. Motor Transport Tariffs . . . . .	305
Examples from Specific Countries . . . . .	309
A. Railway Tariffs . . . . .	309
America (United States of) . . . . .	309
Mexico . . . . .	310
Great Britain . . . . .	311
France . . . . .	313
Belgium . . . . .	316
Netherlands . . . . .	317
Switzerland . . . . .	318
Italy . . . . .	319
Germany . . . . .	321
Czechoslovakia . . . . .	322
Austria . . . . .	324
Hungary . . . . .	325
Jugoslavia . . . . .	326
Rumania . . . . .	328
Poland . . . . .	329
B. Motor Transport Tariffs . . . . .	330
America (United States of) . . . . .	330
Great Britain . . . . .	330
Germany . . . . .	331
Austria . . . . .	332
<b>5. PUBLICATION OF TIME-TABLES . . . . .</b>	<b>333</b>
<b>6. LEVIES FOR PURPOSES OF NATIONAL DEFENCE . . . . .</b>	<b>335</b>
<b>7. POSTAL LEVIES . . . . .</b>	<b>337</b>
<b>8. OTHER LEVIES (SOCIAL WORKS, HYGIENE, COMMERCE, IN-</b>	
<b>  DUSTRY, AGRICULTURE) . . . . .</b>	<b>340</b>

<i>Chapter II. TAXATION PAID BY RAILWAYS AND MOTOR</i>		
TRANSPORT . . . . .		342
Railway Taxation . . . . .		348
America (United States of) . . . . .		348
Great Britain . . . . .		350
France . . . . .		350
Belgium . . . . .		353
Switzerland . . . . .		354
Italy . . . . .		354
Germany . . . . .		355
Czechoslovakia . . . . .		357
Motor Transport Taxation . . . . .		358
America (United States of) . . . . .		358
Great Britain . . . . .		363
France . . . . .		368
Belgium . . . . .		372
Switzerland . . . . .		377
Italy . . . . .		378
Germany . . . . .		380
Czechoslovakia . . . . .		385
<i>Chapter III. MEASURES TAKEN BY THE RAILWAYS TO</i>		
<i>MEET MOTOR TRANSPORT' COMPETITION . . . . .</i>		389
1. TECHNICAL AND OTHER MEASURES . . . . .		390
2. TARIFF MEASURES . . . . .		399
Examples of Measures taken in Certain Countries . . . . .		404
America (United States of) . . . . .		404
Great Britain . . . . .		406
France . . . . .		409
Belgium . . . . .		411
Netherlands . . . . .		412
Switzerland . . . . .		415
Italy . . . . .		417
Germany . . . . .		419
<i>Chapter IV. SOCIAL AND LABOUR LEGISLATION . . . . .</i>		421
1. GENERAL . . . . .		421
1. Introductory . . . . .		421
2. Hours of Work . . . . .		425
3. Protection of Labour . . . . .		426
4. Wages . . . . .		427
5. Social Policy . . . . .		427
2. EXAMPLES TAKEN FROM SPECIFIC COUNTRIES . . . . .		429
America (United States of) . . . . .		429
Canada . . . . .		431

## CONTENTS

xix

Brazi . . . . .	432
Uruguay . . . . .	432
Argentine . . . . .	432
Great Britain . . . . .	433
France . . . . .	435
Spain . . . . .	436
Portugal . . . . .	437
Belgium . . . . .	437
Luxemburg . . . . .	439
Netherlands . . . . .	440
Switzerland . . . . .	440
Italy . . . . .	442
Germany . . . . .	443
Czechoslovakia . . . . .	446
Austria . . . . .	447
Hungary . . . . .	448
Jugoslavia . . . . .	448
Rumania . . . . .	449
Bulgaria . . . . .	449
Poland . . . . .	450
Estonia . . . . .	450
Finland . . . . .	450
Denmark . . . . .	451
Sweden . . . . .	452
Norway . . . . .	452
British India . . . . .	453
Japan . . . . .	453
South Africa (Union of) . . . . .	453
New South Wales . . . . .	454
Western Australia . . . . .	455

### SYNOPTIC TABLES

TABLE I. The Legal Bases of Railway and Motor Transport Organization

TABLE II. Railway and Motor Transport Taxation

TABLE III. Measures taken by the Railways to Meet Motor Transport Competition



*PART I*

SUMMARY OF THE ROAD AND RAIL SITUATION IN THE VARIOUS COUNTRIES CLASSIFIED IN GEOGRAPHICAL ORDER



# UNITED STATES OF AMERICA

## I. RAILWAYS

### 1. *The important part played by the railways in the economic life of the country.*

(a) *Railway Companies.*—In 1931 there were 1,459 companies operating in the territory of the Union, and 215 terminal and switching companies. This immense railway system is the outcome of a long period of growth beginning as far back as the invention of the first railway, but the key-date in that long and crowded history is undoubtedly May 10th, 1869, when, at Ogden, not far from Salt Lake City, the Union Pacific Line from Omaha met the Central Pacific from San Francisco. This achievement brought with it the realization that the railway's primary function in the U.S.A. was not merely to serve local interests but to span the continent from coast to coast. From then onwards, nothing could check the advance of the American railways; the barriers set up by nature and climate were overcome, and at last the whole of that vast territory was brought into the railway network. In their steady progress, the railways helped to open up the country and contributed wherever they went to the rapid development of industry and agriculture. This close link between the growth of the American railway system and that of the country's economic life as a whole goes to explain why at the present time as many as 155 line haul companies and 17 terminal and switching companies are Class I railways, in other words, railways with gross earnings of \$1,000,000 or more per annum.

These 155 companies are divided into three groups.

*The first group*, consisting of 55 companies operating 59,919 miles of line, serves the north-eastern district situated east of Chicago and Saint Louis and north of the Potomac and Ohio. Although the smallest in area, this district is the most thickly populated and active in the country. In it are located some of the most prosperous companies, including: the *Pennsylvania System*, with a revenue, in 1931, of over \$484,000,000; the *New York Central Lines* which have a revenue of over \$400,000,000; the *Baltimore and Ohio System* with a revenue of over \$182,000,000;

the *Reading System* with over \$112,000,000; the *New York, New Haven and Hartford R.R.Co.* with over \$100,000,000 and the *Erie System* with over \$95,000,000.

The second group, with 33 companies operating 46,104 miles of line, runs through the south-eastern district, extending over a larger although less active and more thinly populated area than the north-eastern district. The following companies also have large revenues: the *Atlantic Coast Line System* (which includes the *Louisville and Nashville Railroad*), over \$175,000,000; the *Illinois Central System*, over \$135,000,000; the *Southern Railway System*, over \$134,000,000; the *Chesapeake and Ohio Ry. Co.*, over \$119,000,000.

The third group, with 67 companies operating 136,267 miles of line, forms a vast railway system westward of the first two districts. It includes the following important railways: the *Southern Pacific System*, over \$202,000,000; the *Santa Fé System*, over \$162,000,000; the *Union Pacific System*, over \$157,000,000; the *Missouri Pacific System*, over \$155,000,000; the *Burlington Route*, over \$128,000,000; the *Chicago and North Western System*, over \$120,000,000; the *Chicago, Milwaukee, Saint Paul and Pacific R.R.*, over \$111,000,000; the *Rock Island System*, over \$99,000,000. In order to appreciate the true significance of these figures, it must, however, be remembered that the area covered is immense and has a smaller population and is less developed than the area comprised in the first two groups.

There are in all 248,828.75 miles of line haul railways and 1,905.01 miles of terminal and switching lines, making the U.S.A. the leading country in the world as regards length of railways.

In 1931 the Class I railways had 55,400 locomotives in service. The carrying capacity of their wagons rose from 78,100,000 tons in 1911 to 103,400,000 tons in 1931. The total number of employees of the railway companies is 1,260,758, their wages amounting to \$2,095,000,000. Upkeep costs of material are about \$2,000,000,000. The railways serve every branch of national activity. In 1931, out of a total of 894,185,637 tons of goods dispatched, 56 per cent. came from mines, 25 per cent. from manufactures, 13 per cent. from agriculture and stock breeding, 5 per cent. from forest exploitation, and 3 per cent. consisted of small



consignments. Output in ton-miles amounted to 309,224,879,000 and passenger-miles to 21,894,421,000, the latter figure relating to 596,391,000 passengers transported in 1931. It is to be noted, however, that the passenger transport figure, despite its size, represents a drop of 36 per cent. as compared with 1911; goods tonnage has also fallen off but to a lesser extent.

(b) *Amount of capital invested.*—The amount of capital invested is considerable and gives the same impression of magnitude. The capital investment in the leading companies as of December 31st, 1931, was \$19,425,654,850, divided as follows:

Share capital . . . . .	\$ 8,271,976,776
Long-term debts . . . . .	\$11,153,678,074

The above figures represent par value of securities. Owing to the considerable shrinkage in market values in the past few years, the present value of the capital is difficult to compute. Dividends amounted to 6.02 per cent. in 1929 and 4.01 per cent. in 1931.

Property owned by the companies, in permanent way, equipment, and material, amounted to \$26,300,000,000, a figure considerably higher than that of 1911, which was \$14,960,000,000.

It should be noted, however, that in spite of the large amount of capital invested, profits are falling off, charges continually increasing, and traffic diminishing.

## 2. *Close supervision by the Federal authorities.*

The railways in the United States are in principle privately owned and operated. In practice their management is controlled by the Central Government through the Interstate Commerce Commission whose powers have been gradually extended since 1887. This Commission supervises the adequacy, safety, and continuity of services; it grants authority for the construction of new lines or the suppression of existing ones. The issue of new securities and matters involving mergers and pooling of traffic must be referred to it. It supervises tariffs and can suspend or amend them. In fact, the transport industry in the United States is subject to rigid regulation from the Central Government. This State intervention, moreover, does not carry any guarantee as to capital, interest payments, or debts of the companies. Furthermore, the railways

are obliged to undertake certain transport operations at reduced prices: transport of troops at 50 per cent. and mail at 80 per cent. of commercial rates. The advantages enjoyed by the railways include, however, perpetual charters (no monopolies are granted) and the payment by other interested parties of part of the cost of suppressing level-crossings.

### 3. *Certain charges and obligations a heavy burden upon the companies.*

(a) The wages paid to employees have steadily increased: in 1911 they amounted to \$1,167,000,000; in 1931 this figure had reached \$2,095,000,000 (a rise of 79 per cent.) despite various measures of economy.

(b) The taxes paid over the same period likewise increased steadily: in 1911 they amounted to 3.58 per cent. of the revenue of the companies, and in 1931 to 7.25 per cent.; in 1932 they had reached 8.80 per cent. (provisional figure). Their intrinsic value increased by 208 per cent.: in 1911, \$98,626,848; in 1931, \$303,528,099; in 1932, \$275,189,976 (provisional figure). It is these figures which enable the companies to contend that they contribute to the financing of the roads a share amounting to one-eighth of the total taxes they pay.

(c) The thirty days' notice which they are compelled to give before introducing new tariffs makes prompt adjustment to competitive requirements impossible.

### 4. *The railway crisis in the United States.*

(a) *Diminishing traffic.* The number of passengers fell from 1,234,862,000 in 1920 to 596,391,000 in 1931 and to 478,738,000 in 1932 (provisional figure). These figures represent a drop of 51 per cent. in passenger traffic between 1920 and 1932. In the same way, passenger-miles dropped from 46,848,668,000 in 1920 to about 31,000,000,000 in 1928; the downward movement became even more marked in 1932, the figure for that year being 16,974,591,000 (provisional figure). This represents a fall of about 5,000,000,000 passenger-miles per year and a drop of 64 per cent. since 1920.

Goods transport, which amounted to 1,339,091,007 tons in 1929, fell to 894,185,637 in 1931; traffic in ton-miles amounted to

447,321,561,129 in 1929 and to 309,224,879,222 in 1931; the provisional figures for 1932 show a further drop of about 20 per cent.

(b) *Receipts likewise diminishing.* In 1925 average receipts in cents per passenger-mile amounted to 2.938; in 1929 to 2.808; in 1931 to 2.513, and in 1932 to 2.219 (provisional figure). Average receipts per ton-mile amounted to 1.097 in 1925, to 1.076 in 1929, to 1.051 in 1931, and to 1.045 in 1932.

Taking into account this fall in receipts and all the charges borne by the railways, it can be estimated that the average revenue from every dollar invested in the railways has fallen from 5.90 per cent. to 2 per cent. In other words, in 1931 each dollar yielded 66 per cent. less than in 1916.

The causes are to be found in the unsatisfactory general economic situation as well as in motor transport competition which appears to be making itself more keenly felt in the U.S.A. than anywhere else.

## II. MOTOR TRANSPORT

### 1. *The road mileage of the United States: about one-third of the mileage of the world.*

There are 3,009,066 miles of road in the U.S.A. out of a world total of 9,225,000 miles, representing one mile of road per square mile of country (world figure: 1 mile per 5.4 square miles). The roads may be divided into the following classes: (1) State roads, constructed and maintained out of the Federal funds; (2) county and local roads; (3) urban roads.

The total length of the State roads is 324,496 miles. They are most highly developed between longitude 103° West and the Atlantic Ocean, particularly in the north-east district. There is therefore a concordance between the geographical distribution of the railways and that of the roads, which is alone sufficient to explain the competition between them. These roads increased by 50 per cent. between 1921 and 1929. In 1931 a third of the State roads had no special surfacing, and rather more than a third had a surface of clay sand, gravel, and quartz; roads of the latter class increased by 151 per cent. between 1921 and 1929, whilst unsurfaced roads diminished by 1.8 per cent. In 1929 rather less

than one-sixth of the roads were surfaced with concrete; the length of the roads with this type of surfacing increased by 400 per cent. between 1921 and 1929.

The number of county and local roads tended to decrease between 1921 and 1929. In 1929 they represented 89 per cent. of the total highway system against 93 per cent. in the preceding year: in all 2,700,000 miles. In 1929, 16.8 per cent. were surfaced. Although 81 per cent. of the surfacing was still of a very primitive nature, considerable progress had been made, the tar-macadamized roads having increased by 375 per cent. between 1921 and 1929, and the concrete-surfaced roads by 141 per cent.

According to the report of the Interstate Commerce Commission, the amount of capital invested in road construction and upkeep, including public and private garages and motor vehicles in use, is estimated at \$25,000,000,000, a figure approximately equal to the amount of capital invested in the railways as a whole.

## *2. Motor traffic in the United States, the heaviest in the world.*

There were 25,814,103 motor vehicles in the United States in 1931, representing 75 per cent. of the world total, or one vehicle per 4.7 of population (world figure: 1 per 57 of population).

3,233,457 of these vehicles are motor-trucks, of which 54 per cent. are of 1 ton to 1.5 tons, 18 per cent. between 2 and 2.5 tons, 14 per cent. between  $\frac{1}{2}$  and  $\frac{3}{4}$  of a ton. 85.9 per cent. are privately owned and operated in connexion with industry, wholesale or retail selling, &c.; 8.7 per cent. are owned by contract carriers who haul for hire for a limited number of customers, and 5.4 per cent. are owned by common carriers operating for hire over fixed routes on regular schedules.

The majority of the motor-trucks in the country are in the hands of the small owners, being the property of two and a half million individuals, with some 2,200,000 persons owning but one truck each. With the exception of those owned by the Federal Post Office Department, the largest fleets are in the hands of private owners, used in connexion with their business, such as the American Telephone and Telegraph Company; the meat-packing companies and the milk distributors; the Railway Express Agency, which picks up and delivers express parcels within a limited radius

at railroad stations, operating about 9,000 trucks; draying companies operating as contract carriers between rail and water terminals.

The average radius of action of trucks in inter-urban traffic is computed at 100 miles. The average distance covered annually is 15,000 miles. This, however, is an all-over average figure, the distances covered annually according to categories of enterprises being as follows: common carriers, 20,000 miles; contract carriers, 15,000 miles; private owners (*Werkverkehr*) 5,000 miles, the ratio therefore varying by as much as 4 to 1.

There are 104,000 motor-buses, as follows:

Motor carrier buses . . . . .	32,213
Electric railway buses . . . . .	11,541
Steam railway buses . . . . .	1,246
<b>Total (public carriers) . . . . .</b>	<b>45,000</b>
School buses . . . . .	55,231
Sight-seeing buses . . . . .	2,069
Other buses . . . . .	1,700
<b>Total . . . . .</b>	<b>59,000</b>

In 1931 these services effected 1,800,000,000 bus-miles, of which 1,344,000,000 were in inter-urban service, and in 1932, 1,796,000,000 bus-miles, of which 1,270,000,000 were in inter-urban service. They effected 10,880,000,000 passenger-miles in 1931, of which 6,725,000,000 were in inter-urban service.

### 3. *Motor transport less strictly regulated than the railways.*

There is no Federal regulation of truck or bus operators. All the States with the exception of Delaware have laws regulating the operation of motor vehicles as common carriers of passengers. Thirty-nine States have laws regulating the operation of such vehicles as common carriers of property, and thirty-four States have enacted laws dealing with the operation of contract carriers.

These State laws cover a wide field and generally include the following: obligation of the operator to prove the public convenience and necessity of the service to be opened; regulation

of rates, fares, and charges; regulations as to accountancy; issue of shares and compulsory insurance; regulations as to the safety, size, and speed of vehicles. There are no regulations in regard to rates in inter-State traffic, and sometimes they do not exist even in intra-State traffic.

Private automobiles are only affected by these regulations in so far as they concern police matters, whilst vehicles operating exclusively inter-State services more or less escape the legal regulations existing in the various States. Furthermore, the most recent law on transport, dated 1930, is already out of date. For instance, the clause of the Inter-State Commerce Act compelling the railways to obtain official authority for the operation or suppression of their lines does not apply to motor transport. Similarly, the carriage of explosive materials and inflammable liquids is regulated as far as the railways and common motor carriers are concerned, but no regulations exist for traders or private concerns.

#### *4. The special taxes and other charges paid by users and the cost of road upkeep.*

It is estimated that the total amount expended in 1930 for the upkeep of all classes of roads, including city streets, was \$2,063,330,815. Of this sum, \$897,982,422, i.e. 30.4 per cent. only, were derived from the taxes paid by users. It should be noted, however, that this percentage is increasing; it was only 13.6 per cent. in 1913. The revenue from taxation has increased steadily. The taxes included under the heading 'Motor Vehicle Licence Fees' rose (city streets excluded) from \$116,401,416 in 1921 to \$344,712,860 in 1930. The Gasoline Tax, which only brought in \$3,513,460 in 1921, produced \$518,220,155 in 1930. Nevertheless 69.6 per cent. of the necessary sums have to be found by the public (including the railways). Even excluding city streets, these two taxes only yield 43.9 per cent. of the funds required for road purposes; the balance of 56.1 per cent. from other sources still represents a considerable sum.

A distinction has to be made between the main State roads and other roads. The taxes paid by automobile users are more especially employed for the former. In 1930, out of a total sum of

\$1,049,502,478 expended for the upkeep of main State roads, \$769,271,662, i.e. 73 per cent., were found from motor and petrol taxes.

It should be added that motor vehicles, garages, workshops, and filling stations have to pay the general tax on property, whilst contract carriers are also liable for income tax, so that the share they pay is actually higher than would appear at first sight.

It is likewise to be noted that the special charges now levied on common carriers are many times higher than those paid by contract carriers, which is clearly to the disadvantage of the former.

On the other hand, the scale of taxes payable on the vehicle itself has been more carefully worked out. In Pennsylvania the taxes paid by the various types of vehicles are as follows:

Automobiles . . . . .	\$ 24.50
Trucks ( $\frac{1}{2}$ ton) . . . . .	\$ 36.50
" ( $\frac{3}{4}$ " ) . . . . .	\$ 47.50
" (1 " ) . . . . .	\$ 60.00
" (1 to 1 $\frac{1}{2}$ tons) . . . . .	\$ 88.00
" (2 tons) . . . . .	\$113.00
" (3 " ) . . . . .	\$150.00
" (4 " ) . . . . .	\$185.00
" (5 " ) . . . . .	\$255.00

### III. ROAD AND RAIL

#### 1. *Conditions of motor transport.*

(a) *Advantages.* Greater speed and freedom to pick up and unload without being bound by fixed time-tables; ability to effect door-to-door delivery; closer personal contact with customers; fewer formalities; possibility of effecting sales transactions and transport as a single operation.

(b) *Disadvantages.* The motor vehicle has, however, certain disadvantages. It cannot be used for all types of goods nor up to any distance. In motor transport, the return load problem is always a factor of first importance in determining the cost of transport. The railways, on the other hand, have the incontestable advantage of being able to store goods in transit in their warehouses. Lastly, goods requiring specially equipped vehicles for their conveyance

are offered better facilities by the railways than by motor transport. In regard to packing, the motor-truck does not offer any appreciable advantages. Goods which can be carried without packing by motor-truck can be transported equally well by train. It is only over short distances that the packing material can be lighter than that required for conveyance by rail. Over great distances, stronger packing material is necessary than in rail transport, as the shocks to which the goods are subjected are more severe.

(c) *The problem of tariffs.* When regulations exist in this connexion, they are as a general rule limited to specifying the filing of tariffs by the common carriers; their publication is not, however, compulsory. Such regulations only apply to the large common carrier enterprises, although attempts have been made on a limited scale to introduce regulations regarding the tariffs of the contract carriers. When tariffs are published they contain either an incomplete classification of goods or no classification whatsoever; existing tariffs do not distinguish between loose lot shipments and complete loads; under these tariffs special advantages are granted for regular shipments or shipments of a certain size; the contract carriers discriminate more between the different classes of shippers than do the large common carrier services, and their tariffs are less stable; for certain commodities like fruit and cotton, seasonal arrangements are sometimes made and in such cases competition frequently leads to tariff disorganization; generally speaking, the tariffs applied to live stock, fruit, and vegetables are higher than the railway rates; those applied to coal and cotton are lower. Motor transport operators do not therefore hesitate to raise their tariffs when they have no competition to fear. The price per ton-mile may be as high as 15 cents in the case of valuable merchandise, whereas in 1929 the price of transporting the same goods by rail was on the average 0.745 cent per ton-mile.

## 2. *The scope and limits of competition.*

It is difficult to determine how far motor transport competition and the general economic situation are respectively responsible for the present railway crisis.

(a) *Passengers.* In 1931, 6,725,000,000 passenger-miles were



recorded in inter-city motor transport. Even if all this traffic had been carried by the railways, the railway passenger-mile figure would still have been 39 per cent. lower than that of 1920. If the railways had operated the intercity bus services in 1929, the passenger-mile figure would have been 19 per cent. lower than in 1920 owing to the loss of traffic caused by private motor-cars. The loss incurred by the railways in passenger traffic through competition by motor-buses since 1920 is probably less than 15 per cent. It would seem, therefore, that railway passenger traffic has been more affected by competition from private cars than by motor-bus services.

(b) *Merchandise.* In goods traffic, competition is keenest within a radius of 50 to 75 miles, although it continues to be serious up to distances of 200 miles. Recent information goes to show that certain transcontinental railways are even feeling the effects of motor transport competition up to 1,000 miles. It should be noted also that the traffic which goes to motor transport consists principally of goods representing less than a complete car-load. The losses suffered in less than car-load traffic has been 50 to 100 per cent. on certain branch and short lines. Motor-trucks are also making inroads into the railway's car-load traffic. Among the commodities thus diverted from the railways are live stock, meat, dairy produce, fruit and vegetables, cotton, and coal.

For many years now, live stock have been carried by motor transport. In certain markets, up to 60 per cent. of the total supply is brought by motor vehicle. In most cases the distance covered varies between 45 and 75 miles. Cream is normally carried 100 miles and sometimes 200 miles. Fruit is conveyed up to 100 miles in the Eastern States and still farther in the other States. The transport of coal and cotton by motor-truck is a more recent development. In the case of cotton, the greater part of the traffic is towards the ports and the centres of the spinning industry situated in the interior of the country; this traffic is principally handled by contract carriers who offer seasonal tariffs which are frequently lower than those of the railways. Cotton-seed is to a very large extent carried by motor transport. Coal is now moved by truck up to 60 miles, but only for the supply of the centres of consumption located near the mines, so that it is

hardly possible to speak of motor transport competition in this particular field.

3. *Steps taken by the railways to meet motor transport competition.*

The railways have attempted to meet motor transport competition by a number of technical and tariff measures.

(a) *Technical measures.* These measures include: (1) Improvements in the actual operations of transport: speeding up of trains and the introduction of short light trains; employment of railcars in the place of local trains; (2) improvements of service: extension of the hours for shipment and delivery of goods; opening of night services for handling goods; (3) employment of special equipment to facilitate handling; the principal forms of equipment of this kind are: containers, truck bodies, and rail-wagons. Transport by *container* was first started in 1921 between Cleveland and Chicago, and in 1922 between Buffalo and New York. Since then container traffic has increased continuously. The number of container shipments on the New York Central lines rose from 278 in 1922 to 10,217 in 1927, and to 47,886 in 1930. The Pennsylvania Railway carried, between June 20th, 1928, and January 30th, 1931, 63,084 containers, of which only 7 per cent. were empty. The success of the container is due to the fact that it is loaded and unloaded at domicile, both operations being effected by the carrier. The handling of the goods is simplified, thus ensuring more rapid service. Lastly, the number of transport documents is considerably reduced. The standard container has a loading capacity of 10,000 lb.

The *truck bodies* are collapsible; the owner of the truck delivers the truck body to the railway which places it on a wagon by means of a crane; on arrival at the terminal station it is again loaded on to a truck. This system was used for the first time in Cincinnati, in 1917; in 1929 all the railways had adopted it. It has one disadvantage as compared with the container in that the truck body does not belong to the railway company and therefore has to pay the cost of transport of its own weight.

The *rail-wagons* are towed by motor vehicles or tractors and conveyed, on their wheels, by means of an inclined plane, to the

floor of the railway-wagon. They can therefore be transported by road and rail alike and thus facilitate door-to-door delivery. There are various models of rail-wagons including closed-body type, refrigerating wagons, and tank-wagons.

(b) *Organization of motor transport services.* In the organization of motor services, three principal methods are followed: (1) substitution of motor services for unprofitable train services; in this way it is possible to intensify traffic, adapt it to local requirements, and reduce operation costs; (2) extension of feeder services to areas not reached by rail and to small towns situated between two important railway stations, or opening of services at harvest time; (3) independent services operated by the railways.

The following four methods have been adopted for the operation of these services: certain railway companies operate bus or truck services as part of their normal transport business, in which case they come directly under the jurisdiction of the Interstate Commerce Commission. For that reason, relatively few companies have adopted this method, inasmuch as they would be operating a regulated motor service in competition with unregulated services. The majority of companies operate motor services through subsidiary companies; these companies which are subject to no restriction can compete on an equal footing with the independent companies. In other cases certain railway companies have acquired a holding in existing motor companies; a few of the larger motor companies are controlled in this way, notably the Greyhound Lines. Lastly, some railway companies have entered into contracts with independent motor enterprises for the operation of certain services.

(c) *Tariff measures.* The companies have not lowered their basic tariffs, but by introducing a large number of special tariffs have made considerable reductions since 1921, representing a saving of \$641,461,000 in fares to the public. This saving was estimated at \$53,206,000 in 1925 and \$125,478,000 in 1931. The economy realized in goods traffic by the lowering of tariffs is estimated at \$7,275,599,000 between 1921 and 1931. Various methods have been employed in this connexion: in some cases it has taken the form of a pure and simple lowering of the rate, while in others special classifications have been introduced

for certain goods; reductions have also been granted to persons attending meetings or congresses, and reduced-rate return tickets issued, particularly during the summer months. Tariff reduction has not, however, always produced the expected result. As the railways are compelled to publish their tariffs before putting them into force, the motor transport operators have ample time to adopt counter-measures. This does not, however, alter the fact that the American railway companies have made a big effort to adapt themselves to new traffic conditions.

#### 4. *Traffic brought to the railways by motor transport.*

The motor-car has brought a not inconsiderable increase of traffic to the railways. Directly or indirectly the motor industry has created a large amount of rail freight traffic. Large quantities of building material and machinery are required to construct factories for the manufacture of motor vehicles. Raw materials moving to the factories, finished parts moving to assembly plants, and the finished product moving to centres of distribution, also create traffic for the railways. The development of the highway system has necessitated the transport of stone, gravel, cement, and sand. The large quantities of petrol consumed annually have to be transported from the refineries to distributing points. The National Automobile Chamber of Commerce estimates that automotive freight of all kinds carried by the railways in 1931 aggregated 3,106,645 car-loads, or the equivalent of about one-eighth of all rail originating car-load traffic.

#### 5. *The leading public bodies and the road and rail problem.*

There is no Federal legislation dealing with the co-ordination of road and rail transportation, and in the absence of legislative authority there can be no administrative intervention in the conflict which is taking place between the two means of transport.

The Interstate Commerce Commission, on its own initiative, after extensive hearings on the subject, arrived in 1932 at the following conclusions: that there is to-day an excess of carrying capacity of existing transport facilities. This excess is due to the freedom with which the motor-car has been allowed to develop

and create competition. This competition operates under conditions of inequality which are favourable to motor transport. It is reasonable that wherever motor transport renders better service it should replace the railways; this transformation should be encouraged wherever it seems to be conducive to progress. On the other hand, Federal legislation relating to the regulation of motor vehicles operating on the public highways and engaged in interstate commerce is desirable in the public interest.

The Federal regulations should contain the following provisions: (1) motor transport companies only to operate with special authorization; (2) this authorization to be issued by a special commission; (3) all motor transport operators to keep a record of their activity and furnish a periodic report to the commission; (4) freight forwarding companies and express freight companies to be subject to the Interstate Commerce Act; (5) joint transport by motor vehicle and rail or boat to be regulated by provisions similar to those existing in regard to joint transport by rail and boat.

In January 1933 the Joint Committee of Railroad and Highways Users, New York, published its recommendations as to the principles which should form the basis of all highway regulations and taxation. This Committee arrived at the same general conclusions as the Interstate Commerce Commission.

In February 1933 the Report of the National Transportation Committee was published. This Committee had been formed in October 1932 at the request of certain business associations (savings banks and other institutions which were all interested in railway securities). This Report recommended the maintenance of the railway system without any addition to existing regulations, and emphasized the necessity for the railways to adapt themselves so as to meet competition and reduce unproductive costs. Regarding motor transport, the Report recommended the introduction of regulations and taxation which should not, however, put it in a less favourable position than the railways.

*In brief.* It is desirable that the motor-car whose prestige in the United States is without parallel should continue to render the services expected of it, and nothing should be done to arrest its development. In the interests of all, however ('the supreme test

must always be the interest of the Public'—*Regulation and Taxation of Highway Transportation*, page 7), it is desirable that the present period of unrestrained competition should be followed by a more rational form of competition between the two means of transport. Such is the recommendation made by qualified bodies in the United States.

# CANADA

## I. RAILWAYS

### 1. *The railways still the mainspring of Canada's economic life.*

Natural conditions placed considerable difficulties in the way of colonization in Canada. Distance and climate were obstacles of no mean importance. Constant relations had to be maintained, at all seasons of the year, between groups of population scattered over vast areas. For a long time the waterways rendered inestimable service, as they still do at the present time, but they were closed to traffic during the winter months, i.e. for one-third of the year. The construction of railways made it possible to overcome this difficulty, and this explains the important part they play both in the political and in the economic life of the Dominion. It was entirely due to the development of railways like the Canadian Pacific, constructed between 1880 and 1890, and the National Transcontinental Railway in the eastern part of the country, that the British North-America Act of 1867 became a reality. In the same way it was the railway which made possible the opening up of the vast prairie regions.

In 1930 the total length of the railways was 56,642 miles, of which 42,075 miles were first main tracks. There were 236·1 inhabitants per mile of railway. Geographically speaking, the railways are principally grouped in the more thickly populated parts of Canada, i.e. in the central district, between the Great Lakes and Nova Scotia, in which are situated the important cities of Montreal and Toronto, and in the area between Lake Winnipeg and the line Edmonton-Calgary, in which are situated the important centres of Winnipeg, Calgary, and Edmonton.

This is clearly illustrated by the following figures giving the percentage of volume of traffic: region to the east of Levis, 12 per cent.; Quebec and Ontario, 60 per cent.; north of the Great Lakes, 4·5 per cent.; Prairie Provinces, 20 per cent.; British Columbia, 3·5 per cent.

The traffic carried represents every branch of economic activity. In 1931, out of a total of 79,820,000 tons, 18,190,000 represented agricultural produce, 25,650,000 mineral products, 7,750,000

forest products, 19,820,000 manufactured products, and 2,420,000 animal products. However, the trend towards industrialization is clearly shown by the steadily decreasing quantity of agricultural produce transported. In 1922 only 870,000 tons more mine products were transported than agricultural produce, while in 1931 the difference had increased to 7,460,000 tons. In 1922 there were 4,910,000 tons less manufactured products carried than agricultural produce; in 1931, 1,630,000 tons more.

Heavy traffic predominates, representing 50·2 per cent. of the total ton-miles, whilst medium and light traffic represent 45·1 per cent. and 4·7 per cent. respectively.

2. *There are two principal railway systems in Canada under the control of a central board.*

(a) *The Canadian National Railways* operate 21,981 miles of line; they are owned and managed by the Dominion Government. At their head are a president and board of directors appointed by the Governor-General in Council. In financial matters involving capital expenditure, the executives are subject to the control of Parliament and the Minister of Railways. By an Act of Parliament in 1923 all the railways previously owned by the Government, as well as the Grand Trunk Pacific and the Canadian Northern, were amalgamated into this one group (Canadian National Railways).

(b) *The Canadian Pacific Railway* belongs to a private company which is, however, to a certain extent under Government control. It operates 16,886·89 miles of line.

The interests of both these companies extend beyond the Canadian border, the first possessing 1,889 miles of line in the United States and the second 5,160 miles. These companies also own a number of hotels and ships.

(c) *The central body which supervises the Canadian railways* is the *Board of Railway Commissioners*, more generally known as The Commission, with head-quarters at Ottawa. The Board consists of six members. Its powers include the settlement of matters relating to the location, construction, and operation of railways, as well as tariff regulation. An appeal against any of the Commission's decisions may be made to the Governor-General in Council,



who in practice generally refers the question back to the Commission for further consideration. In matters of law the Commission may, if it wishes, allow an appeal to the Supreme Court, and on questions of jurisdiction the applicant may make his appeal without the permission of the Board. The Commission is assisted in its work by provincial organizations, including the Railway and Municipal Board of Ontario, the Commission of Public Utilities in Quebec, the Board of Commissioners of Public Utilities in Nova Scotia, and the Public Utilities Commission in Manitoba.

### 3. *The obligations of the Railways.*

The railways must carry out all contracts in connexion with their general functions, run regular services, ensure public safety where their lines cross a road, and undertake the loading and unloading of goods. The Commission may lay down certain conditions of transport, as it does for example in the case of dangerous or inflammable materials. It may determine in each case to what extent the liability of the companies in a particular contract shall be limited. All tariff schedules must be deposited in the office of the Commission and published twice in the *Canadian Gazette*, and only these tariffs may be applied. There are the standard tariffs which fix the maximum rates and special freight tariffs which fix a lower rate for certain types of merchandise. These latter which are established for competitive purposes are also subject to confirmation by the Commission. Tariffs which have been fixed by agreement between the companies must likewise be approved. In the case of conflict the Commission determines what the common tariff shall be. The companies must apply the same tariff schedule to all users. Lastly they must furnish certain services free or at reduced rates to members of the Government, railway employees, soldiers, journalists, and charitable organizations. They must also undertake the mail service. The presidents of the railways must submit, on December 31st of each year, a faithful, exact, and detailed account of expenditure and receipts. Since 1930 the accounting methods of all the companies have been the same.

The companies may not operate new lines before they have been inspected and approved by the Commission. Rolling-stock

must comply with the regulations; in the event of non-compliance the company is liable to a fine and seizure of its rolling-stock. The Commission may introduce regulations as to the use of a specific type of fuel or motive force in a certain district.

Concessions cease to be valid if the construction of the railway is not begun two years after the passing of the law authorizing such concession and completed five years after.

Lastly, the railways must collect on behalf of the Government certain taxes in addition to the price of tickets.

As an off-set to these charges, the companies may receive loans from the Government and subsidies for the construction of certain lines. Furthermore, when it is necessary to construct a station or harbour, the Commission may require the municipalities to share the construction costs with the companies.

#### 4. *The difficult financial position of the Canadian railways.*

The investment in permanent way and equipment in 1930 is estimated at \$3,153,351,000, representing 10 per cent. of the total national wealth. The inclusion of other kinds of property brings this figure to \$3,228,708,000. Against these assets must be placed liabilities amounting to \$4,101,124,843, made up as follows: shares, \$1,455,492,922; funded debt, \$2,645,631,921.

The Canadian railways are therefore over-capitalized. This situation is partly due to Government advances covering Canadian National deficits and unpaid accrued interest, which up to December 31st, 1930, amounted to \$322,155,902. It is to be noted that \$264,000,000 of this total dates from the period 1919 to 1922, i.e. before motor transport competition had begun to make itself felt.

In 1930 the return on this capital liability was as follows:

All railways:

Gross earnings . . . . .	\$454,231,650
Operating expenses . . . . .	\$380,723,412

Net earnings from operation . . . . .	<u>\$73,508,238</u>
---------------------------------------	---------------------

These net earnings from operation represent 1.7 per cent. of the capital liability.

In 1931 the capital liability of the Canadian National Railway included \$1,276,457,207 in long-term debt due to the public and

\$1,393,469,164 in money invested in the original Government railways, Government loans, unpaid interest on those loans, and deficit on the eastern lines. The net income of the Canadian National amounts to about  $24\frac{1}{2}$  million dollars, i.e. 1 per cent. per annum on the invested capital. The Royal Commission to Inquire into Railways and Transportation in Canada believes that a substantial part of the money invested in this system must be regarded as lost.

5. *The decline in traffic since 1928.*

(a) *Passengers.* The total number of passengers fell from 40,592,792 in 1928 to 34,698,767 in 1930, and passenger-miles from 3,140,860,693 in 1928 to 2,222,874,877 in 1930. The average length of journey per passenger fell from 77 to 70 miles.

(b) *Merchandise.* In 1928 the Canadian railways effected 41,610,660,776 ton-miles and 29,604,545,125 ton-miles in 1930. The average journey in miles fell from 331 to 308, and tonnage receipts from \$118,652,969 to \$96,194,017.

(c) *Reasons for falling off in traffic.* The Royal Commission to Inquire into Railways and Transportation in Canada expressed the opinion that a falling off in the growth of traffic was to be expected, because the period of establishment of the industry had come to an end. The opening of the Panama Canal and the improvements made in the waterways were likewise bound to affect the tonnage carried by the railways. Lastly, there are numerous railways whose services overlap; certain sections of the Canadian National and Canadian Pacific, for instance, are parallel and in direct competition with one another. A number of lines of this kind have, however, been suppressed since 1933 but some still remain, and in certain cases new lines have even been constructed in competition with existing railways. Motor transport may be regarded as a kind of additional form of competition.

## II. MOTOR TRANSPORT

1. *Road conditions not always favourable to the development of motor transport.*

The road mileage of Canada is estimated at 394,372 miles divided into the following categories: unimproved earth roads,

156,639 miles; improved earth roads, 155,234 miles; gravel roads, 71,347 miles; waterbound macadam roads, 4,991 miles; bituminous macadam roads, 1,445 miles; bituminous and cement concrete roads, 2,696 miles. Almost 40 per cent. of the Canadian roads are unimproved, and therefore hardly suitable for commercial operation. Many of the improved earth roads, moreover, are closed to traffic during the long winter. General conditions are such, therefore, that motor transport is restricted to those sections of the country that are better situated either on account of geographical conditions or density of population. Thus Ontario, the most thickly populated Province in Canada, has more than 564,000 motor vehicles out of a total of 1,239,000 for the whole Dominion. Efforts are nevertheless being made to maintain and enlarge the road system. Highway expenditure in 1930 was as follow:

Upkeep and improvement.	. . . . .	\$14,171,483
New construction . . . . .	. . . . .	\$39,279,794
Total . . . . .	. . . . .	<u>\$53,451,277</u>

## 2. *The progress of motor transport.*

Motor-car registrations increased as follows from 1923 to 1931:

1923: 585,050	1929: 1,195,594
1926: 836,794	1931: 1,206,836 comprising
	1,024,385 private cars
	1,729 buses
	180,722 trucks

or one vehicle per 8.6 of population.

Trucks are classified as follows:

Common carrier vehicles, engaged in hauling for hire for the public and plying over a definite route; total in 1931: 9,437 vehicles.

Contract carrier vehicles, engaged in hauling for hire the goods of any one person or firm at any one time, and not confined to a fixed route.

Privately owned trucks.

The volume of traffic in 1929 was estimated approximately as follows:

Private cars . . . . .	11,500,000,000 passenger-miles
Buses . . . . .	250,000,000 " "
	representing operating returns of \$3,650,000.
Lorries: 5,000,000 tons of goods or at \$8 per ton—	\$40,000,000.

The motor-bus industry appears to be the least developed. This situation is due to a number of causes:

The economic crisis which has prevented passenger traffic from going over from the rail to the road during the period of depression.

The increase of private cars competing with the bus lines as well as with the railway.

High taxation: the taxes paid by buses represent 8.5 per cent. of the total taxation revenue collected by all the Governments and Provinces; in Ontario it amounts to 8.6 per cent. and in the province of Quebec to 11.34 per cent.

The limited radius of action of motor-buses which rarely exceeds 100 miles on the average.

The Gray Coach Line Ltd. in Ontario and the Provincial Transport Company in Quebec are perhaps the only really large operators of motor-coaches.

### 3. *Efforts now being made to regulate motor transport; the taxes paid by motor vehicles on the increase.*

There is an increasing tendency in Canada to regulate bus transport. Rate schedules have been prepared with the co-operation of the provincial authorities; the companies have been compelled to insure passengers against accidents due to negligence in operation. Vehicles are subject to periodic inspection and their registration is compulsory. In the case of trucks, however, the rates are not controlled. The regulations applying to trucks are principally concerned with public safety and the preservation of goods: here again the provincial Governments have intervened, particularly in Ontario, Quebec, and Manitoba.

The total revenue collected from motor taxation amounted to \$42,821,508. This sum is derived from the licence fees paid on demonstration vehicles, automobiles, trucks, &c., the taxation of garages, motor transport operators and drivers, a mileage tax on buses and trucks, and the petrol tax. The revenue accruing from

licence fees has increased steadily: 1925, \$13,020,607; 1929, \$21,735,827. The revenue from the petrol tax has likewise increased: 1925, \$3,521,388; 1929, \$17,237,017; 1930, \$22,655,225.

The difference in treatment of buses and trucks is clearly shown by the taxes they pay: in Ontario a bus with accommodation for 30 passengers and travelling 30,000 miles during the year pays \$840; a truck travelling the same distance pays \$215; taxation of trucks is lower than in the United States.

The following figures for Ontario give an approximate idea of the ratio between road expenditure and revenue:

Fiscal year ended October 31st, 1930:

Expenditure on upkeep and construction.	\$24,000,000 (approx.)
Taxation of the motor trade and motor transport	\$16,000,000 (approx.)

Part of the upkeep, therefore, has to be borne by the general public.

#### 4. *Competition between the two means of transport.*

The use of motor trucks, the carrying capacity of which rarely exceeds one ton, cannot be said to affect seriously the receipts of the railways which, up to the time when the crisis began to make itself felt, saw their gross receipts for merchandise steadily increasing. In the opinion of the Royal Commission, factors other than motor competition are more especially responsible for the depression in goods transport. In passenger traffic depression has even gained the bus lines, whose receipts have likewise shown a slight but steady fall as follows: 1923, \$77,335,453; 1926, \$73,709,662; 1929, \$73,009,353. Private automobiles undoubtedly offer the most serious competition, but in a country where the climate and great distances have a considerable influence on transport methods, it is hardly possible for the automobile to become a real danger for the railways.

The expansion of the motor industry has brought an increased volume of traffic to the railways each year. Between 1926 and 1929 it was estimated at 11.9 per cent. of the total freight of the railways. In 1930 it amounted to 13,330,952 tons, or 13.8 per cent.

## MEXICO

Of the three countries of North America, Mexico is the one in which the railways still have relatively the most importance and in which motor transport is least developed.

### I. RAILWAYS

#### 1. *Importance of the railways in Mexican economic life.*

From the very outset Mexico gave particular attention to the development of her railway system, the first railway concession being granted in 1837. The great period of construction was, however, between 1881 and 1882, when 2,000 km. of line were built.

On December 31st, 1931, the length of lines of the forty-four companies holding Federal concessions amounted to 23,387 km., of which 18,609 km. were broad-gauge lines of 1·435 metres and 4,507 km. narrow-gauge lines of 0·914 metre. 57·033 per cent. of the lines are operated by the National Company of Mexico, 10·491 per cent. by the Sud Pacifico, 7·862 per cent. by the Interoceanico de Mexico, 3·893 per cent. by the Noroeste de Mexico, 3·843 per cent. by the Unidos de Yucatan, 2·638 per cent. by the Mexicano, 2·357 per cent. by the Kansas City, Mexico y Oriente. The Nacionales de Mexico, whose railway system is developing more especially in the central part of the country, operates more than 13,100 km. of line. Taken all over, Mexico has 1·453 km. of railway per 1,000 of population.

The first important law dealing with railway administration in Mexico dates from 1899. Further measures were, however, taken later, and it was eventually decided to include the whole of the legislation in a single law to which were added measures concerning the other means of transport. This law finally appeared under the title *Ley de Vias generales de Comunicacion*, promulgated in 1932. Concessions are only granted for seventy-five years. The companies must run regular services and give priority of transport to live stock and perishable goods like fruit and vegetables. Transport must be effected in such a way as to safeguard shippers against damage; any delay or deterioration of the

goods may give rise to claims on the part of the consignor rendering the companies or their agents liable to fines or sanctions. Tariffs must be submitted to the Secretariat of Communications for agreement as to classification. The companies must allow trains belonging to other companies to travel over their system if the Secretariat judges this necessary. Employees are medically examined at regular intervals and are obliged to pass a special examination as to physical fitness before they can be promoted. The companies must deliver passes to the railway inspectors and allow them to make use of the railway telegraph and telephone.

The value of the capital invested in the Mexican railways was estimated in 1931 at \$1,420,175,958, as compared with the original value of \$1,373,255,419, increased by \$127,932,950 for additions and improvements and diminished by \$49,692,167 for depreciation, deterioration, &c. The largest holdings are in the hands of the Nacionales de Mexico with \$934,324,300 and the Sud Pacifico de Mexico with \$119,117,187.

## 2. *Operating results.*

Goods traffic has fallen during recent years as follows :

	<i>Tons transported</i>	<i>Ton-km.</i>
1929	13,875,499	4,035,336,284
1930	13,008,813	4,040,342,501
1931	10,793,017	3,378,219,644

Revenue in 1930 amounted to \$8.34 per ton, and in 1931 to \$8.28 per ton.

The length of journey per ton tends to increase:

1930	.	.	.	310.585 km.
1931	.	.	.	313.000 km.

Out of the total transport effected, the percentage of each category conveyed was as follows:

Agricultural produce, live stock, and forest products	.	.	32.249%
Sub-soil products	.	.	30.950%
Miscellaneous products	.	.	36.801%



The number of passengers diminished between 1927 and 1931 as follows:

1927	.	.	.	20,629,229
1930	.	.	.	18,251,894
1931	.	.	.	14,483,614

or 1,082,221,033 passenger-km. in 1931 as compared with 1,410,701,379 in 1930. Revenue per passenger has likewise diminished; it was \$1.91 in 1928 and 1929, \$1.82 in 1930, and \$1.77 in 1931.

The financial results were as follows:

	<i>Operation receipts</i>	<i>Operation costs</i>	<i>Operation profits</i>
1926	164,689,568	152,538,642	12,163,526
1929	167,780,097	142,091,427	25,688,670
1930	159,933,317	143,447,978	16,485,339
1931	129,993,323	116,340,601	13,652,721

## II. MOTOR TRANSPORT

*Motor transport less developed in Mexico than in the other North-American countries.*

In 1931, 67,072 vehicles were registered, divided as follows:

Automobiles	.	.	49,457
Buses	.	.	4,051
Motor-trucks	.	.	13,564

The above figure represents one vehicle per 245 of population (world figure: 1 per 57).

Despite the small number of vehicles in use, regulations were introduced in 1932 governing the conditions of traffic on the national highways. These regulations apply to the size and weight of vehicles, equipment, number of passengers per vehicle, registration and operation, and tariffs, which must be approved for a period of three years. Lastly there are regulations applying to the different forms of transport which are classified as follows: (1) passenger services; (2) express services; (3) goods services.

## UNITED STATES OF BRAZIL

TRANSPORT conditions in Brazil are profoundly influenced by the presence of an inland waterways system extending over 35,000 km. To quote but one example, it is possible for an ocean-going steamer to cross Brazil and reach Iquitos in Peru, some 4,000 km. from the sea.

### I. RAILWAYS

*The development of the Brazilian railway system.*

On January 1st, 1930, the total length of railways was 32,478 km., the following table showing the steady growth of the railway system since 1885:

1885 . . . . .	6,930 km.
1895 . . . . .	12,967 „
1905 . . . . .	16,780 „
1915 . . . . .	25,646 „
1925 . . . . .	30,731 „

There are 28,211 km. of 1 metre gauge and 2,227 km. of 1.60 metres gauge; the remaining lines are of six different gauges, including 734 km. of 0.75 metre and 565 km. of 0.66 metre.

The majority of the railways are in the Southern States, particularly in Minas Geraes (7,925 km.) and São Paulo (7,033 km.). There are 2.84 km. of railway per 100 sq. km. in São Paulo, and 1.33 km. in Minas Geraes; the figure for the country as a whole is 0.38 km. per 100 sq. km. Except in zones where the density of population exceeds 10 inhabitants per sq. km., the railways serve principally as a means of linking up the navigable reaches of rivers on which traffic is interrupted by cataracts, &c., or of uniting two rivers or furnishing communication between the navigable reaches of a river and a seaport.

*The legal treatment* of the railways is complicated by the fact that the twenty States and the Federal District forming the Union are to a large extent autonomous, and that Brazilian railway legislation dates from 1835. In that year the Government of the Empire of Brazil was authorized to grant concessions of forty years to companies which would undertake to construct

railways linking up Rio de Janeiro with the capitals of certain provinces, but owing to the short duration of these concessions the law in question remained inoperative. The first concession was granted in 1839 for a railway, constructed without any guarantee of interest payments and without any subsidy, running from the end of the Bay of Rio de Janeiro to the foot of the Sierra. This line was opened to traffic in 1854. After that time a system of ninety-year concessions was introduced. These concessions were either governed by the conditions usually enforced in colonial countries, viz. the establishment of privileged zones of 31 km. on either side of the railway line, right of expropriation of the land supplying construction materials, exemption from Customs duty on imported material (including coal), or by general conditions such as guarantees of interest payments (5 per cent. and in certain provinces even 7 per cent.), subsidies, mileage guarantees, and other advantages.

1929	<i>Receipts</i>	<i>Expenditure</i>	<i>Deficit</i>	<i>Surplus</i>
(Contos of paper Milreis)				
(a) Railways administered by the Union: 11 companies, 9,410 km. . . . .	248,362	267,995	19,633	..
(b) Railways of the Union leased to companies or States: 12 companies, 10,793 km. . . . .	198,340	176,294	..	22,046
(c) Companies receiving an interest guarantee from the Union: 1 company, 546 km. . . . .	8,921	9,202	281	..
(d) Companies no longer receiving or having never received an interest guarantee: 5 companies, 7,843 km. . . . .	249,119	177,018	..	72,101
(e) Companies subject to special regulation: 32 companies, 3,983 km. . . . .	No information			

Under the Laws of 1892 and 1896 the Federal Government retained the exclusive concession rights of lines linking up the Federal capital with the State capitals, as well as international and strategic lines.

Railway extensions which were of no interest to the Federal Government and new local lines continued to be subject to concessions issued by the different Federal States, and in some cases municipalities. The fluctuations of the Brazilian rate of exchange caused the Federal Government to repurchase a large number of lines where the guarantees of interest payments had proved too onerous. Nevertheless, the Government leased them very shortly afterwards either to private companies or to the States.

The table on p. 29 shows the present division of the Brazilian railways, with their corresponding revenue and expenditure.

English capital invested in the Brazilian railways is spread over sixteen companies, of which the most important is the Leopoldina Railway, £17,589,199. The total of British capital investment amounts to £46,854,626.

In the absence of information in regard to numbers of passengers and quantities of goods transported, the following figures show the amount of rolling-stock owned by the railways on January 1st, 1928:

32 railways . . . . .	3,306 locomotives
30 railways . . . . .	3,933 passenger coaches
38 railways . . . . .	43,597 wagons

The railways have shown a certain tendency to electrify their lines, following the lead given by the Paulista Company which electrified its principal line from Jundiahy to Rincão (285 km.) between 1922 and 1929. In this connexion the Central Railway Company of Brazil, with the provisional authorization of the head of the Government and of the Minister of Transport, undertook in July 1933 to sign a contract involving the expenditure of 140,000 Contos for the electrification of certain lines. Two other companies are also electrifying between 200 km. and 300 km. of their lines.

## II. MOTOR TRANSPORT

### *Motor transport taxation.*

The total number of motor vehicles in use in the Union in 1926 was about 117,000, of which 54,000 were in the State of

São Paulo and 52,000 in the States of Rio Grande do Sul, Minas Geraes, and the Federal District. In 1928 the total number of vehicles had reached 156,332, comprising 107,431 private cars and 48,901 commercial vehicles.

The estimated figure for January 1st, 1932, was 112,000 touring cars, 2,200 motor-buses, and 45,800 lorries, i.e. 160,000 vehicles in all. These figures represent one vehicle per 252 of population.

Up to the beginning of 1930 the registration fee was collected almost exclusively by municipalities, but in some States a State tax has been introduced payable by all types of animal-drawn or mechanically propelled vehicles. In São Paulo, for example, the tax is established on a sliding scale according to horse-power in the case of passenger cars, and according to loading capacity in the case of trucks, a distinction being drawn between those fitted with pneumatic tyres and those fitted with solid tyres; the tax paid by the latter is 50 per cent. to 80 per cent. higher. Buses pay a surtax according to seating capacity.

The basis of municipal taxation varies widely. In some cases the taxes are established according to the weight of the vehicle and are applicable to automobiles and trucks alike; some municipalities have adopted the usual system based on horse-power in the case of automobiles and according to loading capacity in the case of trucks. A flat rate is also sometimes applied based on the number of cylinders (4, 6, 8 cylinders) irrespective of capacity, with a subdivision into categories according as to whether the vehicle is an automobile or a truck or whether it is for personal use or hire.

As a general rule, municipalities differentiate between cars for personal use and those let out for hire; trucks fitted with solid tyres pay a considerably higher rate of taxation than those fitted with pneumatic tyres.

### III. ROADS

#### *Measures taken in Brazil to improve the highway system.*

The first roads in Brazil were constructed during the seventeenth century, but it was not until the nineteenth century that

continuous and systematic construction was undertaken. From the end of the Empire up to about 1910, highway construction work remained dormant. It was only in 1920 that work was finally taken in hand for the construction of roads suitable for motor traffic.

(a) *Federal Financing.* Up to 1927 the roads constructed with the aid of subsidies and the tracks built under the Federal irrigation scheme, some of which form the basis of the present highway system, were paid for out of allocations from the general budget.

The law of January 5th, 1927, provides for a *special fund* for road construction and upkeep; this fund is maintained by the additional revenue obtained from increased customs duties and by an import tax on petrol and motor-car accessories. The rate of these taxes was increased by a decree of September 5th, 1928. The issue of a series of 5 per cent. road bonds redeemable in twenty years was also authorized. As the results obtained were not, however, satisfactory, a further decree dated June 1st, 1929, increased the import duties by an adjustment of the method of calculating the part levied at the gold Milreis rate.

The roads to be constructed under the plan adopted by the Federal Bureau will have a minimum width of 8 metres, gradients not exceeding 1 in 16 $\frac{2}{3}$ , and a minimum radius of curve of 50 metres. It is to be noted, however, that the States have displayed considerably greater activity in road matters than the Federal Government.

At the beginning of 1931 the estimated total length of roads in the twenty States and Federal District was 113,252 km., including:

45	km.	concrete roads
59	„	asphaltic concrete roads
805	„	macadamized roads
4,222	„	gravel roads
16,157	„	improved hard earth roads.

The remainder are plain hard earth roads.

In the Federal District and the States of Espirito Santo, Rio de Janeiro, Minas Geraes, São Paulo, Paraná, Santa Catherina, Rio Grande do Sul, there are about 4,600 km. of good motor roads, 9,450 km. of other roads passable for motor traffic during almost the whole year, and 59,000 km. which are passable during the dry season only. This group of States includes approximately 65 per

cent. of all the Brazilian roads which are passable for motor traffic and 90 per cent. of the total of good motor roads.

(b) *State Financing.* Very few of the States have a road fund, and highway expenditure is paid out of the general budget. Since 1927 certain States, including some of the most important economically, have, however, introduced a number of laws in regard to the creation of special road funds. These funds are as a rule maintained by special taxes paid by all road users, as well as by taxes on property adjoining the roads and allocations from the general budget. The basis of the special taxes paid by motor vehicles varies considerably as indicated above.

# GREAT BRITAIN

## I. RAILWAYS

### 1. *The reorganization of the British railways in 1921 and the codification of their obligations.*

The first commercial railway line in England was opened on September 15th, 1830, between Liverpool and Manchester (28 miles). After that date railway construction was pushed forward with feverish haste so that by 1850 there were 10,142 km. (6,303 miles) of line in the United Kingdom, while France at that time had but 3,083 km. (1,916 miles). In 1931 the British railway system comprised 20,403 miles of line representing about 22.9 m. per 100 sq. m. of country and 0.45 m. per 1,000 of population.

From the geographical point of view it is necessary to note the great influence exercised by London in the plan of the British railway system. All the principal lines converge on the capital, so that time is frequently saved by travelling via London when making a journey between two towns whose geographical position would suggest the adoption of a more direct route. The sea, which also plays an important part in the economic life of Great Britain, has likewise influenced railway organization. All the great centres are closely linked up with the seaports, whilst the marine stations are well supplied with modern installations and equipped to deal with the traffic they handle—passengers, coal, or fish. During the period of development of the railways, the greatest freedom was left to the companies. Before the War there were more than a hundred companies, of which twenty-eight could be considered as of first importance. Their legal position had been established by numerous Acts voted by Parliament since their creation and by innumerable decisions taken on points of detail.

In order to meet the various economic difficulties which arose after the War, it was decided to reorganize the British railway system, and in 1921 the Railways Act was published. This Act, besides regrouping the railways, revised the various regulations, charges, and obligations applying to the railways.

(a) *Reorganization.* The 119 companies were re-formed into four groups as follows:



*The Southern Group*, comprising: the London and South Western Ry. Co.; the London, Brighton, and South Coast Ry. Co.; the South Eastern Ry. Co.; the London, Chatham, and Dover Co.; and the South Eastern and Chatham Ry. Co.'s Managing Committee.

*The Western Group*, comprising principally: the Great Western Ry. Co.; the Barry Ry. Co.; the Cambrian Ry. Co.; the Cardiff Ry. Co.; the Rymney Ry. Co.; and the Taff Vale Ry. Co.

*The North Western, Midland, and West Scottish Group*, to which were affiliated: the London and North Western Ry. Co.; the Midland Ry. Co.; the Lancashire and Yorkshire Ry. Co.; the North Staffordshire Ry. Co.; the Furness Ry. Co.; the Caledonian Ry. Co.; the Glasgow and South Western Ry. Co.; and the Highland Ry. Co.

*The North Eastern, Eastern, and East Scottish Group*, including: the North Eastern Ry. Co.; the Great Central Ry. Co.; the Great Eastern Ry. Co.; the Great Northern Ry. Co., &c.

(b) *Regulations*. As regards *passenger traffic*, the companies are bound to carry all persons who wish to travel. All passengers are entitled to take with them a certain quantity of luggage. Proper accommodation must be provided for the conveyance of this luggage, which must be treated with as much care as any other type of goods. The companies are obliged to run a sufficient number of trains—at least one train in each direction daily stopping at all stations. The stations must have proper waiting-rooms and lavatory accommodation. If the railway company desires to withdraw any existing train services, close a station, or reduce the facilities at any station, it may have, in the case of opposition, to justify its action before the Railway and Canal Commission. The Railway Companies are obliged to provide a sufficient number of workmen's trains. If they neglect to do so, the Railway and Canal Commission has power to order additional trains. The railway companies are bound to provide facilities for carrying officers and soldiers, including their families, when they travel at Government expense. Perishable goods (milk, fish, fruit, vegetables, and cheese) must be carried by passenger train or similar service. If any company fails to afford these facilities the user can appeal to the Railway Rates Tribunal. Mails must be carried by passenger train.

As regards *goods traffic*, the railway companies are under the obligation to receive and forward all merchandise except dangerous goods. All shipments must be treated with equal care. Maximum charges have been fixed under the provisions of the Railways Act, 1921. These cannot be exceeded. In certain cases, however, the companies may charge rates lower than the standard, known as exceptional rates, within certain limits. Users may also apply at any time to the Railway Rates Tribunal for the introduction or modification of exceptional rates. The Minister of Transport has power to refer to the Tribunal new exceptional rates reported to him if he is of the opinion that such new rates affect prejudicially any class of users of the railway. Rates must be recorded in a public rate book. Exceptional rates which are more than 40 per cent. below the standard rate can only be amended with the sanction of the Tribunal. Sections 58 and 59 of the Railways Act, 1921, contain machinery for ascertainment by the Rates Tribunal of the standard revenue. The standard revenue, broadly, is 1913 revenue plus interest on new capital expenditure. The Railway Rates Tribunal must review annually the net revenue of each of the companies, and if this is in excess of the standard revenue for the year they must reduce the charges to a level which in their opinion will reduce such excess by 80 per cent. If the standard revenue is not earned, the Tribunal may make such modifications in the charges as will enable it to be earned in the following year. The standard revenue is not guaranteed by the State. The effect of the provisions is to fix the maximum profits of the railway companies which may not be exceeded. In prosperous times, when the standard revenue is exceeded, the charges must be reduced and the railway companies are not entitled to take advantage of the surplus which might reasonably be earned in good years to make good the deficiency suffered in bad years. When trade is bad and the standard revenue is not obtained, the Tribunal has power to increase the charges, but for commercial reasons this is impracticable and therefore the standard revenue is not earned.

The railway companies must compile their accounts in the form directed by the Minister of Transport, and publish them annually.

Up to 1928 the railway companies were not allowed to organize

road transport undertakings, and this restriction placed them for a long time at a disadvantage in meeting motor transport competition.

## 2. *The capital invested in the British railways.*

The total capital invested in British railway companies in 1931 was as follows:

£1,095,090,435 consisting of  
 £309,100,918 Debentures and  
 £785,989,517 Shares.

This capital was divided among the different groups as follows:

Great Western Railway . . . . .	£147,426,401
London, Midland, & Scottish Railway . . . . .	£413,778,857
London & North Eastern Railway . . . . .	£376,845,174
Southern Railway . . . . .	£157,040,003

All new equipment is financed out of fresh capital issues and only temporarily out of reserves:

Interest payments in 1931 were as follows:

£34,359,288, consisting of  
 £11,937,442 Debentures and Loans, and  
 £22,421,846 Dividends.

The average rate of interest between 1925 and 1931 varied from 4.32 per cent. to 3.17 per cent. There is no State guarantee of railway debts, capital, or interest. In recent years, however, the State has guaranteed a part of the interest payment in order that the railways may obtain the necessary capital for carrying out certain work.

Annual expenditure for the upkeep and renewal of material has decreased slightly during recent years but is still high:

1927 . . . . .	£21,242,696
1928 . . . . .	£21,160,413
1929 . . . . .	£21,210,624
1930 . . . . .	£19,824,314
1931 . . . . .	£18,067,775

The figure for 1931 is made up as follows:

Great Western Railway . . . . .	£3,215,240
London, Midland, & Scottish Railway . . . . .	£6,565,551
London & North Eastern Railway . . . . .	£5,078,157
Southern Railway . . . . .	£3,208,827

Expenditure on new construction has shown a tendency to increase:

1928	.	.	.	.	£3,621,541
1929	.	.	.	.	£4,688,231
1930	.	.	.	.	£9,426,129
1931	.	.	.	.	£7,545,148, including
£3,793,838 for the Great Western Railway.					

*Financial obligations of the railways towards the public authorities.* At the present time there is no tax on transport. Up to 1928 such a tax existed on certain passenger fares and brought in a revenue that year of £372,348. By the Finance Act 1929 this tax was, however, abolished, on condition that the railway companies capitalized 75 per cent. of the saving thus made and spent it on railway improvement with a view to relieving unemployment. The railways were likewise relieved of 75 per cent. of the local rates on condition that the sums thus saved should be devoted to the reduction of the transport charges for certain goods such as coal, iron, and agricultural produce. The railways are, however, subject to State taxation which, according to the Salter report, amounted to £3,500,000 in 1931. They are also compelled to maintain all the roads of approach to the railways as well as level-crossings, the cost of which is estimated at from £110,000 to £120,000. The railways receive no subsidies, but the cost of all services which they are obliged to give the State (transport of troops, &c.) is refunded to them.

### 3. *The decline in traffic.*

Goods traffic on the British railways has decreased in recent years as follows:

1929	.	.	.	.	378,064,000 tons
1930	.	.	.	.	293,409,000 „
1931	.	.	.	.	258,761,000 „

The number of ton-miles dropped from 17,318,306,000 in 1929 to 14,896,260,000 in 1931.

Passenger traffic has likewise fallen:

1929	.	.	.	.	813,925,000 passengers
1931	.	.	.	.	743,801,000 „

Passenger traffic on the Great Western Railway has fallen from 114,521,000 to 98,159,000, i.e. a decrease of 14 per cent. Traffic on the London and North Eastern Railway has fallen from 200,091,000 to 176,715,000, representing a decrease of 11 per cent.

Receipts have likewise decreased as follows:

1931	.	.	.	.	.	£153,046,963
1932	.	.	.	.	.	£140,147,278
					representing a difference of	£12,899,685.

The causes of this depression should be sought in:

- (a) the economic crisis which has affected transport in the same way as all other branches of British economic activity. The railways show a smaller deficit in places where the crisis is less acute; since 1930 the Southern Railway has only lost 1 per cent. to 2 per cent. of its passenger traffic;
- (b) the development of motor transport.

## II. MOTOR TRANSPORT

### 1. *The importance of the British road system as regards both development and expenditure.*

(a) *Development.* At the present time there are 177,000 miles of roads in Great Britain, of which 43,000 miles are classified and 134,000 unclassified. Of the 43,000 miles of classified roads, about 26,600 miles are listed as 1st class and 16,400 miles as 2nd class. Classification is based not on differences of quality but on traffic, with a view to establishing the proportion of upkeep costs to be borne by the local and central authorities respectively. These classified roads are not all equally adapted to motor transport. Many of them are in a good state of repair and fulfil the purposes for which they are intended, but many others need to be improved, particularly as regards metalling, strengthening bridges, and the suppression of level-crossings.

(b) *Expenditure.* The capital invested in the roads is estimated at between £1,600,000,000 and £2,000,000,000. The annual expenditure for upkeep and construction of new roads is estimated at £60,000,000. In 1900, i.e. before the introduction of the motor-car, this expenditure amounted to £15,300,000 or, on the basis of

1925 prices, £23,700,000. There has, therefore, been an increase of £45,000,000 or, on the basis of 1925 figures, £36,000,000.

There is a divergence of opinion between railway and road interests as to the apportionment of this sum. The road interests claim that they should only pay the difference between the old and new expenditure since persons other than motorists used the roads before the development of motor traffic. And since the revenue from the tax on fuel (£31,000,000) and from the taxation of motor vehicles (£28,000,000) totals £59,000,000, they hold that motor transport is paying more than its share of the cost of upkeep. The railway representatives point out, on the other hand, that motor transport ought also to contribute to the amortization of the initial cost of the roads as the railways do in regard to their permanent way.

The representatives of motor interests reply that it would be difficult to establish these initial figures and, moreover, that many different types of users make use of the roads. Both road and rail interests, however, agree that light vehicles are proportionally more heavily taxed than heavy vehicles. The railway representatives regard this as a sort of luxury tax of which the proceeds need not be applied to the roads, and ask that additional taxation be placed on heavy vehicles.

## 2. *The development of motor traffic and its effect on railway transport.*

In 1931 the number of motor vehicles in use in Great Britain was 1,570,173, made up as follows:

Private cars . . . . .	1,154,709
Motor-buses . . . . .	49,910
Lorries . . . . .	365,554

The only restriction placed upon bus services for passenger transport was the obligation to obtain a licence issued by the Area Traffic Commissioners. Goods transport, on the other hand, did not require a licence, was under no obligation to operate, carry, publish time-tables or tariffs, establish minimum and maximum rates, or put new lines into service. These exemptions represented a great advantage from which the railways did not benefit.

The railway companies estimate that their annual loss due

to motor transport between 1923 and 1929 was £10,000,000 in respect of passenger traffic and about £6,000,000 in respect of goods traffic between 1923 and 1930. The total estimated annual loss on net revenue at the end of that period, therefore, was £16,000,000. It is calculated that 70 per cent. to 80 per cent. of the goods carried by road are carried in lorries operated by private traders for their own requirements. Even bulk goods have been diverted to motor transport over short distances up to 40 miles. On the other hand, motor transport has brought a certain amount of traffic to the railways which carry 9 million tons of road construction material annually. However that may be, it is the passenger traffic that has been most strongly affected.

### III. ROAD AND RAIL

1. *The efforts of the railways to adjust themselves to the new situation, either by modernizing their methods or by collaborating with road transport.*

(a) *Modernization.* One of the questions which has received the special attention of the British railways is that of the time taken for the delivery of goods. The railway companies have replaced their horse teams by motor-lorries and have extended the areas of collection and delivery. They have improved in particular their container services which have been developed probably more than in any other country and are much in favour with users. Special wagons have also been constructed for the transport of milk so as to keep this traffic with the railways. These are tank wagons which can be used on road and rail alike. A number of secondary stations have been closed and tariffs reduced for both goods and passengers. The reductions in passenger traffic apply more particularly to collective tickets. Under the Railway (Road Transport) Act of 1928 the companies are authorized to organize bus services, and in most cases they have collaborated with motor transport concerns.

(b) *Collaboration.* The railway companies have acquired a part interest in many already existing motor transport undertakings, and the services of the two means of transport are now introducing measures of co-ordination on the following lines:

- (i) Issue of tickets available for use on road or rail.
- (ii) Joint time-tables for passenger services.
- (iii) Joint utilization of equipment.

However, in passenger traffic over long distances collaboration is not yet very close, and still less so in goods traffic where there is no concordance of rates.

## 2. *Action taken by the public authorities.*

In Great Britain the road and rail problem aroused public interest at a comparatively early stage, and the public authorities have endeavoured to find a satisfactory solution. As early as April 24th, 1928, in the House of Commons Mr. Winston Churchill, Chancellor of the Exchequer, said: 'It is the duty of the State to hold the balance even between road and rail.'

In 1930 the *Road Traffic Act* was published, comprising over 120 sections with five schedules. This Act marked a real advance towards the establishment of order in a system which had previously lacked organization. It fixes the maximum weight and dimensions of vehicles; the maximum weight of any vehicle being 22 tons. The maximum speeds of vehicles are also defined. They vary from 30 miles per hour in the case of light lorries up to an unladen weight of 2½ tons, down to 3 miles per hour in the case of very heavy vehicles, this minimum only being applicable in special cases. The working hours of drivers are regulated, and this measure brings the conditions of employment in the road transport industry much more into line with those prevailing in the railway industry. Area Traffic Commissioners are made responsible for conducting periodical inspections of road motor vehicles with authority to carry out their inspection at any time *en route*. Although primarily designed in the interests of public safety, this latter measure also had the effect of preventing undercutting of railway rates by the use of old or dilapidated vehicles. The Act also contains provisions regarding the physical fitness and age of drivers. Lastly, it provides for compulsory insurance against third-party risks. The Road Act did not, however, make any provision for the co-ordination of railway and road services, nor did it stipulate the fixation of road transport tariffs. Road transport operators continued, therefore, to enjoy considerable liberty.



Stricter regulations are, however, imposed upon passenger transport. The Area Commissioners have power to determine whether a service shall run or not, having regard to the requirements of the area under their control. They can likewise decide as to the elimination of unnecessary existing services or their co-ordination with other means of transport. They also have power to control tariffs with a view to protecting the other means of transport from ruinous competition. These Traffic Commissions were formed under Art. 63 of the Road Traffic Act, and consist of three members. Each of them administers one of the following areas: Northern Traffic Area; Yorkshire Traffic Area; North-Western Traffic Area; West Midland Traffic Area; East Midland Traffic Area; Eastern Traffic Area; South Wales Traffic Area; Western Traffic Area; Southern Traffic Area; South-Eastern Traffic Area; Metropolitan Traffic Area, i.e. eleven areas in England and Wales, and two in Scotland: Northern Traffic Area; Southern Traffic Area.

Despite all its advantages, the Act of 1930 still left a number of problems untouched. The Royal Commission which was formed in 1929 asked for the creation of a Committee consisting of representatives of railway and motor transport interests. A committee was formed under the Chairmanship of Sir Arthur Salter, and published the *Report of the Conference on Rail and Road Transport*. As a result of the recommendations contained in this Report a *Road and Rail Traffic Bill* was introduced in the House of Commons on April 7th, 1933, and enacted in November of the same year. This Act is in no way intended to hamper motor traffic; its sole purpose is to regulate competition between road and rail so that such competition may take place under equal conditions for all. *The Act is divided into three parts:*

*Part I* deals with motor-car licences: a licence to operate must be obtained before a motor transport service can be opened. The authority issuing this licence is the Chairman of the Traffic Commission in each of the areas created in 1930. There are three types of licence bearing the distinguishing letters A, B, and C. The first or Public Carriers' Licence is valid for two years, and must be obtained by carriers transporting goods for third parties; the second or Limited Carriers' Licence is only valid for one year and

applies to vehicles carrying goods either in connexion with the owner's business or for hire or reward; the third, which is valid for three years, applies to manufacturers or enterprises using their own vehicles for their own purposes, described in the Salter Report as 'Ancillary Users'. To settle any dispute which may arise in connexion with the issue of licences, an Appeal Tribunal is to be formed consisting of three members, one of whom shall be a person of legal experience.

*Part II* deals with railway traffic. The railways will in future be entitled to grant special rates to any trader after approval by the Rates Tribunal. Any trader may, however, oppose application of a special rate if he considers it contrary to his interests. The railway companies may, without the consent of the Rates Tribunal, introduce any exceptional rate not more than 40 per cent. below the standard rate.

*Part III* provides for the creation of a Transport Advisory Council which will advise the Minister on questions of transport collaboration. This Council will include representatives of the public authorities and representatives of all the different means of transport: motor transport, railways, and canals.

Thus, efforts made in Great Britain in recent years have resulted in a closer collaboration between the railway companies, a strict control of motor transport, and the adoption of fiscal measures to ensure that all road expenditure is paid by motor transport on a commercial basis.

# IRISH FREE STATE

## I. RAILWAYS

THE Great Southern is the only company having its entire railway system within the territory of the Irish Free State. It also operates the Irish section of the railway from Fishguard to Ross-lare. The other companies have lines extending into Northern Ireland.

However, in the following pages, no distinction is made between lines in the Free State and lines in Northern Ireland except in respect of mileage.

### 1. Mileage (first track) open to traffic at the end of 1932.

	<i>Irish Free State</i>	<i>Northern Ireland</i>	<i>Total</i>
Great Southern . . .	2,184 miles	..	2,184 miles
Great Northern . . .	229 „	332 miles	561 „
Other Railways <sup>1</sup> . . .	255 „	23 „	278 „
	2,668 miles	355 miles	3,023 miles

### 2. Legal status.

The legal status of the railways is laid down by the Railways Act 1924. This Act made compulsory the amalgamation of all the companies whose lines were situated within the borders of the Irish Free State, to the exclusion of those having lines extending into Northern Ireland. The new company resulting from this amalgamation took the name of 'Great Southern Railways Company'. The Railways Act 1924 contains similar clauses to those of the Railways Act 1921 of the United Kingdom, except that the Tribunal specified in the Free State Act is vested with exceptionally wide powers and has been entrusted with completing the amalgamation operations.

<sup>1</sup> County Donegal Railways Joint Committee; Dundalk, Newry, and Greenore Railway; Londonderry and Lough Swilly Railway; Sligo, Leitrim, and Northern Counties Railway.

3. *Financial situation.*(a) *Capital expenditure.*

Great Southern Railway: £30,047,572 (1928)

£29,957,617 (1932)

Great Northern Railway: £9,894,429 (1928-32)

(b) *Expenditure arising out of financial charges.*

	1928	1929	1930	1931	1932	
Rentals, fixed charges	49,143	49,016	78,602	67,999	117,990	} Great Southern
Interest and dividends	804,250	804,783	802,217	761,811	363,774	
	853,393	853,799	880,819	829,810	481,764	
Rentals, fixed charges	11,298	22,322	17,259	19,126	20,136	} Great Northern
Interest and dividends	329,932	329,932	269,172	228,665	128,444	
	341,230	352,254	286,431	247,791	148,580	

(c) *Total traffic expenditure (gross).*

	1928	1929	1930	1931	1932
Great Southern	3,355,148	3,155,117	3,056,974	2,833,113	2,624,820
Great Northern	1,294,192	1,255,040	1,238,923	1,155,857	1,094,355

(d) *Net revenue receipts from railway operation.*

	1928	1929	1930	1931	1932
Great Southern	764,552	818,998	743,635	641,767	404,843
Great Northern	241,029	266,782	197,247	192,564	68,172

(e) *Net financial results of business other than railway operation.*  
(Deficit figures in italics.)

	1928	1929	1930	1931	1932
Great Southern:					
Passenger road vehicles	1,293	9,897	33,247	16,250	2,799
Canals	7,356	6,512	6,303	5,160	4,908
Docks, harbours, and wharves	2,720	3,164	4,322	5,711	4,987
Hotels and restaurants, including dining cars	9,054	17,936	14,195	10,666	7,006
Great Northern:					
Passenger road vehicles	..	395	13,120	13,370	38,625
Hotels and restaurants, including dining cars	4,131	3,567	737	1,636	209

(f) *The downward movement of the total net receipts checked by the relative stability of the miscellaneous receipts.*

	1928	1929	1930	1931	1932
	<i>Great Southern</i>				
Total net receipts	764,823	817,361	713,958	625,312	404,753
Miscellaneous net totals	103,116	113,851	114,571	113,132	119,858
Total net income	867,939	931,212	828,529	738,444	524,611
	<i>Great Northern</i>				
Total net receipts	245,160	270,744	184,864	177,558	29,756
Miscellaneous net totals	65,531	66,226	62,035	59,428	64,453
Total net income	310,691	336,970	246,899	236,986	94,209

(g) *Payments received under the Irish Railways (Settlement of Claims) Act 1921.*

## GREAT SOUTHERN

## GREAT NORTHERN

1928	1929	1930	1931	1932	1928	1929	1930	1931	1932
..	..	..	50,000	..	30,000	15,000	40,000	10,000	38,430

(h) *The movement of traffic; effects of the depression.*

	1928	1929	1930	1931	1932
	<i>GREAT SOUTHERN</i>				
<i>Passengers</i>					
1st class	482,545	577,892	444,685	411,220	348,554
2nd "	109,388	81,128	36,878	..	..
3rd "	9,466,975	9,754,112	8,355,797	7,932,434	7,572,818
Workmen	149,350	187,744	109,644	..	..
Season tickets <sup>1</sup>	2,833,800	3,178,200	3,625,200	3,541,800	3,367,200
Total	13,042,058	13,779,076	12,572,204	11,885,454	11,288,572
Goods (in tons)	2,498,024	2,468,251	2,389,655	2,290,032	2,049,628
Live stock (heads)	2,740,081	2,504,283	2,328,700	2,003,753	1,421,379
	<i>GREAT NORTHERN</i>				
<i>Passengers</i>					
1st class	69,636	68,071	56,983	52,526	43,579
2nd "	364,493	311,593	260,064	224,311	182,114
3rd "	4,891,299	5,120,318	4,845,712	4,760,375	4,449,162
Workmen	402,944	481,326	532,102	499,198	417,578
Season tickets <sup>1</sup>	2,629,800	2,703,600	2,613,000	2,706,000	2,920,800
Total	8,358,172	8,693,908	8,307,861	8,242,410	8,013,233
Goods (in tons)	997,419	1,056,835	967,760	959,030	784,820
Live stock (heads)	524,032	519,544	499,634	445,358	373,516

<sup>1</sup> Equated to the basis of 600 journeys per season ticket per year.

The Railways Act of 1933 considerably modified the situation of the Great Southern. Under this Act the nominal value of the different classes of shares and debentures was arbitrarily reduced as follows: by 90 per cent. in the case of the ordinary shares, by 65 per cent. in the case of the 4 per cent. preference shares, by 50 per cent. in the case of the 4 per cent. guaranteed preference shares, and by 15 per cent. in the case of the 4 per cent. debentures. The total capital which amounted to £25,044,758 at December 31st, 1933, has thus been reduced to £11,568,591. Furthermore, the Railways Tribunal in December 1933 fixed the standard revenue forming the basis of calculation of the tariff structure at £561,188 instead of £1,169,899, thus only permitting the payment of a dividend of 5 per cent. on the ordinary shares which, moreover, had already been reduced by nine-tenths of their nominal value. The Company had asked the Tribunal to fix the standard revenue at £638,981 which would have made it possible to pay a dividend of 15 per cent. on this class of share.

Further, the new Act made the Company responsible for payment to the companies it had absorbed at the time of the amalgamation of the dividends due to them under the baronial guarantees they held in the areas served by their lines. According to a clause of the Railways Act of 1924, these dividends, which amounted to £47,288 per year since 1929, were to be paid by the Treasury until 1934. The Government, on the other hand, undertook to relieve the Company of an outstanding debt of £285,900. The saving of some £15,000 of interest payments thus realized will, however, probably be more than counterbalanced by certain new expenditure required in connexion with a scheme to be carried out in collaboration with the representatives of the unions of railway employees. This scheme, which is governed by the terms of the Railways Act of 1924, provides for the creation of a super-annuation fund to be maintained by contributions from the interested parties. The total of these charges is estimated at £16,000 per year.

The Act of 1933 contains certain clauses authorizing the Company to close branch lines and suppress services which do not pay, notwithstanding any previous provisions to the contrary. The onerous conditions attaching to these rights, however,

render them in most cases of little value to the Company. Before any measures of this kind may be taken, the necessary authority must first be obtained from the Minister, but such authority is only granted on condition that the services which have been suppressed are replaced by new ones and that compensation is paid to the employees affected by the measure in question.

Lastly, the new Act leaves it to the Minister to decide whether or not flat rates shall be introduced irrespective of distance.

## II. MOTOR TRANSPORT

### *Motor transport legislation.*

The two following laws have been passed in regard to highway transport: Road Transport Act, 1932, Road Transport Act, 1933.

The 1932 Act regulated passenger transport, whilst the 1933 Act introduced regulations for goods transport and made certain amendments in the 1932 Act.

The present regulations are as follows:

(a) *Transport of passengers and their luggage.* A distinction is drawn between continuous, seasonal, and occasional services; the licences issued in respect of all transport enterprises only, however, cover two categories of service, i.e. annual and occasional services, seasonal services being included in the first category. Licences are issued by the Minister of Industry and Commerce on application. They may be refused on grounds of public interest, this reservation being made with a view to avoiding any overlapping with other road services or other means of transport as well as to guaranteeing the safe and proper operation of the services contemplated. In the case of existing services, however, the grounds for refusal on the part of the Minister are limited to those of safety and efficiency of operation. Licences to operate are valid up to the following October 31st; in the case of renewal they expire on the October 31st following the date of renewal. The date of seasonal licences, however, is fixed for the first day of the season after the October 31st in question. The licences may specify not only the route, frequency, and duration of service and number and type of vehicles, but also the publication of tariffs

and time-tables, the notification of any changes therein to the Minister, and, finally, the rates, wages, and working hours of employees. Licences are personal and can only be transferred by the Minister. When any decision is taken in regard to the issue or renewal of a licence, account has to be taken of whether the vehicles used are manufactured or kept in repair by national labour. The Minister may specify the accounts to be shown by any transport enterprise for the conveyance of passengers as well as the maximum tariffs and the manner of their application.

(b) *Goods transport.* The regulations do not apply to the transport of goods supplied by the owner of the lorry (*Werkverkehr*) to his own customers, nor to the carriage of mail under contract with the Minister of Posts and Telegraphs, nor to the transport of goods in vehicles primarily intended for the conveyance of mail but authorized to carry such goods under the terms of the above-mentioned contracts.

The following, on the other hand, are expressly included in the regulations: all other transport operations effected in or by means of mechanically propelled vehicles, including feeder services operated by railway, canal, or navigation companies, whether in the form of subsidiary or auxiliary services or through a third party acting in their name.

Traffic within a radius of 15 miles of Dublin and Cork and within 10 miles of each of the ten other principal ports is, however, exempt from all the obligations set forth in the Articles grouped under Title II of the Regulations applying to goods transport by road.

The Road Transport Act, 1933, differentiates between: (a) existing services and proposed services; (b) 'authorized companies' and all other applicants for licences. The definition 'authorized company' given in the Road Transport Act, 1932, includes only those companies which were authorized under a Royal Charter or Statutory Order to carry on the business of carrying for reward otherwise than by road transport or by sea, that is to say, railway companies.

All applications for licences must be accompanied by the following information:

The areas in which the transport operations are to be effected.



Classes of goods to be transported.

Applications from 'authorized companies' and existing transport enterprises are in principle favourably received by the Minister. Existing enterprises must, however, submit their applications before a certain date. In all other cases, particularly when it is proposed to open a new service, the Minister must satisfy himself that the existing facilities are inadequate having regard to the areas served and classes of goods carried. In that event he invites an 'authorized company' chosen by himself to establish services which will meet requirements. If, at the end of a specified period, the 'authorized company' does not act on such invitation, the Minister may grant the licence for which application has been made, if he considers it in the public interest. These provisions have the effect, whenever the creation of a new service is contemplated, of giving the railways a right of priority of which they rarely fail to take advantage.

The provisions applying equally to the transport of passengers and goods, and the compulsory transfer of licences to 'authorized companies', are dealt with farther on in the present report.

The holders of licences are bound to transport and grant equality of treatment. The Minister may also prescribe: the wages and conditions of work of employees; approval of all agreements entered into with other persons effecting transport operations by rail, road, air, or water; utilization of vehicles built or kept up by national labour. Furthermore, the Minister may amend the terms of the licence at any time during the period of its validity. The duration of a licence is twelve months starting to run from the date indicated on it, unless the holder of the licence has applied for its renewal, in which case the duration is likewise twelve months from the date of expiration of the original licence. Licences can only be transferred by the Minister who is bound to sanction such transfer when there is also a transfer of ownership, provided the acquirer of that ownership is a relative of the holder of the licence or has become entitled to it through a will or intestacy or is an 'authorized company'. Every vehicle licenced to carry goods must bear a special plate issued by the *Gárda Síochána* (Civic Guard) which is vested with very wide powers of control and inspection.

Any transport enterprise for the carriage of goods by road which is under or comes under the orders of an 'authorized company' or a navigation company, whether by transfer or by direct or indirect control, must, within a period of at least three months, as ordered by the Minister, submit to the Railway Tribunal proposals as to goods classification. After the Tribunal has taken its decision, a similar period is allowed to the enterprise in which to file its tariffs for confirmation by the Tribunal. The Tribunal reserves the right to amend both the goods classification and the tariffs. Their publication is compulsory, but it should be noted that the tariffs established in this way are maximum tariffs.

(c) *Provisions concerning the compulsory transfer of goods and passenger licences.* On application by an 'authorized company', the Minister may transfer to that company a goods or passenger licence, or limit the number of authorized classes of goods or areas of operation. Such application is also admissible if made by the holder of the licence. In the case of passenger licences, however, no application by an 'authorized company' is admissible during the period commencing with the expiration of one year after the vote of the Road Traffic Act, 1933, and ending with the expiration of the third year after that date. The above transfers and limitations are subject to compensation payable by the beneficiaries, the amount of which is fixed on request of the Minister by an arbitrator appointed by a Reference Committee. This Committee consists of the Chief Justice, the President of the High Court, and an officer of the Minister appointed by the Minister. Compensation is likewise payable to employees by the beneficiaries of the transfer or reduction, in the case of dismissal within the six months following the date of such transfer or reduction and, in the event of their re-employment by the beneficiary, in the case of dismissal within two years from the date on which such employment commenced, on condition that they had been employed continuously for a period of five years in the enterprise of which the licence was transferred or modified. The compensation payable is one-twelfth of the annual remuneration of the employee for every completed year of service.

## MOTOR VEHICLES

Year	Private cars		Motor Hackneys having		Road locomotives, motor tractors, &c.				Motor cycles	Tax-exempt vehicles
	less than 6 seats	more than 6 seats	Lorries	General haulage	Ploughs	Other tractors				
1925	16,211	8,208	4,950	98	71	25	7,369	1,215		
1926	19,848	7,999	5,468	106	188	46	7,788	983		
1927	22,415	7,256	6,017	92	530	255	7,824	1,075		
1928	26,327	5,671	6,496	62	442	109	7,853	1,086		
1929	29,435	5,598	7,204	55	426	145	7,591	986		
1930	32,632	5,150	7,695	79	378	146	7,039	801		
1931	35,675	4,610	8,278	100	342	159	6,395	807		
1932	35,731	4,369	8,287	109	311	150	5,668	836		

Population according to 1926 census: 2,971,992  
 or 16.7 vehicles per 100 of population excluding motor cycles.  
 19.0 " " including " " " "

## ROADS

	Mileage	Upkeep expenditure in £.			
		1930-1	1929-30	1928-9	1927-8
Main roads . . . . .	9,739 miles	906,782	874,536	700,957	661,947
County roads . . . . .	36,235 "	632,606	611,855	613,792	581,344
Urban roads . . . . .	354 "	36,864	50,401	59,462	53,924
County borough roads . . . . .	328 "	100,176	70,385	83,349	104,046
Total . . . . .	46,656 "	1,676,428	1,616,337	1,466,560	1,401,261

## Road Fund Receipts and Payments, 1926-31

	1925-6	1926-7	1927-8	1928-9	1929-30	1930-1
<b>Receipts</b>						
Motor taxation . . . . .	£517,000	£612,000	£666,000	£730,000	£868,000	£943,000
Contributions under Damage to Property (Compensation) Act, 1923 . . . . .	279,366	269,350	294,421	148,442	28,883	..
Advances under the Road Fund (Advances) Act, 1926 . . . . .	..	..	390,000	400,000	..	..
On Account of United Kingdom Road Fund at 31 March 1922 . . . . .	..	..	200,000	..	..	728
Loans repaid . . . . .	8,428	7,002	840	..	951	3,725
Interest . . . . .	..	..	3,367	555	1,497	..
Other receipts . . . . .	..	..	..	9,347	..	..
Total receipts . . . . .	£804,794	£888,352	£1,554,628	£1,288,344	£899,331	£947,453
<b>Payments</b>						
Grants paid for . . . . .						
1. Road improvement . . . . .	673,471	736,098	1,518,667	932,146	358,555	450,568
2. Road maintenance . . . . .	..	..	86,453	261,031	290,610	357,004
3. Destroyed or damaged bridges . . . . .	221,203	78,668	60,482	9,406	3,383	6,266
Loans . . . . .	..	..	2,835	..	..	139
Repayment of advances under Road Fund Act . . . . .	..	..	150,000	..	..	..
Cost of collection of motor licence and other licence duties by local authorities . . . . .	9,255	10,609	14,054	12,000	7,775	12,182
Interest on advances . . . . .	8,108	8,448	14,805	19,807	35,200	35,200
Administrative and miscellaneous expenses . . . . .	2,549	3,092	3,025	15,499	16,424	15,913
Other charges . . . . .	..	..	..	3,093	4,284	4,825
Total payments . . . . .	£914,676	£836,915	£1,859,411	£1,253,942	£716,231	£882,114
Balance at 31st March . . . . .	£406,482	£457,919	£153,136	£187,538	£370,638	£435,977

## III. ROAD AND RAIL

The road and rail situation has certain special characteristics in Ireland owing to the fact that the railways do not serve all the important towns. It was logical, therefore, that traffic should go to the means of transport offering the greatest facilities, and that, having once captured that traffic, the means of transport in question should endeavour to retain it. This situation caused the railways some anxiety, and the legislative measures, the details of which have been given above, enabled them to take steps with a view to co-ordination, first by obtaining financial control of the leading motor transport passenger services and later by absorbing them altogether. At the present time it may be said that all passenger transport is in the hands of the two great railway companies and the Dublin United Tramways Company. In goods transport, however, it should be noted that at the beginning of 1933, according to the Minister of Industry and Commerce, 80 per cent. of the goods transported by road were conveyed in vehicles used by private owners for the purposes of their own business or trade (*Werkverkehr*) and therefore not subject to any regulations.

Estimates of the traffic carried by motor-buses are as follows:

	1931	1932
Passengers . . .	72,587,365	58,319,649
Vehicle-miles . . .	30,091,652	27,069,907
Revenue . . .	£1,030,568	£900,492

# FRANCE

## I. RAILWAYS

### 1. *The French railways operated under a system combining private enterprise and State control.*

The French railways date from the beginning of the last century. In 1823 the first concession for a railway between Saint-Etienne and Andrézieux was granted by Royal Ordinance. In 1826 a concession was granted for a line between Saint-Etienne and Lyons, and between Andrézieux and Roanne in 1828. Progress was slow at first, but certain measures like the law of 1842 under the July Monarchy, the encouragement given to the railways under the Second Empire, and the big schemes drawn up by M. de Freycinet under the Third Republic, made possible the development of the French railway system which to-day comprises 42,000 km. of lines of general interest and 20,000 km. of local lines. All the principal railways in France converge on Paris, so that the railway system as a whole is very centralized. This may be explained by the predominant position occupied by the capital in the administrative, economic, and intellectual life of the country.

The railways of general interest may be divided into two classes: (1) railways conceded by the State to private companies; (2) State railways.

*The former*, comprising some 31,000 km. of line, are operated by the following five great companies: Est, Nord, P.L.M., Midi, and Paris-Orléans. The period of the concessions (99 years) expires between 1950 and 1960. These companies are commercial enterprises with share capital and debenture capital, administered by a Board of Directors who delegate their powers to a Management Committee which in turn appoints a Director of Services.

*The latter*, comprising the State Railway proper and the Alsace-Lorraine system, are 11,000 km. in length. These lines, which are under the control of the Minister of Public Works, have a manager, appointed by decree, assisted by a Railway Board of which the members are nominated by the Government. The State railway systems have debenture capital but no share capital.

The organization of both these groups is governed by the

Convention of June 28th, 1921, and the law of October 29th, 1921. Under this law each railway retains the right to organize and operate its own system, subject, however, to the control of:

- (a) a *joint administrative body*, consisting of a *Management Committee* whose decisions are taken by majority vote and apply to all the railways;
- (b) a joint financial organization, comprising a *common fund* into which the railways pay their surplus profits to cover the losses of other systems in deficit.

A Government Commissioner is a member of the Management Committee.

There is also a *Conseil supérieur des Chemins de Fer*, independent of the Management Committee, comprising, in addition to the representatives of the companies, delegates of the staff and representatives of the general public.

The law of July 8th, 1933, 'tending to adapt the great railway systems to present-day technical and economic requirements', introduced various amendments of the by-laws of the railway companies and of the Convention of 1921 which constitutes the charter of the Great Railways. These amendments include the appointment of State directors to each of the companies and the creation of a contracts and tenders commission, composed of State officials, with a view to more effective State control; modification of the management premium with a view to giving the companies a greater interest in operating results, with a corresponding renunciation on their side of a part of the indemnity paid by the State in respect of material taken over on termination of the concession; examination of the geographical lay-out of certain railway systems and amalgamation of the operation services of the Orléans and Midi companies, each of which, however, continues to be a separate entity; revision of the system of transport of postal packages with a view to its improvement through closer collaboration between the Postal administration, the railways, and other carriers.

These measures have for the most part been introduced by an addendum to the Convention of 1921. The study of the postal packages system, which is closely linked up with that of the conditions of transport of postal material and equipment, is not yet, however, terminated.

This joint organization of the different railway systems is likely to mark the opening of a period of increasingly close collaboration.

2. *The railways and the State bound by clearly defined obligations.*

The obligations of the railways are laid down in a series of legislative measures introduced at different times between 1842 and 1932, in which latter year a decree was issued reorganizing the State control of railways, and in the conditions of operation stipulated in the concessions (*cahiers des charges*) or Conventions accepted by the companies. There are three classes of obligations: technical, commercial, and financial.

(a) *Technical obligations.* The lay-out of the railway lines, construction work, and alterations of all kinds must be approved by the Administration. Additional work on existing lines must likewise be approved. The railways are obliged to accept concessions for new lines within the limits fixed by the Convention of 1921. The Administration may order a second track to be built. Time limits are set for completion of the initial construction work. The permanent way and its equipment must be maintained in a proper state of repair. Rolling-stock, its fitness for service, and any alterations in it are controlled by the public authorities. The minister may order the opening of new train services and alterations in time-tables, or issue regulations as to the running and make-up of trains.

(b) *Commercial obligations.* The railways must maintain a regular service and are subject to the general obligation to carry. Tariffs are fixed by the *Cahier des Charges*. Article 17 of the Convention of 1921 stipulates that tariffs shall be increased where necessary, to ensure a balance between the annual payments and receipts of the joint fund and reimbursement to the Treasury of the advances made by it to the joint fund. All proposals in this connexion are made to the Minister of Public Works by the Conseil Supérieur. The tariffs must be applied uniformly to all users. The railways are forbidden to grant preferential tariffs other than those expressly specified by the law. The Minister may order the lowering of certain tariffs in the general interest, and the railways may not apply for the raising again of tariffs lowered in this way until a certain time has elapsed. In towns of more



than 5,000 inhabitants the companies must undertake delivery and cartage services. The railways are compelled to grant reduced fares to certain users as follows: (a) soldiers and sailors ( $\frac{1}{4}$  fare); (b) inspecting officials (free); (c) postal officials (free); (d) prisoners and their guards ( $\frac{1}{2}$  fare); (e) reductions to large families and war wounded. The companies are obliged to carry the mails. All these obligations have been considerably extended during recent years.

(c) *Financial obligations.* Under the system introduced in 1921 the railways bear one-fifth of the initial cost of new lines. They must pay any surplus they may have into the joint fund. They are obliged to issue loans on behalf of the State when required, in order to cover certain expenditure for which the State is responsible. They may not issue loans without authorization. The type of security to be issued is decided by the Administration.

In consideration of these obligations, the railways receive certain *guarantees*. The State contributes four-fifths of the initial expenditure of the railways, and assists in the construction of second tracks by an annual payment equivalent to the interest on loans issued to finance the work. When necessary the State makes advances to the joint fund, to cover the different charges of the railway companies, including minimum dividends and management premiums. The terms of repurchase and taking over of material are fixed in advance. They include an annual payment payable up to the expiration of the concession and an indemnity comprising the refund of expenditure incurred in connexion with additional work and of movable property, particularly rolling-stock. The railways estimated the amount of this indemnity at about 12 milliard francs, but the law of July 8th, 1933, while amending the terms of the management in order to increase the interest of the railway companies in the operating results, suppressed the refund in respect of movable objects included in the inventory after January 1st, 1933.

The railways also contribute to the country's budget by the collection of certain *taxes*<sup>1</sup> (32.5 per cent. on passengers and luggage and 5 per cent. or 10 per cent. on goods).

<sup>1</sup> By the law of July 8th, 1933, the tax on passengers and luggage was brought back to the 1918 level of 12 per cent.

In 1930 the tax on the price of passenger and goods transport, collected direct from the public, brought in the following revenue:

Passengers . . . . .	frs. 1,081,000,000
Goods (fast service, <i>grande vitesse</i> ) . . . . .	„ 65,000,000
Goods (ordinary service, <i>petite vitesse</i> ) . . . . .	„ 703,000,000
	<hr/>
	frs. 1,849,000,000

Revenue from subscription payments in respect of stamp duty on shares and debentures, transfer fees, income tax in respect of transferable securities, the tax on redemption premiums of paid-off securities, and various other taxes, amounted to:

Inland revenue stamps, &c. . . . .	frs. 665,000,000
Consignment note and similar stamps . . . . .	„ 74,000,000
Losses incurred through various obligations (mails, soldiers, &c.) . . . . .	„ 850,000,000
	<hr/>
Total . . . . .	frs. 1,589,000,000
	<hr/>
Grand total of revenue from taxes . . . . .	„ 3,438,000,000

### 3. *The difficult financial and economic situation of the railways.*

(a) *Capital invested.* The total capital invested in the big railways on December 31st, 1930, was estimated at frs. 49,720,000,000, of which 16·7 per cent. (frs. 8,276,000,000) was invested by the State and other corporations and 83·3 per cent. (frs. 41,444,000,000) by the railways themselves. The capital investment in the great railways before the War amounted to frs. 19,813,000,000, of which frs. 14,587,000,000 or 73·62 per cent. was shares and bonds subscribed by the public. The railways' share has therefore increased from 73·62 per cent. to 83·3 per cent.

In 1932, capital charges were as follows:

Share capital charges . . . . .	frs. 152,000,000
Debenture capital charges . . . . .	„ 3,026,000,000
Premiums and miscellaneous appropriations . . . . .	„ 62,000,000
	<hr/>
Total . . . . .	frs. 3,240,000,000

Moreover, the capital of the railways has since been on the increase.

(b) *Operation.* In addition to these charges, the railways have entered upon a period of operating deficit:

1932: Operation receipts	. . .	frs. 12,341,000,000
Operation expenditure:		
Staff	. . . . .	„ 8,042,000,000
Other expenditure	. . . . .	„ 4,643,000,000
Net difference.	. . . . .	„ 344,000,000

To this deficit must be added the frs. 3,240,000,000 mentioned above (not including the joint fund charges amounting to frs. 425,000,000), making a total of frs. 3,584,000,000.

The period of deficit dates from 1929:

1929	. . . . .	+ frs. 326,000,000
1930	. . . . .	— „ 1,297,000,000
1931	. . . . .	— „ 2,625,000,000

If the joint fund charges are added, the annual deficit figures amount to:

1929	. . . . .	— frs. 189,000,000
1930	. . . . .	— „ 1,781,000,000
1931	. . . . .	— „ 3,100,000,000
1932	. . . . .	— „ 4,109,000,000

Receipts have decreased steadily as follows:

1930-1	. . . . .	by frs. 1,394,000,000
1931-2	. . . . .	by „ 2,057,000,000
1932-3	. . . . .	by „ 673,000,000

In three years, therefore, the total decrease of receipts amounted to frs. 4,124,000,000. The railways serving industrial districts have been most affected by this decrease:

Est and Alsace-Lorraine	. . . . .	30 per cent.
Nord	. . . . .	24 „
P.L.M.	. . . . .	23 „

The agricultural lines have suffered less :

Midi . . . . .	20 per cent.
Paris-Orléans . . . . .	15 „
State . . . . .	11 „

Many opinions have been expressed as to the cause of this deficit. Some blame the Convention of 1921 which they claim is impossible to apply. Others attribute the greater part of the depression to the public charges placed upon the railways, while still others impute it to the general economic crisis, or to motor transport competition, or to the investment policy, or to various other causes. Probably all these causes have had their share in the final result. The present study deals primarily with the road and rail aspects of the problem.

## II. MOTOR TRANSPORT

### 1. *The roads: their development and maintenance.*

Since the eighteenth century France has had a highway system worthy of the name. The opening of the *École des Ponts et Chaussées*, in the reign of Louis XV, established the tradition of a sound highway policy and the maintenance of a regular corps of engineers. The law of June 24th, 1836, completed the work of the preceding century by providing for the construction of district roads. If therefore the eighteenth century saw the creation of the national highway plan, it can equally be said that the nineteenth century saw the construction of the district and local road system. *At the present day France has about 650,000 km. of roads consisting of national highways, departmental roads, main district roads, roads of common interest, and ordinary district roads.* There are 80,000 km. of national highways. The French system is the most highly developed in the world as regards length of roads to area of country (France, 120 km. per 100 sq. km.; Great Britain, 95 km.; United States, 62 km.; Germany, 45 km.). In respect of length it takes third place after the United States and Russia.

The initial expenditure on the national highway system before the nineteenth century has been estimated at frs. 732,000,000. Between 1800 and 1900 it amounted to frs. 833,000,000 and

between 1900 and 1913 to frs. 46,000,000, i.e. up to the eve of the Great War, frs. 1,611,000,000. Since the War, expenditure on new construction has represented but a small percentage of the annual road costs, which amounted between 1920 and 1929 to frs. 62,000,000 of the new currency or about frs. 15,000,000 of the old. Road upkeep costs, which are increasing steadily, have been as follows:

1920 . . . . .	frs. 160,000,000
1925 . . . . .	„ 235,000,000
1929 . . . . .	„ 605,000,000
1932 . . . . .	„ 875,000,000

In order to obtain an accurate idea of the total expenditure incurred in 1932, the following amounts should also be included:

Staff . . . . .	frs. 60,000,000
General expenses . . . . .	„ 5,875,000
Roadmen . . . . .	„ 123,750,000
Subsidies to the City of Paris . . . . .	„ 8,865,000

making a total of more than frs. 1,000,000,000 over a period of nine months. Total expenditure for the year 1932 was estimated at more than frs. 1,400,000,000.

To the above sum should also be added 200 million allotted to the Minister of the Interior for subsidies to Departments, making a grand total of frs. 1,630,000,000 in 1932.

Expenditure on the departmental roads amounted to frs. 1,173,000,000 and on local roads to about frs. 1,500,000,000. In all, France spends frs. 4,400,000,000 per year on her highways and roads.

The above figure does not, however, represent the total annual expenditure made by the State. By the law of December 28th, 1931, further road expenditure amounting to frs. 750,000,000 is provided for under the heading of national equipment. Extraordinary expenditure during the period 1932-7 has also been authorized in the form of departmental loans amounting on an average to frs. 20,000,000 per department, i.e. frs. 2,000,000,000 for five years or frs. 400,000,000 per year.

The grand total of annual road expenditure in France is therefore roughly frs. 5,000,000,000.

2. *Motor transport development and legislation.*

The number of motor vehicles has rapidly increased :

1913	.	.	.	95,259	motor vehicles
1920	.	.	.	235,948	" "
1925	.	.	.	721,306	" "
1928	.	.	.	1,089,253	" "
Beginning of 1932	.	.	.	1,722,368	" "

The figure for 1932 is made up as follows :

Touring cars	.	.	.	.	1,249,375
Buses	.	.	.	.	40,800
Lorries	.	.	.	.	432,193

i.e. one motor vehicle per 24 of population or 41 vehicles per 1,000 of population.

Up to now, legislation in regard to motor transport has been very liberal.

Motor transport enterprises for the carriage of goods have complete freedom and are only subject to the provisions of the *Code de la Route* applicable to every motor-car owner. Since the passing of the law of August 21st, 1923, the State may grant subsidies to motor transport services for the conveyance of goods.

In passenger services a distinction is drawn between enterprises which receive subsidies and those that do not. Those of the first category must undertake to comply with certain rules as to the state of the vehicles, time-tables, tariffs, penalties in the event of interruption of service, and accountancy methods. They are also subject to inspection by the agents of the State. Transport enterprises of the second category had complete freedom and were only subject to the following formalities: declaration to the Prefect in each Department giving the number of vehicles, places and hours of departure and arrival; a further declaration to the Prefect in the event of any alteration regarding the above. The transport operator must take the necessary steps to ensure the safety and comfort of passengers and allow his vehicles to be inspected by the agents of the State. Drivers must have a special permit. The number and price of seats must be posted up inside the vehicles. In the event of alterations of prices, the new fares must be posted up a week in advance. Motor transport enterprises are only com-

pelled to operate within the capacity of the vehicles they possess. The use of a mixture of petrol and alcohol has become compulsory in fact and pneumatic tyres on all vehicles are also to be made compulsory.

Certain taxes and dues are levied on motor transport, but distinction must be drawn between those levied on other industries as well and those especially applied to motor transport.

The general taxes and dues include the following: (a) turnover tax and luxury tax levied by the State, which in 1930 amounted to about frs. 554,000,000; (b) tax on imported vehicles, which in 1930 brought in frs. 145,000,000; (c) tax on insurance premiums, frs. 44,000,000; (d) social insurance, frs. 140,000,000.

The special taxes paid by the motor industry are made up as follows:

Petrol tax . . . . .	frs. 1,893,000,000 <sup>1</sup>
Tax on lubricating oils . . . . .	„ 86,000,000
Circulation tax (registration fees) . . . . .	„ 1,114,000,000
Tax on drivers' licences . . . . .	„ 24,000,000
Road maintenance tax . . . . .	„ 100,000,000
<b>Total . . . . .</b>	<b>frs. 3,217,000,000</b>

Since 1930, motor transport taxation has become heavier, the increase being estimated at frs. 185,000,000 in 1932, making an approximate taxation total of frs. 3,400,000,000. Moreover, taxation is still on the increase,<sup>2</sup> and it would appear that the motor industry has now reached a point where it is paying a fair share of road upkeep costs.

### III. ROAD AND RAIL

#### 1. *Competition.*

It is difficult to estimate the damage caused to the railways by motor transport.

Studies conducted in regard to passenger traffic have given

<sup>1</sup> The petrol tax has been raised and the registration fee abolished as from February 1st, 1934.

<sup>2</sup> The law of February 28th, 1933, makes motor transport liable for the 2 per cent. turnover tax from which it was formerly exempt, and has placed additional taxes on heavy and cumbersome vehicles, calculated according to their weight and size.

results which vary according to the lines investigated. Over certain routes there has been a decrease of 20 per cent. to 25 per cent. from the time when motor transport competition first began to make itself felt. With a view to arriving at a more accurate result, the railways have calculated the number of passengers they would be carrying to-day on the basis of the pre-war annual increase of traffic; these calculations take into account net revenue and alterations in tariffs; they do not include the Alsace-Lorraine railways. If the pre-war rate of increase of traffic had continued, revenue would amount to about frs. 1,200,000,000 instead of frs. 920,000,000, i.e. a deficit of frs. 280,000,000 representing 30 per cent. of the present revenue. Expressed in passenger kilometres the difference would be 27.5 per cent. The deficit appears to be greatest on the local lines, which conveyed 9,000 passengers per km. in 1914 and now only carry 6,000. This decrease is no doubt due in a large measure to motor transport competition.

The railways have gone carefully into the question of motor transport competition in goods traffic. Their studies would appear to show that competition in this branch is more especially felt in live-stock traffic, removals, groceries, and wines, and generally speaking in all traffic where there is packing material to be returned. Whenever motor transport operators are assured of a return load they are willing to carry any class of goods whatsoever. It is estimated that this type of traffic amounts to 200,000,000 tons per year. The highest figure given as representing possible loss is frs. 600,000,000.

According to other calculations, traffic on the national highways in 1913 was 4,413,000,000 ton-kilometres gross, representing 1,293,000,000 pay-load tons. The corresponding figures for 1928 were 11,040,000,000 ton-kilometres gross and 2,752,000,000 pay-load tons of which 77 per cent. were conveyed by motor transport. The increase of pay-load tonnage in 15 years would therefore be 43 per cent. Total receipts in 1913 are computed at frs. 390,000,000 (present value) and frs. 651,000,000 in 1928. The loss of the railways would therefore only be frs. 261,000,000.

Taking the mean between these two figures, the Administration estimates the loss at frs. 410,000,000 i.e. frs. 220,000,000 in passenger traffic and frs. 190,000,000 in goods traffic.



With a view to modernizing their services, the railways have established reduced rates between certain stations. Grouping services have been improved in stations and the use of containers developed. Reduced rates have been introduced for empty packing-cases. In *Grande Vitesse* traffic a special tariff has been put into force, providing in principle for door-to-door service and intended to reduce the time taken for delivery. In passenger traffic reductions have been more especially introduced in respect of collective tickets. Parcels traffic has been speeded up and a long-distance combined transport and delivery services organized. The hours during which stations remain open have been increased. Numerous tests have also been conducted with rail-cars and road-rail wagons, and services of this kind are already in operation.

It must also be remembered that a certain volume of traffic has been brought to the railways by motor transport. In 1931 the subsidiary motor transport companies of the various railways conveyed 6,800,000 passengers, of whom a considerable number were either coming from or going to the railway. In goods traffic, motor transport has brought new traffic to the railways in the form of spare parts, materials used in motor-car construction, accessories, fuel, and the finished cars themselves. In 1931 the railways carried 2,100,000 tons of petrol, of which 86 per cent. (1,800,000 tons) were consumed by motor vehicles.

## 2. *Provisions regulating the technical and commercial operation of the railways, with a view to their modernization.*

These provisions, covered by the law of July 8th, 1933, are contained in the two decrees of December 30th, 1933, and January 19th, 1934.

The first of these decrees authorizes, in respect of railway tariffs, departure from the provisions of the *Cahier des Charges* and conventions with a view to simplifying and expediting the formalities required for the approval of tariffs. It stipulates in particular that the proposed tariff may be applied one month after its publication without express approval, if the Minister of Public Works has raised no objection; should the Minister raise an objection, he must either approve or refuse to approve the tariff in question within two months from the time of its publication. The

minimum period of application of goods tariffs has been reduced from a year to three months. Lastly, the tariffs may indicate the maximum and minimum limits within which the charges made may vary without special approval, subject, however, to their being posted up and a fortnight's notice being given to the Minister, and provided also the Minister raises no objection within that period.

The decree of January 19th, 1934, renders railway regulation more flexible from the point of view of technical and commercial operation, more particularly with regard to the employment of light vehicles and the adjustment of certain of the obligations placed upon carriers to the special characteristics of such vehicles. It provides, in particular, for the suppression of railway installations if necessary or even the suspension of service on certain lines and the organization of new services by other means of transport to replace them, i.e. road transport. It authorizes the reduction of the number of classes of passengers and, where the railway service is replaced by some other service, reduction of the quantity of luggage (30 kg.) which passengers are entitled to have carried free. It authorizes the replacement of trains by rail-cars and suppresses the obligation to run a minimum of three trains per day in each direction as laid down in the case of most local lines by the Conventions of 1883. It modifies the conditions governing the delivery of the receipt to the consignor, with a view to the simplification of dispatching operations in small stations.

These provisions, by freeing the railways from certain obligations which had been placed upon them by the Public Authorities as a consequence of their *de facto* monopoly, have enabled the French Railway Companies to make a start in the reorganization of their operating methods, particularly by the introduction of rail-cars. These rail-cars are employed on the main lines to link up Paris with the large provincial towns and to establish complementary services during the hours of light traffic, and on the local lines with a view to improving cross-country traffic relations and ensuring complete or partial operation of local services.

This reorganization, which must necessarily be gradual owing to the work, acquisition of material, and alteration of contracts

it involves, is to be facilitated and speeded up by the adoption of measures of co-ordination between road and rail transport.

### 3. *Co-ordination of road and rail transport.*

The conditions of road and rail transport co-ordination are governed by the decree of April 19th, 1934, which has still to be ratified by Parliament.

The objective is a suitable apportionment of traffic between the railways and motor transport respectively, and the provisions of the decree tend towards the accomplishment of that purpose through regional agreements entered into by the representatives of the two means of transport, the public authorities only intervening as arbitrator of differences.

The scheme will be carried into effect under the direction of a *Co-ordination Committee* consisting of five experts (including two representatives of the railways, two representatives of road transport interests having no contracts with the State, the Departments, or municipalities, and one representative of road transport interests having contracts of that kind), and an arbitrator, unani- mously designated by the five experts or, failing agreement between the experts, by the Minister of Public Works.

The main work of this Committee will consist in bringing about the conclusion of regional agreements between all the carrying interests concerned for the organization of public passenger and goods transport services by road and rail.

The ground will be prepared for these agreements in local or regional meetings of the representatives of the main railways, local railways, and road carriers—carriers having contracts with public bodies or otherwise—at which the transport situation as a whole will be examined and the representatives of users' interests consulted as to the requirements of the public.

If no agreement can be reached, the arbitrator will submit proposals to the Minister of Public Works for the maintenance or modification of existing services, or for the suppression of some of them or for the establishment of new services within a period specially fixed in each case.

The agreements or the proposals of the arbitrator will be

enforced after approval given by a decision of the Minister of Public Works.

In this connexion two points in particular should be noted: first, the ministerial decisions, approving the agreements or the arbitrator's proposals, will lay down the conditions to be complied with by public motor transport services notably in respect of timetables and tariffs, the obligation to give regular service and equality of treatment to users, and the acceptance of mail. Secondly, a further decree, still under consideration, may shortly compel these public services to insure themselves with an insurance company approved by the public authorities or, failing that, to furnish equivalent guarantees.

The decree only applies to public transport, i.e. to services offered to the public on a commercial basis, and not to private transport operation (particularly in the case of manufacturers or traders carrying in their own lorries or in lorries hired by them). Nor does the decree apply to exceptional passenger transport services, i.e. special services to meet needs which are not of regular occurrence.

The results to be obtained from this system depend entirely upon the way it is carried out.

The Minister of Public Works recently declared to the representatives of the constructors of commercial vehicles that if the new system tended towards a rational apportionment of traffic between road and rail, it should not lead to any marked decrease in the tonnage at present carried by motor transport services. It is also important that the public should not be deprived of the benefits they may reasonably expect from competition within proper limits between the various transport agencies. It will be for the carriers—and more particularly for the railways—to see to it that their traffic is not hampered by excessive rates, if only over a section of a given route. But since the users are not directly represented on the bodies appointed to prepare the agreements, it will be incumbent upon the Minister of Public Works to give due weight to their interests when the agreements or the arbitrator's proposals are submitted for his approval.

Taken as a whole, the new measures will certainly achieve interesting results. As the report explaining the decree of April

19th, 1934, points out, the recovery by the railway of the traffic which motor transport is to abandon in the future, particularly long-distance traffic, will give the railways as a whole higher net receipts than those previously derived from the traffic won over from them by motor transport, while the suppression of all or part of the railway services on lines or at points taken over exclusively by motor transport will be a definite saving for the railways. The whole life of the country should profit by this rationalized organization of the transport system in the direction of maximum efficiency.

# SPAIN

## I. RAILWAYS

1. *The first stages of railway development; changes in operating conditions due to political instability; adoption of the system of concessions to private companies under State supervision.*

The Spanish railways were not put into operation until fifteen years after those of the other nations of western Europe. In 1844 the first measures were introduced laying down the relations between the State and the railway constructors. A law of 1855 fixed the duration of future concessions at ninety-nine years. After the revolution of September 1868 the original legislation was considerably amended and the greatest possible freedom left to the companies, the State renouncing all right to participation in railway construction and operation. After the restoration of the monarchy, however, the legislation was once again changed by the promulgation of the general railway law of 1877, a great part of which remains in force to this day. This law authorized the construction and operation of railways by the State or by companies or private individuals; it laid down again that, in future, concessions would only be granted for ninety-nine years; it further reserved to the Government the right to intervene in the fixation of tariffs, to supervise the efficiency of services, and to check the receipts and expenditure of the companies. In 1918 post-war economic conditions led the Government to adopt certain further measures: by decree a first increase of tariffs was authorized; in March 1920 subsidies were granted to the companies, and in 1924 the Government began to associate itself more closely with the work of the railways. By a decree of July 12th, 1924, a new régime was established under which the State became responsible for ordering and paying for work carried out on the extension and improvement of existing railways, and for the purchase of material. While new construction work was to be done at the expense of the State, the companies, on the other hand, were made responsible for financing the upkeep of existing lines. The concessions of ninety-nine years were extended to all the railways, whilst the fixation and amendment of tariffs were

placed under the control of the Railways Board, a body consisting of representatives of the State and of all national interests. Any profits were to be shared by the concessionaries and the State; losses were likewise to be borne equally by the railways and the State. In order to obtain the necessary funds for alterations, a debt called the Redeemable State Railways Debt was formed, with all the privileges and guarantees of the other State debts. For purposes of application of the new régime, three different periods were laid down: (1) transition period; (2) provisional period; (3) final period. The new régime is still in the provisional period.

In the meantime the Spanish railway system is almost exclusively operated by private enterprise. There are, however, certain exceptions; the railway from Zumarraga to Zumaya (37 km.), for example, is operated under a concession by the Deputation of Guipuzcoa. The State itself owns 275 km. of railways consisting of five lines, three of which are standard gauge over a distance of 109 km. and the remainder narrow gauge. The 16,700 km. of permanent way are, however, the property of the North Company, the M.Z.A. (Madrid, Zaragoza, and Alicante Company), and the Andalusian Railway Company. There are 3.1 km. of railway per 100 sq. km. and 0.070 km. per 1,000 of population. The gauge of the Spanish railways is broader than that of the other European systems. Since 1927 it has been made compulsory for the railways to consume a fixed percentage of national coal.

2. *The heavy taxation of the railways; their difficult financial situation; the decline in traffic.*

(a) *Taxes.* The Spanish railways pay the following taxes:

The *transport tax* amounting to 5 per cent. of the sums collected for the conveyance of goods and 25 per cent. of the price of passenger tickets, with certain reductions in respect of charity tickets, kilometric tickets, and tickets issued at 25 per cent. and more below the ordinary fare. This tax also applies to loading and unloading charges when these operations are included in the rate charged by the company. The transport of certain types of merchandise, which include packing materials, cereals, vegetables, wood for fuel, coal, and live stock, are exempt from payment of

the tax. The tax, which is collected by the railway companies along with the charge for transport, is subsequently paid into the treasury. In 1929 the revenue accruing from this tax amounted to 69,000,000 pesetas.

The *stamp tax* on tickets and consignment notes, established on a sliding scale varying from 0·05 for a charge of 2 pesetas up to 10 pesetas for charges between 500 and 1,000 pesetas.

The *premium tax*—‘compulsory insurance of passenger and live stock’. In the case of passengers it varies between 0·10 and 3 pesetas according to the price of the ticket; in the case of live stock it is 4 per cent. of the transport charge. These taxes were raised by 44 per cent. in 1931.

*Inspection charges and participation in expenses* of the Railways Board.

The M.Z.A. claims to have paid 22,975,236 pesetas in all under these four headings in 1930.

(b) *Financial situation.* Owing to the difficult financial situation of the railways after the War, the State was obliged to make numerous advances to the companies. Up to 1924 these advances amounted to 603,000,000 pesetas, of which 435,000,000 pesetas represented salaries to staff, the balance being for the acquisition of material. From 1925 to 1931, advances amounted to 1,205,000,000 pesetas. Interest payments with the guarantee of the State amounted to 8,000,000 pesetas in 1931. To cover all these expenses State Railway Bonds were issued amounting to 1,300,000,000 pesetas. The State is thus closely associated with the railway companies.

The capital proper of the railway companies in 1931 was as follows:

Share capital . . . . .	1,512,000,000 pesetas
Debenture capital . . . . .	3,513,000,000 „

The market quotations for bonds, however, show a depreciation of 30 to 45 per cent., whilst the shares have depreciated to an even greater extent.

(c) *Decline in traffic.* There has been a general decline in traffic since 1925. On the lines of the M.Z.A. Company, tonnage in wagon-load lots fell from 10,238,675 tons in 1929 to 8,961,372 tons in 1930 and to 8,788,339 tons in 1931. The total



number of wagon-load lots fell from 1,230,092 in 1929 to 1,095,192 in 1930. Loose lot and less than wagon-load traffic fell from 2,449,185 tons to 2,133,123 tons. The M.Z.A. Company considers that a large part of the traffic has been taken from it by motor transport; it estimates that it suffered a loss in 1930 of 10,600,000 pesetas in respect of passenger traffic and fast goods traffic and 5,800,000 pesetas in respect of ordinary goods traffic. This loss of traffic represents 8.2 per cent. in the case of passenger and fast goods services and 2.6 per cent. in the case of ordinary goods services.

## II. MOTOR TRANSPORT

### 1. *Measures taken in Spain for road improvement and maintenance.*

Spain possesses about 87,000 km. of roads, of which 58,000 km. are State highways. Nearly 200,000,000 pesetas were provided in 1933 for their upkeep and development, of which 84,000,000 pesetas were to be used for maintenance and repairs and 47,000,000 pesetas for new construction; 30,200,000 pesetas were ear-marked for the special metalled roads system. These credits are shared between each province according to the existing state of the roads, the volume of traffic, the price of materials, climatic conditions, and the economic activity of the region in question. For the reconditioning and maintenance of district and rural roads, the municipal councils have power to demand payment in labour up to a period of fifteen days per annum, but not exceeding three consecutive days at a time; this personal contribution can, however, be replaced by a monetary payment.

The *taxes* intended to cover costs are as follows:

(a) The *national motor traffic tax*, created in 1927 and established on a sliding scale for luxury touring cars, hire cars, lorries for the conveyance of goods, and motor cycles. The revenue accruing from this licence is apportioned as follows: 50 per cent. to the State, 35 per cent. to the municipalities, and 15 per cent. to the provincial authorities, of which  $7\frac{1}{2}$  per cent. is allotted according to the number of roads that each province is obliged to maintain and  $7\frac{1}{2}$  per cent. according to the number of motor vehicles registered in the province.

(b) *Transport tax*, paid in accordance with the agreements signed with enterprises or owners of vehicles.

(c) *Road maintenance fee*, paid by the operators of regular lines at the rate of half a centimo per kilometre and per ton, and by the operators of irregular lines, who pay a surcharge of 25 per cent. on the licence, if they operate entirely in the interior of one province, and 40 per cent. if they operate in several provinces.

(d) *Stamp duty* on tickets and way-bills paid by transport enterprises of all kinds according to a fixed scale.

(e) *Special vehicle inspection tax* levied on buses at the rate of 10 pesetas per passenger seat and per annum.

(f) *A tax of 3 per cent. on the sale* of all motor vehicles, paid by the purchaser.

(g) *A duty of 0.10 pesetas per litre of petrol*; it should be noted that petrol and lubricating oils are a State monopoly.

(h) *Import duty on pneumatic tyres* varying according to their country of origin.

In 1933 the revenue from these different taxes was estimated as follows:

National Motor Traffic Tax . . . . .	58,000,000 pesetas
Transport Tax . . . . .	80,000,000 „
Road Maintenance Fee . . . . .	2,812,500 „
Stamp Duty . . . . .	140,000,000 „
Inspection Tax . . . . .	1,202,500 „
Petroleum Monopoly . . . . .	230,000,000 „
Miscellaneous . . . . .	2,863,000 „

in all, more than 500,000,000 pesetas.

New work for which provision has been made includes the Pyrenees Road System to link up the principal municipalities of the Spanish Pyrenees, and the double circuit around Madrid to join up seventeen municipalities for which the necessary land will be furnished free by the owners.

## 2. *The regulation of motor transport.*

The development of mechanically propelled vehicles has been more especially marked since 1924.

1924 . . . . .	58,644 vehicles	1928 . . . . .	166,518 vehicles
1926 . . . . .	111,765 „	1930 . . . . .	238,547 „

The above figures include motor cycles. The number of motor vehicles (excluding motor cycles) in Spain on December 31st, 1931, was estimated at 175,330, of which 52,600 were lorries, or 1 vehicle per 129 of population.

Public road transport services are now governed by the decree of July 4th, 1924. This decree ended the period of unrestricted operation dating from the time of the introduction of the automobile. Under the provisions of this decree, the concession and inspection of road services are in the hands of Transport Boards created for that purpose and on which are represented the interests most directly affected by those services. The concession is granted by public tender in the course of which observations and proposals may be presented. The period of the concession is twenty years. There can only be one concession in respect of each route, including intermediate services. The concessionary must undertake to carry the mail free. At the end of a year the concession may be transferred at the discretion of the Transport Board. Concessionaries pay a special fee towards the upkeep of the roads.

This system was manifestly bound to result in the establishment of a number of small monopolies over each route, and for that reason efforts are now being made to alter it. It is thought in particular that road transport services can be operated without exclusive concessions and without large subsidies, by observing the principle of free traffic movement over all the public highways. A very careful inspection of these services would be sufficient to protect the interests of users and ensure the payment by the companies of a contribution similar to that made by the other means of transport. The concessions would in future be issued by a central office and would only be granted for one year with the possibility of renewal each year. The concession certificate would establish the tariffs in accordance with a fixed scale. The concessionaries would be compelled to furnish a deposit and pay for the right to operate, as well as paying a road maintenance tax and various other fees. It would further be desirable to eliminate competition between road and rail by dividing the roads into two categories, viz. those which are parallel to the railways and those which are not. Transport services of the first category would

only be authorized in case of absolute necessity and would pay heavier charges than those of the second category.

Briefly, the dominating idea at the present time seems to be that of fixing the rights of each means of transport according to the services which it can render and making the charges they pay as equitable as possible.

# BELGIUM

## I. RAILWAYS

### 1. *Belgium's high railway density; the importance of the local railway system.*

The economic life of few countries is as closely bound up with the railway as that of Belgium. As early as 1835 a line connected Brussels and Malines, and in 1836 it was extended as far as Antwerp. In 1837 Antwerp was linked up with Ghent, and Ghent with Ostend via Bruges in 1838. The line from Brussels to Mons dates from 1841, and that from Liège to Verviers from 1843. A few years later a large number of local lines were completed in addition to the lines of general interest. The first local lines linking up Ostend with Nieuport, and Antwerp with Hoogstraten were completed in 1885; by 1887 their total length was 315 km. At the present day there are 4,823 km. of railways of general interest and 6,167 km. of local lines, out of a total of 11,090 km. The Belgian railway system is the densest in the world and represents 36.5 km. per 100 sq. km. of country, Luxemburg, which is next in order after Belgium, having only 21.2 km. per 100 sq. km. of country.

The volume of both general and local traffic is considerable in this small country. The high state of development of the local traffic enables the workman to live in the country and thus prevents over-crowding in urban centres. Through her general traffic Belgium plays an important part internationally in western Europe: London is linked up with Berlin by Ostend and Brussels, with Basel and the Mediterranean by Ostend and Luxemburg, and with Istanbul by Ostend, Cologne, and Frankfurt. The Paris to Amsterdam trains pass through Brussels and those from Paris to Berlin through Liège. The railways also render inestimable service to the port of Antwerp.

### 2. *The railways of general interest operated by the 'Société Nationale des Chemins de Fer Belges'.*

Since 1926 the lines of general interest have been in the hands of a company administered by a Board of Directors consisting of

twenty-one members who appoint a General Manager. This company is supervised by six commissioners, three of whom are appointed by the Chamber of Representatives and three by the Senate.

The State has granted the company the right to operate the railway lines for seventy-five years, but retains ownership of the system. The value of these operation rights was estimated at 11 milliards of francs. In consideration of the concession the State received 10 milliards of francs consisting of 20 million preference shares each having a nominal value of 500 francs. The remaining milliard consists of 10 million shares of 100 francs each. The preference shares are made out to bearer. The ordinary shares are registered and untransferable. Interest and sinking fund charges on the preference shares are borne by the State.

Since its formation the company has expended as initial outlay the sum of frs. 1,426,600,000. In 1926 the initial capital was estimated at frs. 25,480,000,000.

Between 1926 and 1931 the company expended frs. 1,387,000,000 on renewals.

The reconditioning of the Belgian railway system since 1926 has thus involved a total expenditure of frs. 2,813,000,000.

This expenditure was covered by a payment from the Public Debt Redemption Fund representing 10 per cent. of the preference share issue (frs. 497,600,000), by a loan (frs. 551,800,000), by the liquid assets of the company (frs. 377,200,000), and by an appropriation of operation receipts (frs. 1,387,200,000).

### 3. *The decline in traffic.*

Operating results between 1930 and 1931 were as follows:

	1930 Frs.	1931 Frs.	Difference per cent.
Operation receipts	3,528,500,000	3,090,100,000	12·5
Operation expenditure	3,208,300,000	3,023,900,000	5·7
Surplus receipts	320,200,000	66,200,000	79·1

The cause of this decrease of surplus receipts is shown by the following tables:

*(a) Decrease of passenger traffic*

	1930	1931	<i>Decrease per cent.</i>
Number of passengers carried . . . .	242,900,000	222,200,000	8.5
Number of passenger-kilometres . . . .	6,521,000,000	5,810,000,000	10.9

*(b) Decrease of goods traffic*

	1930	1931	<i>Decrease per cent.</i>
Tons carried . . . .	75,597,000	69,523,000	12.7
Ton-kilometres . . . .	7,133,340,000	6,026,907,000	15.5

To meet expenditure, the company reduced wages, cut down staff, and lowered the average fuel consumption. Nevertheless, expenditure from 1930 to 1931 increased by 9 per cent., but this was no doubt due to the fact that certain costs could not be reduced to the level necessitated by the decrease of traffic.

The traffic depression can be attributed to the crisis, which is felt with particular strength in an industrial country like Belgium, as well as to motor transport competition.

## II. MOTOR TRANSPORT

*The steady increase in the number of motor vehicles since 1925; road expenditure and motor transport taxation; the effect of motor transport development on the railways.*

The following figures show the increase in the number of motor vehicles:

1925 . . . . .	86,000 vehicles
1929 . . . . .	143,000 "
1931 . . . . .	174,000 "

According to the 1931 figure there was 1 vehicle per 48 of population in that year. Motor-cars belonging to private persons totalled 102,237, hire cars 7,612, motor-buses and coaches 1,527, light lorries 51,310, and heavy lorries 11,968.

This growth of motor traffic has been accompanied by a steady increase in road expenditure, amounting to frs. 25,640,000 in 1925 and frs. 93,687,000 in 1931. To meet this additional expenditure a *Road Fund* was created in 1928 of frs. 600,000,000 to be used over a period of five years as follows: frs. 18,323,000 in 1928, frs. 129,639,000 in 1929, frs. 240,519,000 in 1930, and frs. 127,669,000 in 1931. The balance was allotted for road work in 1932.

The taxes paid by motor vehicles have likewise increased steadily.

The petrol tax, which brought in frs. 42,993,000 in 1925, produced frs. 294,761,000 in 1931.

Duty on motor vehicles and chassis amounted to frs. 35,582,000 and frs. 59,173,000 in 1925 and 1931 respectively.

Duty on motor vehicle parts rose from frs. 20,737,000 to frs. 82,431,000.

The total of dues, taxes, and duties paid, including registration fees, has increased as follows:

1925 . . . . .	frs. 146,612,000
1929 . . . . .	„ 475,279,000
1931 . . . . .	„ 520,065,000

Conditions in Belgium have been particularly favourable to the development of motor competition, since owing to the size of the country the distances to be covered are never beyond the motor vehicle's radius of action.

According to calculations made by the Société Nationale des Chemins de Fer Belges in 1930, light lorries deprived the railways of 75,000,000 ton-km. of traffic at frs. 1.68 per ton-km., representing a total of frs. 125,000,000.

It is further estimated that heavy lorries deprived the railways of 360,000,000 ton-km. of traffic at fr. 0.93 per ton-km., representing a total of frs. 335,000,000. The grand total was therefore frs. 480,000,000 or 21 per cent. of the total goods traffic receipts.

According to similar calculations made by the Société Nationale des Chemins de Fer Vicinaux, motor transport deprived the railway in 1930 of 5.5 per cent. of its goods receipts and 10.3 per cent. of its passenger receipts, in all 15.8 per cent. of the total traffic.



The railways have reacted by adopting: (a) tariff measures including a 25 per cent. reduction to users dispatching daily for a minimum period of three months between two fixed stations a consignment of Class I (highest rated) merchandise, or (b) technical measures (improvement of conditions of carriage, increased number of light trains, employment of rail-cars; the distance covered by rail-cars rising from 217,000 km. in 1930 to 437,000 in 1931).

### III. ROAD AND RAIL

#### 1. *The intervention of the public authorities; the law of March 1932.*

Since 1929 road and rail problems have had the special attention of the Ministry of Transport. At that time only 60 motor transport lines out of a total of about 300 in operation were in possession of a regular authorization; the remainder were left free to operate, thanks to the lenient attitude adopted by the Authorities. The first step taken, therefore, was to remedy this state of affairs, and there are now 320 regularly constituted services operating over a distance of 6,000 km.

The principles governing motor transport organization are laid down in the law of March 1932. This law contains provisions dealing with the following points: (a) definition of the term 'bus service'; (b) obligation of every service to obtain a proper authorization; (c) procedure to be followed in issuing such authorization; (d) creation of a Consultative Committee to express its opinion on all questions connected with road transport services. Authorizations are only issued after previous inquiry, and certain obligations are placed upon the operators of motor transport lines. Authorizations are granted by public adjudication. The Société Nationale des Chemins de Fer Belges and the Société Nationale des Chemins de Fer Vicinaux are also subject to the same obligations when they operate bus lines, unless such services replace existing train services. Operators of public motor services must pay a fee according to the number of kilometres covered.

The strict regulation of all types of traffic appears, however, to present some difficulty; certain private transport operations can always be carried out with complete liberty and in many cases

motor transport has unquestionably succeeded in establishing itself in an impregnable position.

### 2. *Appointment of a Road and Rail Sub-Committee.*

With a view to arriving at an equitable solution of the problem, the Conseil Supérieur des Transports decided in 1932 to form a Road and Rail Sub-Committee to study the relationship between the two means of transport. In April 1933 this Committee submitted to the Ministry of Transport a report containing: (a) a statement of the principal elements of the problem of road and rail competition (Chap. 1); (b) a survey of the measures adopted or contemplated in other countries (Chap. 2); (c) a set of draft regulations for the transport of goods by road in Belgium (Chap. 3).

In the third part of this report the Commissioners suggested the adoption of the following measures:

- organization of commercial control of the roads;
- right of the Government to forbid certain transport operations;
- compulsory registration of motor transport enterprises;
- obligation to establish a transport document and keep a record of transport operations;
- creation of a special charge—'Special Cartage Fee'—for transport operations exceeding 20 km.;
- application to international transport of the charges paid by domestic transport operators;
- improvement of road police system;
- revision of registration fees and petrol taxes.

### 3. *Government decrees; increased taxation.*

The Government likewise did not remain inactive. By two decrees dated August 14th, 1933, to come into force on October 1st of the same year, an annual surtax was to be applied to motor and steam vehicles used for the transport of goods by road, except those exclusively employed for transport operations for reward. The amount of this surtax was fixed at frs. 80 per h.p. for the first 10 h.p. and frs. 120 for each additional h.p. in the case of vehicles taxed according to horse-power. Where taxation was based on weight, the rates were frs. 100, 150, and 200 established

on a sliding scale. These taxes were, however, only applied to vehicles operating over distances of more than 20 km.

In the case of vehicles used exclusively for transport operations for reward and subject to the  $2\frac{1}{2}$  per cent. transport tax, the latter tax was raised to 20 per cent. where such operations were effected over distances of more than 20 km. At the same time the tax on railway transport (except tramways) was raised from 0.25 per cent. to 1.25 per cent. It was further decreed that all vehicles subject to the transport tax should keep a register or log-book, and that a separate consignment note should be made compulsory for each operation of transport.

Regulations were also introduced in regard to carriers established abroad, and for the calculation of the portion of international transport operations effected on Belgian territory.

Lastly, a circular issued by the Minister on October 1st, 1933, laid down the methods of traffic control and introduced two fines of frs. 10 and frs. 500 respectively in the event of infraction of the regulations.

#### 4. *The law of December 30th, 1933.*

Strong protests against this sudden increase were, however, raised by the motor transport interests, and the law of December 30th, ratifying the above-mentioned decrees, introduced considerable modifications into the system of highway transport taxation and even repealed certain essential portions of it.

This law, in conjunction with the Circular of January 31st, 1934, amended the new system which had just come into force (October 1st, 1933) as follows:

- (a) re-establishment of the transport tax at the uniform rate of  $2\frac{1}{2}$  per cent.;
- (b) application of the annual surtax to all vehicles used for goods transport by road over any distance irrespective of whether such transport is effected for the owner's account or for reward. The rate of taxation has, however, been considerably reduced: frs. 25 and frs. 38 instead of frs. 80 and frs. 120, and frs. 32, frs. 46, and frs. 62 instead of frs. 100, frs. 150, and frs. 200;
- (c) implicit abolition of the consignment note and the vehicle log-book;

- (d) doubling of taxation (registration fee with surtax where applicable) of vehicles using heavy oil fuel;
- (e) reinstatement of the tax exemption granted to operators of authorized bus services or those operated under concession, ambulances, &c., and to vehicles of the S.N.C.F.B. (Belgian National Railways) services, which had been withdrawn by the decrees mentioned above;
- (f) non-application of the surtax to certain classes of tractors and trailers used in ports.

All these provisions came into force on January 1st, 1934, the lowering of the surtax being retroactive as from October 1st, 1933.

# LUXEMBURG

## I. RAILWAYS

*Luxemburg, second in the world as regards railway density; its railway system of international as well as national importance.*

The Luxemburg railway system is 551 km. in length, representing 21.2 km. per 100 sq. km. of country. The two principal railway companies are the Guillaume-Luxemburg line, 205 km. in length, and the Prince-Henri line of 195 km. Since 1918 the Guillaume-Luxemburg line has been operated by the French administration of the Alsace-Lorraine railways, under the control and with the participation of the State of Luxemburg, which also shares all profits or losses with the operators. The Prince-Henri line is operated by a private company under a ninety-year concession. There are also a number of Cantonal railways which are likewise operated under concessions. Some of these receive subsidies. The present method of administration is, however, only temporary, and the Luxemburg Government is trying to arrange for the amalgamation of the two principal systems.

The capital invested in the Guillaume-Luxemburg railway amounts to 151,732,605 Luxemburg francs (1 L. fr. = 1 Belgian fr.).

In 1931 this railway contributed frs. 12,356,150 to the public budget, of which frs. 9,171,242 represented tax on capital, frs. 1,780,883 turnover tax, frs. 1,273,480 consumption tax (customs duty), frs. 1,179 tax for verification of weights and measures, frs. 563 assessment and sales charges, and frs. 128,800 transport tax. While it is true that the services rendered by this railway against payment, such as the carriage of mail, &c., amounted to frs. 3,073,642, it is subjected, on the other hand, to numerous charges and is obliged to publish time-tables, collect taxes on behalf of the State, submit to the inspection and control of its locomotives and carriages by the authorities, and carry all classes of goods.

Traffic increased steadily up to 1929, since when it has tended to diminish. Figures for the Guillaume-Luxemburg line are as shown on p. 88.

<i>Year</i>	<i>Passenger-kilometres</i>
1925	127,953,129
1929	154,587,254
1931	174,251,120
<i>Year</i>	<i>Ton-kilometres</i>
1925	387,553,023
1929	448,678,741
1931	330,419,952

Traffic on the Prince-Henri railway has shown a similar tendency :

<i>Year</i>	<i>Passenger-kilometres</i>
1927	90,032,387
1929	91,105,677
1931	82,416,677
<i>Year</i>	<i>Ton-kilometres</i>
1927	177,931,072
1929	151,350,899
1931	121,159,186

## II. MOTOR TRANSPORT

*Comparative freedom from restrictions; only common carriers regulated.*

The number of motor vehicles has increased steadily :

1930 . . . . .	8,625
1931 . . . . .	9,520, comprising:
Private cars . . . . .	6,324
Vans . . . . .	2,492
Lorries . . . . .	591
Buses . . . . .	99
Tractors . . . . .	14

Transport is not subject to any restriction other than having to conform with the Code de la Route and pay the taxes or fees laid down by the law, which are as follows: 5 per cent. tax on the price of the vehicle; the transfer or turnover tax of 1 per cent. on the price of the vehicle; customs duties; petrol tax (fr. 1.15 approx. per litre); the motor-car tax (in accordance with the law of 1922); the tax on driving licences and registration of motor-

cars; the tolls levied at frontier bridges, payable to the municipalities of Grevenmacher, de Wormeldange, de Remiche, and de Schengen; the taxes paid at the frontier for the temporary entry of foreign motor-cars; taxes proper (direct taxes, &c.).

Common carriers are subject to the old regulations applying to highway transport, according to which common carrier motor services are subsidized by the State and operated under concessions issued either by private contract or public tender. Such enterprises are operated at the expense and risk of their owners in accordance with the clauses of a *Cahier des Charges*. They are under the control and supervision of the Public Works Department. Transport operators are compelled to deposit a sum of money as security. The *Cahier des Charges* specifies the types of vehicles to be used, the number of reserve units to be maintained, the method of equipment, the safety measures to be employed, and the conditions applying to the establishment of time-tables. The concerns must keep proper books and forward all necessary information to the Government as to cost price and revenue. Maximum tariffs are fixed. In 1932 there were 46 lines operating under the conditions described above.

The only motor service organized by the railways is between Esch-sur-Alzette and Audun-le-Tiche where the Alsace-Lorraine railways run a service in prolongation of the line from Redange to Audun-le-Tiche. A passenger service subsidized by the same railway also operates over the route Luxemburg-Echternach. Competition by bus lines makes itself felt in the vicinity of the railways. It is, however, more for the sake of convenience than economy that these services are preferred to the railways, the average price of transport by bus being actually higher as a rule than the average price of a third-class railway ticket. It varies from fr. 0.40 to fr. 0.50 per passenger per kilometre, and generally speaking no return tickets are issued on the bus lines.

According to estimates, the number of passenger-km. effected in 1931 by transport lines in competition with the railways was 1,000,000. This figure, however, represents no material loss to the railway.

In goods traffic, competition makes itself more especially felt in the transport of milk, one concern alone supplying that

commodity to Luxemburg, Bettemburg, and the localities situated in the Valley of the Mersch. Its charges, which are lower than those of the railway, are as follows: frs. 5 per 100 kg. from Lorentzweiler to Bettemburg (railway price: frs. 5·10) and frs. 3 per 100 kg. from Lorentzweiler to Luxemburg (railway price: frs. 5·10). This company produces about 5,000 ton-km. per year. Private owners also compete to a slight extent with the railways in the transport of live stock.

On the other hand, according to estimates, 300,000 passengers per year are brought to the railways by motor transport.

No legislative measures have been taken with a view to the co-ordination of the two means of transport, nor have private interests taken any steps towards that end.



## NETHERLANDS

IN considering the question of goods transport in the Netherlands, account must be taken of the extremely important place occupied by the water-ways in the traffic of that country. The quantity of goods carried by inland water transport is twice as great, and according to some estimates even four times as great, as that carried by land transport.

### I. RAILWAYS

#### 1. *Strict regulation of both lines of general interest and secondary and district lines.*

Some of the railways of general interest were constructed by the State or purchased by it from private companies. A certain number, however, still belong to private companies. As a general rule, the actual operation of the lines is carried out neither by the State nor by the private companies owning them. At the present time most of the railways are operated by the *Maatschappij tot Exploitatie van Staatsspoorwegen* (State Railway Operation Company) called the *S.S.* and the *Hollandsche IJzeren Spoorweg Maatschappij* (Dutch Railway Company) called the *H.S.* In 1917 the *S.S.* and *H.S.* pooled their interests. The profits and liabilities of the two companies have been merged, and every year a joint balance sheet is drawn up in the ratio of 18/40·5 in respect of the *S.S.* and 22·5/40·5 in respect of the *H.S.* The joint company has the name *Nederlandsche Spoorwegen* (Dutch Railways) or *N.S.* Each of the companies, however, continues to be a separate legal entity.

The Dutch railways are 3,639 km. 117 m. in length, made up as follows:

- 1,887 km. 325 m. belonging to the State,
- 834 km. 315 m. belonging to the *S.S.* and *H.S.* in their own right,
- 917 km. 477 m. belonging to other interests.

These figures represent a density of 10·7 km. per 100 sq. km. 2,425 km. are lines of general interest, the remainder being secondary lines (962 km.) and district lines (over 251 km.).

Numerous obligations are placed upon rail transport. The

railways can neither open new services nor bring new rolling-stock into use without the approval of the competent Ministry. They must notify the public authorities of any cessation of service, assist the State inspectors in every way possible in conducting their inspections, and carry out all orders issued by them. The Government may issue instructions as to suspensions of service, or the creation of stops and stations at places indicated by it; it may likewise order the establishment of time-tables as it sees fit. Tariffs are subject to the approval of the Ministry concerned. A multitude of regulations deal with the conveyance of passengers, luggage, and goods, and the maintenance of the permanent way and rolling-stock. The railways are also compelled to keep two months' supply of coal in stock.

In addition to these general obligations the district railways are subject to certain special obligations arising out of their closer connexion with local interests.

## 2. *The capital invested in the Dutch railways.*

The capital investment figures are as follows:

General interest railways:	<i>Florins</i>
(a) Capital invested by the State up to 1892 for construction purposes . . . . .	262,673,722
Expenditure from 1892 to 1931 incl. for railway work	59,129,915
(b) Estimated expenditure by the railways themselves . . . . .	<u>527,817,033</u>
Total . . . . .	849,620,670
Secondary and district railways . . . . .	158,097,782

The State guarantees a dividend of 4 per cent. The local railways sometimes receive a guarantee of interest payments from the provinces and municipalities they serve.

In 1931 expenditure on upkeep and renewal of permanent installations amounted to fl. 23,688,203.14½, and in 1932 to fl. 20,773,032.07½; the amounts expended on new construction during the same period were fl. 5,903,651.54½ in 1931, and fl. 3,441,245.48½ in 1932.

Various charges are levied on the railways, which have to pay the same taxes as any other company.

In 1930 they paid . . . . .	fl. 609,643
In 1931 they paid . . . . .	,, 557,245.69

They also pay fl. 4,378,194.45 to the State as rent for the use of the railway system.

The free transport which the railways are obliged to grant to certain persons and certain classes of goods (material for the installation of telegraph and telephone lines, &c.) may also be considered as financial charges.

3. *Traffic of general interest railways in 1932 approximately the same as in 1926 but below 1929 peak.*

Figures in regard to passenger traffic in recent years are as follows:

	<i>Number of passengers</i>	<i>Passenger-kilometres</i>	<i>Passenger journey per passenger</i>
1926	92,323,413	3,100,837,413	33.58 km.
1929	107,121,151	3,669,299,301	34.25 „
1931	102,494,666	3,516,335,852	34.31 „
1932	90,963,222	3,085,376,584	33.92 „

Goods traffic shows a similar tendency:

	<i>Tons transported</i>
1926 . . . . .	19,987,229
1929 . . . . .	24,262,247
1931 . . . . .	21,977,243
1932 . . . . .	18,290,674

There is no way of ascertaining the losses caused to the railways by motor transport competition. It may be supposed, however, that the lines of general interest are less affected than the district railways. The motor vehicle, through its ability to effect door-to-door service, deprives the district railways of goods for direct delivery to private persons as well as of high-grade traffic.

## II. MOTOR TRANSPORT

1. *Steady increase in the number of motor vehicles, volume, and turnover of motor transport since 1925.*

The following figures show the increase in the number of motor vehicles during the last few years:

## NETHERLANDS

	<i>Private cars</i>	<i>Buses</i>	<i>Lorries</i>
1925	37,000 (including buses)		17,000
1929	60,262	3,357	35,040
1932	81,277	3,783	48,494

The total number of vehicles in 1932 was 133,554 (or, including motor-cycles, about 166,500), or about 1 vehicle per 60 of population.

Regular passenger transport lines are controlled and can only be operated under a licence issued by the permanent governing body of the province concerned and according to the particular conditions obtaining in that province. Tariffs must be confirmed by the governing body and posted up. The material of the various concerns is inspected by the competent services of the State railways. Every person operating a motor transport line must be covered by insurance in respect of his liabilities. Public passenger motor transport enterprises are not, however, numerous, passenger services being for the most part in the hands of private companies.

Goods transport, on the other hand, is at present entirely unrestricted.

The following table based on estimated traffic for the years 1923, 1926, and 1929 shows with what rapidity motor traffic has increased.

*Number of vehicle-kilometres*

	<i>Motor-cars</i>	<i>Buses</i>	<i>Motor-lorries</i>
1923	72,000,000	13,500,000	45,000,000
1926	480,000,000	72,000,000	190,000,000
1929	890,000,000	81,000,000	350,000,000

According to the same estimate, passenger traffic has increased as follows:

*Passengers carried*

	1923	1926	1929
Private cars	4,500,000	16,000,000	18,000,000
Buses	3,700,000	20,000,000	34,000,000

Goods traffic (in tons) has increased as follows:

Lorries	1,100,000	5,700,000	10,000,000
---------	-----------	-----------	------------

2. *Reorganization of highways to meet increasing volume of motor traffic; special taxes created; receipts paid into a 'Road Fund' and used for new construction and the improvement and upkeep of existing roads.*

A law voted in 1926 and put into force in 1927 divides the road system into three categories: (1) main roads, 3,300 km. in length and principally used for through traffic; (2) secondary roads, 4,200 km. in length and likewise used for through traffic; (3) other roads, amounting to some 18,000 km. The upkeep, improvement, and construction of roads of the first category are undertaken by the State; roads of the second category by the provinces, and those of the third category by the local authorities, both the latter categories being assisted in certain cases by a State subsidy. The resources of the 'Road Fund', which in 1932 comprised fl. 12,816,000 from the road tax and fl. 7,000,000 from the bicycle tax, are divided between the State and the different provinces. During the first five years the State receives 70 per cent. and the provinces 30 per cent. At the end of five years the share of the provinces will be increased to 35 per cent., and to 40 per cent. at the end of ten years.

The principal taxes on motor transport are as follows: (1) the road tax; (2) the personal contribution, applied only to private cars; (3) import duties on motor-cars and pneumatic tyres; (4) duty on fuel. Revenue from these taxes in 1932 is estimated at fl. 42,526,000 made up as follows:

Road tax . . . . .	fl. 12,816,000
Personal contribution (including the surcharges levied by provinces and municipalities) . . . . .	„ 7,000,000
Import duties on motor-cars, pneumatic tyres, and spare parts . . . . .	„ 3,800,000
Import duty on fuel . . . . .	„ 18,910,000

However, a part of these charges, represented by two-thirds of the import duty on motor-cars, the total of the import duty on pneumatic tyres and spare parts, and fl. 3,260,000 of the revenue from import duty on fuel—in all about fl. 6,160,000, may be considered as not applying exclusively to motor transport, the amounts in question being normal fiscal charges levied from other commercial enterprises as well.

The amount paid out from the 'Road Fund' for the construction, improvement, and upkeep of the main roads in 1932 amounted to about fl. 19,000,000, including fl. 2,500,000 for the building of bridges across the big rivers. A further sum of about fl. 7,000,000 was paid to the provinces from the 'Road Fund' for the carrying out of the secondary road scheme. According to estimates, the provinces themselves expended a sum of fl. 6,800,000, raised locally, on new road construction and improvement and upkeep of existing roads. The sums expended by municipalities and the amount of the subsidies granted by the State for work on the third category of roads are not known, but they are likewise considerable.

With a view to meeting motor transport competition, the railway companies have reduced certain of their tariffs, increased the number and speed of trains, and suppressed intermediate stations. They have also organized affiliated motor transport companies like the A.T.O. and the Van Gend and Loos Company to establish connecting and feeder services. For a complete account of such measures, see Part II, Chapter III.

Moreover, in order to equalize the conditions of competition between railways and motor transport, an important amendment to the railway law has recently been adopted, according to which the railways may reduce the rates for certain categories of goods or passengers, without being obliged either to publish the reduction or to extend it to other categories of goods and passengers.

A Bill was also adopted in June 1934 by the Second Chamber of Parliament, the object of which is to establish a 'Traffic Fund', uniting all the items of government income and expenditure in respect of traffic as a whole, i.e. rail, road, water, and air transport. Should this Bill go through in the First Chamber as well, the existing 'Road Fund' will become a part of the general 'Traffic Fund'. In that case, the existing road tax will be replaced by a new tax on motor vehicles with higher rates, whilst expenditure on the road system will be at least equal to the revenue brought in under the old system of taxation. The use of any surplus revenue, although confined to traffic purposes in general, will within these limits be left to the discretion of the Government.

# SWITZERLAND

## I. RAILWAYS

1. *Ownership of the principal railway lines in Switzerland by the Confederation; a few private enterprises; electrification on the increase.*

Under the Federal Constitution of 1894, legislation on railway construction and operation comes within the competency of the Confederation. Up to the end of the nineteenth century the Swiss railways had been constructed under concessions granted by the Federal Government. These lines were then repurchased and now form the Federal railway system, of which the total length in 1931 was estimated at 2,922 km. They are under the control of the Federal Posts, Telegraph, and Railways Department. A certain number of private companies still exist, however, comprising 2,400 km. of line. Switzerland possesses in all about 5,400 km. of railways, representing 12·8 km. of line per 100 sq. km. and 1·35 km. per 1,000 of population.

The most striking feature of railway development in Switzerland in recent years is the marked progress that has been made in electrification. On completion of the first scheme, drawn up in 1923, 1,672 km. of the Federal system and 1,717 km. of private lines had been electrified, representing 62·5 per cent. of all the Swiss railways. Still further lines are to be electrified under the programme approved in 1929. This work has called for a great financial effort, the cost of the necessary installations amounting to S. frs. 473,299,123 between 1907 and 1931. On December 31st, 1931, the electrical haulage equipment consisted of 441 locomotives, 12 tractors, and 44 rail-cars. In 1931 steam locomotives covered 15,269,226 km. or 30·4 per cent. of the total mileage, and electric locomotives 34,847,977 km., or 69·6 per cent. of the total mileage. This last figure represents an increase of 467,856 km., i.e. 1·3 per cent. more than in 1930. The development of electric traction has thus been carried farther in Switzerland than in any other country. For geographical reasons and with a view to encouraging tourist travel, the narrow-gauge railways, tramways, rack railways and funiculars have received

particular attention, so that the Swiss railway system has now become one of the most remarkable in Europe. The legal obligations of the railways, which differ very little from those of other countries, are as follows: obligation to maintain regular services; obligation to carry luggage and goods at their own risk; obligation to adhere to a scale of rates which has been checked and approved by the Federal Department of railways; obligation to maintain the permanent way and rolling-stock in good condition; obligation to keep accounts in accordance with the regulations laid down by the Federal Department.

## 2. *The financial situation of the Federal railways.*

In 1930 the total initial costs for the establishment of the entire railway system amounted to S. frs. 3,750,632,000. On December 31st, 1930, the total assets of the railways were as follows:

Federal railways	.	.	.	.	S. frs. 3,023,304,143
Private railways	.	.	.	.	„ 806,840,194
Rack railways	.	.	.	.	„ <u>64,050,141</u>
Total	.	.	.	.	S. frs. 3,894,194,478

Interest paid by the Federal railways on their debenture capital in 1930 amounted to S. frs. 115,094,800, or 4·24 per cent.; paid by standard-gauge private railways, S. frs. 7,000,644, or 2·04 per cent.; paid by private narrow-gauge railways, S. frs. 8,857,677, or 3·29 per cent., and by rack railways, S. frs. 3,224,565, or 4·51 per cent.; total: S. frs. 133,177,686.

Fiscal charges do not seem to be so high as in other countries. No tax is levied on the price of passenger and goods transport, nor are any taxes or dues payable over and above the price of passenger and goods transport.

The Federal railways are exempt from all taxation and do not contribute to the State budget. On the contrary, the State guarantees the indebtedness of the Federal railways. The private railways which are constituted as joint stock companies pay Cantonal and Municipal taxes on property or income in the same way as other industrial, commercial, and financial enterprises. Railway users pay no indirect contribution except the stamp duty on consignment notes.

The Federal railways and private transport enterprises benefit



on the other hand by contributions from public bodies at the time of the construction of railways, railway stations and the roads leading to them, and of the suppression of level-crossings. The Confederation paid to the railways S. frs. 60,000,000 for special war expenditure in 1920, and a further S. frs. 35,000,000 in 1931 for extraordinary transport effected by the railways during the War. The Federal railways are now asking the Confederation to grant them a release in respect of S. frs. 800,000,000 of capital and it is highly probable that the country will agree to relieve them of this charge.

The Confederation also guarantees the capital and interest of the Federal railways, and this guarantee enables the railway administrations to obtain extremely favourable terms for their loan service. They pay, for example, 0·8 per cent. less interest for their fixed loans than the private railways, representing an annual economy to them of 22 million Swiss Francs.

*Operating expenses* of the Federal railways in 1931 amounted to S. frs. 283,282,100, or 2·8 per cent. less than in 1930. These expenses consist chiefly of the salaries paid to staff, which represent 75 per cent. of the total expenditure. The effective staff in 1931 was 33,891, or 11·04 per km. of line in use.

*Operation revenue* in 1931 amounted to S. frs. 389,449,903.

*The balance sheet* therefore shows a surplus revenue of S. frs. 106,167,803. This surplus is, however, smaller than that of 1930 which amounted to S. frs. 113,978,318, i.e. S. frs. 7,810,515 less, or 6·8 per cent. The coefficient of operation rose from 71·8 per cent. to 72·7 per cent., whereas in 1913 it was 66·9 per cent. In 1932 and 1933 the surplus operating revenue amounted respectively to 69·6 and 76·7 million S. francs.

### 3. *The decline in railway traffic and the world crisis.*

Passenger traffic is decreasing steadily:

	1930	1931	Difference	Per-centage
Passengers conveyed	127,911,307	124,272,560	3,638,747	2·7
Passenger-km.	3,029,353,610	2,938,314,461	91,039,149	3
Receipts	159,120,836	150,722,568	8,398,268	5·3

The foregoing would appear to indicate that Switzerland is the country in which revenue has fallen least. In Great Britain, for example, there has been a fall of 7.3 per cent., and in Belgium 11.4 per cent. The drop in percentage of receipts on the other hand is greater than the fall in the number of passengers (5.3 per cent. and 2.7 per cent. respectively). This is due to the increased number of passengers conveyed at reduced rate. The figures for transit traffic are, however, less unfavourable, the number of passengers in transit having risen from 135,128 to 140,416.

Details of goods traffic are as follows:

	1930	1931	Difference	Per-centage
Tons transported	18,402,753	17,655,114	747,639	4
Tons-km.	2,056,306,429	1,895,513,800	160,792,629	7.8
Receipts	219,643,749	211,369,008	8,274,741	3.7

The traffic deficit is principally in respect of exports which dropped 24.2 per cent. between 1930 and 1931. The carriage of goods in transit, which plays an important part in Switzerland, has fallen 25.3 per cent.

Owing to her geographical situation, Switzerland is liable to suffer considerably from any general crisis. The lack of orders in industry, the multiplication of customs barriers, all go to show why traffic in Switzerland has been so seriously affected. However, the railways also point to the losses caused to them by motor transport competition.

## II. MOTOR TRANSPORT

### 1. *The roads in Switzerland independent of the Federal Administration; the problem of highway finance.*

The functions of the Confederation are limited to granting subsidies to the Cantons. Road upkeep and maintenance are in the hands of the Cantons and municipalities. There is no Federal department to deal with the roads and consequently there is no national highway system.

The roads may be divided into two classes: Cantonal roads and municipal roads. The Cantonal system comprises 14,867 km.

No reliable statistics are available regarding the length of the municipal roads. The present tendency is apparently to hand over to the Cantons the administration of a large number of the municipal roads. In Valais, for instance, the municipalities have forfeited the right to levy taxes on motor vehicles, but on the other hand the Canton subsidizes all the municipal roads. In other Cantons, like Lucerne and Solothurn, the municipalities have asked the Cantonal administration to grant large subsidies for their roads or even to take them over entirely. Decentralization continues, however, to be an essential feature of the road administration, which explains the wide differences in legislation in the various Cantons. Even when the Cantons receive a subsidy from the Confederation, their authority, liberty of action, and jurisdiction remain unaffected.

In 1930 the Cantons expended the following sums on road construction and upkeep:

Upkeep of roads . . . . .	S. frs. 28,760,163.65
Improvement . . . . .	„ 44,874,781.99
New construction . . . . .	„ 2,630,141.20
Insurance and administration . . . . .	„ 2,282,897.05
<b>Total . . . . .</b>	<b>S. frs. 78,547,983.89</b>

No accurate data are available regarding municipal expenditure.

Against this expenditure, receipts were as follows:

Federal subsidies . . . . .	S. frs. 1,177,938.35
Motor taxes . . . . .	„ 24,673,857.91
Sundry allocations . . . . .	„ 5,719,357.36
Appropriation from petrol duty . . . . .	„ 8,996,808.36
<b>Total . . . . .</b>	<b>S. frs. 40,567,961.98</b>

There is therefore a deficit of S. frs. 37,980,021.91.

Users of motor vehicles point out, however, that in 1930 the amount of taxes paid by motor vehicles was as follows:

Tax on vehicles . . . . .	S. frs. 30,000,000
Customs duty on vehicles . . . . .	„ 19,000,000
Petrol duty . . . . .	„ 44,000,000
<b>Total . . . . .</b>	<b>S. frs. 93,000,000</b>

They point out that the rate of duty on petrol, which may be as much as 170 per cent., is higher than that allowed by the Federal

Constitution, whereas it is only 20 per cent. for other goods. They claim that if the share of the Federal Treasury were limited to the revenue from a 20 per cent. duty and the remainder were used for the roads, the Cantons would receive S. frs. 39,000,000, which, with the taxes, would place a total of S. frs. 69,000,000 at their disposal. Furthermore, if account were taken of the fact that before the advent of the motor vehicle the roads cost S. frs. 16,000,000, the balance to be charged to the motor vehicle now would be S. frs. 62,500,000, and that consequently the yield of S. frs. 69,000,000 would easily cover expenditure.

## 2. *Efforts by the Confederation to give motor transport legal status.*

The Federal law of October 2nd, 1924, reserves to the Confederation the exclusive right of conveying passengers, but concessions may be granted. Motor transport enterprises are classified as follows:

*Government lines* of which the staff and material are directly under the State, and which are operated at the sole risk and expense of the State.

*Private enterprises*, receiving an indemnity from the Federal Posts Service and of which the material is not State property. The indemnity paid to these enterprises is based on mileage. At the end of 1930 about 270 lines were being operated under this system. They exist mainly where the nature of the traffic allows of the employment of heavy vehicles.

*Lines operated under Concession (A)*, organized by municipalities or private interests for the conveyance of mail and postal packets, and receiving an indemnity from the Postal Administration. The duration of Concession (A) is ten years. The subsidies are fairly high and the concession can only be cancelled on serious grounds.

*Lines operated under Concession (B)*, particularly in connexion with tourist travel, organized by private enterprises according to traffic requirements. Concession (B) is only granted in exceptional cases (excursions).

The establishment of rates and time-tables for all services is subject to the approval of the Authorities. Public transport enterprises are at liberty to choose the means of conveyance they wish to employ. They are not subject to taxes on the tickets

they issue. The Government Postal Service vehicles are exempt from all taxation. Owners of motor vehicles carrying mail and holders of Concession (A) do not pay all the taxes, nor do they pay the same taxes everywhere. Holders of Concession (B) are subject to all the taxes in every Canton. They are granted no privileges.

There are likewise police regulations which are constantly undergoing changes to keep abreast of motor-car developments.

Motor traffic, however, has increased steadily.

In 1927 there were only 54,447 motor-cars and lorries.

In 1931 there were 84,333 motor-cars and lorries.

The increase for the two years was therefore 54·7 per cent.

In 1931 there were approximately 18,500 lorries and 900 buses in Switzerland. A slowing up of progress is, however, now to be expected.<sup>1</sup>

### III. ROAD AND RAIL

#### 1. *The effect of motor competition on railway traffic; measures taken by the railways.*

It is naturally difficult to estimate the amount of traffic taken from the railways by motor transport. Competition seems to make itself most felt in passenger traffic. In 1910 private motor passenger traffic represented about 1 per cent. of the total traffic, as against 98·2 per cent. carried by the railways. In 1929 the figures were 9·2 per cent. and 88·2 per cent. respectively. In goods traffic the management of the Federal railways estimates the value of the traffic taken from the railways at between 20 and 25 million Swiss francs.

Whatever percentage they may be losing, the railways have endeavoured to protect themselves against competition by adopting a series of tariff and administrative measures. Tariff measures, as in other countries, include reduced rate tickets (round trip tickets, collective tickets, &c.) and special terms for goods transport. Administrative measures include the opening of road transport companies (Sesa and Asto). In 1931 the Sesa (Suisse

<sup>1</sup> Figures for December 31st, 1933, show a total of 88,017 motor vehicles (excl. motor-cycles) of which 1,273 were buses and coaches, 18,258 lorries, and 2,176 tractors.

Express S.A.) had 38 agencies, served 916 localities and 365 railway stations, and assisted the railways considerably by establishing a closer collaboration between road and rail. The Asto (Automobil-Stückgüter-Transport Organisation) undertakes more especially the carriage of parcels (small consignments). Private motor transport contractors see in these powerful companies a weapon to be used by the railways against the motor-car, and the railways do not appear to contest the truth of this assertion. Private undertakings also complain of certain contracts made by the railways under which they grant rebates to users who undertake to utilize only their services. Cases are also quoted where special agreements have been made with foreign railway companies who promise to direct traffic towards the railways. The private motor transport enterprises consider that in certain Cantons the authorities favour the railways too much.

## 2. *Recent agreement between the two means of transport.*

As the conflict seemed to be dragging on indefinitely, the railways and motor transport interests opened negotiations with a view to arriving at a solution of the problem by private arrangement. *An agreement was reached on May 27th, 1933.* This agreement was signed by the General Management of the Federal railways, the Union of Swiss Transport Companies and the Rhetian Railways, on the one hand, and by the Bureau for the Protection of Automobile Interests, on the other.

The two parties undertook to support a draft Federal law prepared jointly by them setting forth the relationship between the railways and motor transport. This draft was published the same day as the Agreement. The second part of the Agreement deals with the apportionment of traffic between the railways and motor transport: in areas within a radius of 30 km., the conveyance of goods and animals is undertaken by holders of Concession (A), unless the consignor expressly asks for the carriage to be effected by railway (a number of exceptions are provided for under this heading); the portion of the carriage effected by road is likewise allocated to the holders of Concession (A), should the operation of transport exceed a distance of 30 km., of which part is effected by rail and part by road. Conversely, goods traffic over long

distances is undertaken by the railways, except in certain specific cases when it is effected by holders of Concession (B).

The railways and motor transport enterprises are agreed in demanding limitation as to transport obligations in certain circumstances (when traffic is exceptionally heavy, for instance).

The railways undertake to assist the development of the motor services operating in the restricted areas. They will employ neither their staff nor their material in road services. If, however, private railways have already organized services of this kind, they may retain them on condition that they adhere to the Co-operative Society of which the formation is stipulated in Article 10 of the Agreement and Article 16 of the draft law.

Article 16 of the draft law is worded as follows:

'In order to encourage the creation of the various means of transport, a Co-operative Society shall be formed including representatives of the railways, motor transport interests and traders.'

The organization of this Society is dealt with in detail in the third part of the Agreement (Articles 10 to 19).

The Agreement has been signed for a period which ends on December 31st, 1943.

# ITALY

## I. RAILWAYS

### 1. *The Italian railways mainly owned by the State.*

The first railways in Italy were constructed in 1839 and 1840 between Naples and Portici and between Milan and Monza. The Italian railway system at the present day has a total length of 22,886 km., or 7·13 km. per 100 sq. km. of country. The railways are divided into two groups. The first group, which consists of the railways operated by the State, is by far the more important and includes the longest (16,966 km.) and busiest lines. The second group, comprising all the local lines, is divided among a large number of concessionaries; it has a total length of 5,900 km., of which 2,587 km. are standard gauge and 3,313 km. narrow gauge.

The basic law governing the operation of the State railways is dated July 7th, 1907, with subsequent amendments. The railways operated by private companies are governed by the law of May 9th, 1912, which has likewise been amended on numerous occasions. Concessions are granted for a maximum period of seventy years, but prior to the passing of the law they could be for ninety years. At the end of that period the line and its installations (excluding rolling-stock) become the property of the State. The State may also, if it wishes, acquire the rolling-stock when the period of the concession terminates. In most cases the State grants subsidies to the concessionaries on a mileage basis. At the present time such subsidies are granted as follows:

- (a) Railways of regional interest: 50,000 lire per km. for 50 years.
- (b) Local railways: 35,000 or 20,000 lire per km., according as the railway runs over a route which belongs to the company or follows the public way for the greater part of its distance.
- (c) An additional subsidy of 8,000 lire (maximum) per km. for the construction of electric lines.
- (d) A special subsidy of 10,000 lire (maximum) for a period of 50 years for the electrification of existing lines.



*General obligations* similar to those in other countries apply to the Italian railway companies. As regards *the actual permanent way*, the concessionary must allow his railway to be linked up with or crossed by another railway and agree to the joint use of a particular section with another company; in regard to *operation*, the concessionary must ensure safety and regularity of service, maintain rolling-stock in proper condition and make the company's time-tables, tariffs, and regulations accessible to users. The tariffs must be strictly observed throughout and equality of treatment accorded to all users. Reductions of tariffs may only be granted in cases prescribed by the law. As regards *taxes*, railway operators are obliged to collect, on behalf of the State, the taxes levied on transport. Concessionaries must carry the mails free, and postal parcels against the payment stipulated in special agreements or as laid down by the law in the absence of any such agreements.

*Certain rights* are granted to railway operators, *on the other hand*, in consideration of these obligations. The concessionary of a public railway has the exclusive right of operation over his lines and in their vicinity, within the limits of distance specified in the concession contract. The concessionary also has the right of expropriation when a line is constructed.

## 2. *The financial and economic importance of the railways.*

In 1932 the *total capital invested* in the installations, permanent way, and rolling-stock of the State railways amounted to 39,254,000,000 lire (stabilized).

If the present value of the lira is not taken into account, the amount of investment would be 20,485,000,000 lire, including 7,807,000,000 lire representing expenditure on installations and operation equipment before July 1st, 1905, when the State took the operation of the railways into its own hands, and 12,678,000,000 lire representing the investment made by the State between 1905 and 1932.

Payments made from the budget in 1931-2 in respect of *interest* and *amortization* amounted to 502,943,500 lire.

It is difficult to estimate the initial expenditure in the case of

the privately owned railways but, according to calculations, it is in the neighbourhood of 391,000,000 lire (pre-war) or 880,000,000 lire (present value). If the cost of new installations subsequent to the original construction of the railways is added to the above figure, the present value of the private railways would be about 3,000,000,000 lire.

*Costs of maintenance and of renewal or improvement of permanent installations* of the State railways continue to be over 1 milliard of lire per year:

1928-9	.	.	.	.	1,121,000,000 lire
1929-30	.	.	.	.	1,102,000,000 „
1930-1	.	.	.	.	1,082,000,000 „

The figure for 1930-1 includes 609,000,000 lire for ordinary maintenance and 473,000,000 lire for renewals and new installations.

Only statistics for *maintenance* are available regarding the privately owned lines; the figure for 1930 was 56,570,355 lire.

*Expenditure for new construction* on the State railways is decreasing steadily, the figures for recent years being as follows:

1927-8	.	.	.	.	274,900,000 lire
1928-9	.	.	.	.	217,900,000 „
1929-30	.	.	.	.	186,800,000 „
1930-1	.	.	.	.	124,400,000 „

There are hardly any data of this kind available in regard to the privately owned lines.

The Italian railways *contribute their share to the public budget*.

The State railways pay the following taxes and charges:

a tax of 13 per cent. on the price of transport of passengers, luggage, and goods by fast service, and 2 per cent. on the price of transport of goods by ordinary service;

an ordinary stamp duty of 3 per cent. on the transport of passengers, luggage, and goods by fast service, and 0.80 per cent. on the transport of goods by ordinary service;

there is also an extraordinary stamp duty varying from 0.10 lira for a package by fast goods service to 1 lira for a wagon-load by ordinary service.

a tax of 0.05 lira paid into the war-wounded fund.

These taxes are included in the tariffs and for the financial year 1930-1 totalled 85,800,000 lire. This figure is not, however, proportionate to the total receipts of the administration, because the taxes and stamp duties are collected in lump sum payments on the basis of the tariffs in force before the War.

The State railways also pay the surplus of their operating receipts into the general budget. Figures for recent years are as follows:

1925-6	.	.	.	.	378,100,000 lire
1928-9	.	.	.	.	206,700,000 „
1930-1	.	.	.	.	10,300,000 „

In 1931-2 there was a deficit of 197,800,000 lire and in 1932-3 a deficit of about 600,000,000 lire.

The railway administration further estimates that the conveyance of mail costs it 70,000,000 lire and tariff reductions 46,000,000 lire (1930-1).

Lastly, the State railways paid 6,500,000 lire of miscellaneous taxes (land, property, &c.) in 1931-2.

In the case of the private railways the transport tax is 8 per cent. for passengers, luggage, and goods by fast service and 3 per cent. for merchandise sent by ordinary goods service. The tax in the case of inter-urban tramways is fixed at the uniform rate of 3 per cent. on all receipts. The State also participates in the gross and in some cases even in the net profits. In 1930 these charges were made up as follows:

Taxes and stamp duty	.	.	.	.	13,624,703 lire
State share of gross profits	.	.	.	.	1,009,984 „
State share of net profits	.	.	.	.	363,277 „
Total	.	.	.	.	<u>14,997,964 lire</u>

In 1927 the extra-urban tramways paid . 7,674,505 lire.

In 1930 the State paid more than 150,000,000 lire as subsidies to the private railways and 1,607,000 lire to the tramways.

The number of passengers (exclusive of circular, combined, or free tickets) on the State railways has decreased during recent years as follows:

	1927-8	1928-9	1929-30	1930-1	1931-2
Passengers:					
123,043,000	120,625,000	123,528,000	111,154,000	95,874,000	
Passenger-km.:					
7,065,201,000	7,049,317,000	7,035,522,000	6,491,677,000	5,800,131,000	

Goods traffic has likewise decreased as follows:

	1927-8	1928-9	1929-30	1930-1	1931-2
Tons:					
54,350,852	58,757,453	58,487,177	48,613,287	40,404,167	
Ton-km. (approx.):					
11,711,100,000	12,200,100,000	12,804,100,000	11,543,700,000	10,077,900,000	

Figures for the private railways are as follows:

	1927	1928	1929	1930
Passengers . . . . .	66,630,000	69,113,000	71,003,000	69,198,000
Passenger-km. . . . .	1,000,000,000	1,208,000,000	1,234,000,000	1,146,000,000
Tons . . . . .	9,994,000	9,945,000	10,417,000	9,137,000
Ton-km. . . . .	270,000,000	217,400,000	227,000,000	199,100,000

The decrease of traffic, except on the smaller lines, does not appear to be so marked as in other countries. However, in 1932 and 1933 the State railways show a heavy falling-off in traffic and reduced receipts.

## II. MOTOR TRANSPORT

### 1. *The modernization of the Italian roads.*

In 1931 there were 20,672 km. of national highways, 42,578 km. of provincial roads, and 106,800 km. of extra-urban municipal roads. In accordance with numerous laws promulgated since 1865 and a large number of decrees, road construction work in Italy up to 1928 was generally shared by the State and lesser authorities. In order to provide a general solution of the road problem, the Italian Government, however, formed the *Azienda Autonoma Statale della Strada* (A.A.S.S.) in 1928. This organization, which has been entrusted with the upkeep and development of the State roads, comes under the Ministry of Public Works, but has its own administration and budget. Its budget is maintained by the

revenue from the registration fee and road improvement tax paid by motor vehicles, and by the additional contribution they pay for use of the roads. It also receives periodic financial assistance from the State. The A.A.S.S. only deals, however, with the roads of general interest, and the provincial and municipal road systems do not come within its jurisdiction. Each province and municipality is responsible for the upkeep of its roads without the assistance of the Azienda. Nevertheless, interprovincial and intermunicipal committees may be formed to apportion expenditure among the various corporations concerned. The State exercises a right of control over the provincial and municipal roads constructed with the aid of subsidies granted by the Central Government.

A number of private societies have also taken up the question of the construction of *autostrade* (roads for motor traffic only). The State assists in this work by guaranteeing bond issues, but with the reservation that it participates in the profits and that the *autostrade* revert to the State at the end of fifty years with the right of repurchase before that period has elapsed. Users of the *autostrade* are obliged to pay for each journey they make, according to the horse-power of the car and its seating capacity. At the present time there are 460 km. of *autostrade* of which 327 km. are in northern Italy and 133 km. in central and southern Italy.

In 1932-3 the budget of the Azienda amounted to 416,373,000 lire (excluding new construction which is paid for by the State and the corporations concerned). Of the above sum, 130,000,000 lire were advanced by the State.

The taxes levied in connexion with the roads were made up as follows:

(1) Registration fee and road improvement tax . . . . .	193,000,000 lire
(2) Additional tax . . . . .	No figures available
(3) Customs duty and sales tax on petrol . . . . .	463,868,651 lire
(4) Customs duty on rubber tyres, motor cars, and spare parts . . . . .	39,197,102 ,,
(5) Stamp duty . . . . .	2,957,609 ,,
Total . . . . .	<u>699,023,362 lire</u>

The A.A.S.S. does not, however, receive all the sums raised in

this manner; it only receives the revenue obtained under heading No. 1 and heading No. 2 (part only, plus the subsidy of 130,000,000 lire). To this sum must be added the revenue collected in the form of police fines.

No general solution of the problem of financing the local roads has yet been found.

*2. Concessions only granted to regular public motor transport lines for the conveyance of passengers and goods.*

The number of vehicles has increased steadily during recent years as follows:

1925 . . . . .	114,677
1930 . . . . .	296,600
1932 . . . . .	345,776

or 1 vehicle per 118 of population.

In 1932 there were: 227,445 private cars, 9,108 buses, 81,243 lorries, 14,492 trailers, 1,024 tractors, and 12,464 agricultural tractors.

Motor transport may be divided into two classes: private enterprises and public enterprises. Private enterprises are subject to no regulations or restrictions other than those of a general nature concerning the licence to operate, driving permits, and other technical matters. Public enterprises are operated under concessions granted by the State. This principle is strictly applied in passenger services. Its application is not so easy, however, in the case of goods services, because it is difficult to define exactly what a fixed route is—a necessary condition for the granting of a concession.

The authorized public services consist principally of the following:

(a) Line services to which the State grants subsidies when they serve districts having no other means of mechanical locomotion; this subsidy averages 600 lire per km. and may be as much as 800 lire. Services of this kind may also receive subsidies from the provinces, municipalities, or the postal administration. Certain line services are only provisional; they are authorized for a period of six months and receive no subsidies. The total subsidies paid

to line services in 1927 amounted to 11,491,952 lire for 23,367 km., i.e. 492 lire per km. 37.60 per cent. of these lines were subsidized.

(b) Tourist services which receive seasonal licences and are also in certain instances subsidized.

(c) Passenger services which in 1930 comprised 3,261 lines operating over 97,644 km. and included the following:

27,679 km. permanent services
39,866 km. provisional services
30,099 km. tourist services.

It is estimated that the length of these lines now exceeds 100,000 km.

(d) Goods services which, unlike the passenger lines, are practically never required to adhere to a regular time-table. It is considered more economical and easier to establish fixed itineraries to be followed by these services.

The concessionaries generally have the exclusive right of operation. They likewise receive preferential treatment when a new concession is granted or when an old one is renewed. The services operated under concession do not, however, enjoy a complete monopoly as they are almost invariably in competition with other enterprises which are not bound by the obligation to operate regular services.

### III. ROAD AND RAIL

With regard to the road and rail problem, it is interesting to note that, according to Mr. Vezzani, motor transport is actually a more costly form of transport than the railways.

	<i>Lire per passenger-km.</i>	<i>Lire per ton-km.</i>
State railways . . . . .	0.19	0.22
Standard-gauge private railways . . . . .	0.14	0.40
Motor vehicles . . . . .	0.43	1.20

The flexibility of motor transport may, on the other hand, compensate this disadvantage.

According to the experts of the Italian Section of the International Chamber of Commerce, the situation is as follows:

(1) The volume of private passenger transport does not cause the railways any anxiety, as the development of tourist and other traffic in private motor-cars has been limited.

(2) In public passenger transport the concession system has given good results and permitted the wide development of services which are not in competition with the railways.

(3) In the carriage of goods competition is as a rule only to be feared in transport operations effected for hire or reward, but such services do not all represent a loss for the railways; in many cases these services become auxiliaries of the railway companies. The only really competitive services are those operating over a route where there is already a railway line, but competition of this kind on a large scale only occurs in certain districts, particularly in the valley of the Po. However, more recently, competition in this field is likely to have become much keener on the improved main arteries owing to the development of Diesel-engined lorries which allow of cheaper transport.

According to calculations made by the State railways, in February 1932 the deficit resulting from motor transport competition was 7,000 tons per day, i.e. 5 per cent. of the total railway traffic or 8 per cent. of the total receipts. Traffic returns for August 1932 show this decrease as 10 per cent., representing an annual loss of 400,000,000 lire.

The railways on the other hand have carried considerable quantities of goods for the motor industry: in 1931-2 they transported 495,266 tons of petrol, representing 38,967,754 lire, and 13,422 tons of motor-cars and motor-car parts, representing 3,745,000 lire.

There are no laws governing the relationship between road and rail, but certain organizations have been created to co-ordinate the two services. In 1929 the *National Transport Institute* was formed with a view to directing traffic to the railways by technical methods (door-to-door delivery, &c.) or tariff measures (reduction of tariffs for amalgamated freight). The greater part of the capital of this organization was found by the State railways assisted by the principal banks. The National Transport Institute has signed



a number of important agreements with firms shipping large quantities of goods, and the railways grant special tariffs to users who undertake to dispatch a certain tonnage regularly. In 1931-2 the National Transport Institute arranged for the transport of 295,672 tons of amalgamated freight at an average reduction of 60 per cent. of the standard charges.

In 1932 the *Sicon Company* (Società Anonima Italiana Casse Mobile) was formed to construct and hire out Containers.

With a view to modernizing their services, the railways have improved their express parcels services and introduced services for the door-to-door collection and delivery of passengers' luggage.

# GERMANY

## I. RAILWAYS

1. *Constant supervision of the railways by the public authorities throughout German railway history; consequent close relationship with the State; the greater decentralization of the German railways an explanation of the important part they play in German economic life.*

Experiments in railway construction in Germany date from about 1825. As early as 1826, Fritz Harkort, a Westphalian manufacturer, tried to promote a scheme of railway construction, but at first he was unsuccessful, and it was not until 1838 that the Elberfeld-Düsseldorf line was constructed in that region. In the meantime other German countries had started work: in 1835 the line from Nürnberg to Fürth, in Bavaria, had been opened. In Saxony the first section of the Leipzig-Dresden line was opened in 1839, and extended in 1840 as far as Magdeburg. About the same period the Prussian Government authorized the opening of the line from Berlin to Potsdam (1839), and later the line from Berlin to Anhalt and Coethen (1841).

The striking feature of this early railway history is the absence of co-ordinated effort, which can, however, be explained by the lack of political union, the persistence of particularism, and the timidity of capital. Political particularism ruled out the possibility of any general plan, and it will be recalled that the construction of the Bremen-Hamburg line could only be carried out after the fall of the kingdom of Hanover in 1866. The hesitancy of capital is understandable in a country where the capitalist system was still in its infancy and where private enterprise had not yet acquired that boldness which was to become one of the most striking characteristics of Germany at the beginning of the twentieth century. The need to support or make good private capital, and even at times the desire to strengthen growing political unity by the formation of powerful economic organizations, committed certain States, especially Prussia, to a policy of intervention in railway matters.

In 1838 the Prussian law, although placing the railways in the hands of private companies, formally laid down the principle of State authorization and State supervision of constructional work, as well as the progressive taxation of net income and the right of the State to repurchase the railways. In 1840 railway construction underwent a crisis and the State had to step in so as to give confidence to capital. It offered a guarantee of interest payments and took up a certain number of shares, but retained the right of very close supervision. In 1843, by a convention signed with the Upper Silesia Company, the State authorized the issue of guaranteed shares of which it took up one-seventh itself. On the other hand, any surplus profits over 5 per cent. went to the State, which also had the right to supervise the operation of the railway and its rates and time-tables, and even to appoint certain officials or take over the company should the working results not appear satisfactory. Similar conventions were signed with a number of other companies. Certain States—Brunswick in 1838—had adopted this policy even earlier than Prussia, whilst others—the Grand Duchy of Baden in 1840, Saxony in 1842, and Württemberg in 1844—were also proceeding along the same lines.

Nevertheless, the idea of direct operation of the railways by the State gained further supporters every year. In 1848 the Minister David Hansemann suggested the construction of State railway lines in East Prussia and Westphalia as well as the repurchase of certain existing lines. The crisis of 1848 delayed matters, however, and the scheme was not taken up again until the following year. The law was finally voted on December 7th, 1849, and the city of Bromberg became the head-quarters of the first Royal Prussian Railways Management. The tendency of Governments to construct and repurchase railways continued to develop more or less slowly according to the financial position of the States and the fluctuations of the political situation. At times, as for example between 1853 and 1866, the State made but slow progress, while at other times, as in 1866, progress was rapid (the war of 1866 placed 1,292 km. of railway in the hands of the Prussian State against 638 km. retained by the companies, in the provinces of Hanover, Nassau, and Hesse-Cassel). Several companies still continued to exist, however, in 1869, but the war of 1870-1 was

destined to bring about the nationalization of all the principal railway systems.

The constitution of the Empire of 1871 recognized the right of the Reich to supervise the railways and regulate rates. Article 45 specified that the Reich should endeavour to unify and reduce the principal rates over long distances, for the conveyance of coal, coke, wood, metals, &c. But State individualism still persisted. In order to overcome this individualism, the Chancellor Bismarck proposed to the Reichstag the creation of an Imperial Railways Office (Reichs-Eisenbahn-Amt) to centralize all the different questions and do away with the diversity of administrative regulations (1873). Many States resisted and refused to amend their rates, whilst the crisis of 1874 still further complicated the situation. The Chancellor then conceived the idea of having all the lines in Germany repurchased by the Reich (1875).

The railway system at that time comprised 28,200 km. of line of which 16,200 km. were in Prussia, 3,962 km. in Bavaria, 1,800 km. in Saxony, 1,218 km. in Württemberg, 1,145 km. in the Grand Duchy of Baden, &c. The total value of the German railway system was estimated at about 7 milliard marks, of which 3 milliard were represented by the State railways, 3 milliard by private railways, and 900,000,000 marks by lines which had been conceded but which were nevertheless State operated. The explanation given was that an Empire administration alone would have sufficient authority to establish order in the different organizations. Nevertheless, the Chancellor's plan was not adopted.

Between 1879 and 1895, however, Prussia repurchased all the existing lines of general interest in her territory. By 1892 Saxony had likewise repurchased her railways, and Württemberg and Baden the greater part of theirs. But each State retained a certain degree of autonomy in its dealings with its neighbours. The Imperial Office played but a secondary part. The Union of the German Railway Administrations, whose interests went beyond the frontiers of the Reich, alone introduced some sort of unity into the railways as a whole. In 1914, 61,404 km. of standard-gauge line were being operated, of which 57,858 km. belonged to the various States. In addition there were more than 10,000 km. of local light railways (*nebenbahnähnliche Kleinbahnen*).

The Great War had two main consequences. First, the German railway system was reduced by 6,000 km. of lines of general interest. At present, the Reichsbahn operates more than 53,700 km. of lines, while the private railways account for a further 4,700 km. Secondly, the Constitution of Weimar brought about the transfer of all the German railways to the Reich. Under the agreement between the Reich and the States, which was finally settled on April 1st, 1920, it was decided that an indemnity would be paid to the States equal to the initial capital plus the amount of the deficits caused by the War. Under the Dawes Plan the German railways were constituted a guarantee of reparations payments. Under the same Plan also, the Deutsche Reichsbahn Gesellschaft (D.R.G.) was formed, the operating rights of which terminate in 1964 (law of August 30th, 1924, subsequently amended on March 13th, 1930). Despite the existence of this intermediary company, the German railways may be regarded as a perfect example of State enterprise.

From a geographical point of view the German railway system is one of the best laid out in the world. Such factors as topographical features and average altitude have not prevented the railway from penetrating the most isolated regions, and traffic can run with equal facility in the Black Forest and the Mountains of Thuringia. The wide valleys of the Rhine, Weser, Elbe, Oder, and Danube formed ready-made routes for the railways to follow. Lastly, the absence of any geographical centre of attraction, such as Paris constitutes in France, saved Germany from the inconveniences of excessive centralization of railway administration, and permitted the greatest possible flexibility in the adaptation of services to meet local requirements.

The German railways, more than those of neighbouring countries, appear to be centralized in their administrative organization and decentralized in their economic functions. This situation results in a happy combination of unity of management and flexibility of operation. It also explains the close relationship existing between the Reich and the railways, and may likewise account for the railway putting up a stronger resistance against motor transport competition than in other countries.

2. *The obligations and rights of the railways clearly defined.*

The Constitution makes a distinction between the main and secondary lines of the railway system, both of which are under the supervision of the Minister of Transport.

The railways of general interest must be constructed and equipped on uniform lines laid down by the State. They must be maintained so as to offer safety to users and meet traffic requirements. The railways may not refuse to take goods offered under normal conditions of transport. Conveyance of goods must be undertaken according to the order in which the goods are received, except in certain cases fixed in advance. The railways are responsible for accidents due to their fault; they are likewise liable for loss, decreased value and deterioration of packages or luggage, and damage arising out of non-observance of the specified delivery periods. The rates must be applied uniformly to all users, except in certain specific cases. They must be approved by the public authorities, who may also require them to be modified. Should any difference arise in this connexion between the Government and the railways, the Railway Tribunal arbitrates the dispute. Authorization is necessary for the construction of new lines. The D.R.G. has the right of expropriation, but the Government decides whether such expropriation is to take place. The railways are obliged to collect the tax on passenger and goods transport on behalf of the State. Since 1924 (Article 13 of the Reichsbahn Law) the postal administration has been obliged to pay for the services of the railway which up to then had been free. The same Article maintains the reductions for the transport of soldiers. The railways must supply the Customs Authorities with the necessary premises for carrying out their inspection. They must also observe certain requirements in regard to the engaging of staff (physical fitness), and establish a pensions fund.

Against these obligations the D.R.G. has the exclusive right of railway operation. Section 5 of the law of 1924-30 runs as follows:

‘The Reich shall concede to the Company the exclusive right to operate the railways of the Reich under the conditions set forth in the present law and in the Company’s Statutes.’

The private railways have similar rights and are protected, especially in Prussia, against any competition. The State gives no guarantee of interest payments, whilst the law on their railways stipulates that the railway rates must be calculated so as to ensure that a proper rate of interest is paid. During recent years remissions of taxes have been granted, by emergency decrees, to companies in deficit; in 1931 the authorities went so far as to contemplate the suppression of the transport tax. However, this was never carried into effect.

3. *Financial organization; the interests of the State closely bound up with those of the railways.*

Following the amalgamation of the former State railways in 1920, their capital went to the Reich, which also took over the debts contracted by the States for their repurchase. When the D.R.G. was formed in 1924, the capital continued to be owned by the Reich which, however, still remained responsible for interest payments and amortization of the repurchase price of the railways.

On October 1st, 1924, the value of the entire railway material amounted to RM. 24,500,000,000. All improvements in material subsequent to that date become State property: in this connexion the D.R.G. expended RM. 1,741,100,000 between 1924 and 1931. The capital expenditure of the D.R.G. is made up as follows:

(a) Initial expenditure in respect of permanent way and rolling-stock . . . . .	RM. 25,186,600,000
(b) Other expenditure (costs of financing, &c.) . . . . .	„ 1,629,900,000
(c) Difference between purchase price and initial cost of construction in the acquisition of the private railways . . . . .	„ 148,400,000
	<hr/>
	RM. 26,964,900,000
(d) <i>Less:</i> Expenditure covered out of operation receipts, &c. . . . .	„ 723,800,000
	<hr/>
	RM. 26,241,100,000

To the above figures must be added the capital invested in private and narrow-gauge railways, as follows: RM. 2,109,228,000 comprising:

Road railways, or tramways . . . . .	RM. 1,980,484,000
Narrow-gauge railways . . . . .	„ 580,829,000
Private railways . . . . .	„ 547,915,000

No statistics are available showing the share of the Government in the invested capital; nevertheless, there is no doubt that it has a large holding in these private enterprises.

In 1931 the total amount paid to the State by the railways was made up as follows :

Reparations tax . . . . .	RM. 330,000,000
Contribution to the State in respect of reparations	„ 304,500,000
Dividend on preference shares . . . . .	„ 35,000,000
(1) Total . . . . .	„ 669,500,000
(2) Transport tax . . . . .	„ 236,700,000
(3) Other charges (social, pensions, &c.) . . . . .	„ 228,000,000
(4) Miscellaneous taxes and duties (turnover, land taxes, &c.) . . . . .	„ 20,140,000
Total (1+2+3+4) . . . . .	RM. 1,154,340,000

The private railways have been exempted from certain taxes by emergency decrees.

#### 4. *Constant improvement of Reich railway equipment.*

The volume of rolling-stock has grown continually since the beginning of the century.

In 1899 there were 18,291 *locomotives* to 49,040 km. of line, or 3.72 per 10 km. In 1931 there were 22,147 locomotives to 53,000 km. of line, or 4.1 per 10 km. The number of locomotives appears, however, to have decreased in recent years :

1928 . . . . .	24,481
1929 . . . . .	24,089
1930 . . . . .	23,673
1931 . . . . .	22,147

Their power, on the other hand, has increased. The number of electric locomotives grew, during the same period, from 347 to 399, or from 1.4 per cent. to 1.8 per cent.

In 1899 there were 36,688 *passenger coaches*, or 7.4 coaches per



10 km. In 1931 this figure had reached 65,632, or about 12 coaches per 10 km.

In 1899 there were 389,067 *goods wagons*, or 79.4 per 10 km. In 1931 there were 649,148, or 122.4 per 10 km.

In 1931 the *staff* numbered 643,750, of which 301,892 were employees and 341,858 workmen, representing 46.9 per cent. and 53.1 per cent. of the total respectively. These figures are equivalent to 11.95 persons per km. of railway operated. The 1931 figures show a very marked decrease as compared with those for 1929, through the effort made by the Reich to make economies in staff; in 1929 there were 713,119 workmen and other employees; in 1930 there were 681,871, i.e. 13.25 per km. of railway operated in 1929 and 13 per km. of railway operated in 1930.

*Salaries and wages* have likewise fallen since 1929:

1929	.	.	.	.	RM. 2,100,000,000
1931	.	.	.	.	„ 1,800,000,000

##### 5. *The decline in traffic; the railway deficit.*

Traffic has fallen off constantly since 1928.

*Passenger traffic figures* are as follows:

1928	.	.	.	.	2,009,400,000
1929	.	.	.	.	1,980,300,000
1930	.	.	.	.	1,829,300,000
1931	.	.	.	.	1,577,700,000

A similar decrease is recorded in passenger-km.:

1928	.	.	.	.	47,649,000,000
1929	.	.	.	.	47,088,000,000
1930	.	.	.	.	42,297,600,000
1931	.	.	.	.	36,922,300,000

Where in 1928 there were 120.76 persons per train, there were only 87.63 in 1931.

Third class is the most used; the percentage is as follows:

3rd class	.	.	.	.	94.44 per cent.
2nd class	.	.	.	.	5.54 „
1st class	.	.	.	.	0.02 <sup>1</sup> „

<sup>1</sup> First class exists only in international services and a few intercity expresses.

In *goods traffic* as a whole, there has been a similar drop:

1928	.	.	.	.	480,966,000 tons
1929	.	.	.	.	485,921,000 "
1930	.	.	.	.	399,544,000 "
1931	.	.	.	.	325,552,000 " of which
					286,076,000 tons, or 87·87 per cent.,

was general traffic (*öffentlicher Verkehr*).

An analysis of these 286,076,000 tons gives the following details:

Traffic on Reichsbahn	.	.	.	231,040,000 tons or 80·76 per cent.
Traffic on private railways	.	.	.	22,750,000 " " 7·95 "
Foreign traffic	.	.	.	31,496,000 " " 11·01 "
Transit traffic	.	.	.	790,000 " " 0·28 "

This represents a total of 51,208,000,000 ton-km., or an average of 157 km. per ton for traffic as a whole in 1931.

*Goods traffic receipts* were as follows:

1930	.	.	.	.	RM. 2,839,200,000
1931	.	.	.	.	" 2,307,500,000

In 1932 there was a further falling off of traffic, and the *staff* was still further reduced by 40,000, making 100,000 railway employees less than in 1929. In 1933 *operating expenses* were RM. 1,849,743,000; *maintenance costs* were RM. 798,672,000; *replacement costs* were RM. 408,175,000. The payments to the Central Government in accordance with the Lausanne Agreements amounted to RM. 70,000,000.

The loans service absorbed	.	.	.	.	RM. 33,100,000
Dividends on preference shares	.	.	.	.	" 75,700,000
Reserves and amortization of operating rights	.	.	.	.	" 12,400,000

In the course of the same year, the D.R.G.

had a revenue of	.	.	.	.	RM. 2,920,600,000
and expended	.	.	.	.	" 3,056,600,000

Excess of expenditure over revenue RM. 136,000,000

The total *deficit* in 1933 was RM. 309,900,000 as against RM. 233,000,000 in 1932. The continued deficit is explained by:

the economic crisis which has affected every branch of German activity, not excluding the railway industry;

the very heavy fixed charges which amount to as much as 70 per cent. of general operating expenses;  
 the abuse of special rates;  
 rash investments;  
 motor transport competition.

## II. MOTOR TRANSPORT

### 1. Road classification, finance, and upkeep.

The roads are divided into the following classes: (a) State and provincial highways; (b) county and district roads; (c) municipal and rural roads. The length of each category is as follows:

State and provincial highways . . . . .	63,000 km.
County and district roads . . . . .	111,000 "
Municipal roads . . . . .	40,000 "
<b>Total . . . . .</b>	<b>214,000 "</b>
By the addition of city streets . . . . .	60,000 "
<b>a total is reached of . . . . .</b>	<b>274,000 "</b>

With a view to altering the system of road classification and establishing it according to modern requirements, the Government undertook a series of *vehicle censuses*: the first took place from October 1st, 1924, to September 30th, 1925, and the second from October 1st, 1928, to September 30th, 1929. The comparative results of these two censuses show the progress made by mechanically propelled vehicles (figures expressed in percentage):

Nature of vehicle	Vehicle		Tons	
	1925-6	1928-9	1925-6	1928-9
Horse-drawn vehicles . . . . .	54·9	26·3	50	24·2
Touring cars and motor cycles . . . . .	34·7	60·6	21·9	39·0
Lorries, buses, and other heavy motor vehicles . . . . .	10·4	13·1	28·1	36·8
	100·0	100·0	100·0	100·0

The growth of vehicle weight is particularly interesting:

<i>Weight of passing traffic per 24 hours</i>	<i>Percentage of total length of roads</i>	
	<i>1925-6</i>	<i>1928-9</i>
0-200 tons . . . . .	41·6	25·59
201-400 „ . . . . .	35·9	36·23
401-800 „ . . . . .	17·2	25·11
801-1,200 „ . . . . .	2·9	6·95
1,201-1,600 „ . . . . .	1·3	2·50
1,601-2,000 „ . . . . .	1·1	1·41
2,001-3,000 „ . . . . .	..	1·46
3,001-5,000 „ . . . . .	..	0·59
Over 5,000 „ . . . . .	..	0·16
	100·0	100·00

Development of this kind calls for a considerable effort if the roads are to be kept in a proper state of repair. Highway finance is one of the most complex problems to be tackled in modern Germany. Its complexity arises more especially from the following considerations:

(a) *The large number of administrative bodies responsible for the upkeep of the roads* (States, provinces, counties, municipalities, &c.). In certain Federal States in Germany the arterial roads are maintained by the State itself, and the remainder by the secondary authorities. In others, particularly in Prussia, the State does not deal with any matters connected with the roads which they have handed over to the provincial authorities. There is therefore no uniform policy, and consequently statistical data are incomplete and unreliable. It is only recently that a beginning has been made in the administrative organization of the roads on a centralized basis.

(b) *The difficulty of arriving at any method of ascertaining the apportionment of liability in regard to highway finance.* The representatives of motor interests would like to see a distinction made between pre-war and post-war expenditure. There is, however, a great lack of accurate information in connexion with pre-war highway expenditure. It has been suggested that a part of the expenditure should be attributed to motor transport on the basis of the number of ton-km. effected. But with the rapid

evolution of the motor vehicle, the basic figures would be each year farther removed from reality. A suggestion has also been made to take specific wear and tear of the roads as basis, but here again it would be difficult to determine the exact amount of wear and tear to be attributed to the various users. After thorough consideration of the problem, the Prussian statistical departments came to the conclusion that the best method would be to take road classification as a basis.

(c) *The financial difficulties experienced by the authorities in advancing the necessary funds for road work.* According to an estimate made in 1930 in Baden, there was a discrepancy of RM. 22,000,000 between the amount required for road upkeep and the amount actually available. Generally speaking, requirements are considerably greater than the available funds. In 1927 expenditure on improvement and upkeep of *provincial roads*, which ought to have been RM. 248,628,000, was only RM. 158,776,857. In 1928 expenditure on *State highways*, which ought to have been RM. 183,028,000, was only RM. 113,355,000. In 1932 the Prussian State statistical bureau calculated that the total expenditure for the upkeep of the German road system amounted to RM. 435,000,000. At the same time it estimated pre-war current expenditure, allowing for the difference in purchasing power of the Mark, as RM. 268,000,000. Additional expenditure necessitated by motor vehicles was estimated at RM. 167,000,000.

## 2. *The number of motor vehicles and the organization of motor transport services.*

In 1931 the number of motor vehicles was 684,000, consisting of: passenger vehicles, 523,000; lorries, 161,000. If motor-cycles are included this represents 1 vehicle per 43 of population.

The development of the motor-cycle (792,000 in 1931) is due to its low purchase-price and upkeep costs.

Excluding motor-cycles, the percentage is 1 vehicle per 94 of population and 146 per 100 sq. km. These figures are lower than those of all the neighbouring western countries.

Despite the all-over increase in the number of vehicles, a relative falling-off in the yearly rate of development has been noticeable

for some time past. Taking the index 100 as representing the total number of vehicles, the following result is obtained:

1929	.	.	130.1	as compared with 1928 (= 100)
1930	.	.	117	" " 1929 (= 100)
1931	.	.	106.1	" " 1930 (= 100)

The same regression continued in 1932. In the first part of that year the following drop was recorded:

25,668 private cars	.	.	4.9	per cent. of the total
8,652 lorries	.	.	5.4	" " "
31,950 heavy motor-cycles <sup>1</sup>	.	.	7.7	" " "

In 1933, however, owing to taxation relief, the upward trend began again.

In 1931, out of 161,000 lorries, 65,737 exceeded 2 tons in weight. The utilization of the latter was distributed as follows:

	1931	1927	Situation
Public authorities	8,488	5,732	Increasing
Agricultural and forestry operations	1,661	2,185	Big decrease
Transport enterprises	11,040	7,355	Increasing
Transport of liquid fuels	1,136	(not specified)	Big increase
Commercial and other purposes	43,412	41,899	Increase

Goods transport by motor vehicle is operated by private concerns and by concerns with a joint system of administration, i.e. with financial participation of the public authorities. The latter are: 'The Motor Transport Services of Bavaria' (Kraftverkehr Bayern); 'The Saxon Motor Transport Services' (Kraftverkehr Sachsen); 'Northern March Motor Transport Services' (Kraftverkehr Nordmark).

The private concerns are grouped in the two following organizations:

(a) 'The Association of Long Distance Motor Transport Enterprises' (Reichsverband der Autoferntransportunternehmer) with its head offices in Düsseldorf. This association includes enterprises having an average of 1 to 5 trains of vehicles, and comprises about 1,000 trains in all.

<sup>1</sup> Light-weight motor-cycles (up to 200 c.c.) are free of tax in Germany.

(b) 'The Association of Carrier Enterprises' (Reichsverband der Fuhrbetriebe), grouping the small transport contractors who only possess one vehicle on an average and operate over shorter distances.

*Passenger vehicles* in use in 1931 were as follows:

Private vehicles for commercial, professional, and other purposes	477,202
Vehicles in the service of the Public Authorities . . . . .	7,522
Ambulances . . . . .	1,924
Hackney carriages and motor-buses . . . . .	36,295

The first motor-bus line was opened in 1903. By 1913 there were 367 lines in service operating over a distance of 6,802 km. At the present day the traffic is divided among three categories of enterprises:

(a) Enterprises organized by the Reichpost. It should be noted in this connexion that the Reichsbahn and the Reichspost entered into an agreement in 1929 with a view to eliminating the lack of co-ordination of the different services organized by the public authorities. According to the division of traffic under this agreement, the right to form new passenger lines is reserved to the Reichspost and that of forming new goods services to the Reichsbahn. Furthermore, the Reichsbahn undertook to transfer its existing passenger lines gradually to the Reichspost. A detailed agreement has been concluded with a view to limiting the creation, except in special cases, of new lines in competition with the Reichsbahn. When a new line is created exceptionally, the Reichsbahn has a 65 per cent. participation in the profits and losses. In the case of any other new lines its participation is limited to 35 per cent. By 1930 co-ordination had been developed to a point where it was possible in certain cases to issue through rail and road tickets, with the possibility also of through luggage registration.

(b) Enterprises organized by provincial, municipal, and other authorities, generally with participation of the local railways concerned. The majority of these enterprises are grouped in two associations: the Verband deutscher Verkehrsverwaltungen and the Verband deutscher Kraftverkehrsgesellschaften; the former includes the Kraftverkehr Deutschland G.m.b.H.

(c) Privately organized enterprises, most of which are grouped

in the Reichsverband der Kraftomnibusunternehmer; in certain cases the Reichsbahn has organized liaison services with these enterprises.

*Ad (a).* The Reichspost services are by far the most important and have grown steadily since 1921:

<i>Year</i>	<i>Length of lines</i>	<i>Number of vehicles</i>	<i>Distance run (km.)</i>	<i>Passengers</i>
1921	5,985 km.	428	9,400,000	8,180,000
1926	23,848 „	2,167	38,200,000	36,120,000
1930	43,815 „	3,736	82,530,000	87,850,000
1931	46,483 „	3,939	82,530,000	95,000,000

*Ad (b).* The traffic handled in recent years by the two associations mentioned above (excluding city and suburban traffic) has been as follows:

<i>Year</i>	<i>Length of lines</i>	<i>Number of vehicles</i>	<i>Distance run (km.)</i>	<i>Passengers</i>
1926	5,418 km.	748	18,830,000	32,340,000
1930	13,923 „	1,571	48,250,000	90,610,000
1931	12,788 „	1,652	48,485,000	77,110,000

The first-named association, which also carries goods, conveyed 890,000 tons in 1931.

*Ad (c).* The Reichsbahn has issued the following figures regarding services operated jointly with enterprises other than the Reichspost:

*Passengers*

<i>Year</i>	<i>Length of lines</i>	<i>Number of vehicles</i>	<i>Distance run (km.)</i>	<i>Passengers</i>
1930	633 km.	44	1,485,933	2,098,881
1931	319 „	32	1,414,806	1,408,656

*Goods*

<i>Year</i>	<i>Length of lines</i>	<i>Number of vehicles</i>	<i>Distance run (km.)</i>	<i>Tons transported</i>
1930	879 km.	40	575,723	111,727
1931	942 „	37	510,577	86,822



### 3. *The charges laid upon motor transport.*

These charges may be divided into two classes: (a) general obligations; (b) fiscal charges.

(a) In passenger transport the general obligations include: the obligation to operate the line throughout the whole period of the licence irrespective of traffic fluctuations; the obligation to convey any passenger on request; liability for damage caused to passengers or goods carried; compulsory insurance (in 1929 the premiums paid by transport contractors exceeded RM. 40,000,000); obligation to have rates approved by the authorities and to post them up before they are put into force; time-tables must also be posted up. In the case of goods transport for hire or reward over distances exceeding 50 km., a licence must be obtained from the authorities. Vehicles are subject to inspection and a special standard of physical fitness is required of drivers.

(b) Fiscal charges include the following:

(1) all the charges borne by other undertakings of a similar nature, viz. tax on capital, and income tax; corporation tax; professional tax (*Gewerbesteuer*); turnover tax; land purchase tax; tax on landed property; tenant's tax; tax on capital transactions; tax on appreciations in value of landed property;

(2) motor vehicles also pay certain special taxes, including the motor vehicle tax which brings in considerable sums:

1924-5	.	.	.	.	RM.	50,570,000
1929-30	.	.	.	.	„	209,480,000
1932-3	.	.	.	.	„	170,000,000

(3) taxes on imported fuel, RM. 192,000,000; compensation taxes on home-produced petrol and benzol, RM. 89,000,000; charges in respect of the admixture of alcohol, RM. 46,000,000; total: between RM. 490,000,000 and RM. 500,000,000.

In this way a balance might be established between road expenditure and the revenue accruing from motor transport taxation.

## III. ROAD AND RAIL

1. *Conflicting estimates made by railways and by motor interests as to effect of motor competition on railway traffic.*

No reliable data exist as to the relations between road and rail. The figures furnished are simply estimates. Fairly reliable calculations have been made in certain individual cases, but accurate surveys of the situation as a whole are lacking.

The departments of the D.R.G. estimate that in 1929 motor transport competition deprived them of RM. 190,000,000 of passenger traffic and RM. 220,000,000 of goods traffic. The figures for 1932 can be estimated at about 20 per cent. less than those for 1929, through the general falling off of traffic; the loss in 1932 would therefore be RM. 150,000,000 of passenger traffic and RM. 180,000,000 of goods traffic. The D.R.G. also considers that the expenditure incurred for the improvement of its services in order to meet road competition should be included in its losses.

Motor-car constructors maintain that their competition has had far less serious results than the railways claim. Mr. Schippert writes as follows in that connexion:<sup>1</sup>

'It is a known fact that on an average 2,390 trains of vehicles (lorry plus trailer) are loaded every four days up to 100% of their carrying capacity; this is equivalent to a daily average of 597 lorries with one trailer each, with a carrying capacity of 10 tons per unit. Against these 597 vehicles, the Reichsbahn has 100,000 wagons with an average carrying capacity of 15 tons. The share of motor transport in the conveyance of goods, based on transport capacity, is therefore less than 0.5%.'

Mr. Schippert adds that if the figure represented by actual goods receipts (RM. 1,700,000,000) be taken as basis of calculation, then motor transport's share of 40 million RM. is equal to 2.3 per cent. of the total. This loss to the railways is almost equal to half the amount paid by the D.R.G. to subsidize certain of its consignors, as will be seen later.

<sup>1</sup> Report submitted to the International Motor Transport Congress, Berlin (February 1933), p. 21, last paragraph but one.

## 2. Measures of defence taken by the railways.

(a) *Technical measures.* The railways have organized local goods trains for the conveyance of parcels: these trains are called 'Leichte Güterzüge' (shortened form, 'Leig'). They are made up of closely coupled wagons with a covered gangway giving communication between each wagon, so that the whole forms a single unit; a small train of this kind is extremely mobile and reduces the running time and the waits at stations. Goods train time-tables have been altered so that the trains load in the day-time and travel during the night. A more rapid service is obtained by supplying even the smallest stations with light locomotives for shunting. The speed of trains on the main lines has been increased through the employment of compressed air brakes, and journey times have been substantially reduced by eliminating needlessly long stops. Particular attention has been paid to connecting services at junction stations. Time-tables have been carefully revised and fast goods train services introduced. It is now even possible to deliver goods loaded the same day over distances as long as Berlin-Cologne or Cologne-Hamburg. Cases are also on record of live stock being shipped from the Königsberg district and arriving at the Berlin market the same day. Container services have been developed and efforts are being made to increase their capacity. Cartage services have been improved.

(b) *Rating measures.* The D.R.G. has introduced collective tickets issued at 33½ per cent. instead of 25 per cent. reduction, and the minimum number of sharers of the ticket has been reduced from 20 to 15, and more recently to 12; the clause stipulating the minimum length of journey has been cancelled. When more than 31 persons share a ticket, one free journey is allowed, a further free journey being allowed for each additional unit of 50. The reduction in the case of excursion trains has been increased from 10 to 20 per cent. The reduction made for collectively booked special trains may be as much as 50 per cent. and even more in certain cases. Other reductions are granted in respect of school-children's tickets, holiday tickets, &c. Lastly, the D.R.G. has come to an agreement with certain motor forwarding agents (Schenker Contract) whereby they are able to make

such substantial reductions in cartage rates that competition is no longer to be feared. The D.R.G. makes good the difference between these reduced cartage rates and the cost price of transport: the subsidies paid in this way are estimated at RM. 70,000,000.

### 3. *State intervention.*

A decree of 1919 introduced licences for all motor transport services operating beyond the limits of a municipality. The provisions of this decree were subsequently confirmed by a law of 1925. A further decree of 1928 defined 'motor transport lines' as public services operating with a certain regularity. This latter notion was not, however, sufficiently concise. The final decision as to traffic requirements lies with the D.R.G. Under a decree of October 1931, transport by lorry over distances of more than 50 km. was made subject to the issue of a licence; this obligation was extended at the same time to passenger transport. The law of October 1931 was subsequently amended by complementary decrees as to its application. A compulsory minimum tariff was established bringing the motor transport tariffs into line with the tariffs of the three highest classes of the D.R.G., plus the additional charge of 5 per cent. for closed wagons. Lastly, the system of way-bills, consignment notes, and compulsory inspection was introduced. Certain severe penal clauses were also added to these regulations. Motorists declare that the D.R.G. is aiming at a complete monopoly of all transport.

The D.R.G. quotes in its defence the obligations placed upon it by reparations, its obligation to construct and maintain the permanent way, the heavy staff and insurance charges it has to pay, and the important place it occupies in the national economic life.

The motor transport companies reply that the reparations charges have affected the entire community and that in any case they are decreasing; that the necessary land for the construction of the permanent way was given to the railways free and that the States contributed towards its installation and upkeep by granting subsidies; that motor transport moreover pays sufficient taxes to cover road upkeep and that while the railway companies may have to remunerate their staff, the railway installations on the other

hand are their own property and are used by no one but themselves; as regards insurance, rail transport risks are less than road transport risks, and in any case the State Railway never pays more than RM. 5,000,000 to RM. 6,000,000 of damages a year; that the motor-car renders the public as great service as the train, and that it has actually helped to create traffic in certain isolated districts and thus increase their general prosperity.

The great automobile associations have therefore constantly asked for a reduction in the charges borne by them. They have demanded a reduction of 50 per cent. of the motor vehicle tax, a lowering of the duties on mineral oils to a reasonable level, and the transfer to the public at large of the charges levied in respect of the admixture of alcohol to petrol. During 1933 the new Government adopted a policy which was more favourable to motor transport, and the following laws were introduced in that year: (a) the law of April 10th, 1933, abolishing the licence fee in the case of new motor-cycles and new touring cars; (b) the law of May 31st, 1933, giving the owners of motor-cycles and cars already in use the option of making a lump sum payment in lieu of the annual licence fee; (c) the law of June 27th, 1933, regarding the formation of an enterprise called the 'Reichsautobahnen'. This enterprise was constituted as a subsidiary of the Reichsbahn; it is a separate legal entity and is governed by public law. It was formed with a view to constructing and operating special roads reserved for motor traffic (*Autostrade*). Under this law the post of 'Inspector-General of German Road Affairs' was created. The Inspector-General is vested with very wide powers in regard to all proposed road construction. The first constructional plan comprises a motor highway system of about 1,000 km.

# CZECHOSLOVAKIA

## I. RAILWAYS

### 1. *The Czechoslovakian railways a State enterprise with independent management.*

Czechoslovakia has 14,300 km. of railways, of which 13,000 km. are operated by the State, the remainder being in the hands of private companies. By the law of December 18th, 1922, these railways were formed into an autonomous enterprise operated on business lines, although still continuing to be administered like a government department and serving general interests. Being run on a commercial basis, the railways are required to pay all their costs, including interest on capital, out of their own revenue. This enterprise operates not only the railways belonging to the State but also a number of municipal and private railways.

The administration of the railways is in the hands of the Ministry of Railways assisted by a Board consisting of twelve members, one of whom is appointed by the Finance Minister in agreement with the Minister of Railways. The other members are selected from the active staff of the railways and the law allows up to one-third of them to be experts who are not officials. This Board was formed to act as intermediary between the Minister and the bodies responsible for operating the railways. Decisions of the Board must be unanimous. In the event of a divergence of opinion, the final decision lies with the Minister of Railways. Under the Minister and Board is a central management which administers the railways through a number of departments (staff department, legal and administrative department, finance department, &c.).

Regulations as to accountancy methods and publication of balance sheets are laid down by the law and various ordinances. The railway accounts are inspected by a Commission consisting of three members. They are also submitted to the State Accountancy Department in the same way as those of other government administrations.

The law prescribes the creation of two reserve funds, the first

of which is intended for the improvement of equipment, and the second for making good any operation losses. Any profits made by the railways are paid into the State Treasury. Should revenue be insufficient to cover operation costs, the railways may obtain short-term credits or advances from the Treasury. The operation deficit at the end of the year is met by the Treasury, but only in the form of advances which are debited to the railways account in the following year.

The railways are subject to numerous obligations, most of which are based on the principles contained in the Berne International Railway Convention (guarantee of transport and operation, publication of tariffs, &c.). The railways collect, on behalf of the State, the transport tax which is included in the price of the ticket, as well as an essentially social tax of 10 per cent. paid into the old age pensions fund of the railways.

## 2. *The economic crisis in Czechoslovakia and its effect on the railways.*

*The capital invested* in the Czechoslovakian railways in 1930 was estimated as follows:

16,830,868,000 Kč., including:
16,594,770,000 Kč. in real estate and movable property, and:
236,098,000 Kč. uncompleted construction work.

*Expenditure* in 1930 amounted to 313,712,427 Kč. on upkeep and renewal of equipment and material, and 91,144,345 Kč. on new lines.

*Revenue*, in the form of taxes on tickets (20 per cent.), goods, and parcels (15 per cent.), amounted to 670,000,000 Kč., out of which the State returned to the railways 337,000,000 Kč. The old age pensions tax brought in 98,000,000 Kč. The railways therefore received in all 435,000,000 Kč.

Lastly, the railways grant reduced rates for the conveyance of mail, soldiers, and various other users, the total of which, according to estimates, reaches the somewhat surprising figure of 500,000,000 Kč.

The financial situation was worse in 1930 than in previous years. Railway revenue figures are as follows:

1927 . . . . .	663,000,000 Kč.
1928 . . . . .	682,000,000 „
1929 . . . . .	653,000,000 „

This decline is due to the *decrease in traffic*, which has become more and more marked during recent years:

	<i>Passenger traffic</i>	<i>Goods traffic (tons)</i>
1929 . . . . .	270,000,000	83,000,000
1930 . . . . .	264,000,000	73,000,000
1931 . . . . .	236,000,000	64,000,000

In 1931 the drop in goods traffic (12·49 per cent.) was greater than in passenger traffic (10·66 per cent.). The principal products affected are: beetroots (39·97 per cent.), fertilizers (20·18 per cent.), wheat and vegetables (19·36 per cent.), refined sugar (16·55 per cent.), and wood (13·8 per cent.), showing the serious crisis through which agriculture is passing in Czechoslovakia. The economic situation appears therefore to be primarily responsible for the diminution of railway traffic.

## II. MOTOR TRANSPORT

The number of motor vehicles increased steadily up to 1931:

1925 . . . . .	18,623
1929 . . . . .	52,166
1931 . . . . .	91,600

The latter figure includes:

58,000 private cars,
3,600 autobuses,
30,000 lorries.

The development of motor traffic has given rise to two problems, both of which have been solved in Czechoslovakia: (1) Highway finance; (2) Regulation of motor transport.

1. *Highway finance*. According to the figures for 1924, the highway system is divided as follows:

National highways . . . . .	8,475 km.
Departmental roads . . . . .	50,098 „
Other roads . . . . .	13,010 „



The highway system had been very much neglected during the War, and as the ordinary budget was no longer sufficient for its restoration, the plan was conceived of raising a loan within the country, secured by the taxes to be levied on motor traffic. A road fund was therefore created in 1927, managed and administered by the Ministry of Public Works in collaboration with the Ministry of Finance. A Road Board was also formed at the same time to supervise the economic administration of the fund. This road fund was constituted as an autonomous institution having full legal standing. The resources of the road fund are more especially intended for improving the roads. In addition to this fund there is the ordinary budget expenditure of the State, Provinces, Departments, and Districts.

No accurate figures are available as to the sums advanced by local corporations for the maintenance of their roads, but statistics in regard to the general budget and the road fund give some idea of highway expenditure:

Expenditure by Ministry of Public Works . . . . .	126,000,000 Kč. (approx.)
Expenditure from road fund . . . . .	258,000,000 " "
<b>Total . . . . .</b>	<b>384,000,000 Kč.</b>

The road fund is kept up principally by the taxes paid by motor-cars as follows:

- the tax on vehicles based on cubic capacity in the case of touring cars and on the weight of the vehicle in the case of lorries;
- the tax on motor-bus tickets, in the form of a surtax;
- registration taxes paid to the general treasury;
- local taxes levied for the upkeep of the roads;
- taxes on imported mineral oils and on pneumatic and solid tyres, of which a part is paid into the road fund.

Loans may also be raised for purposes of highway finance where necessary.

In 1931 these taxes brought 208,000,000 Kč. to the road fund, to which must be added 147,000,000 Kč. of loan money, amounting in all to about 350,000,000 Kč.

As it would have been necessary to put the highway system in a proper state again even if there had been no motor traffic,

it can be said that motor transport repays the sums required for the upkeep of the roads. Work is being carried out methodically, and by 1931 40 per cent. of the roads of the national highway system had already been transformed and modernized.

2. *Transport regulation.* Up to 1932 the regulation of motor transport was extremely liberal. Regular public transport lines alone were obliged to procure a licence, whilst goods services were subjected to no real supervision. Motor transport was thus able to enter in a certain measure into competition with the railways. It is, however, difficult to gauge accurately the extent of this competition, which made itself more felt in fast transport and parcels service than in ordinary goods transport.

This liberal system came to an end when the *law of December 23rd, 1932*, was promulgated, extending the concessions system to all forms of transport and limiting the duration of concessions to fifteen years. Under this law, considerable financial guarantees and deposits are also required from transport operators, and penalties are inflicted in the event of non-observance of the law. Since then motor transport enterprises created by the railways and the postal service have been granted special advantages. Lastly, the conditions governing taxation are more clearly laid down than they were before.

This law has met with considerable opposition from motor transport interests. The Central Association of Czechoslovakian Industries has opposed it on the grounds that taxation which formerly increased the operating costs of motor transport by 16.4 to 18.5 per cent., will increase them by 21 to 23 per cent. under the new law. The Association claims that under these conditions the motor industry will find itself in an extremely precarious position.

# AUSTRIA

## I. RAILWAYS

*Main characteristics of railway situation in Austria; relationship with the State; charges and obligations; decline in traffic during recent years.*

Austria has a railway system of a little over 7,000 km., or about 11 km. per 100 sq. km. of country. Her railways form part of a larger system constructed by the Habsburg Monarchy during the nineteenth century and now shared by a number of States. The geographical position of Austria accounts for the international importance of her railway system.

Since 1923 the Austrian Federal Railways (Österreichische Bundesbahnen—'Ö.B.B.')

 have been an autonomous organization of the Federal Republic. There are, however, several lines which are not included in the Ö.B.B. The Province of Styria (Bundesland Steiermark), for example, operates certain lines, and there is a local standard-gauge railway of about 200 km. linking up Aspang and the Schneeberg with Vienna. The right to construct and operate public railways lies entirely with the State, which may, however, concede the operation rights for a period of ninety years. Since the introduction of the law of 1910 the duration of concessions for local railways has been limited to sixty years.

The obligations of the railways are laid down in a series of laws and ordinances, including the law on concessions, the law of 1910 on local railways, the railway expropriation law, the railway operation ordinance, &c. These obligations are similar to those in many other countries, i.e. obligation to give regular service; obligation to carry all goods other than those forbidden by the regulations; equal application of tariffs to all users; prohibition against granting tariff reductions except where specified in the regulations and with the consent of the Minister of Commerce and Transport; prohibition against amending tariffs without authorization of the public authorities; obligation to publish tariffs and any reductions made therein. The local railways are, however, further subject to certain special obligations. On the other hand, they benefit by a number of special

advantages. The State, for example, sometimes assists them by guaranteeing their profits or authorizing the postponement of payment of certain operation expenses. Similarly, although not directly subsidized, they receive an indirect subsidy in the form of a refund of the costs of establishment of sidings or exemption from payment of general administration expenses. The local railways are likewise protected against competition by a prohibition forbidding the construction of a second line between two terminals.

The capital of the Austrian Federal Railways is entirely in the hands of the State. In 1930 it amounted to 3,199,000,000 schillings. Charges and interest payments on Federal loans in the same year amounted to 53,000,000 schillings; while expenditure on upkeep and renewals was 155,000,000 schillings, and new construction 136,000,000 schillings. The railways also pay special and general taxes. In 1931 they paid the following amounts:

Erwerbsteuer (tax on profits)	181,306.29	schillings.
Grundsteuer (land tax)	475,726.09	„
Gebäudesteuer (tax on buildings)	993,356.33	„
Fürsorgeabgaben (social welfare charges)	10,772,577.07	„
Total	12,422,965.78	schillings

Railway transport has likewise to pay the following charges: tax on rail transport amounting to 5 per cent. of the transport tax in respect both of passengers and of goods and levied by the railways on the passengers and consignors; taxes on transport documents; stamp duty on permits.

Special obligations like the granting of reduced transport charges to active or retired officials involve an annual loss of two million schillings. Travel permits issued to members of parliament likewise represent a loss of 60,000 schillings, and permits to Customs officials 100,000 schillings. The cost of the carriage of mail, on the other hand, is refunded by the Posts Administration. However, despite this compensation, in 1931 the Ö.B.B. spent almost 800,000 schillings in respect of postal, telegraph, and telephone services.

There has been a marked decrease in traffic during the last few years.

This *decrease* has occurred in all classes of goods: coal still occupies first place (21·67 per cent.) but has fallen slightly (23·12 per cent. in 1929). All classes of traffic have likewise been affected: local traffic, which in 1929 amounted to 19,500,000 tons, fell to 15,700,000 tons in 1931; transit traffic, which amounted to 2,600,000 tons in 1929, was only 1,929,000 tons in 1930.

*Passenger traffic*

	<i>Number of passengers conveyed</i>	<i>Passenger-kilometres</i>
1928 . . . . .	119,000,000	3,935,900,000
1930 . . . . .	104,500,000	3,507,000,000
1931 . . . . .	92,069,000	3,183,000,000
1932 . . . . .	72,452,911 (of whom 94·70 % were 3rd class passengers)	..

*Goods traffic*

	<i>Tons carried</i>	<i>Ton-kilometres</i>
1929 . . . . .	36,700,000	4,595,000,000
1930 . . . . .	31,000,000	3,868,000,000
1931 . . . . .	26,558,000	3,199,000,000
1932 . . . . .	21,533,000	2,260,415,000

The total deficit rose from 83,100,000 schillings in 1931 to 101,300,000 schillings in 1932, despite a decrease of 13·1 per cent. in operation expenses.

## II. MOTOR TRANSPORT

*Recent reorganization of Austria's system of highway finance; steps taken by the railways to protect themselves against motor transport competition.*

Austria has 31,155·8 km. of roads as follows:

I. Federal highways . . . . .	3,899·5 km.
II. State roads . . . . .	1,855·3 „
III. Departmental roads. . . . .	18,483·2 „
IV. Municipal roads . . . . .	6,917·8 „

Expenditure on the Federal highways in recent years has been as follows:

1930	.	.	.	.	36,640,000	schillings
1931	.	.	.	.	42,770,000	„
1932	.	.	.	.	19,728,000	„

Contrary therefore to what has taken place in other countries, credits for federal road expenditure have dropped during the last few years. The total expenditure on the other road systems (excluding the municipality of Vienna) was estimated at 45,000,000 schillings in 1930.

In 1931 the Government undertook to create a *road fund*, and this was finally done in 1933. It has a civil standing and is represented by the Minister of Commerce and Transport. It is principally intended for the reconstruction of the existing road system and, in principle, should only be used for the Federal highways. This fund receives an annual contribution from the Federal budget which, from 1934 to 1947, must be not less than 5,000,000 schillings. Should the amount represented by two-fifteenths of the yield of the petrol tax exceed 5,000,000 schillings, the surplus will be included in the budget of the following year as a supplement to the Federal contribution. In this way a balance between road expenditure and revenue is being established.

The organization of the road fund has to a certain extent satisfied the complaints of the transport operators using the roads. They were complaining that since 1931 the situation had become more difficult for motor transport; instead of paying 24,000,000 schillings of taxes as in 1930, they paid 64,000,000 schillings in 1931 representing a fiscal charge of 1,500 schillings per vehicle or sometimes even 5,000 schillings in the case of heavy vehicles. This increase is principally due to the additional taxes levied on petrol and other fuel.

These charges did not, however, prevent motor transport from competing with the railway, and the number of vehicles continued to grow. In 1931 there were 76,153 vehicles, including 2,138 buses and 13,372 lorries. The average per population is lower than that of many other countries. Road transport enterprises are divided into the following categories: (1) public transport enterprises including those of the Post and certain municipal

undertakings; (2) joint undertakings (including the Federal railways); (3) private enterprises. The regulatory measures in respect of certain categories of road transport are dealt with farther on in the present report. The 450 private enterprises operating over 1,100 lines have undoubtedly caused losses to the railways, the extent of which is, however, difficult to gauge owing to lack of data. It is evident, however, that competition is felt most over the short distances, and is caused primarily by traders using their lorries for their own purposes (*Werkskraftwagen*). The railways are meeting this competition either by improving their operation methods (introduction of light transport: 'Leig Züge'), or by attempting to attract a part of the motor traffic towards the railways. In 1931 the Federal railways affiliated the 'Lobeg' (the largest private motor transport enterprise) with themselves. They also entered into agreements with various companies, especially in the neighbourhood of Vienna. At the end of 1932 the Federal railways owned 95 buses and operated 38 lines. Traffic amounted to 2.6 million passengers and 4,095,837 vehicle-kilometres. The traffic of the affiliated enterprises, which at that time owned 132 autobuses, 49 lorries, and 18 trailers, amounted to 4,099,562 vehicle-kilometres and 2,400,000 passengers in passenger traffic, and 2,200,000 vehicle-kilometres and 40,519 tons transported in goods traffic.

The Clauses forming section VI of the law of October 3rd, 1931, entitled *Kraftfahrliniengesetz* (K.L.G.), set forth the regulations governing so-called 'line' transport, i.e. regular transport services of a public nature operating beyond the boundaries of municipalities for the conveyance of passengers against payment. These regulations specify that the duration of concessions shall be twenty-five years—except in special cases—and stipulate the obligations to transport and maintain a permanent service. The first regulations established under this law dating from 1931 compel the operators of transport services to draw up and publish tariffs approved by the authority granting the concession. The K.L.G. further specifies that no distinction shall be made between users, and that they shall receive equality of treatment. Other provisions of the same law establish in a certain measure the equalization of the transport taxes applied to rail and

motor transport. Concessions do not include a transport monopoly. The State does not grant any subsidies nor give guarantees as to capital and interest payments.

Regulations for the conveyance of goods by lorries are laid down by the decree of June 9th, 1933. All transport operations effected beyond the boundaries of municipalities are subject to a minimum tax which is specified in the Decree in question. Special provisions have been introduced in regard to the tariffs of transport which might enter into competition with certain local railways. Transport records and log-books must also be kept by the transport operator or his employees. The foregoing provisions do not apply to owners carrying for the purposes of their own trade or business (*Werkverkehr*). The *Werkverkehr* is, however, only authorized, in respect of routes adequately served by one or more railways, to carry over distances not exceeding 100 km., an exception being made in the case of perishable goods. The decree gives the railways the right to cancel any reduced tariffs they may have introduced, if they can prove that the reductions in question were granted in order to meet motor transport competition.



# HUNGARY

## I. RAILWAYS

HUNGARY has 7,700 km. of railway, of which 7,270 km. are operated by the State and some 400 km. by private enterprises. The Government had no part in the construction of the first railways, but public opinion soon showed itself to be in favour of Government intervention, and as early as 1869 the public authorities took over a company which was in financial difficulties, and constructed a Government-owned line. About 1890 the Minister Gabriel Baross repurchased a large number of lines and encouraged the construction of numerous local railways. As the State, however, lacked the necessary capital, the construction of the local railway system was carried through with the aid of groups of capitalists and even of users interested in its construction. Its management was, however, placed in the hands of the State railways, with a guaranteed percentage on gross revenue. After the War the repurchase of the railways continued, so that at the present day nearly the whole of the railway system is State property.

Up to 1926 the railway budget was united with that of the Ministry of Commerce. Since then it has been made autonomous. Organized on a commercial basis, it is established so that the costs of maintenance and interest service are covered out of revenue. The charges and obligations are exactly the same as those laid down in the Austrian legislation before the War; Austria, however, made certain alterations in her regulations by the Federal law of July 19th, 1923.

The total capital invested in the railways amounted to 1,634,000,000 pengös on June 30th, 1931, as follows:

Major construction	. . .	448,000,000 pengös
Minor construction	. . .	614,000,000 „
Transport material	. . .	572,000,000 „

In 1930-1 expenditure on upkeep and renewal of permanent installations amounted to 26,800,000 pengös, and expenditure on new construction to 4,600,000 pengös. The latter figure is considerably lower than the corresponding figure in previous years:

in 1928-9, 16,100,000 pengös were spent on new construction while the average for the years 1924 to 1928 had been 25,000,000 pengös. In 1930-1 the amortization service absorbed 16,300,000 pengös.

The railways collect on behalf of the State a transport tax of 5 per cent., which is included in the price of the railway ticket. They also pay various other taxes of which the total in 1930-1 amounted to 439,279 pengös. Payments for services effected for the Posts Department amounted to 4,500,000 pengös in 1930-1. The cost of transport of soldiers or State officials is refunded to the railways. The reduced tariffs granted to employees, workmen, and school children, on the other hand, represent a loss of 20 to 25,000,000 pengös, while the reductions allowed for the carriage of certain goods as directed by the Minister of Commerce amount to the same figure.

In 1930-1 the volume of general traffic on all the Hungarian railways was 110,000,000 passengers and 38,700,000 tons of goods. An analysis of available figures for the State railways shows that goods traffic has a downward tendency, as follows: 28,800,000 tons in 1929-30, and 24,400,000 tons in 1930-1. This drop is more especially pronounced in certain branches of business, e.g. ores (1,135,000 tons in 1929-30 and 688,000 tons in 1930-1); foreign coal (1,092,000 tons and 786,000 tons); raw iron (131,000 tons and 63,000 tons); mineral oils and petroleum remain at about the same figure—crude oil (63,000 tons and 67,000 tons), petroleum (79,000 tons and 71,000 tons); only a few products show a slight increase—for instance: wines (166,000 tons and 176,000 tons); fruit (127,000 tons and 149,000 tons). It would be interesting to know the quantities carried by slow and fast goods services respectively in such a highly agricultural country as Hungary, but unfortunately statistics are not available.

## II. MOTOR TRANSPORT

Hungary has about 60,000 km. of roads. At the beginning of 1932 there were 16,673 motor vehicles, consisting of 11,716 private cars, 653 buses, and 4,304 lorries (of which 4,100 were in the hands of owners carrying for their own business or trade), or about 1 vehicle per 500 of population.

Motor transport is governed by the law of 1930. According to this law a private enterprise may be formed only under a concession granted by the State. In principle, the right to organize regular interurban motor transport lines is reserved to the public authorities, who alone have the power to concede that right to third parties for a limited period. This period must not exceed ten years, nor can an extension be granted. The concession may grant monopoly rights which may, however, be cancelled if the concessionaire does not meet traffic requirements. In practice, regular transport lines over long distances may only be operated by the buses of the Postal Service or by the 'Mavart', a motor transport company formed by the Hungarian railways. Such enterprises must establish a reserve fund for the renewal of their material, submit their tariffs and time-tables for approval by the competent authorities, and insure themselves in respect of their liabilities. This law does not apply to persons transporting their own goods in their own lorries (*Werkverkehr*).

It is these latter, however, who are the railways' keenest competitors. The loss to the railways resulting from this competition is estimated at 15,000,000 pengös per year. It affects more especially the transport of agricultural produce within a radius of 150 km. of towns and of flour and wheat in the neighbourhood of flour-mills.

The railways have adopted the following technical measures to meet competition: (1) improvement of passenger transport; (2) increased number of connexions; (3) introduction of rail-cars on local lines; (4) greater speed of goods trains. They have also adopted the following tariff measures: (1) reduced tariffs for distances of less than 100 km.; (2) inclusion of loading and unloading charges in price of transport. Carrying the policy of modernization still farther, and with a view to establishing a close liaison between road and rail, the railways formed the 'Mavart' Motor Transport Company in 1927 to create and maintain public motor transport enterprises for the conveyance of passengers and goods, and to organize amalgamation depots and door-to-door delivery services. For its part the State sees to it that no parallel services are created to the railways.

The sums necessary for highway finance are found from the

taxes paid by users of the roads. These taxes are as follows: (1) the motor-car tax, of which the yield amounts to about 4,000,000 pengös per annum; (2) the luxury tax on turnover; (3) the petrol tax; (4) local dues such as rank fees in certain towns; (5) import duty on motor-cars; (6) the annual inspection tax paid by motor transport enterprises.

A comparison of the costs of the two means of transport shows that, between Vienna and Budapest, motor transport is cheaper than the railway with which it is in direct competition.

According to certain press notices which appeared in December 1933, the Government had just issued a decree granting the railways an exclusive concession for the carriage of goods by road, on condition that the concession be operated by a co-operative company consisting of established carriers, including the 'Mavart' (Hungarian State Railway Motor Company). In future, road transport will be managed by a Committee consisting of six members, three of whom are appointed by the railways and three by the co-operative company. The country has been divided into seven districts for purposes of control. Transport between different points situated in the same district may be effected by road. If it is necessary to go beyond the limits of the district, the carriage is effected by rail, the co-operative company only undertaking collection and delivery of the shipment; in consideration of these services it receives a part of the total charge for the whole operation of transport (direct door-to-door delivery tariff).

The railways and the co-operative company make a joint adjustment of their tariffs to meet the competition of third party enterprises. There is a minimum tariff for road transport based on loading capacity and fixed at a per ton rate irrespective of the nature of the goods carried. Every driver is obliged to carry a card of identity, a map of the district in which he is entitled to operate, details in regard to booked journey time, and the necessary consignment notes. The State railway officials have the right to inspect these documents at any time. The regulations, however, maintain the liberty of transport effected by private persons for their own purposes (*Werkverkehr*).

# JUGOSLAVIA

## I. RAILWAYS

JUGOSLAVIA has only a little over 10,000 km. of railways in an area of 249,000 sq. km., or 4 km. of line per 100 sq. km. of country. In principle the railways belong to the State which actually administers 91·6 per cent. of them. In certain cases, however, the State may delegate its construction and operation rights to private companies. At the present time a distinction is drawn between the State railways (9,166 km.), operated by the Ministry of Communications, the forest and mines railways (514 km.), managed by the Forests Administration, and certain private lines (360 km.), constructed before the War under the old Austro-Hungarian laws.

The legal position of the railways is clearly laid down in the regulations of Public Administration (1925) governing the relations between the railways and users, the law of 1930 regarding railways for public transport, which specifies the general administrative and technical conditions for the operation of public railway services, and in various other laws. Under these laws the railways are compelled to fulfil the following obligations: obligation to operate, transport, and make good any damage caused to persons or objects, except in the case of *force majeure*; obligation to deliver goods without delay; obligation to submit their rates for the approval of the Minister of Communications, and to publish and apply them uniformly; obligation to submit their time-tables for approval by the Minister, and to publish them; obligation to maintain the permanent way and material in a proper state of repair; obligation to provide the necessary sums for insurance of their staff; obligation to submit a statement of receipts and expenditure to the Minister of Finance who has full powers of control over them, and to lodge a statement of accounts with the Audit Office. Legislation is not yet, however, standardized in regard to certain points; in the event of a fatal accident, for example, it varies according to the country. The railways enjoy a *de facto* monopoly. No guarantee of capital and interest payments exists. No subsidies are granted unless the sums necessary to make good any possible deficit be regarded as such. It is to be

noted, however, that the State also participates in any profit. The concession granted to private railways may be withdrawn in the event of non-fulfilment of their obligations.

According to the 1927 estimates, the amount of capital invested in the Jugoslavian railways exceeded 14½ milliard dinars. Since then this figure has increased; between 1929 and 1930 over 2 milliard dinars were invested in new construction, raised by loans of which the annual repayments are made from the general State budget. The annual payments (64,000,000 dinars) for the repurchase of the Danube-Save-Adriatic railways and the annual payments (39,000,000 dinars) for the repurchase of the local railways are made on the other hand from the budget of the railways. Total expenditure for upkeep and renewal of the permanent way, including staff expenditure, is 500 million dinars per annum; this figure represents about 20 per cent. of the gross revenue accruing from the operation of the railways, which amounts on average to 2,500,000,000 dinars per annum.

The railways levy a tax of 15 per cent. of the price of passenger tickets, and 10 per cent. of the price of transport of baggage and goods. This tax is included in the transport charges, and the revenue therefrom (275,986,000 dinars in 1930) goes to the State budget. Taxes on consignment notes represent an annual revenue of 6,000,000 dinars. The railways themselves pay a tax on their buildings but are exempt from all other taxes.

To these direct charges should be added the losses incurred through the reductions accorded to the public services: the postal services only pay 30 per cent. of their actual cost; soldiers only pay 43 per cent. of the normal rate, and military material 50 to 80 per cent.; high officials travel free; other officials only pay 50 per cent. of the price of their tickets for an unlimited number of journeys; retired officials and the families of active officials have the right to make three journeys a year at a reduction of 50 per cent. Workmen and school children, travelling regularly, are granted a reduction which may be as much as 80 per cent. or 90 per cent. Big reductions are also made in the case of societies (sporting societies, scientific societies, &c.), whilst the poor and those incapable of working receive free tickets. Army personnel travelling off duty and journalists only pay 25 per cent. The exact

amount represented by these reductions is not known, but it must be considerable.

As in the case of other countries, traffic has fallen off in recent years:

*Passenger traffic*

	1928	1929	1930
State Railways . . . . .	48,964,000	48,168,000	46,164,000
Private Railways . . . . .	1,447,000	1,401,000	1,978,000

*Goods traffic (in tons)*

	1929	1930
State Railways . . . . .	19,200,000	16,474,000
Private Railways . . . . .	1,393,000	1,134,804

Wood, coal, and wheat represent the greatest volume of goods traffic—25.69, 16.17, and 8.61 per cent. respectively.

## II. MOTOR TRANSPORT

The kingdom of Yugoslavia has had to make a great effort in order to restore its road system to a proper state of repair. At the end of the War, the regional roads and even the State highways were in a lamentable condition. In view of the apathy of the local authorities, the Jugoslavian Government took the restoration of the roads in hand and reconstructed 1,003 km. of roads in a space of ten years. 10,000 km. of old roads were also repaired, and 110 bridges built across the different rivers. The length of roads in Yugoslavia is now estimated as follows:

National highways . . . . .	8,828 km. (21.7 %)
National highways conceded to Departments . . . . .	4,813.7 „ (11.8 %)
Regional roads . . . . .	27,013.3 „ (66.5 %)
Total . . . . .	40,655.0 „ (100 %)

The total figure of 40,000 km. in an area of 248,488 square km. is very small and only represents 2.25 km. per 1,000 of population.

The laws regarding national highways and autonomous roads

were promulgated in May 1929 and unified the previous regulations. The Minister of Public Works administers the national highways through the Roads and Bridges Department and its services. When the roads traverse woods, the Woods and Forests Services assist in their upkeep by felling trees where necessary.

Autonomous roads in Departments are administered by the departmental authorities; in municipalities they are administered by the municipal authorities.

In 1930-1 the following sums were expended:

State highways . . . . .	168,608,625	dinars
Departmental (Banovina) roads . . . . .	231,057,484	„
Town roads . . . . .	306,851,025	„
Municipal roads . . . . .	53,609,506	„
Cash equivalent of duty-service . . . . .	103,116,581	„
<b>Total . . . . .</b>	<b>863,243,221</b>	<b>dinars</b>

This expenditure is met by: (1) the revenue from a special contribution based on the principle that whoever causes damage to a road must pay for its repair; this contribution is payable either in kind or in money and is used solely for the purpose of making damage good; (2) contributions in kind and duty-service payable in kind or in money, of which the cash equivalent exceeds 100,000,000 dinars, as shown above; (3) the revenue from general taxation—motor traffic tax, registration fee, local taxes levied by the Departments (Banovinas); State and Department (Banovina) taxes levied on regular motor transport lines, included in the price of the ticket and amounting to about 10 per cent. of the price; transfer tax on motor-cars; import duty on imported cars; import duty on petrol and compulsory employment of a petrol and alcohol mixture. There are also certain tolls and town dues.

The estimated number of motor vehicles at the beginning of 1932 was 13,060, of which 8,874 were passenger cars, 793 buses, and 3,393 lorries, or a total of 1 motor vehicle per 1,067 of population. In 1932 there were still no general regulations for motor transport services. The general law on Labour of 1931, however, lays down the general principles of future legislation, and pending the introduction of that legislation, certain provinces have already



issued local decrees. Certain lines are organized by the Ministry of Communications which includes the Postal Department. Other enterprises have been organized by the local administrative Authorities, whilst still others are entirely private. All undertakings, other than postal, effecting a regular passenger or goods service must have a special licence issued by the competent Authority. This is generally the Authority of the Department (Banovina) in which the enterprise has its registered offices, but in case of dispute between Departments (Banovinas) the Minister of Commerce and Industry issues the licence. These enterprises are subject to obligations very similar to those of the railways. The licence is issued for a period of not less than five years. There is no legal monopoly and no *de facto* monopoly.

Motor transport competition does not yet seem to be making itself unduly felt by the railways; it exists more especially in that part of Jugoslavia which lies north of the Danube—a country of plains, richer and more thickly populated than the rest of the kingdom and where there are important railways. It is particularly in passenger traffic that motor transport competition is keenest, and the counter-measures taken by the railways include improvement of passenger services. Co-operation between the two means of transport does not yet exist.

According to recent information (January 1934), a Decree has been issued making the operation of commercial transport services outside urban areas subject to a concession to be granted with the consent of the local management of the railways concerned. These restrictions do not apply to owners carrying for their own purposes (*Werkverkehr*).

# RUMANIA

## I. RAILWAYS

### 1. *State ownership of almost all railways.*

In 1919 the Rumanian railways comprised 11,349 km., of which 4,379 km. were privately owned, representing more than 30 per cent. of the total. These private lines were divided into three classes: (a) lines which had been repurchased by the State Administrations but for which the annuities had not been paid since the beginning of the War; (b) those administered by the State under contracts entered into with the companies owning the railways; (c) those which were entirely independent. Long and difficult negotiations were undertaken by the State with a view to the repurchase of these companies. In Transylvania an agreement was reached with seventeen companies for the repurchase of 1,407 km. of railway, as well as all installations and material. Since 1929 almost all the railways have been repurchased.

The total length of railways as at January 1st, 1932, was as follows:

	<i>Single line (km.)</i>	<i>Double line (km.)</i>	<i>Total</i>
Standard gauge . . .	10,232	273	10,505
Narrow gauge . . .	716	..	716
<b>Total . . .</b>	<b>10,948</b>	<b>273</b>	<b>11,221</b>

### 2. *The railways administered by an autonomous body.*

An autonomous State railway administration was created in Rumania by the law of January 27th, 1929. This administration had a precedent in an organization set up in 1925 and twice modified in the course of 1927. The present administration is directed by a Board of Directors and a General Manager. It is, however, supervised by the Government, which appoints a delegate to represent it at Meetings of the Board. This delegate may oppose measures adopted by the Board, and refer them to the Minister. In the event of a difference of opinion between the

autonomous administration and the Minister, the dispute is referred to a Court of Arbitration presided over by the President of the Court of Cassation.

3. *The difficult financial situation of the railways; their efforts to remedy it.*

During the period which preceded currency stabilization the railway operation accounts showed a deficit, the exact amount of which is difficult to estimate. On August 23rd, 1929, an agreement was entered into between the Ministry of Finance and the autonomous administration of the Rumanian railways for the settlement of debts on the following basis:

(a) Debts contracted before January 1st, 1926, were to continue to be borne by the State. In February 1929 the amount of these debts had been calculated by the Minister of Communications at 929,000,000 lei. A part of this debt has been paid off.

(b) Debts contracted after January 1st, 1926, were to continue to be borne by the Rumanian railways. 2,432,000,000 lei of these debts have been paid from funds from the stabilization loan or from other resources.

Various measures with a view to effecting economies have been taken in recent years on the basis of the law of June 15th, 1929, amended by the law of April 16th, 1932. The principal measures adopted have been in regard to the reduction of surplus staff, and limitation of the number of railway users benefiting by reduced transport charges or receiving free transport; in 1928 they represented 20 per cent. of the railway budget.

Steps have also been taken with a view to a general rationalization of the system of administration. The various general measures adopted include technical improvements such as renewal of permanent way, rebuilding of bridges, centralization of signal control and switching posts, doubling of lines, enlargement of stations, and construction of new lines. In 1929 the sums expended for that purpose amounted to 4,750,000,000 lei.

4. *The decline in traffic and the operation deficit.*

In recent years passenger and goods traffic have decreased steadily:

	1929	1930	1931	1932
Number of passengers . . . . .	38,800,000	35,100,000	30,900,000	24,400,000
Passenger-km. . . . .	3,046,000,000	2,603,300,000	2,269,000,000	1,866,000,000
Loaded wagons (Units) . . . . .	1,898,025	1,729,802	1,613,561	1,576,000
Tons transported. . . . .	23,000,000	18,100,000	16,800,000	16,500,000
Ton-km. . . . .	4,618,800,000	3,542,100,000	3,436,900,000	3,443,900,000

It will be noted that the decrease of goods transport was less marked between 1931 and 1932 (due to increased shipments from the oilfields).

This situation has been the cause of an operation deficit which has increased steadily since 1929:

	1929 Lei	1930 Lei	1931 Lei
Revenue (including State subsidies)	11,719,000,000	11,836,000,000	9,864,000,000
Expenditure	12,822,000,000	13,344,000,000	11,165,000,000
Deficit	1,103,000,000	1,508,000,000	1,301,000,000

In the case of the 1931 figures, payments which ought to have been made but which were not made have been deducted as follows:

Renewal fund . . . . .	400,000,000 lei
Amortization fund . . . . .	200,000,000 lei

In this connexion it should, however, be noted that a part of the sums receivable from the various State administrations were likewise not paid.

##### 5. Measures adopted to counteract the effects of the crisis.

(a) *Passengers.* After March 1st, 1933, a new tariff system was put into force introducing changes not only in the basic tariffs, but also in the differences between passenger classes, and in the additional charge for travelling by fast and express trains. The basic 3rd class fare was reduced by 25 per cent. The ratio between 1st, 2nd, and 3rd class fares which had been 1, 1.6, and 2.6 was established at 1, 1.4, and 2. Rumania is therefore one of the countries where there is least difference between 3rd and other class fares. Fares are subject to an additional charge, varying according to class and distance, the proceeds of which are used to

maintain an accident insurance fund for passengers and staff. The additional charges for travelling by express trains have been lowered over short distances and increased for long distances. As a result of the improvement plan which has been carried out, an average commercial speed of 60 to 70 km. per hour has sometimes been attained on the railways, and in certain cases a maximum speed of 110 km. per hour. On some lines which are particularly affected by motor transport competition, rail-car services have been introduced; these services find particular favour with the public on account of the very low fares charged (50 per cent. reduction).

(b) *Goods*. The tariff policy has been considerably changed. By 1930 the general reductions granted to national industries had been suppressed and the system of exceptional rates extended. During 1931 numerous reductions were made varying from 12 to 30 per cent. according to the nature of the goods and applying more especially to exports. On May 1st, 1933, a further tariff reform was brought into force as follows:

- (1) Reduction of additional charges for shipments up to 200 km.
- (2) Reduction of 20 to 30 per cent. of the tariffs for the two highest classes of goods.
- (3) Rating of certain types of goods in a lower class.
- (4) Reduction of the additional charge on loads of 5 tons and small consignments.
- (5) Reduction of minimum chargeable weight.
- (6) Reduction from 25 to 10 per cent. of the additional charge for closed wagons in the case of goods usually transported in open wagons.

## II. MOTOR TRANSPORT

### 1. *An autonomous Bureau of Public Roads tried out and then abandoned.*

The length of roads in Rumania is estimated as follows:

Former kingdom	. . . . .	49,832 km.
Transylvania	. . . . .	45,858 „
Bessarabia	. . . . .	6,989 „
Bukovina	. . . . .	3,261 „
Total	. . . . .	105,940 km.

58,333 km. of roads are macadamized.

9,459 " " gravel surfaced.

The remainder consist of earth roads.

Weather conditions exercise a considerable influence on the utilization of the road system. Only 20,800 km. are passable during the whole year.

In 1929 the first road legislation was introduced in the new Rumania. An autonomous Bureau was formed for the administration of the roads, but in 1931 it was suppressed and replaced by a general roads management under the control of the Minister of Public Works.

## 2. *The number of motor vehicles.*

	1927	1930	1931
Touring cars . . . . .	16,000	27,000	24,100
Buses . . . . .	3,200	5,200	3,100
Lorries . . . . .	3,000	4,800	6,300
	22,200	37,000	33,500
Population per vehicle . . .	775	470	547

## 3. *Public motor transport services governed by a régime introduced in July 1930.*

According to the law, public motor services are a State monopoly. They may be operated under concessions granted by adjudication. The holder of the concession is obliged to pay a royalty which is a function of the length of journey, seating capacity, and tariff to be applied. It varies, as a rule, from 0.10 to 0.40 lei per seat per km. Tariffs are subject to the control of the Ministry, and vary between 1.5 and 2.5 lei per passenger-km. In consideration of these obligations, the concessionary company has the exclusive right of operating regular public services over the route in question. There are about 60 lines of this kind representing a total length of 4,000 km.

The Rumanian railways have asked that, in principle, the operation of all services parallel with the railway should automatically be placed in their hands. *A Bill* has been drawn up giving

the Rumanian railways the right to operate motor transport services, either directly or by a subsidiary company. This Bill specifies that, in addition to the 3,200 km. of roads already conceded to them, a further 6,000 km. will be placed at their disposal. It is thought that as soon as this Bill becomes law the Rumanian railways intend to concede their rights, in consideration of a royalty payment, to a company with which they will work in close collaboration. It is to be noted, however, that the latest management report of the Rumanian railways makes no mention of this law but complains rather of the advantages accorded to motor transport, viz.: freedom in regard to the establishment of timetables and tariffs, exemption from all requisitions, exemption from the tax of 50 lei paid by the railways into the Road Fund, and exemption from the Revenue Stamp levied on parcels sent by rail.

#### 4. *Passenger traffic mainly affected by road competition.*

Goods traffic has been able to meet the crisis much better than passenger traffic. Passenger traffic showed a decrease of 24 per cent. in 1932, whereas goods traffic remained more or less unchanged. This situation can be attributed to the nature of the traffic, the principal commodity carried being wood, a product of considerable national importance, and wheat and oil, the international importance of which is equally great. Passenger traffic, on the other hand, is more liable to feel the effects of motor transport competition and the general impoverishment of the population.

# POLAND

## I. RAILWAYS

### 1. *The Polish railways mainly State-owned.*

The Polish railway system comprises 20,600 km. of line of which 18,600 km. are operated by the State and about 2,000 km. by private enterprises, representing altogether approximately 4·8 km. per 100 sq. km. of country. Although the State owns the greater part of the railway system, there is no legal monopoly, and private companies may obtain concessions for a period of ninety years. The State railways go under the name of 'Polskie Koleje Panstwowe' (Polish State Railways)—abbreviated form 'P.K.P.'. This enterprise is a legal entity and has an autonomous budget.

*The general administration* of the railways is in the hands of the Minister of Communications. The railway system is divided into regional areas each of which has a manager at its head.

*The railways must* comply with the regulations applying to the conveyance of passengers, luggage, and parcels, and the regulations concerning goods, all of which are based on the provisions of the Berne Conventions. They are compelled to publish their timetables and tariffs, but are not obliged to use any particular fuel. Although liable for damage, the railways are not bound by compulsory insurance. The private railways operate their lines in accordance with the terms of the concession contract or according to the law of 1921. The Silesia-Gdynia line, operated under a concession by a Franco-Polish Company, is governed by a special law.

*The capital invested* in the Polish State Railways was estimated at 7,500,000,000 zlotys in 1930. *Annual expenditure* at the same date amounted to 99,300,000 zlotys for upkeep and 45,500,000 zlotys for new construction. The charges borne by the P.K.P. are not excessively heavy; there is no tax on transport other than the loading tax levied in certain towns, which brings in an annual revenue of about 10,000,000 zlotys. The Polish railways pay no general taxes other than a few small municipal taxes. They pay certain land taxes of which the rate is very low, and are practically



exempt from income tax. Certain operation charges are, however, fairly heavy. The transport of soldiers and military material represents a considerable loss. The number of soldiers travelling at reduced fare or free amounts to 4 to 5 per cent. of the total passenger traffic, whilst the transport of military material represents 1.5 per cent. of the total goods traffic. State officials are granted a reduction of 50 per cent. of the normal tariff, representing an estimated annual loss of 30,000,000 zlotys. The carriage of mail, although effected below cost price, does not cause such great losses to the railways. Briefly, the railways only contribute to the public budget in the form of surplus revenue.

*Revenue* has decreased steadily since 1927:

1927	.	.	.	.	236,100,000 zlotys
1928	.	.	.	.	193,400,000 "
1929	.	.	.	.	185,200,000 "
1930	.	.	.	.	131,100,000 "

A part of this revenue is used to cover expenditure on extraordinary reconstruction, new construction, and improvement of existing lines, so that the Treasury only receives a very small amount from the railways.

The private railways have a minimum revenue guaranteed by the State. In 1930 the State was obliged to pay 2,200,000 zlotys in fulfilment of this guarantee.

## *2. The railway situation a reflection of economic conditions in Poland.*

The railways play an important part in the economic life of Poland and in her foreign relations. Forty-three per cent. of the goods traffic carried by the railways consists of coal, which is the most important item; 13.8 per cent. is represented by mineral products other than coal, 11.8 per cent. by wood and forest products, 10.7 per cent. by vegetable products, and the remaining 20 per cent. is divided among miscellaneous products (animals, foodstuffs, &c.). Coal also predominates in domestic traffic (34 per cent.), followed by mineral products (17.4 per cent.) and vegetable products (15.7 per cent.). In foreign traffic and

shipments to the seaports, coal (which reaches the exceptionally high figure of 70·8 per cent.) and wood (14 per cent.) constitute the principal Polish exports.

As in other countries, traffic on the Polish railways is decreasing.

The figures for passenger traffic in recent years are as follows:

1928	.	.	.	.	.	174,358,563
1929	.	.	.	.	.	166,688,490
1930	.	.	.	.	.	153,318,305
1931	.	.	.	.	.	134,500,023
1932	.	.	.	.	.	117,430,780

The decrease of goods traffic has been particularly marked since 1929:

1929	.	.	.	.	.	74,427,000 tons
1930	.	.	.	.	.	61,252,403 „
1931	.	.	.	.	.	54,768,250 „

In the transport of merchandise, the ordinary goods service clearly comes first (1931—54,160,888 tons by ordinary and 599,000 tons by fast goods service). In other words, the railways are mainly employed for the conveyance of bulk goods at low rates, and in this type of traffic motor transport competition is hardly to be feared. The railway rates are lower than those of motor transport: 2 groschen per km. and in certain cases even 1 groschen. Heavy lorries of 10 tons charge 15 to 20 groschen per ton-km., and others 25 to 50 groschen; these prices may be increased by 50 per cent. where no return load is assured. Under such conditions, only light and costly goods can enter into competition. It is to be noted in this connexion that the railways sometimes charge as much as 180 groschen per ton-km. for the conveyance of packages.

The losses caused to the railways by motor transport, although difficult to estimate, are calculated at 25 or 30,000,000 zlotys in passenger traffic and approximately the same figure in goods traffic. The very detailed Polish railway statistics show that traffic in small consignments dropped from 1928 to 1929 far more than wagon-load traffic. It is unlikely, however, that competition in Poland is so keen as in other countries.

## II. MOTOR TRANSPORT

*The incompleteness of the highway system in Poland; motor transport not yet fully developed.*

The number of motor vehicles in Poland (1931) is estimated at 29,500, comprising 19,000 private cars, 2,000 buses, and 8,500 lorries, representing *only 1* vehicle per 1,000 of population. Poland is, therefore, one of the countries with the fewest motor vehicles in relation to population. This is to a certain extent due to the comparative poverty of the people and the lack of roads. The present economic crisis tends still further to decrease the number of vehicles.

1. *Highway finance.*

Poland has only 288,000 km.<sup>1</sup> of roads passable for traffic, in an area of about 388,000 sq. km. The roads are divided into public or national highways, and departmental and local roads. Up to 1931 these roads came within the scope of the ordinary budget. Expenditure for the upkeep and development of the National highways has been estimated as follows:

1926	.	.	.	.	291,000 zlotys
1927-8	.	.	.	.	3,280,000 "
1928-9	.	.	.	.	5,262,000 "
1929-30	.	.	.	.	4,827,000 "
1930-1	.	.	.	.	26,877,000 "
1931-2	.	.	.	.	16,926,000 "

To the above figures must be added the expenditure required for the departmental and local roads, which was estimated at 403,000 zlotys in 1926, and at 46 million in 1930-1.

Before 1931 the contribution made towards highway expenditure by motor transport was very limited and consisted of the payment of a registration tax and a few local dues and tolls.

The law of 1931 completely changed this situation. It provided for a State Road Fund, having full legal standing, to be used for the construction, surfacing, and upkeep of the public highways. Taxes were introduced for the maintenance of this fund and the State undertook to subsidize it. The new body was also authorized

<sup>1</sup> This figure includes the municipal and rural roads.

to contract, with State guarantee, loans up to 400,000,000 zlotys, secured by the revenue accruing from taxation. It was anticipated that an annual sum of 48,000,000 zlotys would be raised in this way.

In 1932 the amounts collected by the Road Fund, which did not, however, reach the figure expected, were made up as follows:

Tax on weight of vehicle . . . . .	7,135,967 zlotys
Tax on horse-drawn vehicles . . . . .	180,000 „
Tax on bus fares . . . . .	5,343,078 „
Tax on fuel consumed by motor vehicles . . . . .	7,946,961 „
Tax on mineral oils used for purposes other than the propulsion of vehicles . . . . .	3,000,000 „
Tax on roadside advertisements . . . . .	50,000 „
Miscellaneous taxes and fines . . . . .	1,150,000 „
<i>Subsidy from State Treasury</i> . . . . .	100,000 „
<b>Total . . . . .</b>	<b>24,906,006 zlotys</b>

Detailed figures are lacking in regard to the secondary roads but the resources of the road fund proved themselves insufficient to meet requirements.

Owing to this insufficiency of income, certain amendments of the law on motor taxation were introduced by the law of March 29th, 1933, which came into effect on April 1st, 1933. As regards motor vehicles used exclusively by their owners for their own account a considerable decrease in tax rates has been effected. The taxes on load conveyed and on passenger tickets sold have been removed from commercial goods and passenger transport respectively, and as far as the latter is concerned, replaced by a new tax based partly on seating accommodation and partly on the length of route scheduled.

Lastly, a surtax on petrol has been instituted, revenue from which is earmarked for road purposes.

Horse-drawn vehicles used for commercial goods or passenger transport are taxed according to road capacity and number of seats respectively.

## 2. *Regulation of motor transport.*

When taking up the question of the better upkeep of the highway system the Polish Government also drew up a complete set of measures regulating motor transport enterprises. As a first step, a series of laws and ordinances were issued including the following:

(a) the law of October 1921 on the regulation of traffic on the public highways; (b) the Ordinance of the Ministry of Public Works of January 1928 on mechanically propelled vehicle traffic on the public roads; (c) an Ordinance of 1929 on public motor-bus traffic. The decisive law is, however, that of March 14th, 1932, on the commercial transport of passengers and goods by means of mechanically propelled vehicles.

After defining the term 'mechanically propelled vehicle', this law specifies the obligation to obtain a concession for commercial transport operations effected beyond the boundaries of any one municipality. The concession may be granted for one particular line, for several lines, or for a system of lines. It may even be granted with monopoly rights, provided the applicant agrees to certain special terms or can show that the proposed service is of special public utility. Ordinary concessions may be granted by the local authorities; but those for a number of lines or monopoly or when the applicant is a foreigner, are issued by the central authorities. In certain cases no concession is required, viz. the free conveyance of the employees of an enterprise, effected by the vehicles of that enterprise; transport operations effected by industrial or agricultural enterprises for their own purposes; transport of postal parcels; conveyance of goods in motor vehicles by the Polish State Railways; transport of school-children, &c. Time-tables and tariffs must be approved by the competent authorities. Security must be lodged for the insurance of staff and passengers. Certain sanctions are laid down in the event of failure to observe the law. In 1932 various Ordinances (July 6th, August 5th, and August 13th) were issued to complete the existing legislation.

No legislative measures have, however, yet been taken with a view to road and rail collaboration and no special effort appears to have been made towards that end. The railways have limited themselves to improving their services in order to meet road competition, as follows: (a) increased speed on certain lines; (b) introduction of light trains; (c) reduced rates for parcels; (d) reduction of certain other tariffs. They see no necessity to take serious steps to meet motor transport competition, the majority of the motor transport enterprises being small concerns (2 to 3 vehicles as a rule) and the capital invested in them very limited.

## THE BALTIC STATES

THE Baltic States have the following *features in common*: (1) Pre-dominance of State operation in the railway régime; (2) extent of new construction; (3) tendency to develop the railways mainly as lines of transit; (4) continual growth of motor transport; (5) the effort being made to organize highway finance and establish regulations for transport enterprises.

### I. LITHUANIA

Lithuania has 3,100 km. of railways, representing about 5·6 km. per 100 sq. km. of country. Some of the railways are privately owned and some are State-owned. On December 31st, 1931, the State railway system, including all the more important lines, comprised 1,648 km., of which 1,144 km. were standard gauge and 504 km. narrow gauge. The railway system is being extended and transformed so that it will meet Lithuanian domestic requirements better in future. In 1931 the line linking up central Lithuania with Memel was completed, which accounts for the large sums allocated for new construction between 1927 and 1931: 2,243,000 litas in 1930, and 1,445,000 litas in 1931. These figures are considerably in excess of the amount expended on upkeep.

The State railways are under the Minister of Transport assisted by a General Railway Manager. Their budget is included in the general State budget, but they may also obtain additional credits.

Lithuania being a young country, traffic is still more or less in a state of development. Although the number of passengers carried on the standard-gauge railways in 1931 fell by 15·7 per cent. as compared with 1927, the number of passenger-kilometres, on the other hand, increased. In 1931 the average passenger journey was 15·8 per cent. higher than in 1927. Goods traffic by fast service increased by 114·8 per cent. in 1931 as compared with 1927, and the number of ton-km. by 150·3 per cent. During the same period ordinary goods traffic increased by 40·3 per cent. in

respect of tons carried and 53.9 per cent. in respect of kilometric tons. Traffic has also increased on the narrow-gauge railways as follows:

1927, passengers . . . . .	1,929,000
1927, goods . . . . .	142,000 tons
1931, passengers . . . . .	2,507,000
1931, goods . . . . .	185,000 tons

Receipts exceeded expenditure as follows:

	<i>Receipts</i>	<i>Expenditure</i>	<i>Surplus</i>
1929 . . . . .	46,715,000 lit.	33,902,000 lit.	12,813,000 lit.
1931 . . . . .	47,218,000 „	35,323,000 „	11,895,000 „

The surplus likewise more than covers exceptional expenditure, which amounted to 2,273,000 litas in 1929 and 2,668,000 litas in 1931.

This satisfactory situation is to be attributed to the economic development of Lithuania, her position as a country of transit (fast trains travelling between Pagegiai and Daugavpils in Latvia) and her system of reduced rates as applied, for example, in favour of the port of Klaipeda (Memel). The same policy of reduced rates is employed to meet road transport competition which makes itself more especially felt in passenger traffic.

The number of motor vehicles is not yet, however, very great: 2,620, at the beginning of 1932, including 1,600 passenger cars, 390 buses, and 630 lorries, or one vehicle per 903 of population.

Lithuania has endeavoured to establish a balance between road expenditure and revenue. The roads are classified as follows:

National highways . . . . .	1,449 km.
Departmental roads . . . . .	12,760 „
Municipal roads . . . . .	31,000 „
Total . . . . .	45,209 km.

The national highways are maintained out of the State budget. The other roads are maintained from the Department and Municipal budgets, but the budget for local roads must first be approved by the State.

Highway finance absorbs 20 per cent. to 25 per cent. of the general budget (in 1927, 5.7 million gold dollars out of a budget

of 22·7 million). Local communities may receive subsidies from the general budget. Different taxes on motor-cars and horse-drawn vehicles were introduced by the law of June 10th, 1931. Motor-cycles, touring cars, and industrial vehicles are taxed according to horse-power; buses and lorries are taxed on their net weight. Trailers are subject to an additional charge on the main tax. Certain special internal combustion vehicles pay an additional 50 per cent., but those belonging to co-operatives and certain peasants are granted a reduction. Vehicles using national fuel pay a reduced rate of 50 per cent.

Half the revenue from these taxes goes to the general State budget and the other half to the local authorities, who use it for the upkeep of the roads.

Concessionary omnibus lines pay a tax which is fixed by the terms of the concession. Import duty on motor-cars, spare parts, and fuel is also paid into the general budget. Landed proprietors are obliged to furnish payments in kind, the value of which cannot be easily estimated, but which are nevertheless far from negligible.

The foregoing shows the effort which is being put forward by this young country to improve its means of communication.

## II. LATVIA

On March 31st, 1931, 2,654 km. of railway lines were being operated in Latvia, or rather more than 4 km. per 100 sq. km. Improvements are now being carried out on the railways with a view to making them into a transit system between Far-Eastern Europe and the Baltic. During the financial year 1930-1 the line from Jelgava (Mitau) to Krustpils was widened from 1·435 metre-gauge to 1·524 metre-gauge to enable the traffic from the U.S.S.R. to have rapid transit to the ports of Ventspils (Windau) and Liepāja (Libau). With a view to stimulating passenger traffic between the Far-East of the U.S.S.R. and western Europe, a new rapid route was also constructed via Eglaine-Daugavpils to the extreme south-east corner of the country, thus shortening the journey from Berlin to Moscow by 8½ hours. Through measures of this kind the Latvian railways are gaining more and more the character of a transit system.



All these lines are administered by the State. The capital invested in the Latvian railways on March 31st, 1931, is estimated at 460,400,000 lats. Expenditure on upkeep and renewals amounted to 6,500,000 lats in 1930-1, whilst 6,300,000 lats were expended on new construction during the same period. The number of passengers (14,000,000) and passenger journeys increased by 12 per cent. and 4 per cent. respectively between the financial year 1929-30 and the financial year 1930-1. Ordinary goods traffic (3,600,000 tons) shows a decrease of 6.5 per cent. Transport by fast goods service (113,000 tons) likewise shows a slight decrease of 2.2 per cent. Transit traffic, on the other hand, tends to increase: 747,000 tons in 1930-1, i.e. 51,000 tons or 7.4 per cent. more than the previous year.

Financial results (expressed in lats) were as follows:

	<i>Receipts</i>	<i>Expenditure</i>	<i>Difference</i>
1929-30 . . .	47,921,501.54	38,531,587.43	+ 9,389,914.11
1930-1 . . .	43,941,777.92	40,530,051.96	+ 3,411,725.96

The surplus of receipts has therefore fallen noticeably. The management attributes this decrease to general economic depression and the competition caused by motor transport. In order to meet motor competition, the number of light passenger trains has been increased and rates lowered in certain cases. The suburbs of Riga, for example, enjoy especially low rates, and by an addition to the railway law of 1932, the railway has been granted the right to open motor-bus lines. Door-to-door delivery of goods is likewise undertaken on request. The railways are also contemplating the introduction of joint rail and motor transport between places not served by the railway.

At the beginning of 1932 there were 3,911 motor vehicles in Latvia, of which 2,174 were passenger cars, 334 buses, and 1,403 lorries, or 1 vehicle per 486 of the population. Supervision of road traffic is in the hands of the Highways Department of the Ministry of Transport. The necessary authorizations and concessions to operate transport services in towns and on roads maintained by towns are issued by the local authorities, and by the Ministerial Department of Highways and Local Roads in the case

of national highways. The total length of roads of all classes in Latvia exceeds 30,000 km.

In 1931 there were 102 passenger transport lines with 167 buses operating over a total distance of 5,484 km. Concessions of one to five years' duration were granted in respect of sixty of these lines, and up to one year for the others. Concessions are granted by adjudication and the sums collected in connexion therewith go to the fund which has been created for the upkeep of the roads. Owners of concessions are obliged to pay, in addition to the ordinary tax, a special contribution based on the length of journey effected, the amount of the ordinary tax paid by the vehicles, and the state of the road over which the vehicles operate. In 1931, 102 bus lines carried 1,800,000 passengers and effected 5,700,000 bus-km. Four lines are maintained by the Posts and Telegraph Department. Relations between road transport and the railways were established, with a view to avoiding harmful competition, by an 'Order' issued by the Minister of Transport in August 1932. The Railways Administration is consulted as to the advisability of opening new lines, and should it oppose the creation of a new line, the dispute is settled by a special Commission. All rates must be confirmed by the higher Administration of the railways. Whenever a concession is granted, the railway always has priority. The time-tables and rate schedules of motor transport enterprises as well as any subsequent alterations in them must be published in the Official Bulletin. The Department of Highways and Roads keeps the railways informed as to the approved time-tables of the motor services, and the opening or suspension of motor-bus lines. In this way the danger of competition has been reduced as far as possible and a certain measure of collaboration realized.

### III. ESTONIA

Estonia has a total of 1,400 km. of railways, of which 1,200 km. are operated by the State, including 200 km. of line autonomously held by the War Ministry. This figure only represents 2.5 km. of railway per 100 sq. km.

The obligations of the railways are laid down by the law of February 10th, 1931, and include the usual obligations to carry,

publish rates and time-tables, &c. The total capital invested in the State railways was 72,900,000 Estonian crowns in 1931. Expenditure for upkeep and renewal of the permanent way and material, in the course of the same year, amounted to 2,900,000 Est. crowns, whilst expenditure on new construction was 3,592,000 Est. crowns. These amounts were covered by credits in the general State budget.

Up to 1930-1 traffic on the Estonian railways was on the increase, but since then there has been a falling off as a result of the general economic crisis:

	1926-7	1929-30	1930-1
Number of passengers . . . . .	6,008,000	9,513,000	8,489,000
Tons of goods . . . . .	1,934,000	2,687,000	2,616,000

Details regarding the various kinds of goods carried are unfortunately not available.

The Government has endeavoured to establish a highways budget and draw up regulations for motor traffic.

Highway finance is dealt with in a law of 1928 by the terms of which a road fund was formed, applying both to the roads coming under the Ministry of Communications and Departmental roads. These roads comprise:

1st class Departmental roads . . . . .	5,694 km.
2nd class roads . . . . .	6,886 „
3rd class roads . . . . .	10,858 „
<b>Total . . . . .</b>	<b>23,438 km.</b>

Roads of the first category are kept up by the State, and the others by the Departments, rural municipalities, and towns. Subsidies are granted from the general budget to the local authorities. Expenditure by the State has increased steadily:

1923 . . . . .	556,128 Est. crowns
1926-7 . . . . .	1,546,150 „
1928-9 . . . . .	2,127,849 „
1930-2 . . . . .	3,885,554 „

whereas the amounts expended by the local administrations have remained comparatively small. The road fund is maintained by a

State subsidy, the petrol tax instituted in 1928, the tax on motor vehicles, and the fees paid by foreign vehicles during the time they are in Estonia. In 1931-2, the motor-car tax yielded 175,757 Est. crowns and the taxes on petrol and foreign cars, 338,765 Est. crowns. The greater part of road costs are therefore covered out of the general budget.

The number of motor vehicles which, in 1931, was only 245, had reached a total of 3,175 in 1932, of which 1,800 were private cars, 165 buses, and 1,210 lorries, representing 1 vehicle per 352 of population. In 1931 there were 93 bus lines operating over 5,810 km. of road.

Public motor transport enterprises must obtain a concession before they may operate. The duration of the concession is generally one year. Existing concessionaries are, however, privileged and the second period of their concession may be three years. Concessions are not granted in the case of parallel lines or when several lines are operating between the same localities. The Ministry of Transport establishes its plan so that the lines form feeder services to the railways. In the case of seasonal lines, however, the Ministry may create parallel lines to the railway. The effect of this control by the Ministry of Communications is to limit motor transport competition. The railways and motor transport enterprises collaborated by special agreements in regard to delivery services, but no official steps have been taken to ensure co-operation between the two means of transport.

# FINLAND

## I. RAILWAYS

### 1. *Mainly State ownership and operation.*

At the beginning of 1931 the State owned and operated 5,239 km. of railway; only 257.9 km. of narrow-gauge lines were in the hands of private companies. Authority to construct a privately operated railway must be obtained from the State Council. A General Manager is at the head of the State railways, with a number of services working under his orders, dealing with questions of operation, new construction, and control of private railways. There is only 1.35 km. of railway per 100 sq. km. of country in Finland, including all State and privately owned lines. The railways are subject to the following obligations: (1) to transport passengers and goods at approved tariffs; (2) to make good as laid down by law any damage caused to users or goods; (3) to undertake certain transport operations at reduced rates (e.g. conveyance of soldiers) and carry various personalities free; and (4) to construct and maintain the sections of road giving immediate access to the stations. The railways have, however, been receiving an indemnity in respect of the postal service for some years past.

Capital investment in the Finnish railways in 1930 was estimated at 6,077,000,000 Finnish Marks. In 1929, at the time of the stabilization of the currency, it was estimated at 4,808,000,000 Finnish Marks. In that year a new valuation of the railway capital account was undertaken and an equipment renewal fund created.

### 2. *The decline in traffic.*

Traffic has diminished in recent years as a result of the general crisis and motor transport competition. The fall in traffic does not, however, seem to be so marked as in certain countries of western Europe. This is explained by the fact that transport has to be operated over great areas in Finland, and in this type of transport the railway retains all its advantages. Finland is, moreover, a country of transit, which ensures a certain volume of permanent

traffic for her railways. Operating results in recent years are as follows:

	1928	1929	1930	1931
Number of passengers	23,152,000	22,816,000	21,251,000	18,526,000
Tons of goods . . . . .	11,371,000	10,576,000	9,465,000	8,762,000

Despite the falling off of traffic, general results are still satisfactory. The net profits in 1930 were F.M. 64,819,000. All revenue is paid into the treasury.

Motor transport competition has been most felt in passenger traffic. The opinion in Finland is that up to now motor-lorries have not taken much traffic from the railways.

## II. MOTOR TRANSPORT

Finland has about 29,797 km. of roads open to public traffic. This figure includes 3,388.89 km. of roads directly administered by the State, 26,026 km. administered by the District Authorities, and 346.48 km. by the towns and boroughs.

Expenditure for the upkeep and improvement of these roads has increased steadily during recent years.

1921 . . . . .	F.M. 47,831,000
1927 . . . . .	„ 101,643,000
1930 . . . . .	„ 212,876,000

This expenditure is partly covered by the taxes and dues paid by motor transport, as follows:

	1930
Taxes on motor vehicles . . . . .	F.M. 27,813,955
Customs duty on motor vehicles . . . . .	„ 7,535,000
Taxes on petrol . . . . .	„ 114,230,000
Taxes on pneumatic tyres . . . . .	„ 16,987,776
<b>Total . . . . .</b>	<b>F.M. 166,566,731</b>

The above amount represents about 75 per cent. of the total road expenditure. The remainder is covered by credits from the general budget, the amount of which cannot, however, be calcu-

lated easily as it was decided to undertake certain road work with a view to overcoming unemployment.

On December 31st, 1931, there were 33,185 motor vehicles registered in Finland, comprising:

21,999 private cars,
1,427 buses,
9,759 lorries,
or 1 vehicle per 110 of population.

In 1932 these figures (except lorries) had fallen as follows:

Private cars . . . .	19,495
Buses . . . . .	1,214
Lorries. . . . .	<u>9,820</u>
Total . . . . .	30,529

Motor transport enterprises are divided as follows: (1) enterprises operated by the Postal Administration for the conveyance of passengers in close collaboration with the railways; (2) private enterprises in whose hands the railways have placed their door-to-door delivery service in prolongation of the railway; (3) private motor transport enterprises, formed into a National Association the Constitution of which has been officially approved.

No motor transport operations may be carried out without permission from the competent authority. If it is proposed to operate within the limits of a department or if the proposed line does not exceed 30 km., the necessary licence is issued by the District Authorities. In all other cases the licence is issued by the Minister of Communications and Public Works. Licences of which the maximum duration is five years are only granted after thorough investigation of traffic requirements and after consulting the various administrative bodies concerned, in particular the railways. The licence certificate specifies the conditions under which tariffs are to be established and the obligations placed upon the holder of the concession. Copies of this certificate setting out the conditions of concession are communicated not only to all the authorities concerned but also to the regional association of the trade. In that way, the fulfilment by the concessionary of his obligations is guaranteed by the proper corporative body. Time-tables are under the control of the authorities. By exercising this close

supervision the authorities are able to follow the development of competition. The railways themselves have tried to introduce the new form of transport into their service, by associating themselves with motor transport enterprises and replacing certain branch railway lines by road lines. Efforts are also being made to establish a basis of permanent agreement between the two means of transport, and a Communications Committee was set up in 1932 to draft regulations regarding road and rail collaboration.



# DENMARK

## I. RAILWAYS

### 1. *Partly State and partly private ownership and operation.*

The Danish railway system comprises 5,000 km. of line, representing 12·4 km. per 100 sq. km. of country. Denmark is therefore one of the best equipped countries in the world from the point of view of railways. There are 2,500 km. of standard-gauge line and 2,500 km. of various gauges. The railways are divided into two categories: the State railways comprising 2,500 km., and privately owned railways, also comprising 2,500 km.

Since the Constitution of 1849, railway legislation has been considered as a State matter and railway questions have always been submitted to the Legislative Assemblies of the country.

The Minister of Public Works is in charge of the State Railways, but the actual management is in the hands of a general manager who is responsible to the Minister. For management purposes there are two administrative districts, each of which has a manager who is responsible to the general manager. This system of railway organization is based on the law of February 15th, 1925. Regulations completing this law can be introduced and subsequently amended, if necessary, either by order of the Minister or the general manager, or by the annual finance law or regulations voted by Parliament.

Each of the private railways is operated under the concession granted by the State and has a Board of Management at its head. The Board does not, however, take any part in the ordinary routine work which is in the hands of a special manager. The Minister of Public Works supervises all the private railways. Many of these railways receive State subsidies, either in the form of a guarantee of interest payments (as in the case of the two oldest companies) or in the form of participation in initial capital expenditure. Usually this subsidy amounts to half the capital invested, and the State is a shareholder in proportion to the financial assistance it gives.

In the case of the State Railways the period of the transport concession is naturally not subject to any restriction; the duration

of the private railway concessions, on the other hand, is limited. In the older concessions this clause did not exist, but at the present time the period of the concession may not exceed one hundred years, and the Railway Act of 1928 gives the State the right to repurchase at the end of twenty-five years the permanent installations and rolling-stock with all rights and obligations attaching thereto. The repurchase may either be made in consideration of a payment of twenty times the value of the average net revenue during the three years preceding the transfer, or by payment of a sum equal to the capital expenditure at the time of the construction of the railway. When a concession expires it can only be renewed by an Act of Parliament.

Public and private railways must comply with certain obligations, including: the obligation to effect all operations of transport in accordance with the regulations in force; publication and posting up of tariffs in all the large stations; reproduction of tariffs in the State Gazette. The tariffs of the State Railways are established in accordance with the provisions of the law of 1925. If the Minister wishes to introduce amendments he must first consult the Railway Board and obtain the consent of the Finance Commissions of both Houses of Parliament. In certain special cases, however, he may issue an order authorizing the general manager to reduce certain tariffs by as much as 50 per cent. in the case of passenger traffic and  $33\frac{1}{3}$  per cent. in the case of goods and live stock. The private railways must have their tariffs approved by the Minister. In the absence of any orders to the contrary, the State railway regulations apply to the private railways. With a few small exceptions, their tariffs generally correspond with those of the State railways. The private railways must pay compensation to the State railways for the use of any junction stations which the latter place at their disposal. All railways must grant reduced tariffs for the transport of soldiers. They must also convey mail and transmit private telegrams, but they are paid for these two services. The railways do not hold a monopoly of transport.

## 2. *The effect of the economic crisis; motor transport competition.*

In 1928 the total capital invested in all the railways was estimated at 565,000,000 Danish crowns apportioned as follows:

441,000,000 Danish crowns in the State railways and 124,000,000 in the private railways, of which 72,000,000 crowns were held by the State. After 1925 provision was made for annual depreciation at the rate of 5 per cent. and since 1932 at the rate of 4.5 per cent. During recent years the expenditure of the State railways has been as follows:

	<i>Upkeep</i>	<i>New construction</i>	<i>Depreciation</i>
	<i>Crowns</i>		
1929-30 . . .	16,000,000	21,000,000	10,300,000
1930-1 . . .	16,400,000	27,200,000	9,300,000

During the first eleven months of the working year 1932-3 (April 1st to March 1st) the statement of operation receipts and expenditure was as follows:

Total receipts . . .	84,160,000 Danish crowns
Expenditure . . .	94,490,000 "
Deficit . . .	10,330,000 "

For the corresponding period in 1931-2, the results were as follows:

Total receipts . . .	98,670,000 Danish crowns
Expenditure . . .	101,610,000 "
Deficit . . .	2,940,000 "

Thus, from 1931-2 to 1932-3 receipts fell by 14.7 per cent. and expenditure by 7 per cent. The greatest loss (20.8 per cent.) was in goods and live-stock traffic, showing the extent to which the crisis has affected the economic system of Denmark, especially her agriculture. It is difficult, however, to estimate the extent to which motor transport competition is responsible for the losses suffered by the railways, but it would appear to be considerable in view of the development of the highways and the number of vehicles.

## II. MOTOR TRANSPORT

### 1. *The highway system in Denmark administered by the local authorities under State supervision; strict decentralization.*

Denmark is well supplied with roads and in 1920 possessed 7,555 km. of main roads and 43,744 km. of secondary roads. There

are no national highways entirely administered by the State. Some are in the hands of the departmental authorities and others are administered by the rural and urban municipalities. The State, however, shares in the financing of the highway system by apportioning the revenue from the automobile tax among the various local authorities. The Ministry of Public Works also has a special fund for subsidizing major repair work. The State thus exercises an indirect influence on the upkeep of the highway system.

The estimated expenditure in 1927-8 was as follows:

Expenditure by general Boards on departmental roads . . . . .	D.C. 23,811,486
Expenditure by general Boards for improvement of district roads . . . . .	„ 2,311,153
Expenditure by municipalities on district roads . . . . .	„ 18,868,214
State participation in major repairs in Jutland . . . . .	„ 1,033,905
<b>Total . . . . .</b>	<b>D.C. 46,024,758</b>

*Revenue* is obtained as follows:

- (a) from the automobile registration fee levied on a sliding scale in accordance with the law of December 24th, 1924, and based on the value of the vehicle; the receipts from this tax are apportioned as follows: 1.5 per cent. to the State; 5 per cent. to the city of Copenhagen; 1.5 per cent. to the city of Frederiksborg; 8 per cent. to the other towns; 43 per cent. to the rural municipalities; 42 per cent. to the departments;
- (b) from the automobile tax (reorganized in 1927) which includes a tax on petrol and a motor traffic tax based on the net weight of the vehicle; the proceeds of this tax are apportioned among the towns, rural municipalities, and departments in exactly the same way as the registration fee receipts. The registration fee brings in between 35 and 36 million Danish crowns and represents approximately two-thirds of the highway expenditure.

This system of apportionment of credits makes it possible to maintain all classes of roads in good condition.

2. *The important place occupied by motor transport.*

Denmark is one of the most highly motorized countries in the world. At the beginning of 1932 there were 122,510 vehicles as follows:

Private cars . . . . .	86,430
Buses . . . . .	1,280
Lorries . . . . .	34,800
or 1 vehicle per 29 of population	

Motor transport is principally operated by private enterprise. The basic regulations regarding road transport are contained in the law of July 4th, 1927, under which every transport enterprise conveying passengers or goods between two localities must have a concession. Concessions are as a rule granted for a limited period, but in certain cases no time limit is set. The terms of the concession specify the obligations of the carrier (tariffs, time-tables, number of passengers per vehicle), but make no provision for protection against competition from other enterprises operating over the same line. This liberty of action has enabled road transport to cause considerable harm to the railways.

The railways have tried to retaliate, either by technical measures (special agencies for goods traffic, amalgamating depots, publicity), or by tariff measures (rebates to shippers of large quantities, reduced fare return tickets, reductions for excursion tickets and special trains), or by creating bus services to replace railway lines in deficit.

The law makes no provision for collaboration, but the issue of joint tickets between the railways and motor transport services may be regarded as a form of co-operation.

## SWEDEN

SWEDEN, which is one of the most widely extended countries in Europe (448,500 sq. km.), has had to provide herself with a highly developed system of communications to meet the requirements of her scattered population of 6,100,000 inhabitants. Through her geographical situation Sweden has become a country of transit of no little importance, whilst her climate tends to influence seasonal traffic.

### I. RAILWAYS

#### 1. *Partly State and partly private ownership.*

Although the Swedish railway system only represents 3.75 km. per 100 sq. km. of country, it has first place in Europe in relation to population (26.3 km. per 10,000 of population). The total of 16,523 km. of line which form the Swedish railway system are owned as follows: by the State, 6,641 km.; by municipalities, 64 km.; by companies operating on behalf of the State or of municipalities, 85 km.; by purely private enterprises, 9,733 km. A fairly large number of the private railways are narrow gauge, whilst those owned by the State are all standard gauge. The railways are obliged, however, to maintain joint operation.

The administration of the State railways is more or less independent and is under a régime lying midway between the entirely centralized system of some countries and what is called the autonomous system. The private railways comprise 105 enterprises which have obtained construction and operation concessions from the State. These concessions are non-transferable and permanent. The State, however, reserves the right of repurchase under certain fixed conditions.

#### 2. *The obligations of the railways.*

There is no systematized legislation regarding the railways in Sweden. The obligations of the railways are laid down in the clauses of the concessions, the general administrative regulations, and the legislation as to damages, expropriation, &c. Certain laws

dealing with other questions also contain provisions in respect of the railways. Generally speaking, the railways are *bound to operate and to convey* passengers and goods. This obligation involves certain *special liabilities* including that of making good any damage due to faulty operation of the services. The *tariffs* of all the railways are fixed by the Government. The tariffs so fixed represent a maximum, although reductions may be authorized in certain cases. Until recently, however, the principle of equality has been strictly applied even when certain requests for reduction were made on the grounds of motor transport competition. Special tariffs are established for the transport of soldiers. Prisoners and their warders and certain public authorities are conveyed at rates fixed by the Government, which are considerably lower than the general tariffs. Certain officials also (including police officials) are conveyed free in the trains. The railways in fact have no liberty whatsoever in regard to tariffs. *Time-tables* are likewise controlled by the public authorities. The railways must supply the necessary information each year for establishing the general Swedish statistics, and furnish detailed information regarding their *accounts* in the manner prescribed.

The railways pay no special taxes. The State railways are exempt from all taxation. Private railways pay the ordinary taxes paid by every enterprise, but are exempt from the property tax in respect of the installations mentioned in the concession.

### 3. *The financial and economic situation.*

The capital invested in the Swedish railways amounts in all to 1,964,000,000 Swedish crowns, of which 1,136,000,000 are invested in the State railway and 828,000,000 in private railways. Of these 828 millions, 109,100,000 come from the State, 83,200,000 from the municipalities and general councils, and 635,600,000 from the railways themselves. By 'invested capital' must be understood the expenditure made for permanent installations including rolling-stock and other material; loan issues are dealt with under an amortization service.

During the years 1925-30 an annual payment of 22 to 24 million Swedish crowns was made into the renewal fund.

Traffic on the Swedish railways during recent years has been as follows:

	1928	1929	1930
Passengers . . . . .	66,833,000	69,368,000	69,647,000
Passenger-km. . . . .	2,222,000,000	2,295,000,000	2,436,000,000
Tons of goods . . . . .	35,576,000	47,568,000	42,996,000
Ton-km. . . . .	3,141,000,000	4,597,000,000	4,264,000,000

An analysis of the traffic on the State railways is as follows:

	1928	1929	1930
Passengers . . . . .	30,513,000	31,370,000	31,400,000
Passenger-km. . . . .	1,404,000,000	1,534,000,000	1,466,000,000
Tons of goods . . . . .	20,691,000	19,229,000	15,147,000
Ton-km. . . . .	3,066,000,000	2,932,000,000	2,497,000,000

The diminution is most marked in ordinary goods traffic:

	1929	1930	1931
Fast goods service (tons) . . . . .	154,000	154,800	137,350
Ordinary goods service (tons)	19,721,054	18,276,635	14,119,701

The following figures show the receipts and expenditure (in Swedish crowns) of the State railways:

	1929	1930	1931
Total receipts . . . . .	210,762,946	201,581,461	181,234,238
Total expenditure . . . . .	161,496,506	157,370,819	156,640,989
Coefficient of operation . . . . .	76.62	78.07	86.43

How far is motor transport responsible for this decrease?

## II. MOTOR TRANSPORT

The number of motor vehicles in Sweden is increasing steadily:

1925 . . . . .	79,608
1929 . . . . .	136,827
1932 . . . . .	149,281



The last figure is made up as follows:

Private cars . . . .	105,283
Buses . . . . .	3,372
Lorries . . . . .	40,626

The above figures represent the very creditable ratio of 1 vehicle per 41 of population.

### 1. *The regulation of motor transport.*

Motor transport is organized by different enterprises. In the north the postal administration operates a small number of transport lines for the conveyance of passengers and mail; the State railways also operate certain passenger lines which, however, are also used for the carriage of goods; lastly, there are 18,000 private enterprises operating motor transport.

All motor transport is subject to the provisions of the ordinance of June 20th, 1930. A special licence or concession must be obtained before a motor transport line can be operated. The essential clauses of the concession are indicated in the ordinance but details are settled by the competent authority.

There are three classes of motor transport as follows: (1) urban transport for which the licence is granted by police authority; (2) so-called 'line' transport for regular transport over a fixed route for which the licence is granted by the provincial authority; (3) rural transport within a certain radius for which the licence is also granted by the provincial administration. These licences are in some respects veritable *concessions*.

In issuing the concession the authorities take account of the needs which the line to be created will meet. In the case of the operation of so-called 'line' transport, the authorities endeavour to limit the number of concessions, having regard to existing railways or other motor transport enterprises already in operation. The services established in this way therefore enjoy a very advantageous *de facto* monopoly. It is more difficult, however, to limit the number of concessions in the case of the third category of enterprise.

The concession can be revoked at any time or, if an enterprise is

badly managed, a competing enterprise may be granted authority to replace it.

The obligations laid down in the concessions generally comprise the following: (1) obligation to transport (which is not, however, usually applicable to the carriage of goods); (2) obligation to adhere to the tariffs fixed by the authorities; these are, however, maximum tariffs, and reductions may therefore be made in them (the principle of tariff equality is consequently not adhered to); (3) obligation to compensate damage caused to persons or property even if the owner is not directly responsible; in this connexion every vehicle owner is compelled to insure against accidents (60,000 Swedish crowns per vehicle, and for vehicles having more than seven seats, 5,000 Swedish crowns per seat in addition); (4) obligation, in certain cases, of adhering to a fixed time-table; (5) obligation to submit to inspection of the vehicles.

There is no obligation to use any special fuel. Motor transport enterprises receive no financial guarantee or subsidy. They pay the general tax on automobiles.

The enterprises formed by the postal administration and by the railways administration are exempt from income tax. Tariffs and time-tables are fixed by the railways and posts administrations.

2. *Competition between road and rail fairly keen, particularly in certain classes of products; but no legislative measures taken to eliminate it and introduce a system of collaboration.*

In *passenger traffic* motor competition has made itself most felt over short distances. The average length of railway journey which has tended to increase for a number of years proves that the operations of the Swedish railways are becoming less local in character.

1913	.	.	.	.	27	km.
1927	.	.	.	.	32.6	„
1930	.	.	.	.	35	„

Even journeys over long distances are now being made by motor-car, particularly by commercial travellers. Certain passengers travelling in groups (soldiers on leave, football teams, &c.) hire a lorry adapted for passenger transport for which an inclusive

charge is made irrespective of the number of passengers. According to railway statistics, there was an average decrease of 6 per cent. in the number of journeys effected between 1926 and 1929 and an average loss of 6 per cent. of passenger revenue during the same period.

In *goods traffic* competition has made itself more especially felt in the transport of packages over short distances. In the case of high grade traffic competition is active up to 500 km. In this connexion also the average length of railway journey has increased: 88.9 km. in 1933 and 103.3 km. in 1930. In the case of packages the loss is estimated at 15 per cent. of weight and 18 per cent. of revenue, or 8,000,000 Swedish crowns. Even in the transport of bulk goods (cereals, beet-root, &c.) the motor-lorry is taking a certain volume of traffic from the railway.

According to other estimates, shipments by fast goods service are hardly affected by motor competition; on the other hand, the diminution in small consignments by ordinary goods service since 1926 is estimated at 7.1 per cent. The motor-lorry is not, however, responsible for the diminution of traffic in the transport of wood which is floated down the rivers; floating operations are carried out at irregular intervals and vary according to climatic conditions which vary from year to year and according to seasons. The transport of wood-pulp, cardboard, and paper appears to have been seriously affected. Ores, coal, and coke are less affected, but the quantity of stone, clay, and gravel carried by road is increasing steadily. The transport of agricultural products by road is continually increasing and the drop recorded by the railways in respect of certain produce is as high as 40 per cent. The fall in the quantities of iron and steel transported is more especially due to the general economic crisis.

In order to avoid conflict between road and rail interests, the authorities are endeavouring to authorize the opening of lines only when they would not compete with other motor lines or with the railways. Occasional and ancillary (*Werkverkehr*) services are, however, left unrestricted.

The railways have tried to meet road competition by adopting a number of counter-measures. In this connexion they organized the following motor transport services in 1931:

	<i>Operated by railways</i>	<i>Affiliated enterprises</i>	<i>Controlled by railways</i>
Number of lines	142	40	12
Length of lines	4,134 km.	2,409 km.	343 km.
Number of passengers	2,283,600	7,047,500	107,500
Capital invested	3,131,750 S.Cr.	2,799,147 S.Cr.	120,400 S. Cr.

*Tariff measures.* Introduction of week-end tickets; reductions on return tickets issued on Sunday to parties or societies, &c. A new scale of goods rates was put into force on January 1st, 1931. In the case of packages, deviations from the law are being allowed and individual contracts becoming frequent. A reduction has been made of 15 to 30 per cent. of the price of transport of wagon-load lots of 2.5 tons and of as much as 30 per cent. in the case of the rates applying to five-ton wagons.

*Technical Measures.* The railways are using so-called 'collector' wagons; on certain days these wagons stand at given points where the shippers themselves load their packages into them. At times the freight rate is even fixed below cost price. Nevertheless these 'collector' wagons were only utilized in 1930 at 13.1 per cent. of their capacity, despite the predominance of heavy merchandise in Swedish traffic. The number of short trains, light trains, and rail-cars has been increased; the speed of trains has likewise been increased and connexions better organized; the number of night goods trains has been raised and perishable goods are now being conveyed by passenger train and even by express train. Arrangements have now been made for the smaller stations to accept goods at all hours of the day, whilst the stations themselves have been modernized with a view to effecting the various operations more rapidly.

The motor transport companies have also improved their services. When the railways lower their tariffs the motor companies do likewise. Agreements have been entered into by various motor enterprises, and in certain towns central depots have been organized for the concentration of small lots of goods going to the same destination. Motor vehicles arriving in towns where such central depots exist go to those depots to obtain return loads. In this way progress is being made towards a wide system of collabora-

tion between the various enterprises and the extension of the solidarity of their joint interests.

The law, however, contains no stipulation as to collaboration between road and rail.

3. *Revenue from motor taxation about 75 per cent. of the road costs.*

*Expenditure* on the roads was estimated at 27,773,039 Swedish crowns in 1919 and 92,704,815 Swedish crowns in 1930. The increase therefore was 64,931,776 Swedish crowns. It is possible, however, that the figures for 1919 have been under-estimated. Nevertheless considerable progress has undoubtedly been made and the highway system at the present time comprises 130,000 km.

*Revenue* is found principally from the taxes paid by motor vehicles. In 1919 motor transport did not contribute towards the financing of the roads. In 1930 their share in highway expenditure was estimated at 47,417,355 Swedish crowns. The Riksdag has now voted an increase of the taxes to be paid by local transport. These comprise: (a) the tax on motor vehicles, petrol, and rubber tyres, of which the revenue is directly employed on the road system; (b) the import duties on petrol and rubber, registration fees, type verification and subsequent inspection fees in respect of vehicles, and fees for driving licences, all of which are paid into the treasury. It is estimated that motor transport at present pays three-quarters of the expenditure for road development; its share in road upkeep costs in 1930 is estimated at 56·7 per cent.

# NORWAY

## I. RAILWAYS

### 1. *State ownership and operation predominant.*

Although the Norwegian railways date from the middle of the nineteenth century (construction was first begun in 1851 on the Eidsvoll-Oslo line, which was opened in 1854), their density has remained among the lowest in Europe—1 km. per 100 sq. km. In relation to population their density is fairly average—12.9 km. per 10,000 of population. The lowness of these figures is due to geographical considerations; the interior of the country is extremely mountainous, with the result that certain districts are completely deserted, while the climate in the mountains and north of Norway is severe. In the thickly populated areas on the coast, on the other hand, where the greatest development has taken place, the principal means of communication are the sea and the fjords with which the country is indented.

The railway system comprises 3,873 km., of which 3,504.8 km. are State railways and 368.2 km. private railways. The main traffic lines (standard gauge) belong to the State, whereas the lines of local interest (various less-than-standard gauges) are privately owned.

The State railways are administered by a Hovedstyret located in Oslo under the control of the Ministry of Public Works. A General Manager, assisted by four assistant managers, is at the head of the railway services. The railway system itself is divided into nine districts. The State Railways are associated in limited partnership with the Bratsbergbanen which they operate. The operation of these railways is budgeted for by the State in the same way as the Posts and Telegraphs and other public enterprises.

The private railways are operated under a State concession. They are under the supervision of the Ministry of Public Works both in respect of their permanent way and rolling-stock.

### 2. *Obligations.*

The railways are bound to operate their lines and may only

cease operating with the permission of the State. The establishment of tariffs is dealt with by the Ministry of Public Works. The general management of the railways has, however, the right to grant reduced tariffs to certain users by entering into special agreements with them. Between July 1st, 1930, and June 30th, 1931, 250 agreements of this kind were concluded for goods in wagon-load lots, and 140 for small consignments. Time-tables are not subject to confirmation by the Ministry of Public Works; they are established by the railways after consultation with the supervising Committee, but they must be published in the official Norwegian railway guide *Rutebok for Norge*. The railways are not obliged to levy taxes in connexion with the transport charges made for passengers and goods, nor is there any special obligation for them to insure against accidents. The material and revenue of the railways are considered as sufficient guarantee of payment in the event of damages caused in the course of operation. Decisions as to the construction of new lines rests with the Storting. There is no obligation to use any particular fuel. No official regulations have been issued regarding the submission of accounts, but the railways must furnish the authorities with statistical data in regard to their operation.

### 3. Capital investment.

The capital invested in the Norwegian railways is increasing steadily:

1924-5	.	.	.	.	660,431,000	Norwegian crowns
1928-9	.	.	.	.	848,349,000	"
1930-1	.	.	.	.	892,070,000	"

apportioned as follows:

717,511,000 N.C.	in permanent way and other installations,
174,559,000 N.C.	in rolling-stock.

Out of the total of 892,070,000 N.C.:

838,700,000 N.C.	represent the capital of the State railways,
27,730,000 N.C.	" " " Bratsbergbanen,
25,640,000 N.C.	" " " private railways.

The State holds 87 per cent. of the capital of the State railways and 20 per cent. of the capital of the private railways.

4. *The decline in traffic and operating results.*

The decrease of traffic has affected the financial stability of the railways:

	1926-7	1929-30	1930-1
Number of passengers . . . . .	20,068,871	17,865,903	17,628,975
Passenger-km. . . . .	529,905,571	519,571,239	531,523,208
Tons of goods . . . . .	9,802,074	11,646,969	8,319,873
Ton-km. . . . .	609,950,650	716,371,465	349,612,237

There is a growing tendency for the railways to be used for long-distance transport. The average journey made by passengers and goods in recent years has increased as follows:

	1926-7	1929-30	1930-1
Passengers . . . . .	26.4 km.	29.1 km.	30.2 km.
Goods . . . . .	62.2 km.	61.5 km.	66.1 km.

The financial position (in Norwegian crowns) is as follows:

	1926-7	1929-30	1930-1
Total receipts . . . . .	91,360,525	80,902,728	75,346,027
Total expenditure . . . . .	90,163,245	81,694,398	81,459,852
Result of operation . . . . .	+ 1,197,280	- 791,670	- 6,113,825

## II. MOTOR TRANSPORT

*The development of motor transport; legislative measures; co-operation with the railways.*

In 1932 the number of motor vehicles was estimated at 49,804, comprising 28,676 private cars, 2,029 buses, and 19,099 lorries.

Most of the motor transport services in Norway are operated by private interests and limited companies. There are also municipal and intermunicipal services, and three State-operated services. Motor transport is governed by the law on motor vehicles of February 20th, 1926, amended by the law of June 6th, 1930.

Every motor transport contractor must apply for a special licence which is issued by different authorities according to



circumstances: when the transport enterprise operates in two or three districts, the licence is issued by the district Roads Commission, and by the Council in the case of operation within town limits. The Ministry, however, expressly reserves the right of examining any application which might result in competition with other means of transport, and of withdrawing any licence which may have been granted. The licence is issued for a limited period only and can be cancelled at any time. It is only granted for the operation of regular lines. For all other commercial transport operations the holder of a licence must apply for special authorization. In the case of irregular passenger and goods services, the Ministry has the power to introduce such regulations and restrictive measures as it may see fit, or even forbid the operation of the service in question. Societies of twenty persons and over desiring to run transport services for their members against payment of actual distributed cost without profit for the Society, must obtain a police permit. Infractions of these regulations may entail penalties.

The law sets forth the principles according to which the obligations of carriers are defined, but the actual details are contained in the concession contract. These obligations generally include the following: (1) an undertaking to transport with normally efficient services; (2) the deposit with the district authority of a guarantee of insurance; (3) indemnification of damages caused to persons or goods; (4) compliance with the safety regulations (maximum speed, maximum number of passengers, maximum quantity of goods). Motor transport enterprises may obtain State subsidies. The amount of these subsidies tended to increase between 1918 and 1925, and in 1925 they were as much as 450,000 N.C. At the present time they amount to about 300,000 N.C.

According to figures supplied for the years 1927 and 1928, traffic was as follows:

	<i>Passengers</i>	<i>Tons of Goods</i>	<i>Per kilometre operated</i>	
			<i>Passengers</i>	<i>Tons</i>
1927	108,602,678	1,742,598	5,560	89
1928	148,771,242	2,426,382	6,496	105

The railways co-operate with the motor transport services. They have even created certain lines of their own. They frequently enter into agreements with private companies with a view to opening up regions not served by the railway and establishing feeder services. In passenger traffic, joint tickets have been introduced available for either of the two means of transport. A commission which was set up in 1927, following a resolution of the Storting, also prepared a comparative report on railway and motor transport tariffs, but unfortunately the necessary figures of comparison have not been kept up to date.

Norway has 38,003 km. of roads, which are divided as follows: 15,629 km. of main roads, of which 10,402 are administered by the State and 5,227 by the Districts; 22,374 km. of local roads.

## WESTERN ASIA—SYRIA—PERSIA

IN the countries of western Asia, where the railway has not yet developed to the same extent as in western Europe, Governments sometimes have difficulty in choosing between the two means of transport. These territories have always acted as zones of contact between Europe and Asia. Geographically speaking, they form a natural connecting link between east and west, and the arterial roads which have traversed them from the earliest times have enabled them to fulfil that function. Before the War, different European Powers, already realizing the great importance of the problem, had sought to obtain railway concessions from Turkey and Persia. The War itself showed the magnitude of the problems of communication in western Asia, and if certain lines were neglected the construction of others was begun, and these will doubtless one day be called upon to render important services. The introduction of motor-lorries into these countries was due to the War, and the native population, seeing the loaded supply wagons of the armies in the field, soon became familiar with this new form of transport which could travel across the flat land and desert independently of the tracks. After the War, the new States wished to provide themselves with the necessary economic equipment for their development and for the extension of their international radius of action.

In TURKEY the railway system, which was a heritage of the former Ottoman Empire, was inadequate and comprised only 4,240 km. of line, or 0.55 km. per 100 sq. km. and 3.2 km. per 10,000 of population. From 1924 onwards the new Government carried out a methodical plan of construction and continued to devote more and more money annually for that purpose, as follows :

<i>Year</i>	<i>Amount (Turkish £)</i>	<i>Per cent. of Budget</i>
1924-5	11,000,000	6.44
1925-6	12,600,000	6.68
1926-7	16,700,000	11.28
1927-8	22,000,000	11.32
1928-9	29,000,000	14.00

The construction of new lines was carried out either by the Turkish Government or by foreign contractors (a Swedish group and a German group).

The PALESTINE railways, together with some of the Syrian lines, are becoming a section of the great European, Asiatic, and African line which may stretch from Calais to Cairo.

IRAQ with the Baghdad line is becoming more and more clearly the connecting link between India and the Western world.

PERSIA is entering upon a period of railway development, whilst AFGHANISTAN is preparing plans towards the same end.

Road construction is also continuing, however, and the number of motor-cars increasing:

<i>Country</i>	<i>Private cars</i>	<i>Buses</i>	<i>Lorries</i>	<i>Total</i>	<i>No. of inhabitants per vehicle</i>
Turkey . . . . .	2,250		3,400	5,650	2,451
Syria . . . . .	9,225		2,562	11,817	240
Palestine . . . . .	1,700	800	550	3,050	267
Iraq . . . . .	3,101	185	1,017	4,303	662
Persia . . . . .	4,550	400	5,000	9,950	1,005
Afghanistan . . . . .		160	240	400	17,500

Details are given below in regard to Syria where communications are already fairly well developed, and Persia where they are still in the early stages of development.

## SYRIA

### I. RAILWAYS

The railways serving the Levant States under French mandate are formed into three systems: the D.H.P. system (Damas, Hama et prolongements) comprising the line from Beyrout to Damascus, and the lines from Rayak to Aleppo and Homs to Tripoli—579 km.; the Hedjaz Syrian system (Damascus to Deraa, Deraa to Samack, Deraa to Bosra)—232 km.; the B.A.N.P. line (Bozanti-Aleppo-Nisibine et prolongements)—191 km.—a total of 1,002 km. of railway.

The most important of these railways is the D.H.P., which retains its old contract rights signed under the former Turkish régime in 1890, 1891, 1893, 1913, and 1914. The War affected the situation of this company, as the railways were taken over in turn by the Turkish and Allied Military Authorities, and it was not until 1922 that the company regained possession of its own system. A convention adapted to modern requirements was signed in 1925 establishing the new conditions of operation of the railway, and in consideration of having been dispossessed of its lines during the period of hostilities, the duration of the company's various concessions was made the same in all cases and extended to 1997. Repurchase cannot take place until 1943. Customs franchise was granted for the replacement of material damaged during the War and for new construction material. If traffic requirements call for it, the company have to build a second track. The company will receive out of the operation receipts an annuity of frs. 10,366,000, corresponding with the amount of its loans service, and the amount of its actual working costs. The resultant net yield will be distributed in a fixed proportion between the company and the States. Any deficit appearing after such apportionment will be made good by the States. A reserve fund of frs. 500,000 per year is to be formed for additional work, increase of stock, &c. These new conditions of working do not, however, cancel certain former obligations, e.g. the obligation to carry out necessary additional work, maintain the permanent way and material in good condition, undertake the transport of soldiers at reduced rate, and furnish a monthly statement of receipts.

Neither the States nor other public authorities have any share in the invested capital. On December 21st, 1931, the investment in the railway system amounted to frs. 137,279,659.15. The only tax levied on passenger or goods transport is the 'stamp' tax, of which the total annual yield amounts to some frs. 150,000.

Traffic returns during recent years have not shown so marked a falling off as in other countries, but it was found necessary, in order to meet motor transport competition, to lower the rates to such an extent that the railway has shown a deficit since 1931.

The net yield, which reached frs. 11,500,000 in 1926, decreased

rapidly. In 1930 it was only frs. 2,800,000. In 1931 the accounts showed a deficit of frs. 2,000,000, whilst the deficit for the first six months of 1932 amounted to frs. 6,000,000.

*Passengers*

<i>Year</i>	<i>Number</i>	<i>Passenger-km.</i>	<i>Average journey</i>
1928	507,469	43,725,000	196 km.
1929	656,980	52,024,000	177 "
1930	768,850	57,341,000	165 "
1931	732,451	56,000,000	164 "

*Goods*

<i>Year</i>	<i>Tons</i>	<i>Ton-km.</i>	<i>Average distance</i>
1928	354,380	48,353,000	300 km.
1929	468,770	61,808,000	290 "
1930	461,360	63,531,000	287 "
1931	400,000	60,100,000	301 "

## II. MOTOR TRANSPORT

The highway system was almost non-existent at the time when the mandate was established. From 1925 to 1930 the sums provided for the roads and bridges services increased steadily:

1925	.	.	.	.	788,780 Syrian £ (= 20 frs.)
1926	.	.	.	.	1,736,100 " " "
1927	.	.	.	.	1,255,505 " " "
1928	.	.	.	.	2,800,134 " " "
1929	.	.	.	.	2,305,265 " " "
1930	.	.	.	.	3,703,776 " " "

The greater part of these sums was devoted to the construction of new roads. There is reason to believe that in a few years' time, when the highway system has been sufficiently developed, expenditure will be stabilized and limited to the cost of upkeep.

The total revenue supplied directly or indirectly by motor vehicles for the same period shows that, except for the year 1927 (through the large amounts represented by Customs revenue due

to the heavy importation of motor cars), receipts have always been less than road expenditure:

1925	.	.	.	.	.	492,524	S. £
1926	.	.	.	.	.	936,651	„
1927	.	.	.	.	.	1,314,891	„
1928	.	.	.	.	.	1,669,188	„
1929	.	.	.	.	.	2,022,569	„
1930	.	.	.	.	.	1,611,822	„

Strictly speaking, these amounts should be increased by 10 per cent. to include staff and management costs. The different taxes affecting motor transport are as follows: Customs duty on vehicles and spare parts, petrol, oil, and tyres; petrol consumption tax; various fees such as registration and driving licence fees, and the special taxes on vehicles intended for the carriage of goods. Statistics regarding motor vehicles have already been given above. The only bus lines having proper motor coaches are the *Compagnie Auto-routière* and the *Nairn Transport Company*. All the other vehicles used in services of this kind are nothing more than roughly converted lorries or vans. In most cases transport is in the hands of individual carriers who are the owners or in certain instances the hirers of their vehicle. A large transport enterprise would have too high overhead expenses to compete with the small private undertakings which have practically none. Passenger and goods traffic in 1932 was estimated at 193,500,000 passenger-km. and 60,624,000 ton-km. respectively.

The railways have tried to come to an understanding with the road transport companies. On March 17th, 1932, an agreement was signed between the railways and the *Auto-routière du Levant Company* which could no longer compete with the smaller enterprises. Under this agreement the *Auto-routière du Levant Company* undertook to provide proper motor transport facilities for passengers and goods in liaison with the railways and making connexion with their train services. Through tickets and rates were established and applied and direct door-to-door services instituted, particularly between Beyrout and Damascus. In this way collaboration has developed between the two means of transport.

## PERSIA

Before the War Persia had no railways, and the rivalry between the Great Powers surrounding the country was hardly conducive to railway construction. Numerous concessions had been granted after 1865, but none of them proved a success. The population had to be content with a few roads constructed by the Russians in the north and by the British in the south. The most widely used form of transport for passengers was the slow and costly three- and four-horse mail coach, whilst for the carriage of goods the poor people used donkeys, mules, and horses; camel caravans were also widely employed. Large covered wagons were utilized on a few roads only.

War requirements hastened the construction of the first railways. In 1915 the line from Djoulfa to Tauris (141 km.) via Merend was completed, with a branch line from Sofian to Cherefkhanen (30 km.) on Lake Ourmiah. The British railway from Baluchistan reached as far as Douzdab in Persia. Russia started to construct a line from Haiderabad, at the southern extremity of Lake Ourmiah, to Ravandouz. The highway system was likewise extended for military purposes and motor vehicles were introduced into the country. The Persians were thus able to choose between the two means of transport. After the War the Government was undecided as to which of a number of schemes it should adopt, until finally in 1927 it decided upon the construction of a Trans-Persian railway running from the Persian Gulf to the Caspian Sea via Teheran. This scheme provided for a line 1,550 km. in length and costing about £13,000,000. A sugar and tea monopoly was introduced, of which the revenue amounting to £1,250,000 per year would be sufficient to pay off in twelve years the sums expended on the construction of the railway. In 1928 the work of construction was placed in the hands of a consortium consisting of American, English, French, and German firms. By 1929 the northern section from Bender Chah to Sari was opened to traffic, and in 1932 trains were running to within 14 km. of Chabri. The Elbourz, however, constituted an obstacle. In the south the section from Bender Chapour to Dizfoul was opened, but not without incident, the Shah's special train being derailed on two occasions. In 1930



a dispute broke out between the consortium and the Government, and the Americans withdrew. The Government then placed the construction of the northern line in the sole charge of the German group and decided to take the construction of the southern line into its own hands, the necessary material being supplied by a Swedish company. In the meantime, however, expenditure had exceeded the estimates, and it is now calculated that £40,000,000 at least will be required to complete the work, i.e. £26,000 per km. or 2,613,000 reals.

Thus many people think that the Persian Government should rather take in hand the development of the highway system. Mr. Nikitine, former Consul, wrote as follows in the *Revue Économique Internationale*: 'The writer is led to believe that it might be wiser to adopt a sound motor transport and road policy in Persia before becoming too deeply involved in railway construction work.' According to Mr. Morris, an American engineer, manager of the highway system, the cost of road construction is 40,000 reals per km. for first-class and 30,000 reals for second-class roads, or 1 to 1½ per cent. of the sums required for the construction of the railways. There is also some doubt as to whether the budget in Persia would not be seriously compromised by the charges incurred through the loans it might be necessary to raise in order to complete work on the railways. Lastly, it is open to question whether a railway line running from north to south is in keeping with the traditional role of Persia, which is to draw traffic from east to west.

Motor transport is much in favour in Persia, which has a higher proportion of motor vehicles to population than any of her neighbours, with the exception of Iraq. Details are as follows: 1 motor vehicle per 1,000 (approximately) of population against 1 per 2,405 in the U.S.S.R., 1 per 2,451 in Turkey, and 1 per 17,500 in Afghanistan. The Persian Government has moreover encouraged the development of motor transport by granting Customs exemption to motor vehicles. It was only by force of circumstances that it recently introduced motor vehicle taxation.

The future alone will show which of the two means of transport will finally occupy first place..

## BRITISH INDIA

THE present extensive railway system in British India was constructed during the nineteenth century and early part of the twentieth century. At the time of its construction there were already a large number of roads in India and it frequently happened that the railway lines were built parallel with them. This situation is explained by the fact that road and rail transport both developed along the main trade routes linking up the thickly populated centres. In the areas of the nine Governors' Provinces having a density of population of 100 per sq. mile and over, it is estimated that half the railway lines at the present time are duplicated by roads situated within a distance of less than 10 miles.<sup>1</sup> While railway construction undoubtedly caused certain roads to fall into a state of disrepair, the appearance of the motor-car, on the other hand, gave a fresh impulse to road construction with a consequent decrease of railway traffic and corresponding increase of highway traffic bringing with it increased expenditure on road maintenance. To meet this additional expenditure, the authorities placed a number of new taxes on road users, but the absence of any general plan has since given rise to considerable confusion in the field of taxation. It is understandable therefore that efforts are now being made to establish some degree of order.

### I. RAILWAYS

The first railways date from the middle of the nineteenth century. In 1853, 20 miles of line were constructed in the neighbourhood of Bombay. The main purpose of the railway system was to unite the principal centres of production with the four great sea-ports—Calcutta, Bombay, Madras, and Karachi. It was also intended to link up the peninsular provinces with the districts

<sup>1</sup> *Report on the present state of Road and Railway Competition, etc. . . . in Governors' Provinces*, by K. G. Mitchell, A.C.G.I., M. Inst. C.E., A.M. Inst. T., Road Engineer with the Govt. of India, and L. H. Kirkness, M.A., M. Inst. T., Officer on Special Duty with the Railway Board. (Govt. of India Central Publication Branch, Calcutta, 1933.)

of the Ganges and Indus and prepare the way for the construction of international lines towards neighbouring countries.

*Diversity of relations between the State and the railways.* This diversity is explained by the frequent changes in railway policy during the second half of the nineteenth century.

Between 1854 and 1860, contracts were made by the East India Company and, after 1858, by the Secretary of State for India with a number of companies, among which were the East Indian, Great Indian Peninsula, Madras, Bombay, Baroda and Central India, and the Eastern Bengal, under which the companies undertook to construct and manage specified lines, while the E.I.C. or the Secretary of State for India agreed to provide land and guaranteed interest on the capital at rates which varied between  $4\frac{1}{2}$  and 5 per cent. Half of any surplus profits earned was to be used towards refunding to the Government any sums paid in previous years in respect of the interest guarantee and the remainder was to belong to the shareholders. The leases attached to these contracts were to terminate at the end of ninety-nine years, the rolling-stock, plant, and machinery then to be taken over at a fair price. But provision was also made for repurchase after twenty-five or fifty years.

From 1862 to 1869, unsuccessful attempts were made to encourage unguaranteed companies.

Two important changes were then made: (1) Arrangements were entered into with some of the most important guaranteed companies that half of each half-year's surplus profits should go to the Government, instead of such proportion merely serving to refund previous Government payments in respect of guarantees. In consideration of this modification, the Government relinquished its right to repurchase after twenty-five years. (2) The Government decided to secure to itself the full benefit of its own credit, and for several years after 1869 capital expenditure on railways was chiefly incurred directly by the State.

By the end of 1879, i.e. after about twenty-five years of railway construction, companies had built 6,128 miles involving an expenditure of about £97,872,000, and Government construction and expenditure amounted to 2,175 miles and £23,695,226 respectively.

After the great famine of 1878 the Famine Commissioners, estimating that at least 5,000 miles of railway were still necessary for the protection of the country, advocated giving free scope to the extension of railways by private enterprise, if possible under modified guarantee terms. In subsequent years the terms of guarantee generally provided for three-quarters of the surplus profits in excess of interest charges, which were between 3 and 4 per cent., to go to the State.

The Government made extensive use of the right, reserved in contracts of companies formed before 1869 and after 1881, of terminating these contracts. The method of making use of these rights varied in the different cases. Some lines were purchased and transferred to State management, others were acquired but left under the management of companies working other lines with which it was advantageous to amalgamate them, still others continued to be managed by the original company under more favourable financial conditions for the State, such as reduction of the amount of capital retained by the companies in the undertakings, reduction of the guaranteed rate of interest, &c. In the case of the East Indian, the Great Indian Peninsula, and the Burma railways, the State took over the management at the expiration of the contracts under which they had been worked (1924, 1925, and 1928 respectively). In 1932 the situation was as follows:

Of the important lines situated in British India, or in which the Government of India is interested, five were owned and worked by the State (North-Western, Eastern Bengal, East Indian, Great Indian Peninsula, and Burma Railways); five were owned by the State but worked on its behalf by companies enjoying a guarantee of interest from the Government (Bombay, Baroda, and Central India, Madras and Southern Mahratta, Assam-Bengal, Bengal-Nagpur, and South Indian Railways). Many railways of less importance were the property of private companies, some being worked by the owning companies and some by the State or by companies that work State-owned systems. Several minor lines were the property of District Boards or enjoy a guarantee of interest granted by such Boards.

This diversity of conditions is, however, counterbalanced by

the general powers exercised by the Government under the Indian Railways Act, 1869, which by virtue of arrangements with Indian States also apply in respect of certain railways passing through these States. In addition, the detailed control exercised by the Central and, in some cases, Local Governments under the provisions of contracts, greatly exceeds that secured by the Indian Railways Act. This administrative control comprises numerous obligations, such as the obligation to keep all installations in good working condition and to maintain sufficient staff, to the satisfaction of the Secretary of State; to enter into agreements with adjoining railways with regard to interchange of traffic and rolling-stock, and also in respect of through rates. The Secretary of State has further power to settle the classification of goods and to authorize maximum and minimum rates.

*Organization of control.* Concurrently with the changes in policy outlined above, the organization of Government control went through various phases. At first it was secured by a Consulting Engineer of Guaranteed Railways, and later on, concurrently with the change of policy after 1869, a State Railway Directorate was established in 1874. An experiment, inaugurated in 1877, to decentralize control by the appointment of three Directors of Territorial Systems and one Director of Stores, proved unsatisfactory and was abandoned in 1880. Then followed the appointment of a Director-General of Railways. This post was abolished in 1897 in favour of the creation of the post of a Secretary to the Government of India in the Public Works Department. This system in turn was given up in 1905, when a Railway Board consisting of three members was formed. Following the recommendations of a special committee which visited India in 1921 (the Acworth Committee) the Board, although retaining its name, was completely reorganized and placed under the leadership of a Chief Commissioner who is solely responsible under the Government of India for all technical questions and for advising the Government on matters of railway policy. He is assisted by a Financial Commissioner and two members.

Thus the Government has a preponderating financial interest in the lines worked by the two classes of guaranteed companies, those formed before 1869 and retained as working agencies with reduced



The following big railways take part in the traffic of these provinces:

*Madras*: Madras and Southern Mahratta; and South Indian.

*Bombay*: Great Indian Peninsula Railway; Bombay, Baroda, and Central India Railway; and the Madras and Southern Mahratta Railway.

*Sind*: North-Western Railway.

*Bengal*: East Indian; Bengal Nagpur; Eastern Bengal and Assam Bengal Railways.

*United Provinces*: East Indian; Bengal and North-Western.

*Punjab*: North-Western Railway.

*Bihar and Orissa*: East Indian; Bengal Nagpur; Bengal and North-Western; Eastern Bengal Railways.

*Central Provinces*: Great Indian Peninsula Railway; Bengal Nagpur; Assam Bengal Railway.

*Assam*: Assam Bengal Railway.

*North-West Province*: North-Western Railway.

These companies complain of the freedom enjoyed by road transport as compared to the railways, which are strictly regulated in the following respects: upkeep of material which is subject to strict inspection regulations; publication of tariffs and posting-up of time-tables which have to be approved by the authorities; regulations as to hours of work, strict medical inspection and high standard of knowledge required of their staff; liability in case of accident.

The total revenue of the Indian Railways is estimated at 100 crores (10,000 lakhs or 1,000,000,000 rupees).

It is difficult to calculate the losses caused to the railways by motor transport, but according to estimates the figures are as shown on p. 210.

These estimates refer to passenger traffic only. Goods traffic does not appear to be so much affected, but here again accurate figures are lacking. The North-Western Company estimates that the annual loss of goods traffic caused by motor transport competition is about 4.5 lakhs. The total loss incurred by the railways can therefore be calculated at 190 or 200 lakhs, i.e. 2 per cent. of revenue. The light railways appear to have been most affected. In the Central Provinces, which have the largest

system of light railways, the railway revenue had begun to fall even before the crisis had started.

<i>By province</i>	<i>Lakhs</i>	<i>By companies</i>	<i>Lakhs</i>
Madras . . . . .	30.74	Bengal Nagpur . . . . .	14.22
Bombay . . . . .	18.85	Bengal N.W. . . . .	5.00
Bengal . . . . .	10.39	Eastern Bengal . . . . .	5.00
United Provinces . . . . .	45.42	East Indian . . . . .	30.01
Punjab . . . . .	33.67	Gt. Indian Peninsula . . . . .	20.50
Behar and Orissa . . . . .	6.88	N. Western . . . . .	39.00
Central Provinces . . . . .	15.75	Madras:	
Assam . . . . .	0.25	Southern Mahratta . . . . .	23.61
N.W. Provinces . . . . .	1.33	South Indian . . . . .	13.50
State . . . . .	23.12	Assam Bengal . . . . .	0.56
		Bombay, Baroda, and	
		Central . . . . .	35.00
<b>Total . . . . .</b>	<b>186.40</b>	<b>Total . . . . .</b>	<b>186.40</b>

The railways have retaliated by adopting technical measures (increased speed, opening of new stations) and financial measures (reduction of tariffs, creation of return tickets).

It must also be borne in mind that motor transport has brought additional traffic to the railways. The transport of petrol, for instance, brought 53 lakhs to the railways in 1931-2, representing an increase of 12 lakhs over the previous year.

The following figures will give a clearer idea of the present situation:

In the *Province of Bombay*, 3rd-class passenger traffic on the *Great Indian Peninsula Railway* was as follows: 42,023,207 in 1927-8, 34,952,109 in 1930-1, representing a decrease of 16 per cent.

It has been calculated that 9 per cent. of this 16 per cent. decrease is due to the economic depression, and 7 per cent. to motor transport competition.

To meet this competition, the Great Indian has adopted various measures, including: (a) revision of time-tables; (b) creation of an information service; (c) reduction or adjustment of tariffs; (d) new halts on light railways; (e) collaboration with motor transport services.

*The Baroda and Central Indian Railway* has lowered its tariffs on two lines where competition is particularly keen. On the



Broach-Jambusar Railway, the cheaper-class fare was lowered in 1930 from 4½ pies to 2½ pies, and the higher-class fare from 18 pies to 16 pies. This measure resulted in an increase in the number of passengers and a decrease in the average revenue per passenger:

	Number of Passengers	Average Revenue	
		Annas	Pies
1929	150,894	5	0
1930	506,902	3	4
1931	557,485	3	4

In the *United Provinces* the number of 3rd-class passengers on the *East Indian Railway* fell from 64,837,000 in 1928-9 to 56,051,000 in 1931-2. Receipts fell from 4.8 crores to about 4.3 crores. The percentage of receipts from 3rd-class passengers travelling over 50 miles also decreased from 31.5 per cent. in 1928-9 to 30 per cent. in 1931-2. Although competition ordinarily makes itself felt up to 50 miles on the average, certain services in this district exceed that distance. The service between Fyzabad and Barabanki is 68 miles, between Benares and Allahabad 82 miles, and between Lucknow and Shahjahanpur 104 miles. The *East Indian Railway* is endeavouring to meet this competition by the following methods: (a) employment of rail-cars—without much success; (b) introduction of light trains; (c) issue of cheap return tickets and more suitable timings for local trains. Halts have been created between stations to serve intermediate villages.

In the *Punjab* the revenue of the *North-Western Railway* fell from 18.72 crores in 1927-8 to 15.16 crores in 1931-2.

Passenger traffic revenue fell from 6.49 crores to 4.89 crores.

The competing autobus lines operate over an average distance of 25 miles, and in certain cases over much longer distances: Lahore-Lyallpur, 68 miles; Jhelum-Chakwal, 92 miles. Goods traffic is also affected and Amritsar has become an important centre for the shipment of goods by motor services. The *North-Western Railway* estimates its losses at 4.5 lakhs. As a counter-measure, local train services have been improved, experiments with rail-car services made, tariffs lowered, and daily return tickets at a single fare and a fraction introduced.

## II. MOTOR TRANSPORT

The number of motor vehicles has increased steadily for some years. According to the Mitchell-Kirkness report, development has been as follows (number of vehicles in circulation at the end of the fiscal year, having regard to superannuation):

	<i>Private cars</i>	<i>Buses and lorries</i>	<i>Total (including motor-cycles)</i>
1923-4	32,740	5,884	47,456
1924-5	32,579	6,126	46,349
1925-6	32,526	9,459	48,797
1926-7	34,802	14,156	54,220
1927-8	43,537	21,656	70,723
1928-9	58,222	31,633	96,275
1929-30	68,204	42,492	117,900
1930-1	69,924	44,853	122,051
1931-2	61,392	36,083	..

American statistics give the number of motor vehicles in 1932 as 169,390, of which 113,820 were private cars, 43,345 autobus, and 12,225 lorries, or 1 vehicle per 1,883 of population.

At the same date there were 75,123 miles of motorable roads in Governors' Provinces, of which 58,983 miles were metalled and 16,140 miles unmetalled. The road mileage in the different Provinces is as follows:

Madras . . . . .	27,115 miles
Bombay: Presidency . . . . .	13,400 "
"    Sind . . . . .	183 "
Bengal . . . . .	3,500 "
United Provinces . . . . .	7,776 "
Punjab . . . . .	9,940 "
Bihar and Orissa . . . . .	3,961 "
Central Provinces . . . . .	7,535 "
Assam . . . . .	600 "
North-West Province. . . . .	1,113 "

Expenditure on road construction and upkeep in these provinces (except North-West) has tended to increase:

1923-4	.	.	.	.	.	467.6 lakhs
1924-5	.	.	.	.	.	486.5 "
1925-6	.	.	.	.	.	548.1 "
1926-7	.	.	.	.	.	563.4 "
1927-8	.	.	.	.	.	648 "
1928-9	.	.	.	.	.	631.3 "
1929-30	.	.	.	.	.	609.5 "

Expenditure by Provinces in 1929 was as follows:

Madras	.	.	165 lakhs	Punjab	.	.	109.6 lakhs
Bombay	.	.	71.6 "	Bihar and Orissa	.	.	51.7 "
Bengal	.	.	58.8 "	Central Provinces	.	.	50.3 "
United Provinces	.	.	65.8 "	Assam	.	.	36.7 "

Owing to the fact that the regulation of motor vehicles is exercised by the Provinces under the Devolution Rules and the Indian Motor Vehicles Act 1914, regulation and taxation vary very widely. Taxes differ both in regard to rate and incidence and the Authorities to whom they are paid. On the following page is a list of taxes paid by private motor-cars.

Motor-cars are heavily taxed in Madras with a resultant serious decrease in the number of vehicles. Petrol dues and other taxes represent 30 per cent. of the operation costs of a motor-bus, whereas the normal ratio is 17 per cent. to 21 per cent.

With such a variety of conditions it is difficult to ascertain the contribution made by motor transport towards the upkeep of the roads, but according to estimates the total taxes paid by all motor transport amounts to 830 lakhs as follows:

- 100 lakhs represent the contribution to the Central Road Development Account through petrol taxation;
- 430 lakhs go to Central Revenue;
- 300 lakhs go to the provincial (and State) and local Revenue.

A comparison of the expenditure on the road systems of eight Governors' Provinces (i.e. excluding Burma and the North-West Frontier Province) in the years 1923-4 to 1929-30 shows that the average expenditure on new construction amounted to Rs. 167 lakhs. The maintenance bill increased, during the same period, by Rs. 90 lakhs, but it is not known to what extent this increase was due to motor traffic. On the other hand, the amount accruing in these eight provinces from motor taxation is estimated at about

Province	Driving licence fees		Registration fee		Provincial Government Taxation (Annual)
	Original	Renewal	Type of vehicle	Renewal	
Bombay	Rs. 20	Rs. 5	light heavy	Rs. 32 64	nil
Madras	5	3	all types	16	Weighing not more than 15 cwt. unladen: Rs. 70 " between 15 and 30 " " " Rs.100 " " 30 and 45 " " " Rs.130 " " 45 and 60 " " " Rs.200
Bengal	10	2	light heavy	16 32	Measuring not more than 50 sq. ft. overall: Rs.40 " between 50 and 80 " " " Rs.50 " more than 80 " " " Rs.70
Bihar and Orissa	5	2	see next column	see next column	Seating not more than 1 person: Rs.15 " " 3 persons: Rs.30 " " 7 " " Rs.50 Every additional passenger over 7: Rs.20
United Provinces	5	2	light heavy	30 60	nil
Central Provinces	10	2	see next column	see next column	Not exceeding 15 cwt. in weight unladen: Rs. 15 between 15 cwt. and 1.5 tons " " Rs. 25 " 1.5 tons and 2 tons " " Rs. 35 " 2 " 3 " " " Rs.100
Punjab	3	2	light heavy	16 32	Seating not more than 1 person: Rs.40 " " 3 persons: Rs.60 " " 4 " " Rs.80 Every additional person Rs.20
Assam	5	2	light heavy	16 32	nil

N.B. In addition to the above, there are very varied municipal taxes in certain provinces, the rate of which is sometimes as high as Rs.1.60 per annum (Bombay City). Tolls practically do not exist, except in the Province of Bombay, where they are levied both by Government and Local Bodies.

Rs.600 lakhs, of which 60 per cent. or Rs.360 lakhs may be considered as representing the contribution of motor transport towards expenditure on extra-municipal roads.

The above-mentioned *Report on the present state of Road and Railway Competition*, published in Calcutta in 1933, expresses the opinion that the whole system of calculation should be changed, the diversity of taxes abolished, and the basis of taxation simplified. The report further recommends that the study of all problems connected with road and rail competition should be placed in the hands of a central advisory body (Board of Communications). Provincial Boards would assist this central body, and their work would be given as wide a scope as possible. The report further deals with the possible provision of Divisional Committees for traffic questions within the provinces. These Committees would elaborate in detail local measures of co-ordination and might even act as subdivisions of provincial Boards of Communication. By the adoption of this method it would be possible to emerge from the present period of indecision and uncertainty.

# DUTCH EAST INDIES

## I. RAILWAYS

THERE are two classes of railway in the Dutch East Indies: (1) first-class railways with a maximum authorized speed of 60 km. per hour or over; (2) second-class railways having trains which travel at more than 20 km. and less than 60 km. per hour.

Some of the railways are owned and operated by the State (4,349 km., including 2,929 in Java and Madoura, and 1,420 in Sumatra). Others are operated by private companies (3,027 km., including 2,487 in Java and Madoura, and 540 in Sumatra). The total of 7,376 km. of line represents 4.12 km. per 100 sq. km. in Java, 0.46 km. per 100 sq. km. in Sumatra, and 0.38 km. per 100 sq. km. for the Dutch East Indies as a whole.

The duration of concessions for private railways varies from fifty to ninety-nine years. Almost all the contracts stipulate that the State may withdraw the concession at the end of ten years, in which case the railway company receives an indemnity.

The obligations of the railways are specified either by law or in the concession contract. The various legal provisions are contained in a series of decrees issued during the years 1926, 1927, 1928, the most recent being the Government decree of June 9th, 1928. Concessions are only granted to Dutch subjects.<sup>1</sup> The applicant for a concession must obtain Government approval of railway construction, service regulations, and time-tables. Concessionaries are as a rule allowed to fix their own tariffs within specific limits but they must reduce them if the Government so directs. They are obliged to compensate any damage caused to passengers or goods, failing proof that there was no negligence on their part. They must convey troops and their material at half rate and supply free transport for the postal services and for prisoners and their guards. The concession contract also generally includes a clause specifying the obligation to comply with the legal provisions in force or to be put into force in respect of the

<sup>1</sup> The term 'Dutch subject' includes all persons born in the Dutch East Indies as well as all persons of Dutch nationality.

railways, the deposit of security, and the obligation to link up the Company's lines with those of its neighbours.

Generally speaking the companies do not receive any direct financial assistance nor do they have a transport monopoly. They receive indirect financial aid, however, through their right to the free use of Government land for the construction of their permanent way and for the construction of the buildings and other premises necessary for maintaining their service.

There are no transport taxes. The railways are only subject to the general taxes levied on every kind of enterprise. Certain private lines are, however, obliged to pay over a part of their profits to the State. In 1930, for example, the Nederlandsch-Indische Spoorweg Maatschappij paid 452,200 florins to the State, in 1931, 329,800 florins, and in 1932, 432,300 florins.

On December 31st, 1932, the capital invested in the State railways was almost 700,000,000 florins. The State has no participation in the private companies. The capital investment in these companies, at the same date, was 279,973,000 florins.

Upkeep costs have been as follows:

	1930	1931	1932 <sup>1</sup>
State railways . . .	7,551,000	6,246,000	5,130,000 florins
Private companies . . .	4,069,000	3,567,000	2,678,000 „

Renewal costs were as follows:

	1930	1931	1932 <sup>1</sup>
State railways . . .	1,791,000	1,401,000	964,000 florins
Private companies . . .	765,000	614,000	360,000 „

Extension costs were as follows:

	1930	1931	1932 <sup>1</sup>
State railways . . .	8,689,800	6,087,000	1,012,000 florins
Private companies . . .	3,358,000	1,379,000	610,000 „

<sup>1</sup> Provisional figures.

By 1930 there was a marked falling off in passenger traffic:

	1928	1929	1930	1931	1932 <sup>1</sup>
Number of passengers:					
	107,029,000	108,737,000	98,419,000	78,036,000	63,287,000
Tons of baggage:					
	51,966	48,096	40,172	no data	no data
Passenger-km.:					
	2,463,731,000	2,509,434,000	2,355,280,000	1,873,565,000	1,552,810,000
Average passenger journey in km.:					
	23.1	23.1	23.9	24	24.5

There was a similar falling off in goods traffic:

	1928	1929	1930	1931	1932 <sup>1</sup>
Tons of goods:					
	18,086,476	18,973,416	15,691,861	11,876,637	10,514,503
Ton-km.:					
	1,417,600,000	1,468,775,000	1,228,215,000	993,160,000	885,753,000
Average journey of a ton of goods, in km.:					
	78.4	77.4	78.3	83.6	84.2

It will be seen farther on in the present report that motor transport competition has primarily affected passenger traffic.

## II. MOTOR VEHICLES AND ROADS

According to the statistics of motor vehicle registration numbers issued (probably therefore slightly above the real figure) in 1931, there were 81,160 motor vehicles in the Dutch East Indies in that year, comprising 59,587 private cars, 6,318 buses, and 15,255 lorries, or 1 automobile per 750 of population. The present volume of traffic is calculated at 2,888,570,000 passenger-km. (possibly an over-estimate), and 183,060,000 ton-km.

There are no public enterprises (except those handling urban traffic) operating motor transport lines exclusively, unless it is admissible to consider as such the Government motor services in certain districts, which are closely linked up with the State railways and tramways. There are, however, a number of private enterprises, some belonging to the railway companies and mainly operating passenger services, and some being independent concerns. One of these enterprises owns 300 vehicles, but generally speaking they are small concerns having one or two vehicles only.

<sup>1</sup> Provisional figures.



On September 1st, 1933, an ordinance came into force containing general regulations in regard to public transport by bus and lorry throughout the whole of the territory of the Dutch East Indies.

This Ordinance makes the operation of a lorry or bus service subject to the issue of a licence by the competent authority who, according to the sphere of activity of the service in question, may be either a local autonomous authority or the Governor-General of the Dutch East Indies. Licences which may only be refused for the reasons set forth in the Ordinance are granted for a period of five years or, in special cases, ten years. The licence may lay down certain conditions which the concessionary must fulfil; for instance, the running of a regular service, the maximum number of lorries or buses which may be put on the road, approval by the competent authorities of the rates and terms of transport, &c.

Motor transport has more especially deprived the railways of their passenger and parcels traffic. In passenger transport the higher classes have suffered most from motor competition, and the general opinion is that even the introduction of lower rates would not enable the railways to recapture their lost custom. Motor-buses have deprived the railway of the lower-rate passenger traffic over short and medium distances. An inquiry conducted in 1926 shows that the railways had apparently then lost 1,500,000 florins of revenue, i.e. a loss of 8 per cent. At the present time this loss must amount to several millions. The traffic brought to the railways by motor transport, on the other hand, is not regarded as in any way equivalent to the traffic it has taken away from them.

The railway companies have taken a certain number of counter-measures. Tariffs have in some cases been reduced below the pre-war level, extra express train charges lowered, the tariffs for valuable goods reduced, and contracts over long periods at lower rates concluded with certain shippers. Passenger services have been improved, motor-engined trains introduced, comfort increased, and better connexions organized. In the case of goods transport, large service centres have been created for door-to-door delivery. Several companies have formed motor transport lines to serve villages where there is no railway. It is only in this sense

that collaboration can be said to exist. The law, however, makes no provision for any working arrangement between the two means of transport.

The taxes paid by motor vehicles include the following: (1) import duty on motor vehicles, pneumatic tyres, and accessories; (2) excise or import duty on petrol and import duty on lubricating oil; (3) local road or vehicle taxes varying from one municipality to another; (4) personal property tax. In 1931 the total revenue from all these taxes amounted to 24,500,000 florins.

It is difficult to say what proportion of the total highway expenditure this sum represents. Information regarding the work undertaken in all the provinces is lacking. Part of the road work is carried out by duty-service labour and part is included in the irrigation works accounts. According to a general estimate, however, expenditure in 1931 amounted to 23,392,000 florins for the upkeep of existing roads and 15,498,000 florins for new construction and road improvement.

At all events, the Dutch East Indies are now arriving at a clearer idea of the situation and of the measures which will have to be adopted in order to meet it.

## FRENCH INDO-CHINA

THE building up of suitable means of transport has met with considerable difficulties in Indo-China owing to the great forests, high mountain chains, deep valleys, and the uneven distribution of the population. It was for that reason that the plans of the railway and road systems were not settled until 1898 and 1909 respectively. The first period of development was interrupted by the War in 1914 and the second by the present economic crisis.

### I. RAILWAYS

French Indo-China has 2,400 km. of railways, of which 1,929 km. are in Indo-China proper and the remainder in Chinese territory. This represents a ratio of 0.27 km. per 100 sq. km. The railway system comprises two principal lines:

(1) The Yunnan line, operated since 1910 by the *Compagnie Française des Chemins de Fer de l'Indochine et du Yunnan*. This line, which links up Haïphong and Yunnan Fou, is 859 km. in length (394 km. in Tonkin and 465 km. in Yunnan).

(2) The Trans-Indo-Chinese railway linking up the north and south of the peninsula; two sections of this line (1,535 km.) have already been built, including the branch lines of Lang Bian (61 km.) and Mytho (70 km.). This railway, which follows the old mandarin and sea roads, might well have been planned to better advantage with a view to opening new areas. Moreover, it has not yet been completed and there is a gap of 550 km. between Tourane and Nhatrang. Consequently conditions are favourable to motor transport operation. It is important therefore for the main line to be completed and for the proposed lines to be constructed into the interior. The following are now in course of construction: (a) the line from Tourane to Nhatrang; (b) a line between Arbrey Broyé and Dalat, to link up the main line with Dalat, the summer Capital of the South;<sup>1</sup> (c) a line from Tenap to Thakkek to link up Annam and Laos and open up the latter country. The line from Pnom-Penh to Battambang—forming one

<sup>1</sup> Opened in 1933.

of the first sections of the great international line to link up the French Indo-China railway system with the railways of Siam and British India—was extended in 1933 as far as Mongkol Borey. The Trans-Indo-Chinese line and its branches are operated by the Colony itself. The whole forms a single railway operation department ('Circonscription Spéciale d'Exploitation') under the 'Inspection Générale des Travaux Publics'. It is divided into two systems: the Northern system (in the North of Tourane), 979 km. in length, and the southern system (in the South of Nhatrang), 556 km. in length. These railways are one-metre gauge.

There are four classes of passenger coaches. The fourth class used by the natives carries more than 80 per cent. of the passenger traffic.

Motor transport competition was beginning to make itself felt in Indo-China as early as 1921. In 1924 railway traffic had decreased by 30 per cent. as compared with 1920. Fourth-class rates on the railways operated by the Colony were accordingly reduced. By 1926 the situation was once again in hand and remained so up to 1930, when a further appreciable fall in traffic took place through the economic crisis adding its weight to motor transport competition.

The following figures show the trend of passenger traffic in the Colony:

1927	.	.	115,000	passenger-km. on the Northern railway system				
1929	.	.	230,000	"	"	"	"	"
1930	.	.	224,000	"	"	"	"	"
1928	.	.	89,000	"	"	Southern	"	"
1930	.	.	80,000	"	"	"	"	"

#### Goods traffic:

1927	.	.	46,000	ton-km. on the Northern railway system				
1930	.	.	61,000	"	"	"	"	"
1929	.	.	25,000	"	"	Southern	"	"
1930	.	.	19,000	"	"	"	"	"

Both receipts and expenditure increased considerably from 1921 to 1930:

#### Receipts:

1921	.	.	.	3,000,000	piastres (1 piastre = 10 Fr. frs.)
1930	.	.	.	5,500,000	"

*Expenditure:*

1921 . . . . .	2,800,000 piastres
1930 . . . . .	5,350,000 „

But from 1928 onwards the net earnings fell sharply:

1928 . . . . .	598,000 piastres
1929 . . . . .	448,000 „
1930 . . . . .	150,000 „

On the Yunnan line the net earnings dropped from frs. 8,444,000 in 1929 to frs. 5,822,000 in 1930.

The railways are therefore passing through a period of acute crisis.

## II. MOTOR TRANSPORT

It has already been shown that the organization of the railways contained a considerable number of weak spots of which motor transport could not fail to take advantage. Furthermore, the natives showed a distinct preference for the new means of transport which facilitated travel over the rice-fields and improved communications with the markets.

The highway system comprises: (a) colonial roads; (b) roads of general interest, maintained from the general budget of the Colony; (c) local roads, maintained from the budget of each country; (d) tracks for opening up new country, of which the most important are financed from the general budget. In 1931 the total length of this system was 24,735 km., divided as follows:

Surfaced roads . . . . .	6,303 km. of colonial roads
plus . . . . .	8,178 km. „ local „
Earth roads . . . . .	1,985 km. „ colonial „
plus . . . . .	8,269 km. „ local „

Roads are scarce in the mountainous and wooded districts, but the highway system is highly developed in Cochin-China and the Tonkin plain. Colonial road No. 1 (or Mandarin Road), 2,584 km. in length, forms the main arterial road of the country. A further 8,000 km. of roads are passable during the dry season. Highway construction and upkeep, and road regulations in the different countries, are under a territorial unit of the provincial Public

Works Department under the central control of the 'Inspection Générale des Travaux Publics'. In 1930 highway expenditure for the whole Colony amounted to 13,000,000 piastres (frs. 130,000,000) of which half was represented by new construction and half by upkeep.

In 1919-20 there were about 1,200 motor-cars in Indo-China; to-day there are 21,876, including 11,411 private cars, 3,426 buses, and 2,039 lorries, or 1 vehicle per 972 of population. The majority of the motor transport enterprises in Indo-China are small concerns managed by natives and operating over short distances. Transport enterprises carrying mail receive a subsidy from the Colony. These small contractors, who are as a rule poor, employ old and unsuitable vehicles which often barely fulfil the essential safety requirements. The only enterprises worthy of the name are those attached to the railways: the 'Société des Transports Automobiles du Centre-Annam' running between Tourane and Nhatrang and linking up the two portions of the main railway line, and the 'Perrin' Company operating between Arbre Broyé and Dalat. This is the only form of road and rail collaboration in Indo-China.

Since May 6th, 1933, a decree of the President of the French Republic, countersigned by the Minister for the Colonies, lays down a new régime for motor transport. No passenger or goods service may in future be operated over the classified public roads without a licence issued under clearly defined conditions. This decree defines a 'Public Motor Transport Service' as any service offered to the public for commercial purposes for the conveyance of passengers or goods, irrespective of whether such services are regular or occasional, i.e. those effecting transport operations on demand of the public. This licence is issued by the authorities. The issue may, by order of the Governor-General, be made subject to the furnishing of guarantees as to making good any damage caused. Such guarantees may be in the form of insurance policies taken out with approved companies, or deposits of security. The licence must indicate the nature of the service and the general provisions as to vehicles. In the case of regular services it must also specify the exact routes to be followed. The authorization must establish the time-tables and maximum

charges. It must further contain a clause fixing the period of validity which must not exceed five years.

With a view to ensuring better road and rail collaboration, the operation of motor services may be made subject to the payment of a special fee varying according to the nature of the service and the form of co-ordination it is desired to establish. The method of applying this fee must be determined, in accordance with the regulations governing local taxes, in such a way as to encourage the development of motor transport services feeding the railways.

Certain sanctions are laid down in the event of non-compliance.

# CHINA

## I. RAILWAYS

COMPARED with other countries, the railway mileage of China is very small, the total length of line being 13,684 km. for an area of 11,000,000 sq. km., or 0.124 km. per 100 sq. km. The ratio in relation to population is still lower, despite the necessarily important place occupied by the railway in a vast and thickly populated country like China.

The railways in China are divided into three classes: (1) those which are State-owned; (2) those which have been handed over to private companies; (3) those attached to industries. The railways of the first category are the most important with a total of 12,334 km. of line, of which 8,400 km. are main lines, 1,184 km. branch lines, 176 km. secondary lines, and 2,574 km. private sidings and other lines. The second category comprises 371 km. of lines, most of which are narrow gauge. The third category, like the second, consists for the most part of narrow-gauge lines and has a total length of 469 km.

All the railways are under the control of the Ministry of Railways (formerly the Ministry of Communications) and are governed by the same general laws. The private railways also come under the law of November 12th, 1915, last amended on January 9th, 1931. According to this law, railways constructed by private interests may only be conceded to limited companies. After considering all the facts, the Ministry gives its provisional approval which becomes final when proof has been furnished of the constitution of the company and the payment in cash of all subscribed capital. The first obligation of the company is to construct the railway within the period specified. If it is a single line, sufficient space must be left to construct a double line, if necessary. Rolling-stock must conform with the regulations laid down by the Ministry. The line can only be opened after inspection by the agents of the Ministry. Time-tables, the number of trains it is proposed to run, and the rates must be approved by the Ministry. In the case of joint carriage by State and private railways, expenditure ratios and rates must be



established by mutual agreement. Reduced fare tickets and charges for the transport of soldiers must be the same as those in force on the State railways. An annual report on the working of the company must be sent to the railway authorities before it is submitted to the shareholders. The company must take all necessary safety precautions and, if necessary, call for the assistance of the local police, for which it must pay. It must always undertake the transport of soldiers. It may not oppose the crossing of its system by the lines of another company. If the company wishes to reduce its system, or change the lay-out of the railway, or hand over its management to another company in order to associate itself with some other enterprise, it must obtain the authorization of the Ministry. The Ministry always has a right of supervision and may introduce any modification it considers advisable in the administration of the company, or even repurchase the railway system. The duration of the concessions varies between twenty and thirty years.

An agreement has been concluded between the postal administration and the railways regarding the establishment of postal rates. Soldiers pay half fare everywhere. There is no transport tax.

It is difficult to obtain complete figures showing the amount of capital invested in the Chinese railways. In 1929 the total Government investment in the State railways was \$248,357,600, the greater part of which was in the Peiping-Hankow railway (\$107,851,000) and the Kiao-Tsi railway (\$44,513,000). Capital investment, other than by the Government, in the State railways was estimated at \$279,806,000, of which the greater part was in the Tientsin-Pukow railway (\$84,153,000) and the Hupeh-Hunan railway (\$52,180,300). Capital invested in private railways amounted to \$12,152,000, the greater part of which was in the Sunning railway (\$4,306,000), the Kochin-Pishih (\$4,000,000), and the Chaochow-Swatow (\$3,600,000). The capital invested in industrial railways amounted to \$15,562,000.

Annual expenditure on upkeep varies between \$3,000,000 and \$6,000,000.

1925	.	.	.	.	.	\$5,683,000
1926	.	.	.	.	.	\$3,689,000
1927	.	.	.	.	.	\$4,109,000
1928	.	.	.	.	.	\$3,425,000
1929	.	.	.	.	.	\$4,895,000

According to information obtained regarding 1932, the total receipts of the fourteen national lines amounted to \$134,865,384. The decrease of \$20,046,140, as compared with 1931, was chiefly due to the special situation obtaining in the three Eastern provinces during 1931 and in the Shanghai district at the beginning of 1932. The losses caused to the Peiping-Liaoning, Nanking-Shanghai, and Shanghai-Hangchow railways alone amounted to more than \$20,000,000.

	<i>Passengers</i>	<i>Goods (tons)</i>	<i>Receipts (\$)</i>
Peiping-Hankow . . .	2,626,627	3,538,420	25,029,752
Peiping-Liaoning . . .	4,475,501	7,658,253	25,788,231
Tientsin-Pukow . . .	3,002,962	2,218,317	20,433,431
Nanking-Shanghai . . .	7,565,290	756,317	9,633,907
Shanghai-Hangchow- Ningpo . . . . .	5,046,034	791,887	6,166,473
Peiping-Suiyuan . . .	814,492	1,257,816	7,410,412
Chanting-Taiyuan . . .	1,022,543	1,812,492	5,381,014
Taokow-Chinghwa . . .	3,824,155	949,993	1,570,506
Lung-Hai . . . . .	1,699,643	789,068	8,310,506
Canton-Kowloon . . .	2,182,974	105,433	2,200,913
Hunan-Hupeh . . . . .	906,059	344,850	2,734,379
Kiaochow-Tsinan . . .	3,094,134	2,244,695	13,434,688
Nanchang-Kiukiang . . .	4,085,255	188,820	1,179,202
Canton-Chaochow . . .	7,747,454	435,783	5,591,970
<b>Total . . . . .</b>	<b>48,093,123</b>	<b>23,092,144</b>	<b>134,865,384</b>

## II. MOTOR TRANSPORT

China has always been a land of great highways. Throughout the whole country, particularly in northern China, roads have had a great civilizing, social, and political influence. The twenty-one imperial highways were in their day the finest in the world. To-day all these roads have deteriorated and are unsuitable for motor traffic. They form a complex system of national, provincial, and municipal roads. On July 6th, 1931, regulations were published regarding the national highways. All roads linking up more than two provinces, fortified localities, and ports are considered as national highways. The line they must follow is plotted by the services of the Ministry, whilst their construction is carried

out, in the order of their importance, by the provincial construction offices under the Ministry. The construction of national highways for the defence of the frontier is either undertaken by the Ministry itself or by the provincial authorities of the regions crossed by the road in question. In the latter event the agents of the Ministry supervise and inspect the work of construction. The provincial offices must also submit a monthly progress report to the Ministry.

The total length of roads under construction in recent years is 234,815 li or 132,260 km., of which 116,432 li or 66,085 km. have been completed. The provinces in which the most important work has been carried out are as follows:

	<i>Proposed construction</i>	<i>Construction completed</i>
Kwantung . . .	22,079 li	14,218 li
Kweitchow . . .	13,340 „	6,790 „
Yunnan . . .	12,630 „	2,385 „
Ankwei . . .	11,737 „	3,776 „
Kiang-Su . . .	11,133 „	7,665 „
Chekiang . . .	10,578 „	2,978 „

(1 li = about 0.559 km. = about 0.3473 of a mile).

The revenue accruing from road transport taxation is intended for the upkeep, extension, and improvement of the roads. The principal taxes are: (1) the fee payable on obtaining a licence to form a motor transport enterprise; (2) the special motor traffic tax. In May 1933 a plan to hold a lottery was under consideration, the proceeds of which were to be used for the development of the highway system.

In 1932 China possessed

41,503 motor vehicles, comprising:  
 27,350 private cars,  
 5,894 buses,  
 8,259 lorries,

representing a ratio of 1 vehicle per 10,595 of population.

With Afghanistan, Ethiopia, and the Republic of Liberia, these figures represent the lowest ratio in the world.

Nevertheless, the leaders of the country have drawn up regulations for motor transport in anticipation of its future development. A law on the carriage of passengers and goods by public or private

enterprises was promulgated by the Ministry of Railways on June 19th, 1930. Transport companies are obliged to obtain a licence from the Ministry. They must be essentially Chinese and undertake transport work only. Time-tables, passenger and goods rates, maximum tonnage carried, and speed of vehicles must be submitted for the approval of the Ministry. The companies must construct stations and repair-shops and, with the co-operation of the local police, see to the safety of transport conditions. They must agree to transport soldiers at reduced rates and to carry mail. If any route happens to be duplicated by the railway, the road transport enterprise must cease operating in consideration of a reasonable indemnity. Several companies using the same road must share the costs of its upkeep. All obligations of road transport enterprises are dealt with in considerable detail in the terms of the concession: any passenger found travelling without a ticket pays double fare; passengers in a state of drunkenness or mentally unbalanced are not permitted to travel; children and old people must be accompanied; children under the age of 4 are carried free, and children between the ages of 4 and 10 for half fare; monkeys and dogs are charged at one-third of the full fare, birds in cages one-quarter of the full fare, &c.

The Government has recently created two organizations for the administration of road transport on the national highways. The first of these organizations deals with Government transport questions and is under the direct supervision of the Minister; the second, which deals with provincial transport questions, comes under the provincial construction offices. Both these organizations must submit a monthly report on the road transport situation, and collect taxes.

There is no legislation in China regarding the co-ordination of railway and motor transport services. There is, however, one law forbidding the creation of motor transport lines which might compete with the railways. Up to now, the Chinese railways have not operated any motor transport lines, nor are they associated with any such lines. So far, road and rail competition has not been so keen as in other countries.

## JAPAN

OWING to Japan's island position, the importance of her coast-wise navigation, and the mountainous nature of the country, land transport (road and rail) has not attained the same degree of development as in other countries of equal economic importance.

### I. RAILWAYS

#### 1. *Predominance of State operation and control.*

In 1932 the length of the Japanese railways was 22,208 km., of which 7,194 km. belonged to private enterprises and 15,014 km. to the State, representing 5.8 km. per 100 sq. km. and 3.33 km. per 10,000 of population. In 1905 the State repurchased the greater part of the railway lines with a view to overcoming the difficulties arising out of the lack of centralization and the diversity of methods of operation.

The private railways which still exist are of merely local importance. They are governed by the law on local railways, and receive State subsidies for their services.

The administration of the State railways is in the hands of the Railway Department, which comprises the Secretariat of the Minister and seven other officers. It has at its head the Minister, assisted by Vice-Ministers and numerous subordinates. For purposes of administration the State railways are divided into six districts, as follows: Tokyo, Nagoya, Kobé, Moji, Sendai, and Sapporo.

The rights and obligations of the railways are established by law. The management fixes tariffs and settles all questions regarding time-tables, speed, safety, and comfort. The private companies operate under the supervision of the State Railways Authorities, to whom they must submit their tariffs and operation regulations for approval.

#### 2. *The financial autonomy of the State railways.*

The railway budget is independent of the general finances of the State. This financial autonomy was granted in 1909 by the

Imperial Railway Special Account Law. The law lays down that capital expenditure for the construction and development of the railways must be met out of the revenue accruing from all branches of traffic and, in the event of loss, that such expenditure must be covered by public loans issued under a special account.

Capital is divided into capital proper and debenture capital. The debenture capital represents the railways' undertakings in respect of loans. These loans and interest thereon are repaid out of traffic receipts and the revenue from various other services. At the end of 1930 the total of debentures, loans, and amortization was as follows:

Debentures . . . . .	1,637,500,460 yens
Loans . . . . .	105,726,078 „
Amortization . . . . .	22,169,604 „

The capital of the State railways amounted to 3,382,820,000 yens, and that of the private railways to 1,282,172,000 yens.

### 3. *The recent decline in traffic and its effect on the financial position of the railways.*

The diminution of traffic is as follows:

	1929-30	1930-1	1931-2
<i>Passengers</i>			
State railways . . . . .	862,939,000	824,152,000	787,222,000
Private railways . . . . .	415,740,000	428,370,000	420,725,000
<i>Goods (in tons)</i>			
State railways . . . . .	77,224,000	64,087,000	60,590,000
Private railways . . . . .	26,466,000	22,949,000	21,659,000

In these circumstances it is not surprising that profits have fallen.

The following figures show (a) a simultaneous decrease of receipts and expenditure; (b) a sufficiently substantial decrease of receipts to cause a steady diminution of net profits.

This decline must be attributed primarily to the economic crisis, since in Japan steps have been taken to limit the effects of motor transport competition.

	1929-30	1930-1	1931-2
<i>Total receipts (in yens)</i>			
State railways . . . .	517,749,000	485,140,000	433,540,000
Private railways . . . .	91,725,000	87,841,000	82,946,000
<i>Expenditure (in yens)</i>			
State railways . . . .	304,142,000	284,824,000	266,634,000
Private railways . . . .	52,479,000	52,473,000	47,757,000
<i>Profits (in yens)</i>			
State railways . . . .	213,652,000	173,316,000	166,905,000
Private railways . . . .	39,245,000	35,367,000	35,188,000

## II. MOTOR TRANSPORT

### *Motor transport in Japan controlled by the railways.*

In 1932 there were 100,100 motor vehicles in Japan, of which 59,100 were private cars, 10,000 buses, and 31,000 lorries, representing 1 vehicle per 640 of population.

Regulations for motor transport were introduced in 1931. Up to that time motor transport had been governed by an ordinance called the 'Motor Vehicle Central Act', promulgated in 1919 by the Home Office, but it dealt principally with private motor-cars and proved insufficient to meet modern traffic conditions. The new Act draws a distinction between vehicles used for the commercial transport of persons and those used mainly for private purposes, viz. taxis, private hire cars, hotel cars, &c. The former only are governed by the ordinance of 1931. Commercial transport services are placed under the control of the Railway Department, and any application for authority to open a new service must be made to that Department. The application must submit for approval by the Minister, the tariffs, number, and dimensions of vehicles it is proposed to employ, as well as other details of operation. The Minister of Railways enters all these details in the concession certificate. He exercises wide powers in regard to the alteration of tariffs, improvement of roads for the exclusive use of motor traffic, extension of roads, introduction of joint road and rail services, amalgamation of companies competing over the same route, and the insurance of passengers and goods.

Competition between road and rail is thus limited. The State railway authorities regard motor transport as an auxiliary service of the railways and do not allow the two means of transport to enter too keenly into competition with one another. In the neighbourhood of the railways, motor-bus lines are real collaborators of the railway companies. In goods services, however, competition makes itself more felt, owing to the peculiar facilities offered by motor transport.

The construction costs of a road intended to carry motor traffic are estimated at one-third of those required for a railway line. The Government has therefore drawn up a plan for the building of 10,000 miles of roads, which will reduce the need for new railway construction. The Government also encourages motor-car production with a view to reducing foreign imports. While wishing to eliminate competition between road and rail, the Government does not intend to check the development of the new means of transport.



# TUNISIA

## I. RAILWAYS

### 1. *The Tunisian railways privately operated.*

The organization of the Tunisian railways is in the hands of two limited companies: the Compagnie Fermière des Chemins de Fer Tunisiens (formerly Bône-Guelma and extensions) and the Compagnie des Phosphates et du Chemin de Fer de Gafsa. The railway system of the first-named company comprises 1,609 km., and that of the second 481 km., making a total of 2,090 km. of railway or 1.6 km. per 100 sq. km. The lines of the first group belong to the Tunisian State, which repurchased them from the Bône-Guelma Company on June 22nd, 1922, but are still operated by the same company which adopted the name of 'Compagnie Fermière des Chemins de Fer Tunisiens'. The operation of this company is under the control of the Director-General of Public Works. The company collects revenue and makes payments on behalf of the Government and is compensated by a system of allowances (management allowance, economy allowance). Its lease expires on December 31st, 1948. The Sfax-Gafsa system, which was conceded to the Compagnie des Phosphates, is operated at the company's own risk in respect of the main line, but any losses incurred in the operation of the two secondary lines are covered by Government advances. The concessions expire in 1966. The capital invested in these enterprises is made up as follows:

Tunisian State . . .	frs. 345,054,000
Cie de C.F.T. . . .	„ 45,297,000
Cie de Gafsa . . . .	„ 53,480,000

The share of the Cie de C.F.T. is made up as follows:

Share capital . . . .	frs. 8,046,000
Debenture capital. . .	„ 37,251,000

### 2. *The obligations of the railway companies.*

The obligations of the railways were laid down by the beylic decree of October 16th, 1897, and certain subsequent orders. They specify: (a) the obligation to operate and transport; (b) the liability

of the operator of the railway; (c) the obligation to confirm and publish rates; (d) equal application of rates to all users; (e) the opening of new lines; (f) the obligation to have time-tables confirmed and published; (g) proper upkeep and inspection of material; (h) collection of taxes for the State. Railway transport is further subject to a tax of 25 per cent of receipts and a licence tax corresponding to the French tax on industrial and commercial profits, as well as a number of local taxes. Up to 1930 the yield from rail transport taxation had an upward tendency:

1925	.	.	.	.	.	frs. 24,098,000
1926	.	.	.	.	.	„ 30,472,000
1927	.	.	.	.	.	„ 39,505,000
1928	.	.	.	.	.	„ 38,377,000
1929	.	.	.	.	.	„ 43,580,000
1930	.	.	.	.	.	„ 40,244,000

Up to 1930 taxation receipts had been considerably greater than the amount of the management account deficit borne by the Tunisian State, as follows:

1925	.	.	.	.	.	frs. 8,054,000
1926	.	.	.	.	.	„ 10,307,000
1927	.	.	.	.	.	„ 21,797,000
1928	.	.	.	.	.	„ 18,172,000
1929	.	.	.	.	.	„ 19,079,000

But in 1930 the revenue from taxation was frs. 6,154,000 less than the management account deficit.

Lastly, the concessions and payments the railways are obliged to make in favour of certain public services are equivalent to a further loss in revenue: expenses in connexion with inspection and the work of the Higher Council of Railways and Joint Staff Commission, frs. 840,000; special rates to military (quarter fare and permission to travel by a higher class), frs. 2,200,000; special transport facilities to various State services, frs. 900,000; reductions granted to State officials, frs. 450,000; reductions granted to large families, frs. 1,000,000; reductions granted to the blind and indigent, frs. 100,000; deficitary suburban rates, frs. 1,600,000; free transport of workmen of enterprises carrying out supplementary work for the railways, frs. 300,000. In all, these amounts represented 8.5 per cent. of receipts for 1931.

Annual expenditure for the renewal of permanent equipment (permanent way and buildings) increased each year until 1930:

1925	.	.	.	.	.	frs.	8,420,000
1929	.	.	.	.	.	"	17,642,000
1930	.	.	.	.	.	"	19,065,000
1931	.	.	.	.	.	"	17,593,000

The figures for the financing of new construction show a similar tendency:

1925	.	.	.	.	.	frs.	3,422,000
1926	.	.	.	.	.	"	4,071,000
1927	.	.	.	.	.	"	4,027,000
1928	.	.	.	.	.	"	4,767,000
1929	.	.	.	.	.	"	5,168,000
1930	.	.	.	.	.	"	6,258,000
1931	.	.	.	.	.	"	4,725,000

The State's share in the 1931 sum was frs. 4,148,000 and that of the railway company frs. 577,000.

### 3. *The decline in traffic.*

The traffic returns published by the Compagnie Fermière des Chemins de Fer Tunisiens show a decrease, mainly in goods traffic:

	<i>Number of passengers</i>	<i>Parcels traffic in tons</i>	<i>Goods traffic in tons</i>
1925	4,054,682	18,362	2,262,358
1927	3,582,451	22,053	2,582,263
1929	4,155,994	13,725	2,866,112
1931	4,198,093	9,063	1,829,304

The average return per passenger has dropped while the average return per ton has increased:

1925	Passenger (in frs.):	4.52.	Tons	17.64
1927	"	"	7.27.	" 26.47
1929	"	"	6.60.	" 27.72
1931	"	"	5.57.	" 29.91

## II. MOTOR TRANSPORT

1. *The regulation of motor transport.*

The number of motor vehicles in Tunisia reaches the very creditable figure of 11,955 or 1 motor-car per 183 of population. This figure comprises 10,320 private cars, 160 buses, and 1,475 lorries.

Legislation is not the same for passenger and goods transport.

(a) *Passenger transport.* The law makes a distinction between:

(1) Private cars which are free from restrictions (except those contained in the Road Traffic Regulations), under the beylic decree of July 28th, 1927.

(2) Public transport services which do not receive a subsidy, including: regular services, subject to the authorization of the Director-General of Public Works; services operating at the demand of passengers and subject to an ordinary declaration; casual services, subject to the same formality. The administration retains a general right of control over all these services. They are also compelled to comply with certain safety requirements and conditions of transport. Their time-tables and maximum rates must be displayed in their vehicles and offices. Any alteration must be published eight days before it comes into force and the administration advised thereof. They are forbidden to carry more than the specified number of passengers. A charge may be levied on transport operators for improper utilization of the roads, of which the proceeds are used to subsidize road upkeep.

(3) Subsidized public services subject to the same regulations as those mentioned above. These services are also obliged to have their vehicles approved by the Director-General of Public Works who specifies their stopping places and the junction points of connecting services. The administration fixes, on the proposal of the transport contractor, the minimum number of journeys to be made daily in each direction and decides as to the time-tables and fares of the enterprise. It further retains the right of inspecting the books. It is interesting to note that these provisions date from March 17th, 1914, and September 15th of the same year, showing that little time was lost in introducing regulations for motor transport services in Tunisia.

Since 1931 another type of concession—monopoly concession—has been employed in Tunisia. A concession of this kind has been granted to the Société Tunisienne des Transports Automobiles du Sahel. This system is similar to the preceding one, except that in principle no other public service may operate on the routes covered by the monopoly. The concessionary is obliged to insure against accidents. The duration of the monopoly is five years.

(b) *Goods transport.* The greatest possible liberty is granted subject to the observance of certain obligations in regard to vehicles and the speed at which they travel. A special licence must be obtained from the administration in the case of vehicles with trailers.

## 2. The road budget.

The costs of upkeep, reconditioning, and extension of the highway system are paid by a Government Office created by decree of November 9th, 1925, and called 'L'Office des Routes de Tunisie'.

Expenditure (in francs) is apportioned as follows:

Year	Ordinary Expenditure	Interest and Amortization	Road Repairs	New Construction	Total
1926	24,385,000	..	5,000,000	..	29,385,000
1927	38,134,000	500,000	..	..	38,634,000
1928	36,730,000	1,516,000	10,000,000	..	48,246,000
1929	40,074,000	4,016,000	25,000,000	..	69,090,000
1930	43,067,000	8,016,000	45,000,000	..	96,083,000
1931	42,827,000	11,072,000	57,500,000	7,500,000	118,899,000
1932	43,907,000	14,154,000	40,000,000	7,500,000	105,561,000

Revenue is made up of State subsidies and loans:

Year	State	Loan	Total
1926	24,385,000	5,000,000	29,385,000
1927	38,634,000	..	38,634,000
1928	38,246,000	10,000,000	48,246,000
1929	44,090,000	25,000,000	69,090,000
1930	51,083,000	45,000,000	96,083,000
1931	53,899,000	65,000,000	118,899,000
1932	58,061,000	47,500,000	105,561,000

The State's contribution to the budget of the Road Office is

partly covered by revenue from motor taxation which in 1932 amounted to:

(1) Vehicle tax . . . . .	frs. 12,298,000
(2) Consumption tax on pneumatic tyres . . . . .	„ 5,863,000
(3) Consumption tax on petrol . . . . .	„ 5,863,000
(4) Luxury tax on motor-cars . . . . .	„ 1,600,000
Total . . . . .	frs. 25,624,000

Some of these figures are higher than those provided for in the budget. In 1932 the estimated amount of the vehicle tax was frs. 9,350,000; the actual yield was frs. 12,980,000.

### 3. *Operation of motor services by the railways.*

By the Convention of January 11th, 1930, entered into by the Compagnie Fermière des Chemins de Fer Tunisiens and the State, the company undertook to form a number of subsidiary companies to manage and operate road transport enterprises. These companies only have the right to operate such services on the request or with the authorization of the railway company. The railway company further reserves the right to forbid the operation of lines which it considers prejudicial to its own traffic. The road transport companies receive in return, according to circumstances, amounts varying from frs. 2 to frs. 3 per ton of goods brought by them to the railway.

The railway company already has two subsidiary companies:

- (a) to replace a secondary railway line which has been suppressed;
- (b) the S.T.T.A.S. (Société Tunisienne des Transports Automobiles du Sahel) which has been granted a monopoly in the region it serves.

On some lines certain trains only have been suppressed and the railway company has authorized a subsidiary company to create road services parallel to the railway. These services are operated by the subsidiary company at its own risk, the railway company sharing with the subsidiary company all receipts exceeding frs. 3.30 per km. covered.

# MOROCCO

## I. RAILWAYS

THERE are two railway systems. The first, which is standard gauge, is operated under concession by three companies: the Compagnie des Chemins de Fer du Maroc, the Compagnie des Chemins de Fer du Maroc Oriental, and the Compagnie du Chemin de Fer de Tanger à Fez. The other with a gauge of 0.60 m. was originally built for strategic purposes. It is now commercially operated by the Compagnie des Chemins de Fer du Maroc, to which it is leased by the State. This railway system is, however, gradually disappearing and being replaced by a standard-gauge system. The total length of line is 2,500 km., i.e. 0.500 m. per sq. km. of country.

The establishment and operation of the new system was conceded to private interests by the Cherifian Government on June 29th, 1920. The relatively recent date on which the concession was granted explains why the railways have been adapted to the geographical features of modern Morocco, their principal role being to bring the resources of the interior to the ports. The line from Fez to Casablanca is more especially intended to ensure communication between Tunisia, Algeria, and Morocco. The concession was issued under an agreement entered into by the Cherifian Government, on the one hand, and the Compagnie Générale du Maroc, French P.L.M. Railway Co., and the French Paris-Orléans Railway Co., on the other. According to the terms of this agreement, the concessionaries were compelled to furnish numerous guarantees to the Cherifian Government which thus retains partial control of the railways. The concessionaries have to bear a proportion of the capital expenditure and costs of additional work. The purpose of this clause is to keep construction expenditure as low as possible. At the end of the first twenty years, during which certain facilities are granted to them, the companies will only have a right to a part of the operation revenue. The division of revenue is so established that the development of traffic will be to the advantage of both contracting parties. Expenditure has not been fixed according to a theoretical

schedule and agreed rate, but according to actual cost as shown by the accounts. Whenever any work has to be carried out or material supplied, the concessionary is bound to call for quotations by public tender.

The concession is valid until 1999, when the concessionaries must hand over the railway system to the Cherifian Government. The rights of the concessionaries are moreover liable to forfeiture at any time in the event of non-fulfilment of any one of the obligations specified in the contract. The Cherifian Government further has power to repurchase the railway at the end of twenty years.

In addition to these general conditions, the *Cahier des Charges* contains numerous obligations concerning: (a) the lay-out of the railway; (b) the construction of the permanent way; (c) time-tables and speed of trains; (d) tariffs which the Cherifian Government reserves the right to lower if it sees fit. The concessionaries must also keep a register of all traffic inwards and outwards. Certain time limits are fixed for effecting deliveries. Reduced fares and other facilities must be granted for the transport of soldiers and their material, and the agents of the postal and prison services. Certain officials must be conveyed free.

Every transport operation is subject to the payment of a stamp-duty, the revenue from which goes to the Treasury. In 1931 this duty brought in frs. 150,042. The company is further liable for all the taxes and charges applicable to buildings. In 1931 the revenue from these taxes was frs. 229,700. Lastly, the company is subject to the licence taxes and charges levied on carriages. In 1931 the licence tax yielded a revenue of frs. 473,401. The company likewise pays all customs duties on all material it receives from France and, as its registered offices are situated in France, it also pays the transfer tax and income tax on its coupons.

Total capital expenditure as shown by the capital expenditure account on December 31st, 1931, was frs. 1,400,000,000. The operation account of the Compagnie des Chemins de Fer du Maroc shows the following net profits:

1928	.	.	.	.	.	frs. 10,004,144
1929	.	.	.	.	.	„ 13,008,474
1930	.	.	.	.	.	„ 13,219,772
1931	.	.	.	.	.	„ 11,500,000



The traffic returns of the Compagnie des Chemins de Fer du Maroc and the Compagnie Tanger-Fez in 1931 were as follows:

Number of passengers . . . . .	2,243,116
Passenger-kilometres . . . . .	184,289,762
Tons of goods . . . . .	2,346,572
Ton-kilometres . . . . .	265,052,388
Average passenger journey . . . . .	78 km.
Average ton journey . . . . .	96 „

The principal goods transported are phosphates (951,000 tons), construction material (371,031 tons), cereals and flour (266,779 tons), and coal (91,688 tons).

## II. MOTOR TRANSPORT

There are 18,973 motor vehicles in French Morocco, of which 14,188 are private cars, 958 motor-buses, and 3,827 lorries, i.e. 1 vehicle per 225 of population. In the international zone of Morocco there are 668 motor vehicles comprising 425 private cars, 58 motor-buses, and 185 lorries, representing 1 vehicle per 90 of population. There are 3,565 motor vehicles in Spanish Morocco, of which 1,815 are private cars, 320 motor-buses, and 1,430 lorries, representing 1 vehicle per 238 of population.

Up to February 1933 passenger and goods road transport was unrestricted except that operators were required to make a declaration and comply with the general regulations laid down in the *Code de la Route* (Road Traffic Regulations). Measures had, however, to be taken to deal with the numerous small operators using more or less dilapidated vehicles, who were engaged in cut-throat competition in native passenger traffic, and in the event of accidents almost always proved to be insolvent. A 'Dahir' and a decree, both of February 6th 1933, then instituted a Licence System for common carriers of passengers on the following bases:

(1) In considering applications for licences account has to be taken of:

- (a) the position of the applicant as carrier previous to the new régime.
- (b) the degree of necessity or desirability of the proposed

service having regard to the public interest and the economic requirements of the country.

- (2) Delivery of licences, after favourable decision, in the form of personal documents for each vehicle operated, subject to presentation of a certificate showing the vehicle to be in good working condition and of proof that certain definite risks have been covered by insurance.

Licences are granted by a Committee composed purely of Officials of the Administration which, according to a rider added by the Résident Général, must base their decision 'especially on the necessity for maintaining the free play of fair competition in transport matters and for avoiding the constitution of a monopoly'.

These regulatory measures were extended to public carriers of goods including mixed passenger and goods services by a 'Dahir' of April 19th, 1933, and a complementary decree of the same date.

There is only one subsidized service, established by the Convention of March 6th, 1922, between the administration of the Public Works Department and the Compagnie Générale des Transports et du Tourisme au Maroc. This convention applies to 1,346 km. of lines including those operating between Casablanca and Mazagan, Casablanca and Marrakech, Mazagan and Marrakech, Mazagan and Safi, and Safi and Mogador. These lines act as a complementary service to the railway at certain points. The Casablanca-Marrakech line duplicates the railway provided for by the Convention of 1920. This line is, however, only authorized for nine years and will be suppressed as soon as the railway is completed.

The services of this Motor Transport Company are subsidized. The subsidy is based on the number of passenger-kilometres effected, the amount to be paid in each case being fixed according to the price of petrol. The annual subsidy must, however, never exceed frs. 2,080 per kilometre of line operated. The technical obligations of the concessionary, the number and location of stops, and the minimum number of journeys to be made by each line are laid down in the *Cahier des Charges*. The *Cahier des Charges* also specifies the publication of time-tables, the price of tickets, and the quantity of baggage to which each passenger is entitled. The concessionary company must undertake the con-

veyance of the mails and be able to give an account of its financial position. No monopoly is granted to the company, which bears all charges, taxes, and expenditure in connexion with the operation of its vehicles.

All motor transport is subject to the following taxes and charges:

Customs duty of 12·5 per cent. on all imported vehicles;

Petrol taxes;

Taxes on rubber;

The revenue from all the charges and taxes mentioned above goes to the general budget. There are also two municipal taxes as follows:

Tax on vehicles;

Rank fee.

The railways seem, however, to be at a disadvantage as compared with the motor transport enterprises, which are free to establish their own tariffs and therefore able to convey passengers and goods at the prices which suit them.

There are no administrative provisions compelling the two means of transport to co-ordinate their services. Nevertheless, the motor transport enterprises try to work in conjunction with the railways in the towns. For this purpose they have opened a number of town goods offices. They have also opened a certain number of town passenger offices the management of which has been placed in the hands of the Compagnie des Wagons-Lits. Up to now this collaboration has not shown any appreciable results.

The following table shows that motor transport prices remain lower than those of the railways:

	<i>Railways</i>	<i>Motor Transport</i>
1st class . . .	frs. 0·32 per km.	frs. 0·25 per km. for vehicles with special accommodation
2nd „ . . .	„ 0·252 „	
3rd „ . . .	„ 0·19 „	frs. 0·10 km. for ordinary motor vehicles
4th „ . . .	„ 0·13 „	

Comparison is impossible in the case of the carriage of goods owing to the many different forms of motor transport employed.

# MADAGASCAR

## I. RAILWAYS

THIS large island has 900 km. of railways, or 0.155 km. per 100 sq. km. The railways were primarily built to connect the interior with the coast. The principal line, called the T.C.E. (Tananarive Côte-Est), runs southwards along the coast and then turns inland to Tananarive. Connected with this main section is a line to the north running to lake Alatroa, and a line to the south running as far as Antsirabé and constituting the first section of a main line which will run through Fianarantsoa and then back to the sea and thus form the Malgache Central Railway.

The construction of these lines was carried out by the Colony out of its own resources or by loans which were paid off from general revenue. Their operation is in the hands of a department of the Colony which has its own budget. The rates are established by the Governor-General after consultation with the Advisory Board. They are confirmed by decree. To all intents and purposes therefore it is an autonomous State railway system. Capital investment amounts to frs. 140,000,000. In 1931, frs. 6,560,000 were expended on upkeep and frs. 60,000 on renewals. The railways levy a tax of 10 per cent. on passengers, the income thus obtained being paid into the budget of the Colony.

Details of traffic during recent years are as follows:

### *Passengers and Luggage*

	<i>Number of passengers</i>	<i>Tons of baggage</i>	<i>Passenger-km.</i>	<i>Ton-km.</i>	<i>Average journey (km.)</i>
1928	1,168,036	1,087	56,696,293	101,194	48.5
1929	1,241,815	1,084	59,980,729	98,980	48.3
1930	1,170,785	925	57,040,474	80,468	48.7
1931	1,050,240	1,580	51,650,629	217,423	49.1

The principal goods conveyed are as follows: wood for fuel, 54,172 tons; planks, 11,360 tons; dry manioc, 23,289 tons; rice, 13,763 tons.

*Goods*

	<i>Tons</i>	<i>Ton-km.</i>	<i>Average haul (km.)</i>
1928	266,273	53,374,543	200.4
1929	279,969	50,848,035	181.6
1930	283,546	43,448,440	153.2
1931	319,812	51,053,243	159.6

## II. MOTOR TRANSPORT

The total number of motor vehicles is 3,682, including 2,636 passenger cars and 1,046 lorries. The ratio is 1 vehicle per 1,046 of population. Almost all road transport is operated by a department of the Colony attached to the railway department and under the same manager. The routes over which road transport operates are as follows: Tananarive-Maevatanana, 347 km.; Tananarive-Saovinandriana, 135 km.; Antsirabé-Ambohimahasoà-Tulear, 793 km.; Ambohimahasoà-Mananjary, 179 km. The Colony also subsidizes certain private enterprises with a view to extending communications by road and track. The tariffs are established in the same way as those of the railways. Under the system of transport organization in Madagascar, motor transport tends to act as a feeder service to the railways.

## SOUTH AFRICA

*All the different means of transport in South Africa are grouped under the direct control of the Minister of Transport. This central Authority sees to it that motor transport is principally employed as a feeder to the railways, so that generally speaking competition between road and rail is non-existent.*

### I. RAILWAYS

*The Government of the Union of South Africa has a virtual monopoly of the railways. On March 31st, 1931, the Union owned 13,459 miles of railway, representing 1.72 miles of railway per 100 sq. miles. With a few rare exceptions the Union railways are the property of the State.*

The railways are administered according to the provisions of the South Africa Act of 1909 and of an Act concerning the Railway Board adopted in 1916. The Act of 1909 specifies that subject to the authority of the Governor-General in Council, the control and management of the railways, ports, and harbours of the Union will be exercised by a Board of Commissioners who will be appointed by the Governor-General in Council and a Minister of State who will be its Chairman. This Minister is responsible to the Parliament of the Union. The Act of 1916 states that the actual management will be exercised, under the supervision of the Ministry of Transport, by the General Manager, who will be governed by the regulations drawn up by the Minister after consultation with the Board.

The railways of the Union are administered on business lines. As far as possible, the total earnings should not exceed the amount required to meet the necessary outlay for working, maintenance, betterment, depreciation, and interest payments due on capital, not being capital out of railway or harbour revenue. This rule, of primordial importance for the financial and tariff policy of the South African railways, dates back to the law of 1909.

Their rights and obligations, with the exception of those specifically laid down in the South Africa Act of 1909, are those of a Government Department. The Treasury is bound by the

provisions of the South Africa Act to establish a 'Railways and Harbours Fund'. All revenue raised or received from the railways administration is paid into this fund. All expenditure voted by Parliament is met out of the fund, and withdrawals may be made from it to meet unforeseen expenditure up to £5,000,000, but such expenditure must be reported to Parliament. All profits remain to the credit of the fund and are not paid into the Treasury. Expenditure on Capital Account is made from moneys received from the Treasury out of the Loans Fund. If the profits allow, amounts received from the Treasury on this count are refunded. The Treasury also pays any costs connected with the floating and discounting of loans.

The total capital invested by the State in the railways on March 31st, 1931, amounted to £146,076,674. To this amount must be added the £1,250,000 contributed by the railways out of their current revenue towards the reduction of interest-bearing capital during the period 1925-31, and £7,529,000 also contributed by the railways out of their revenue since 1910. The capital invested in the railways by other public bodies may be placed in the neighbourhood of £4,932,000.

The railways do not make any contribution to the public budgets, as they are not run as a profit-making concern but to develop the territories of the Union. The railways do not collect any taxes for the State. They are paid for carrying the mails and received £196,863 in 1929 on that account.

The following table shows traffic carried in recent years:

	<i>Number of passengers</i>	<i>Passenger receipts</i>
1928-9	81,994,517	£6,379,000
1929-30	80,532,855	£6,300,095
1930-1	76,286,588	£5,930,601

	<i>Tons transported</i>	<i>Goods receipts</i>
1928-9	21,124,344	£18,243,784
1929-30	22,038,240	£18,979,718
1930-1	21,808,409	£17,679,246

Up to 1929-30 the railways of the Union had always paid their way, as shown by the following table:

<i>Year</i>	<i>Profit or loss</i>	<i>Per cent. of capital</i>
1924-5	£820,950	0·69
1925-6	£1,083,998	0·87
1926-7	£262,514	0·20
1927-8	£379,814	0·29
1928-9	£766,527	0·56
1929-30	£63,491	0·04
1930-1	—£309,431	0·21

Not only did the railways cover their expenses, but they also subscribed to numerous funds (Consolidated Revenue Fund, Betterment and Renewals Fund, &c.) and made heavy contributions to the Pension Fund. The present deficit appears to be principally due to the heavy payments made to these various funds and the economic crisis. If the Treasury would make certain concessions, particularly by giving up paying interest on capital invested in initial railway construction before the formation of the Union and therefore in principle free of interest, the deficit in 1932-3 would be practically wiped out.

## II. MOTOR TRANSPORT

### 1. *Motor vehicle taxation and the road fund.*

The construction and maintenance of roads are as a general rule one of the functions of the Provincial Governments. There are about 173,756 miles of road, including 71,505 miles of properly constructed Government roads.

During 1929 a sum of £2,176,817 was spent on their construction and maintenance, the Union Government contributing £1,000,000 towards this expenditure. These amounts were divided among the different Provinces as follows:

Cape of Good Hope	.	.	.	£683,960
Natal	.	.	.	£371,000
Transvaal	.	.	.	£742,486
Orange Free State	.	.	.	£379,371



The income derived from taxation on motor vehicles is credited to the road fund but only represents a small portion of the total expenditure on roads and bridges in the Union. The taxation of motor vehicles being a Provincial question is not uniform, and figures showing the collective revenue from taxation are lacking.

## 2. *Strict supervision of motor transport services.*

On December 31st, 1931, there were 157,255 motor vehicles in the Union, as follows: 138,625 private cars, 1,500 buses, 17,130 motor-lorries, or 1 vehicle per 51 of population.

Motor transport has been placed under the control of the Road Transportation Board constituted in 1930. The functions and duties of the Board are as follows: investigate any matter relating to motor carrier transportation in the Union; determine from time to time the volume and nature of motor carrier transportation which shall be permitted to operate over any proclaimed transportation route; receive and consider applications for motor carrier transportation, and for the amendment of any such certificates previously issued; consider the guarantees offered by undertakings; suspend or revoke any certificate, should it be considered necessary to do so, &c.

There are three general classes of motor transport services as follows: (1) Services which operate within the boundaries of the towns; (2) Controlled Motor Transport Services; (3) Railway (Govt.) Motor Services. The South African Railways and Harbours Administration operates a large number of motor transport services which in 1931 covered a total mileage of 11,117 miles. The number of vehicles belonging to these services at that time amounted to 424 with 49 trailers.

Operating results for the year 1931 were as follows:

	1931
Vehicle mileage . . . . .	5,358,138
Passengers conveyed . . . . .	2,468,591
Tons of goods conveyed . . . . .	242,918
Gallons of cream conveyed . . . . .	872,621

These services have proved extremely valuable in the development of country districts.

Under this form of organization the motor transport services are more in the nature of feeders of the railways. Under the Acts of 1916 and 1922 the railways have the right to levy supplementary wharfage dues of 1s. per 100 lb., on goods imported into the harbours of the Union, this additional charge being imposed on persons using lorries or other vehicles for the transportation of their goods along routes which, in the opinion of the Administration, are regarded as competing with railway transport. Any person may be called upon to enter into a written contract with the railways by which he undertakes to have all his goods conveyed by rail; this exempts him from payment of the supplementary wharfage dues. If, at the request of the consignee, the person concerned uses the competitive route, it is the consignee who is called upon by the railway to pay the wharfage dues. In this way competition is reduced to the minimum.

# AUSTRALIA

## I. RAILWAYS

### 1. *The importance of the railway system; lack of co-ordination.*

In a vast country like Australia, the railways naturally play an important part. At the end of 1930 the total length of lines was 27,540 miles, of which 24,460 miles belonged to the various States, 2,150 miles to the Commonwealth, and 930 miles to private companies. This figure represents a very low mileage in relation to the area of the country, but in relation to population (41·3 miles per 10,000 inhabitants), Australia, like Canada, is one of the best equipped countries in the world as regards railways. The Imperial Line from Brisbane to Perth via Sydney, Melbourne, and Adelaide, 3,500 miles in length, is one of the longest in the world.

Unfortunately no general plan was drawn up in the initial stages of railway development, with the result that each State constructed its own system without considering its neighbours' interests, and adopted the gauge which appeared most suited to its requirements regardless of the importance of adopting the same gauge as other States. On the line from Brisbane to Perth, for instance, the gauge changes five times, as follows: (1) On leaving Queensland, at Wallangara; (2) on leaving New South Wales, at Albury; (3) in Central Australia, at Terowie; (4) in Central Australia at Port Augusta; (5) in Western Australia at Kalgoorlie. These differences of gauge offer a serious obstacle to railway operation by interfering with the free flow of traffic, increasing the period of transit, and deflecting traffic to other means of transport.

Even tariffs are not uniform and are tapered with a view to attracting traffic to the State capitals. Western Australian traders and manufacturers report that goods from the Eastern States are carried over a distance of 1,800 miles, including two breaks of gauge, at rates which preclude competition on the line from Perth which is only 375 miles from Kalgoorlie and on which there is no break of gauge. Similar anomalies are to be found between capitals: freight on wheat from Wagga to Sydney (325 miles) is 17s. 4d., whereas from Wagga to Melbourne (269 miles) it is 25s. 8d.

2. *The railway systems mainly owned and operated by the States.*

The railway systems are generally State owned, but the Commonwealth and certain private companies own a number of lines. For purposes of management each railway system is administered by a Board of Commissioners, responsible through the Minister of Railways to the Parliament of the State. The Railway Commissioners are not, however, the constructing authority. Railway construction is undertaken by the Boards of Land and Works which are also responsible to the Parliaments of their respective States. Similarly the Commonwealth (Federal) Railways are controlled by the Minister for the Interior. A virtual railway monopoly is vested in the Commonwealth and several State governments.

The railways in the different States are operated in accordance with the Railways Acts. The Railway Commissioners are responsible for seeing that the railways and all works connected therewith are maintained in a state of efficiency, and that passengers, animals, and goods are carried without negligence or delay. For purposes of transportation, the Commissioners act as common carriers and are subject to the obligations and entitled to the privileges of such carriers. The Commissioners may, subject to the approval of the Government, make, alter, and repeal by-laws for fixing the amount of fares and freight. Tariffs are fixed, with certain exceptions, according to class of goods and mileage. For example, special rates are applied to maintain a flow of traffic in a given direction to the advantage of some particular district. The Commissioners have power to approve and publish time-tables. The railways are not tax collectors and they are under no restrictions as to the fuel they employ. They are obliged to establish and maintain a Railway Accident and Fire Insurance Fund.

The railways are State owned and, as such, their rights in general are those of a government department, except where they are specifically laid down in the Railways Acts. The capital invested in the railways is derived from State loans and revenue funds. Interest payments and the payment of sums due by the railways are secured by the consolidated revenue of the State.

The State therefore occupies a dominating position in railway operation.

### 3. *The decline in traffic and revenue.*

In considering the economic and financial situation of the Australian railways it is necessary to note that in so vast a country as Australia, railway construction in the past was principally undertaken with a view to the development of certain regions, that the railway frequently preceded colonization, and that certain lines did not become remunerative for a long time. In fact, certain lines created for State rather than business purposes carry goods at a loss. On June 30th, 1930, total expenditure on equipment and construction was estimated at £329,500,000 or £51 per inhabitant of the Commonwealth. The amount of interest paid on railway loans in 1930 amounted to £15,516,740. Interest on capital expended on the railways of the Commonwealth for the years 1929 and 1930 amounted to £357,279 and £481,976 respectively.

The Colonial Treasurer is bound to establish in the Treasury the following funds:

1. The Government Railways Fund referred to as 'The Fund'.
2. The Government Railways Renewals Fund, referred to as 'The Renewal Fund'.

The Railway Commissioners use these Funds for the purpose for which they are appropriated by Parliament and as provided in the Government Railways Acts. Certain public and private bodies have also invested capital in the railways.

The railways revenue is paid directly to the Consolidated Revenue of the States and Government. No taxes or other charges are collected by the railways on passengers or goods transported. No free passes are issued except to members of the Legislative Council. When the railways undertake improvements to the advantage of interests other than their own, expenditure is divided between the railways and the other bodies concerned. When Parliament votes a law which increases expenditure or reduces the revenue of the railways, or when Parliament orders the construction of a new line which is not profitable, the railways receive subsidies.

Since 1927 there has been a decline in both passenger and goods traffic, as shown by the following figures:

Year	Passengers	Goods (tons)
1927	379,311,131	38,840,489
1928	375,472,754	36,242,789
1929	371,950,988	34,510,522

The deficit is of long standing. According to estimates it amounts in all, since 1915, to £68,467,158. It has been particularly marked since 1929:

1929	. . . . .	£ 4,980,444
1930	. . . . .	£ 9,597,117
1931	. . . . .	£10,561,095

For the financial year 1932-3 it was estimated at £8,189,700. Some of the causes of this deficit, such as the multiplicity of different authorities responsible for managing the railway services, are peculiar to certain States, whilst others are of a more general nature, viz. the economic crisis, over-capitalization and competition by other means of transport, particularly motor transport.

## II. MOTOR TRANSPORT

### 1. *The administration and financing of the roads.*

The mileage of the Australian highway system is as follows:

Main roads	. . . . .	35,000 miles
Developmental roads	. . . . .	7,000 „
Other roads	. . . . .	238,000 „
Total	. . . . .	280,000 miles

The construction of roads and bridges is one of the functions of the local authorities, but in New South Wales and South Australia these duties are undertaken by the Government. In some States a certain portion of the work on roads and bridges is undertaken by the Government, which also advances money to be expended on main roads by municipalities under the supervision of special Boards. In the case of the secondary roads, the Governments have been authorized to issue loans and have work carried out under the supervision of Road Boards. The municipalities are, however, required to bear a portion of the interest payments on the outlay and to maintain the roads when constructed.

Figures showing total road expenditure are not available. In

June 1930, loans issued by States amounted to £38,132,000 out of which £3,026,000 were paid into the Road Funds. The latter figure, however, does not represent the total amount expended on the roads. Other credits have been granted against the revenue accruing from local rates collected, and certain sums have been advanced by the Government to local authorities.

Expenditure is met as follows: The Commonwealth allocates to the States out of the petrol duties and excise, a sum equal to 2½d. per gallon on all petrol cleared through the customs for home consumption and 1½d. per gallon on petrol refined in the Commonwealth. The road funds are also credited with the revenue accruing from the licence and registration fees and taxes paid under the Motor Vehicles Acts, Vehicle Licensing Acts, and Motor Vehicles Tax Acts, and the sums obtained from police fines and fees for hawkers' licences issued by the Treasury.

It is estimated that motor vehicles, including motor-cycles, contributed £4,524,898 to the Treasury during the period 1929-30. This figure has increased steadily since 1921-2; in 1925 it was £476,550 and in 1926 it amounted to £2,235,751.

## 2. *The number of motor vehicles.*

From 1925 to 1930 the number of motor vehicles showed an average annual increase of 14 per cent.; the greatest increase (27 per cent.) was registered in 1926-7 and the smallest (3 per cent.) in 1929-30. The number of vehicles per 1,000 of population has risen from 64.6 to 101.9. On January 1st, 1930, the total number of vehicles was 579,957 comprising:

Private cars . . . . .	450,721
Taxis and other hire cars . . . . .	9,287
Buses . . . . .	2,168
Lorries . . . . .	117,781

or one motor vehicle per 10 of population; this ratio is one of the highest in the world.

It is to be noted, however, that in many States the number of heavy vehicles is decreasing. There are no Government-owned motor transport concerns in Australia, except in Victoria, where the railways sometimes operate their own road services to supplement their rail services and in certain cases replace them. There are four

classes of motor transport enterprises as follows: A, authorized services on controlled routes subject to the issue of concessions; B, co-ordinated services, i.e. co-ordinated rail and road services; C, services which only operate within the boundaries of the towns; D, services organized on routes which are not controlled.

3. *Legislation is being introduced in each State with a view to limiting motor transport competition.*

There is at present no Commonwealth regulation governing motor transport. The provisions regarding the registration of motor vehicles and licensing of drivers are not uniform. Traffic is controlled by Road Boards empowered to allocate the routes over which buses may operate. Concessions are generally granted in such a way as to avoid overlapping with other bus services or causing competition to an existing railway line. Motor transport enterprises operating on controlled routes are generally required to run according to regular schedules and are compelled to insure passengers against accident. They are not tax-collecting agents for the State. Some States require the safety inspection of vehicles and issue regulations regarding overloading. According to the report issued by the Conference of Australian Railways and Transport Authorities, the deficit of the railways resulting from motor transport competition is as follows:

	1931	1932
New South Wales . . . . .	£1,800,000	£1,266,000
Victoria . . . . .	1,500,000	1,500,000
Queensland . . . . .	230,000	200,000
South Australia . . . . .	200,000	200,000
Western Australia . . . . .	350,000	350,000
Tasmania . . . . .	100,000	100,000
Commonwealth . . . . .	600	600

The above table shows that this deficit has a tendency to decrease. This is due to the fact that several States of the Commonwealth, particularly Tasmania, South Australia, New South Wales, Queensland, and Western Australia, have adopted legal measures to control commercial motor traffic which amount to actual protection of the railways.



## *PART II*

### ANALYSIS OF THE PRINCIPAL ASPECTS OF THE ROAD AND RAIL PROBLEM

WHILE the first part of this report summarizes the available data country by country, the second part analyses certain categories of these data in logical order. The subject-matter was too complex to permit of its being treated merely in a few synoptic tables. Analytical studies of the different subjects were therefore necessary. These studies, constituting the different chapters of Part II, complete the tables which, although giving a bird's-eye view of the situation, do not furnish a complete picture. Each of these studies comprises two sections, a general section, and a section giving concrete instances taken from the actual practice in certain countries. In many cases the general section only consists of digests, as the limited time and space at the authors' disposal and the number of countries dealt with often obliged them to give no more than an outline of the elements of the problem without going deeper into the subject. It has not always been possible to support the statements with such factual matter or methodical development of ideas as the subject would have justified. Each of the sub-chapters of this part could very well have formed the subject-matter of a whole book. The authors' task was not, however, to write a scientific encyclopaedia but to prepare a report in which general information would be easily accessible. The sections of Part II, dealing with the different subjects by countries, have therefore been kept as short as possible with a view to avoiding repetition of the information given in Part I.

## CHAPTER I

# THE LEGAL BASES AND STATUS OF TRANSPORT ENTERPRISES

It would be going too far to enumerate all the distinctive features of national systems of law, especially in the administrative and fiscal fields. Despite differences of detail, many provisions are more or less the same everywhere. Being of a technical nature, they are determined primarily by their object, whatever the system of law on which they are based, and that object is always the same, namely to regulate two relatively recent means of transport which from the point of view of technique and working are more or less standardized throughout the world.

The variable factor in such regulatory provisions lies in the particular historical characteristics of the systems of law from which they originate as well as in the extent of freedom allowed to transport undertakings by the transport policies of the various countries.

Following the order of the headings of the first synoptic table, the first question dealt with in this chapter of the report is that of the system of concessions or licences (permits) which exists in all countries.

### 1. CONCESSIONS AND LICENCES

#### A. GENERAL SECTION

Transport by its very nature has always been considered as a form of industrial activity which should not be allowed complete freedom of action. Despite the gradual collapse of the old régime of self-contained monopolies (Guilds), Governments retained a certain control of transportation. It was transport, in fact, which enabled the Governments to organize those vast areas within whose boundaries the nations came to life politically and economically. The new means of transport were no exception to the

rule; only for a very short period at the outset of their existence were they left free from more or less rigorous Government supervision or control.

As early as the eighteenth century the great transport services like the Messageries Royales de France and the Postal Service of the Holy Germanic Roman Empire were placed in the hands of certain privileged enterprises regulated by the State. Even in colonial countries, where liberal tendencies have always been more in evidence, the transport enterprises carrying the mails over vast areas have invariably been regarded as services of public utility.

The public utility of these forms of transport, particularly regular services, had already been recognized at the time when the absolute State still theoretically included them in its regal rights. This is proved by the fact that the charges made by the public transport enterprises of the eighteenth century were considered as the counterpart of a service rendered. This liberal conception, which began to show itself at an early date in the history of transport law, went so far in certain countries as to lead to the establishment of tolls for the use of the royal roads at rates so low that they were insufficient to cover the cost of the roads, much less bring in revenue to the Treasury. This was done for the purpose of stimulating traffic in the public interest.

Whilst the public utility character of regular and common carrier transport services is admitted in all countries, various interpretations are given to the conception of public transport or more exactly 'public service' (the latter term having a particularly wide application in the administrative law of Latin countries) which lies at the basis of all transport regulation.

In countries where administrative law has originated from the general principles of French legislation, the term 'public service' is employed whenever the public authorities regulate a particular social activity or exercise it directly themselves. Both the services of public institutions of which the benefits extend to every citizen (National Defence, Customs, &c.) and those intended to offer particular advantages to individual citizens (post, telegraph, railways) may be regarded as public services. The character of

public service is generally established when the public authorities consider that the general interest is sufficiently great to justify their intervention in a field of social activity which in principle is subject to no restriction.

In the administrative law of Central Europe, on the other hand, the question as to whether the general interest is involved does not arise. The principle of public service as interpreted under French administrative law is unknown, but an equivalent principle is found in the activities of 'public institutions' (*Öffentliche Anstalten*). The characteristics of these institutions are as follows:

(1) Only those institutions are public which are public by their object, in other words, whose services are at the disposal of the public, and in which the State has vested special disciplinary powers by virtue of the institution's internal regulations authorized by law and autonomous within the limits of that authorization. Their activities are determined by law or by decree.

(2) The relations between the public institution and its users are not governed by the law of free contract (rights of the parties) but by the regulations of the institution itself to which all those wishing to make use of its services must submit.

(3) The system of remuneration of the services rendered by the institution is governed by public law. Consequently, the charges made by the institution and its tariffs must be fixed or approved by the authorities.

The legal system of central Europe therefore gives a much narrower interpretation to public service than the law of the Latin countries. The recent development of autonomously administered institutions has, however, tended to lessen this difference, and the policy of delegating functions governed by public law to private interests is gradually being adopted in the countries of central Europe.

Under Anglo-Saxon law a service is considered to be in the nature of a 'public utility' whenever it is in the general interest. The special feature of the Anglo-Saxon system is that the necessary functions to meet the requirements of that general interest are in principle assumed by private persons or institutions. It is an old tradition of Anglo-Saxon administration to leave the operation of public utility services to private organizations. This

system has been completed by attributing to these private bodies rights and obligations of a public nature.

In contrast with this very flexible conception is the principle accepted in old and new Russia, Japan, and other countries where the administration is influenced by the traditions of a régime of autocracy, allowing the State to assume all functions of a social nature. In these countries every aspect of social life may therefore have a public character. This conception, which was generally recognized in the Middle Ages, in so far as any distinction was made between the public and private spheres, has, however, undergone a complete transformation even in Russia and the Asiatic countries. The multiplicity and complexity of social activities has led to administrative decentralization and delegation to autonomous bodies of certain functions which previously were reserved to the central authorities. Although this evolution originates from a diametrically opposite starting-point, its final form approximates to that of the other systems.

The distinction indicated above naturally does not apply everywhere, owing to the wide divergence of opinions within the different countries themselves. An attempt has only been made therefore in the present report to set out certain types of development accounting for the differences between the various systems.

In every case regular or common carrier transport operations effected on the public highways—to which the railway line was assimilated more especially in the early days of railway development—are considered either as public services or public utility services.

The classical system under which regular or common carrier transport has developed is the *concession*. The concession differs from the profession monopolies or 'guilds' of the old régime through being limited to a single enterprise operating within certain areas or affecting specific services; it thus constitutes a limited monopoly. Even when the principle of a liberal economic system was recognized and every profession open to all, a large number of countries did not extend that principle to regular or common carrier transport services.

The difference between the concession applying to public

services and the 'concession' (licence or charter) applying to public utility services has likewise determined the concrete form of the regulations governing transport enterprises, particularly the railways. This difference can still be seen at the present time in the diversity of regulations applied to motor transport. The Latin countries where the railways were operated by private companies had a tendency to emphasize the public interest in rail transport. Consequently, the more the State intervened in the field of transport by introducing regulations and decrees, the more the position of those companies was assimilated to that of public agents. In the countries of central Europe, on the other hand, the tendency was to transform the railway companies into public institutions (*Öffentliche Anstalten*), whereas in the Anglo-Saxon countries they have continued to be private bodies of public utility. In Russia and Japan the few existing concessionary companies were considered rather as holding a State privilege. As will be seen later, the same lines of development have been followed by the regulations applied to motor transport.

In the history of transport regulations we may distinguish between two different systems.

Under the first system, the operation of transport services is prohibited to all persons other than the holders of concessions. The old principle according to which people could only practise authorized professions still therefore holds good.

The second system consists of the extension of the liberal principle of the free exercise of profession to transport enterprises. Under this system, although all transport undertakings are permitted to operate, special facilities in the form of taxation exemption or rebates, subsidies, &c., are granted to certain enterprises called 'concessionaries'.

There is also a middle system whereby the State may place the operation of transport in the hands of any enterprise, provided it agrees to comply with a series of regulations. The admission of enterprises under this system is dependent upon certain conditions laid down by the public authorities.

These are obviously only typical systems. Actually there are a number of intermediate systems. Furthermore, the same administrative provisions and legal principles are designated

differently according to countries. This is particularly the case in regard to the term 'concession'.

When the railways first made their appearance, the principle of the concession was applied almost everywhere either on the lines of the second system or of what has been described above as the middle system. Transport was therefore free in principle. Nevertheless, the railways from the outset have demanded special treatment. They pointed out that it was not enough merely to assist the operation of a line between two particular points by granting subsidies for the conveyance of the mails, &c., or by other means, but that it was necessary to give them the exclusive right of operation. The majority of States were therefore led to entrust to one enterprise the construction of railway lines over certain routes. In several countries, however, particularly the Anglo-Saxon countries, the liberal system had already been extended so far that the authorities did not agree to this conception. Consequently, certain localities in these countries are served even at the present day by several parallel lines. The State confined itself to furnishing users with certain guarantees as to safety and regularity of service. These guarantees were given, moreover, at a relatively early date in the history of the railways. In certain countries, particularly the U.S.A., the principle of freedom was pushed to the utmost limit, and for a time the companies exercised complete control in regard to the building of their lines and the establishment of their tariffs. This excessive freedom itself called for the introduction of a certain measure of regulation. The authorities were obliged to take steps to stop the ruinous competition between the companies. The same tendencies showed themselves in other countries. Finally, the railways throughout the world were placed under the concession or other similar systems.

This evolution, which naturally tends towards the creation of new monopolies, was carried still further by the tendency of the State to interfere in the operation of the railways or even assume direct control of them.

In certain countries the concession system has either never existed or has disappeared and been replaced by the system of direct operation by the State.

Present-day tendencies show that the State appears to be

assuming to an increasing extent the right to supervise and even direct the general policy of enterprises, while leaving them considerable freedom of action in regard to the commercial side of their operation. Briefly, whatever the form of ownership, the beginnings of a kind of autonomous operation on commercial lines is to be found everywhere, the method of management being, however, subordinate to considerations of general interest.

Although these tendencies have transformed the concession system, they have not led to its abandonment.

At the present time there are three types of 'concession'.

The *first* or American type has its origin in the particular conditions of railway development on that continent. A characteristic feature of this development is the donation of land to the railways, similar to the donations made to important colonial development enterprises, with a view to the opening up of undeveloped areas. These privileges were conferred upon the railways at the very outset to compensate certain levies placed upon them (transport of mails, soldiers, &c.). In addition to these levies, restrictions were placed upon the railways by regulations issued to eliminate the unbridled competition between the different companies and to ensure equality of treatment of traders and guarantee a certain degree of safety and regularity of transport—in a word to avoid abuses.

It was the combination of these two elements which gave rise to the special form of the American 'concession' (charter) giving the right of eminent domain. The essential difference between this and other types of concession is that there is no limit as to its duration, and that the exclusive rights which it confers on the holder are not based on any legal principle but on a *de facto* situation.

The *second* and *third* types of concession developed within the framework of the European administrative law in force before the appearance of the railways. This system likewise extended to a number of extra-European countries, including South America, China, and certain colonial countries. The concessionaries are granted the exclusive right of operation for a period which may or may not be limited. The first form, i.e. the unlimited concession, is more especially found in countries where economic



liberalism had already developed before the railway made its appearance, and where the railways have remained in the hands of private companies, e.g. Great Britain.

The unlimited concession as a rule restricts State intervention to the establishment of certain general provisions with a view to ensuring equitable relations between the carriers and their customers in accordance with the broad principles of commercial law, and the establishment of rules that are absolutely necessary in the interest of law and order and public safety. Both the unlimited concession and the concession of long duration thus place less restrictions on their holders.

The limited concession, on the other hand, confers on the State more or less extensive powers of control over operation; it also generally contains provisions regarding transfer to the State. Generally speaking, the shorter the concession the more onerous its conditions. A distinction has, however, to be made between limited concessions under which the land remains the property of the State, and those under which the enterprise becomes owner of the land. In the latter case the position differs also according to the origin of the ownership. If the land is granted free to the enterprise by the State, or is acquired by expropriation, the State reserves wider rights. The freedom of the enterprise is greater where it has acquired ownership of the land by ordinary commercial means. The limited concession specifies, in principle, the conditions of repurchase or reversion in the case of railway enterprises which are proprietors of their own land.

Concessions granted to railways operating on State-owned land frequently stipulate that operation of the lines shall pass to the State if the enterprise in question is not in a position to balance its budget and meet certain obligations.

In both cases the concession as a rule fixes the amount of compensation to be paid to the companies in the event of their operation being transferred to the State. Certain limited concession systems, which have always made commercial transport operation by enterprises contingent on their compliance with more or less strict statutes, go as far as to assimilate railway employees to public officials.

The concession system is also applied to local railways.

The actual forms of the concession or system of railway administration are dealt with country by country farther on in the present report. Nowhere do the railways enjoy the same freedom as other branches of business, not excluding motor transport. The licence or authorization (permit) system, for example, consisting of compulsory registration and compliance with certain conditions of an administrative, corporative or technical nature, nowhere applies to the railways.

The licence system is more or less peculiar to motor transport and to a certain number of other enterprises. Common carriers operating regular motor transport services under fixed rates—when considered as public transport services—are the only enterprises which have hardly ever enjoyed this relative freedom.

The following brief description of the different forms of road transport will give a clearer idea of its legal position. The distinctions usually made are between:

- (1) public transport and non-public transport;
- (2) common carriers and contract carriers;
- (3) regular transport and occasional transport.

1. In certain cases it is not always made clear what is meant by public transport. Broadly speaking, two distinctions are drawn: According to what was probably the original definition now employed in several countries, only those services which are run by enterprises operated wholly or jointly by the State or other public bodies, or which are bound by law or administrative regulations to organize certain transport services of public interest, are considered as public carrier services. The more recent conception adopted in other countries is to consider as public carrier services all transport services offered to the public commercially. This conception is to be found in particular in Article 7 of the French decree of April 19th, 1934, and in the British laws of 1930 and 1933 (Road Traffic Act and Road and Rail Traffic Act). According to these British laws, the distinction is not even based on the professional (commercial) nature of the transport; the mere fact of its being carried out for hire or reward suffices. In other cases, carriage for hire or reward is only treated as public transport when a certain number of passengers are conveyed. Regulations therefore vary very widely.

Generally speaking, it may be said that the tendency prevalent in most countries to subject the main forms of commercial transport to regulations having the nature of public law leads to an extension of the notion of public transport.

With regard to non-public transport, in countries where only those services operated by public enterprises or in the public interest are considered as public transport, a distinction is naturally drawn between carriage for hire or reward on the one hand and private transport on the other. The main forms of private transport are conveyance in private passenger cars and in ancillary vehicles.

Private passenger cars can of course also be used for commercial purposes, but as long as they are employed in that way without payment this distinction could only be of importance in international traffic.

In general, the notion of ancillary service (private carriers, *Werkverkehr*) applies to the carriage of goods in connexion with the business carried on by the holder of the vehicle, the gratuity of the service not being the only proviso.

2. As regards commercial transport, a distinction is made from the legal viewpoint between common carriers (*transports en commun*) and contract carriers. A common carrier is a carrier who conveys several passengers, or goods dispatched by different consignors, under equal conditions and at rates confirmed or published by the authorities or under duly confirmed standard contracts of carriage; as a general rule there is also the obligation to carry. In the case of contract carriers, contractor and trader establish separate conditions for each operation of transport. There are, however, intermediate cases. The European Road Traffic Conference called by the League of Nations in 1931 came to the conclusion that the term 'common carrier' (*transports en commun*) could not be interpreted everywhere in the same way.

In every case the distinction between common and contract carriers is linked up with the distinction between public and non-public carriers set forth above. The legal distinction between common and contract carriers naturally also obtains in countries where the notion of public transport applies in the limited sense. Particularly in Central Europe, common carriers are always

considered as public carriers, as in their case the obligation to carry is the rule and they are consequently obliged to hold out their services to the public. The hire of the vehicle alone, which is treated separately by nearly all legislations, is distinct from common and contract carrier operations.

3. The distinctive feature of regular transport is indicated by its very name. It consists of a service running at fixed intervals over definite routes. It is generally required to adhere to time-tables and tariffs confirmed by the authorities, and thus in most countries assumes a public nature. However, in countries where freedom of operation is the rule for transport or at any rate for highway transport, private transport enterprises have frequently organized regular services independently of any public sanction. In principle, regular transport services are also common carrier services.

Occasional transport services may be common carriers, but not necessarily. They include several categories: first, those dependent on traffic conditions and requirements, representing the great majority; secondly, those operating in connexion with a particular event: fair, market, or fête. But under certain circumstances they may also be regular services, for instance when operating every Sunday or on a particular day each week. Only when the notion 'public' is determined by the commercial character of the conveyance are occasional transport services usually considered as public transport.

Motor transport may also be operated under the concession system. It might be useful at this juncture to give the authors' interpretation of the terms employed, in order to avoid any confusion which might otherwise arise. This interpretation has been deduced from existing regulations and the historical development outlined above. The multiplicity of laws and the variety of legal terminology have sometimes made it impossible to use the definitions given in the laws. These definitions are not always sufficiently clear and the law frequently applies a particular term to a legal situation which would be more properly covered by some other term.

1. It has been thought preferable to use the term 'concession' in the two following senses:

(a) *Concessions with exclusive right of operation and concessions with a de jure monopoly.*

An exclusive right of operation, limited or unlimited as to time, conferred upon enterprises or administrations which are thus protected against competition. This is the classical form of the concession with a *de jure* monopoly or exclusive concession. The granting of this right is, in accordance with the different laws in force, at the discretion of the authorities who base their decision on traffic requirements and the financial situation of the enterprise applying for the concession. The terms of the concession frequently imply confirmation of the articles of the concessionary company. In certain countries where the railways were financed by foreign capital, particularly the Russian Empire, the Government went so far as to promulgate by decree the articles of the concessionary companies, which were thus incorporated in national law. This measure was more especially intended to act as a guarantee to the shareholders and debenture-holders.

The terms of the exclusive concessions also frequently stipulate that any sale of immovable property, contracting of loans, or issue of new shares shall be subject to the authorization of the public authorities. The companies are bound to complete their constructional work within a given period, maintain their installations in a proper state of repair, and protect the owners of neighbouring property from possible inconvenience caused by the operation of the enterprise. In several countries the concessions give the railways, particularly the local railways, the status of legal entities, the assets and liabilities of which form an inseparable whole. Consequently their estate can only be pledged or seized in its totality. This provision is likewise intended to ensure greater credit facilities for the concessionary companies.

In several countries, enterprises holding an exclusive concession have been vested with a right of expropriation which can be invoked in all cases where their own interests coincide with those of the general public.

It would lead too far to enumerate here all the rights and obligations of concessionaries; they vary widely in the different countries and also differ according to the nature and the size of

the particular enterprise. These rights and obligations, only the most important of which have been mentioned, are not always contained in the concession itself, but are often set out separately in what is called a *Cahier des Charges*. This division between the conditions of concession and the rights and obligations of concessionary enterprises is due not only to considerations of principle but also to technical considerations. While the concession, particularly when unlimited or of very long duration, does not need to be changed, or usually may not even be changed owing to its conferring a legal status on the concession holder, the rights and obligations of the concessionary, being the basic provisions governing operation, must necessarily evolve with the changes of technique and methods of operation conditioned by social and technical progress. In principle, the division between conditions of concession and *Cahier des Charges*, made in France and those countries whose administrative law is modelled on the same lines, originates from the idea of the division of powers; thus a distinction is made between the concession as being a constitutive administrative act, the *Cahier des Charges* as the special law of the concessionary, and the 'conventions' or contracts of public law between the concessionary and the public bodies; here again the concessionary is as it were treated as an 'agent public'.

In Central European countries, on the other hand, the main rights and obligations of the concessionary are contained in the concession itself and are themselves related to general law and completed by numerous special laws and ordinances. In Anglo-Saxon countries, the rights and obligations of the concessionaries or the enterprises corresponding to that term (the notion 'concession' being hardly known) are, in principle, defined by general law; there can therefore hardly be separate conditions of concession or what would correspond to *Cahier des Charges* for the individual concessionary enterprise, for the charter in the sense of a special statute of a particular company fixed by law plays no part in modern transport. Without entering into the particularities of Anglo-Saxon law—a field which would lead too far—it may be said that to a certain extent the granting of a licence (corresponding to a 'concession') amounts to nothing else but establishing that a definite law is applicable to the concessionary (licensed)

enterprise and, in some cases, that it comes under the jurisdiction of certain courts.

The *concession with de jure monopoly* is relatively rare. It is more especially found in certain oriental countries. As a corollary the inhabitants of the country must have all their transport operations, or at least certain categories of them, effected by the concessionary companies, in the same way as they would be bound for example only to buy or sell matches manufactured by the holder of the match monopoly. This type of monopoly is, however, practically non-existent now, motor transport having made its retention almost impossible.

Common carriers are, as a general rule, holders of *exclusive concessions*. The existence of an exclusive concession does not prevent the public authorities from granting concessions to complementary and non-competitive services. This particularly applies to local railways. The exclusive concession which is recently being more and more applied to motor transport may be granted to a limited number of enterprises which consequently share the traffic over the same route; they must, however, be engaged in the same kind of transport operations. Analogously, the railways in many countries were or are still prohibited from operating public or common motor carrier services, as not falling under the terms of their concession; even where such prohibitions have been removed the railways generally need a special concession or authorization for instituting motor transport services.

(b) *Concessions without exclusive right of operation.*

When the holders do not enjoy an exclusive right of operation, the facilities and funds placed at their disposal by the public authorities may collectively create privileges which are equivalent to veritable concessions. Here again a *de facto* monopoly is created in favour of certain lines, thus rendering competition on equal terms practically impossible for any enterprise not enjoying the same advantage.

2. The *licence*—corresponding more or less to the French *autorisation*—is an act of State by which an enterprise is permitted to effect transport operations provided it submits to the general regulations in force. Under the licence or authorization (permit)

system, any enterprise which complies with the traffic police, trade inspection, safety regulations and, in the case of compulsory trade associations, with the corporative rules, must be allowed to operate. The licence or authorization (permit) as defined in the present report differs from the concession therefore, since it must be issued irrespective of traffic requirements and without regard to the particular qualifications of the applicant. It differs from the concession also in its scope and because it does not confer exclusive rights or offer any protection against competition to the enterprise which holds it. In actual practice the licences (permits) may be granted in many different forms.

In principle the term 'licence' here refers only to the permission to transport and not the act of admitting a vehicle to traffic, for which the term 'licence' is also used, particularly in Anglo-Saxon countries.

The permission to effect transport operations may merely be subject to a simple declaration or registration, often accompanied by the payment of a fee or a tax. Apart from the registration requirements for purposes of traffic safety, owners of private lorries, like the owners of private passenger cars, were in most countries under no obligation in the early days to obtain a licence. Greater weight and size, and the increasing use of private lorries have, however, led some countries to regulate such ancillary vehicles and to make their admission to traffic contingent upon the granting of a licence, or to combine their admission to traffic with a permit to operate any or a given form of transport. Recently certain countries have added a further condition to the effect that the transport operator or holder of the ancillary vehicle must be affiliated to a public association or corporative body.

The term 'licence' or 'authorization', especially in regard to commercial transport, is often applied to legal situations to which it does not actually correspond. The granting of the licence may be made contingent upon conforming with police regulations which not only establish fixed routes, but also limit the number of vehicles operating on each route (the inevitable consequence of fixed routes, particularly where traffic is heavy). It follows logically that any new application by other carriers must be rejected. Otherwise a reduction would have to be made to the



advantage of the applicant in the number of vehicles already authorized, and this is naturally impossible. The foregoing shows that although such terms have been established in legal and administrative practice, in reality the licence system often closely resembles that of the concession.

## B. COUNTRIES

### UNITED STATES OF AMERICA

*Railways.* The lines have as a rule been conceded by the States to private owners. The State laws establish the conditions of railway operation. In the case of lines going beyond the boundaries of States the conditions of operation are fixed by the Inter-State Commerce Commission, which is a Federal body. The word 'licence' is used in American administrative law to designate the document authorizing the operation of a railway, even if issued under the very liberal system adopted during the early decades. The licence has, however, all the characteristics of a concession granting the companies an actual *de facto* monopoly, with certain special features due to the early history of the United States railways. The concessions therefore would appear to grant complete ownership, unlimited as to time, based on a *de facto* situation rather than on any legal principle. As in all Anglo-Saxon countries, State control is of a judicial nature and tends to increase through the intervention of the Inter-State Commerce Commission in railway matters.

*Motor transport.* As in the case of the railways at the beginning of their development, the United States Government has not established Federal regulations. The operation of motor transport services is governed by the laws of the different States. The various State laws cover a wide variety of subjects: some only apply to passenger common carriers, others also include freight common carriers, while still others cover freight contract carriers. These regulations are mainly police and safety regulations. It is sufficient for the common carrier to obtain a certificate of public convenience and necessity, whereas contract carriers merely need permits to operate for hire. The system is in fact an exceedingly

liberal one. The licence system has not yet been adopted by all States, nor is it applied in all cases.

### CANADA

*Railways.* The Canadian railways were built up under a system of unlimited concessions. The State granted considerable facilities to the railways to encourage them to penetrate into new country with a view to opening up fresh areas; in this way the companies were transformed into colonial development enterprises in the lands which had been conceded to them. Up to a few years ago the concessions only remained valid if construction work was begun two years after the voting of the law and completed five years after it. Canada adopted a new policy later by repurchasing a large part of the railways and introducing a system of private companies with a certain measure of State control.

*Motor transport.* No final decision has yet been taken in regard to the regulation of motor transport. The first steps in this direction have been taken by the provinces, beginning as a general rule with the introduction of a compulsory licence for passenger common carrier services.

### MEXICO

*Railways.* The Mexican railways operate under a system of limited concessions. The law of 1932 restricted the period of concessions to seventy-five years. The State has retained numerous rights in the different enterprises and has laid down obligations in the field of private law.

*Motor transport.* Since 1932 public motor transport services have been subject to regulations the majority of which are concerned with general road traffic conditions: the method of regulating motor transport is therefore similar to the licence system. The rules regarding tariffs, however, show a tendency towards the concession system. At all events, no more precise definition can be gathered from a study of the Mexican law.

## GREAT BRITAIN

*Railways.* The British railways were constructed after the advent of liberalism. The system of perpetual concessions was therefore widely applied to railway transport, the Government limiting itself to supervising police matters and public safety. This initial freedom explains why there may sometimes be two different companies operating between termini situated in the same area. The companies have now come to agreements with a view to reducing the economic effects of this freedom, and private interests having a complaint to lodge may do so before the Railways and Canals Commission. Government control continues, however, to be more of a judicial than of an administrative nature.

*Motor transport.* The licence system is widely applied in England. A veritable organization has arisen from its application. The first step took the form of territorial organization by the establishment of traffic areas. This was followed by administrative organization through the appointment of Traffic Commissioners, whose chairman issues the licences. As the chairman can limit the number of licences, the 'A' licences are almost equivalent to exclusive concessions. Lastly came legal organization: an Appeal Court consisting of three members settles disputes arising out of the issue of licences. Everything has been done to make the system as flexible as possible by the introduction of different types of licence (for details see Part I).

## FRANCE

*Railways.* The basis of the system is the clearly defined conception that 'a company holds a part of the public domain only as delegate of the State, or of a Department or Commune' (Colson). Consequently the concession is always limited. It is limited as to time, as its period of validity is generally fixed at ninety-nine years. It is limited in its effect by the permanent control exercised by the State over the acts of the concessionary, either through the Minister of Public Works in the case of main lines, or through the prefects in the case of local lines and tramways. However, this administrative control does not affect the

jurisdiction of the Courts in the event of dispute between the conceding party and the operators of the railway, or when disputes arise between the companies and private interests.

*Motor transport.* Up to 1934 motor transport enjoyed almost complete freedom. Goods transport was subject to no regulation. In the case of passenger transport, it was sufficient to make a simple declaration to the prefect of the department as to the number of vehicles employed, places of departure and arrival, and time-tables. Only subsidized public services were subject to conditions laid down in a *Cahier des Charges* and to inspection by the agents of the State, so that their position was rendered similar to that of a *de facto* monopoly.

The decree of April 19th, 1934, subject to ratification later by Parliament, has introduced in respect of public transport—i.e. service offered to the public for commercial purposes—a system of licences (*autorisations*) to be granted as a result of regional agreements concluded before a Co-ordination Committee, with a view to the apportionment of traffic according to the suitability of the railways and motor transport respectively as a means of conveyance. Failing agreement, the arbitrator of the Committee will submit to the Minister of Public Works his proposals as to the retention, modification, or suppression of existing services. Any such agreements, or proposals of the arbitrator, will be made enforceable by decrees issued by the Minister. The conditions laid down in these decrees will be more especially concerned with time-tables and tariffs, the obligation to maintain the service in question and respect equality of treatment of users, and the undertaking to transport the mails. Exceptional passenger transport services are not considered as public transport.

## SPAIN

*Railways.* Opinion in Spain appears to have been hesitant at first as to the legal system to be applied to the railways. In the beginning the exclusive limited concession system was adopted (law of 1855). Eleven years later a wave of liberalism swept over the peninsula and the greatest possible freedom was given to the

companies, as the State wished to regard the railway companies as being entirely private enterprises. Under the law of 1877 the companies were obliged to obtain a concession of which the duration was limited to ninety-nine years. The State, however, retained a right of control over the concessionaries, and at the present day it shows a tendency to extend its powers of supervision. This régime is similar to the mixed system. The concessions which had temporarily been replaced by the licence system are therefore now in the nature of a *de facto* monopoly.

*Motor transport.* Spain has tried to apply the concession system to motor services. These concessions were granted by Transport Boards for a period of twenty years. As this system led to the creation of veritable small monopolies, measures are now being taken to modify the existing system and return to the system of licences limited to a period of one year but renewable.

## BELGIUM

*Railways.* Up to 1926 the Belgium railways were operated by the State. Since then they have been in the hands of a National Company. The system is that of a limited concession for a period of seventy-five years. The concession is in respect of operation only and gives exclusive rights. The State not only retains ownership of the railways, but also supervises the National Company very closely through a Supervising Committee of six members and by appointing the twenty-one members of the Board of Directors. It is not therefore a private company but rather a public body with autonomy of operation. The same system of operation has been applied to the local railways, although they are privately owned.

*Motor transport.* The principles of operation were established by the law of 1932. This law introduced the *autorisation* system, the *autorisation* being granted on the recommendation of a Motor-Bus Consultative Committee and by public adjudication. This authorization is, however, only required in the case of public transport services. In the authors' opinion it would be

more logical to speak of an exclusive concession. It would appear, however, that the present system is only a temporary one.

### LUXEMBURG

*Railways.* The railways in the State of Luxemburg operate under two régimes. The first consists of State ownership, an operation concession, with State participation, being granted to a third party; this system applies to the Guillaume-Luxemburg line operated by the Alsace-Lorraine railways. The second consists of a limited concession applied with exclusive rights to the Prince Henri railway and to the cantonal railways.

*Motor transport.* A system of control has only been established in the case of public passenger services which are subject to the terms set forth in the *Cahier des Charges*: it is therefore a concession system.

### NETHERLANDS

*Railways.* The State owns a certain number of railways whilst others are in the hands of private companies. The State and certain of the companies do not, however, operate their own lines. Most of the railways are operated by a limited company called the 'Maatschappij tot Exploitatie van Staatsspoorwegen' (referred to as the S.S.) and the 'Dutch Company' (referred to as the H.S.). The interests of these two companies have been amalgamated since 1917. Each of them remains, however, a separate legal entity. In this case also the system is that of an operation concession with a *de facto* monopoly. The State retains its right of control. Since 1917 even the local railways have been compelled to obtain a concession.

*Motor transport.* Up to the present time only regular passenger services have been controlled. They may only operate after obtaining a licence issued by the Permanent Deputation of Provincial States, in accordance with the conditions prevailing in each province. Goods transport is still left complete freedom.

## SWITZERLAND

*Railways.* The principal railways are owned and operated by the Confederation. The railways were originally conceded to private companies, but at the end of the nineteenth century most of them were repurchased. Nevertheless, a certain number of companies still exist. All the lines are under the control of the Post, Telephone, and Railways Department.

*Motor transport.* The Federal law of 1924 reserves to the Confederation the right to operate regular passenger motor transport services. It has therefore officially retained its eminent right, in principle at least. It is authorized, however, to delegate it by granting concessions to private companies as it sees fit. In the application of these two principles motor transport has taken a number of different forms, as follows: certain lines are *government-operated*; their organization, staff, and material are under direct State control; other lines are organized by the State but operated by private companies which receive a *subsidy* from the Federal Posts service. Others hold a *concession* proper as follows: *Concession A*, valid for ten years, under which the concessionary sometimes receives subsidies in consideration of any public services he may effect; *Concession B*, applicable more especially to occasional transport services, the duration of which is limited to the time required to effect the services in respect of which the concession was issued; such concessions are not exclusive.

## ITALY

*Railways.* In the early days of railway history Italy hesitated between State operation and the issue of concessions to private companies. At first companies were authorized to construct railway lines, and this work was sometimes even carried out by foreign enterprises. The State gradually repurchased the lines, sometimes in order to eliminate the foreign factor. In 1885 it leased the lines it had repurchased to private companies for a period of twenty years. The State was unable, however, to reach agreement with the companies, and in 1905, at the expiration of the lease, the system of State operation was again applied. Two systems are

therefore now in force: the system of State ownership and operation applied to the larger and more important railways, and the concession system applied to purely local railways. The law of 1907 limits this concession to ninety years in the case of lines constructed prior to its promulgation, and seventy years in the case of lines built after that date. The railway line and permanent installations become the property of the State on expiration of the concession: the State may or may not repurchase the rolling-stock. Under this system the holder of the concession has a *de facto* monopoly.

*Motor transport.* The State reserves a right of control over public services. In virtue of this principle every motor service is operated under a concession issued by the authorities. The period of the concession may be very short, six months or even for the season in the case of tourist services. The concessionaries generally have exclusive rights in respect of the services they operate: only irregular services can enter into competition with them. These principles are only applied strictly, however, to passenger services. The control of goods services is less easy owing to the difficulty of defining the exact nature of a fixed route. Private or occasional services are subject to no restriction whatsoever.

#### GERMANY

*Railways.* Germany may be considered as the classical example of a country where direct railway operation by the State has been carried as far as it possibly can. From the very outset the States constructed more lines than they conceded. The unification which took place at the end of the nineteenth century merely strengthened that tendency; however, before 1914 all the railway systems had not been transferred to the Empire, although the principal lines were operated by the States and not by companies. After the War the Constitution of Weimar decided that all the railways should be transferred to the Reich; the Reich thus owns all the lines of general interest. Their operation is in the hands of a company—the Deutsche Reichsbahn-Gesellschaft (D.R.G.)—which remains, however, under the control of the Reich.



State intervention is not carried so far in the case of local railways. The principle of the concession has been applied to them for periods of varying length, with the frequent inclusion of a clause to the effect that they shall revert to the State on expiration of the concession. However, the tendency of the State to take a more active part than elsewhere in railway enterprise may be seen from the fact that certain public bodies (States and Provinces) have invested in the equipment and operation of the local railways. The concessions granted to these railways are exclusive.

*Motor transport.* Up to the present, State intervention has not been so marked as in the case of the railways. However, regular transport of passengers against payment is subject to a licence to operate. The same system applies to goods transport for reward—excepting private carrier operation (ancillary services)—as regards conveyance over distances of more than 50 km. Such goods transport is further subjected to a scale of minimum charges (*Reichskraftwagentarif*). This distance of 50 km. has been fixed with a view to allowing a certain scope for the development of motor transport as well as to encouraging it to operate locally, and also because over certain distances motor transport enters much less into competition with the railways. For operations beyond 50 km. a licence must be obtained. The issue of the licence is dependent upon the guarantees offered by the operator in respect of safety of operation and the observance of the special legal provisions laid down in that connexion; in the case of passenger licences the service under consideration must not be contrary to the public interest (state of roads over the route in question, competition with other transport services on an unfair footing, &c.). The local authorities decide as to the issue of the licence after consulting all interested parties, including the Reichsbahn and the Deutsche Reichspost.

#### CZECHOSLOVAKIA

*Railways.* The régime applied to the Czechoslovakian railways is an illustration of the present tendency to give the State the power to direct the general policy of railway enterprises, while leaving them a large measure of freedom in regard to the com-

mercial side of their operation. The railways of general interest are State owned. The Minister of Railways is at their head, assisted by a Commission of which the members are appointed by the Minister of Finance after consultation with the Minister of Railways. Briefly, the enterprise is in the nature of a public administration. The railways are, however, operated along the lines of a private business and must adjust their expenditure to their revenue. When, in the event of a deficit, the State makes advances to the railways, such advances are carried forward to the accounts for the following year. The State therefore owns, controls, and maintains the railways, but does not deal with the commercial side of their operation. The majority of the local railways, although privately owned, are operated by the State.

*Motor transport.* Since the law of 1932 was voted, the concession system has been extended to all forms of motor transport, whilst the duration of the concession has been limited to fifteen years (maximum). These concessions give exclusive rights. They may only be granted if traffic requirements justify the necessity for them or if the roads along the projected route are in suitable condition. Furthermore, the railways and the Postal Administration have a right of priority to introduce regular services. Concessions are not needed by the State railways or the Postal Administration, or in the case of ancillary transport (private carriage, *Werkverkehr*) of passengers or goods.

## AUSTRIA

*Railways.* Since 1923 the Austrian railways have been autonomous bodies under the control of the State. They belong to the Federal Republic, which alone has the right to construct and operate railways. The State has power, however, to concede that right for a period of ninety years, and has done so in several cases. Since 1910 concessions in respect of local railways have been limited to sixty years.

*Motor transport.* The law of 1931 introduced the concession system for 'line' transport, i.e. public and regular conveyance of passengers against payment beyond the limits of a municipality.

These concessions have a duration of twenty-five years; in exceptional cases the period may be shorter. They do not confer a monopoly. The decree of 1933 regulated goods transport through provisions fixing minimum rates for all transport services except private carriers (*Werkverkehr*). With the exception of certain merchandise, such as perishables, all private carriers' operations are limited to a distance of 100 km. whenever the traffic in question can be reasonably handled by a railway. Private carriers' vehicles must bear the distinctive marks: WK or WK(+100).

### HUNGARY

*Railways.* The State has repurchased all the lines which, in the early days of railway history, had been placed in the hands of private companies. Since 1926 the railways are autonomous State enterprises. Railway operation is on a commercial basis, and upkeep costs and interest payments must be covered out of revenue.

*Motor transport.* Motor transport is governed by the law of 1930. The right to organize interurban services is reserved to the public authorities who may, however, concede that right to third parties for a limited period. This period must not exceed ten years, nor can it be extended (the latter provision is very unusual). On the other hand, the concession may give monopoly rights. These rights may, however, be withdrawn if the concessionary does not give satisfaction. The above conditions do not apply to private transport operations (*Werkverkehr*).

### JUGOSLAVIA

*Railways.* The State has in principle retained ownership of the railways, but it may grant concessions for their operation to third parties as it sees fit. The operation of the railways by private enterprises is a legacy inherited by the new State of Yugoslavia from Austria-Hungary; however, it only affects 360 km. of line and the concession may be withdrawn. The State actually administers 91.6 per cent. of the railways. The majority of the

railways are operated by the Ministry of Communications; 514 km. are, however, managed by the Forests Administration. The railway enterprises in Jugoslavia are therefore almost entirely in the hands of the State.

*Motor transport.* All motor transport enterprises other than those carrying mail must obtain a special licence issued by the competent authority; this provision applies to passenger and goods transport alike. The authority issuing the licence is the Banovine where the enterprise has its registered offices; in the event of dispute between Banovines the licence is issued by the Minister of Commerce and Industry. The period of validity is at least five years. The licence does not, however, confer a monopoly or *de facto* monopoly rights. It must be delivered in the full conviction that the general public will benefit thereby and that the service in question meets a real need (Article 61 of the labour law). The notion of public utility thus figures clearly in the motor transport regulations. This licence is somewhat akin to an exclusive concession which can be issued to several concessionaries.

## POLAND

*Railways.* The Polish railways are autonomously operated by the State, their actual management being in the hands of the Minister of Communications. A special law lays down the terms under which concessions are issued for the construction of narrow-gauge local railways. The period of validity of these concessions may be as much as ninety years.

*Motor transport.* The concession system predominates in the case of public transport. The concession may confer monopoly rights if the concessionary agrees to certain conditions or guarantees particular public advantages. Ordinary concessions are issued by the local authorities. Concessions for several lines, monopoly concessions, and those granted to foreigners are issued by the central authorities. No concession is required in the case of occasional transport or *Werkverkehr*.

## LITHUANIA

*Railways.* The Lithuanian railways are directly operated by the State. The railways come under the direction of the Minister of Ways and Communications assisted by a General Railways Manager. Their budget is included in the general State budget. Lithuania offers a striking example of a country where the railways are entirely State operated.

*Motor transport.* The concession system is applied to public motor-bus lines.

## LATVIA

*Railways.* As in Lithuania, the railways are directly administered by the State, their actual management being in the hands of the Minister of Transport.

*Motor transport.* Public motor transport enterprises must obtain a concession. Concessions are granted by adjudication. They confer exclusive rights and their period of validity may vary from less than a year to five years.

## ESTONIA

*Railways.* The railways are operated by the State, except 200 km. autonomously operated by the War Ministry.

*Motor transport.* Public motor transport enterprises must obtain a concession. The period of validity is generally one year. The original concessionaries are granted preferential treatment on renewal of their concessions; in such cases the period of validity may be extended up to three years.

## FINLAND

*Railways.* The public railways are administered by the State. Their organization is in the hands of a central management with a general manager as head of the railways. The central management supervises the operation of the railways, deals with the planning and construction of new lines, and sees to the maintenance of the other means of communication working in conjunction with the State railways. It has a right of supervision over the private railways.

*Motor transport.* Professional motor transport enterprises for the conveyance of passengers and goods must obtain a permit from the competent authority. If the enterprise operates within the limits of a department, the licence is delivered by the prefect. The same rule applies if the length of the line does not exceed 30 km. In all other cases the licence is issued by the Minister of Communications and Public Works. The licence is not issued until thorough inquiries have been made; the maximum period of validity is five years. It is therefore a form of exclusive concession which may be granted to several enterprises.

### DENMARK

*Railways.* Railway legislation is considered in principle as a State matter and railway problems have always been laid before the Legislative Assemblies of the country. Operation of the railways is, however, equally divided between the State and private companies (2,500 km. each). The State railways are administered by the Ministry of Public Works, their actual management being in the hands of a Government official appointed as General Manager. Railways other than those belonging to the State are operated under concession by private companies. No limit as to time was set in the first concessions issued. Those issued now must not exceed 100 years, and since 1928 the State has had the power to repurchase the railways after twenty-five years. These concessions confer *de facto* monopoly rights.

*Motor transport.* Every passenger and goods transport enterprise must be in possession of a licence. Licences are issued for a limited period; in certain cases, however, no time-limit is set. The licence does not give a monopoly and offers no protection against competition.

### SWEDEN

*Railways.* Some of the railways are State operated and others (particularly the narrow-gauge railways) conceded to private enterprises. The State railway administration is to a certain degree

independent of the competent Government Department and therefore relatively autonomous. The form taken by State railway operation in Sweden is midway between that of State control proper and autonomy under State control. The State owns the lines it operates. Two railways are owned and operated by municipalities. Certain lines owned by the State or Municipalities are operated by private companies.

In the case of railways which are altogether private, the public authorities have issued concessions unlimited as to time. These concessions apply to construction and operation alike. The State, however, retains the right of repurchase.

*Motor transport.* A 'special licence' or concession must be obtained for the operation professionally of a motor transport line or enterprise. Such concessions are issued by the competent provincial Authority after thorough inquiry. The concessionary has a *de facto* monopoly under extremely favourable conditions. The concession may be revoked at any time.

## NORWAY

*Railways.* The main traffic lines form the State railway system. The local railways are in the hands of private companies. The State system is administered by a General Management under the direction of the Minister of Public Works. Their budget forms a section of the State budget. The private railways operate under exclusive concessions, but are supervised by the Ministry of Public Works.

*Motor transport.* (a) In the case of regular lines, every carrier must apply for a 'special licence'; this licence, which is issued by the authorities, constitutes a veritable exclusive concession. The concession applying to an enterprise operating in two or three districts is issued by the Ministry. When transport operations are confined to one district the licence is issued by the District Roads Commission. The period of validity is limited. (b) A 'licence' must be obtained by all non-regular commercial transport enterprises.

## SYRIA

*Railways.* The Syrian railways were originally conceded to private companies. After the War these concessions were renewed and extended until 1997. They include the repurchase clause which does not, however, become effective until 1943. No regulations have yet been established for motor services.

## PERSIA

*Railway* construction in Persia was carried out by private companies. The Persian Government now seems, in the case of certain lines at least, to be taking railway constructional work into its own hands. Motor transport is allowed complete freedom.

## BRITISH INDIA

The *railways* were established under the concession system. A certain number of them were repurchased later. They are closely supervised by the State under the Indian Railway Act. *Motor transport* services are not subject to any uniform legislation. Their status varies according to the State. A licence has generally to be obtained from the local authorities against payment of a fee when a new enterprise begins to operate or in the case of renewal.

## DUTCH EAST INDIES

*Railways.* Some of the railways are State owned and operated, and some are operated under concession by private companies. The period of validity of the concession is from fifty to ninety-nine years. The State may withdraw the concession at the end of ten years against payment of an indemnity. The concession system is principally applied to local railways.

*Motor transport.* A concession must be obtained by all passenger and goods transport enterprises.

## FRENCH INDO-CHINA

*Railways.* The French preference for the system of concessions issued for a limited period has made its influence felt in French



Indo-China. The railways are in the hands of concessionary companies. A system of licences issued by the Governor-General or heads of local administrations has been applied to *motor transport* enterprises since May 6th, 1933.

### CHINA

*Railways.* There are three types of railway in China: (a) railways which are State owned and operated; (b) those conceded to private companies; (c) those attached to industries. The present tendency is towards an increasingly close control of the private enterprises.

*Motor transport.* A law governing public and private passenger and goods transport enterprises was promulgated in 1930. The companies may not operate without a licence issued by the Minister.

### JAPAN

*Railways.* Since 1907 the State has repurchased the majority of the railways. The only private railways still existing are local ones. The Railway Department is responsible for the administration of the State railways. Generally speaking the characteristic feature of the Japanese railways is State administration. They have, however, an autonomous budget.

Commercial *motor transport* services are themselves under the Railway Department which issues concessions.

### TUNISIA

*Railways.* The Tunisian railways are divided into two groups. The first consisting of the former Bône-Guelma lines was repurchased by the State in 1922. But although the State owns the railway, it does not operate it; the operation was placed in the hands of the 'B.G.' Company which then took the name of the Compagnie Fermière des Chemins de Fer Tunisiens. The Director-General of Public Works supervises its operation. The second group is the Sfax-Gafsa which was conceded to the Compagnie des Phosphates.

*Motor transport.* The operation of regular passenger motor transport services is subject to the authorization of the Director-General of Public Works. Casual services are only obliged to make an ordinary declaration. Since 1931 a form of monopoly concession has been in force of which the period of validity is five years. Goods services have complete liberty: a licence has only to be obtained if a trailer is used.

## MOROCCO

*Railways.* The railways are jointly operated by the State and the companies, as the Cherifian Government requires numerous guarantees from the companies to which the railways have been conceded. Concessions are valid until 1999. The concessionaries are, however, liable to forfeit their rights and the Government has the power to repurchase the railways at the end of twenty years. The system consists, therefore, of the issue of concessions carrying strong guarantees for the State.

*Motor transport* was regulated in 1933 by Dahirs accompanied by decrees dated February 6th and April 19th, the first applying to common carrier passenger services and the second to public goods carriers including mixed services (passengers and goods). In both cases a system of licences was introduced. These licences are granted by a Transport Commission consisting of Government Officials, having regard to existing carrier interests and the necessity of the proposed service from the point of view of the general interest and the economic life of the country.

The delivery of licences is further subject to proof being shown by the applicants that adequate insurance has been taken out and, in the case of passenger services, to the production of a certificate of vehicle inspection, issued by the Department of Public Works. Passenger licences are valid for six months and renewable upon production of half-yearly inspection certificates and a certificate from the insurance company showing that the premium has been paid. Goods licences are valid for one year and renewable upon presentation of the insurance company's certificate.

It is important to note that in issuing either categories of licence,

the Transport Commission is bound to take into account the necessity of maintaining the free play of fair competition in the field of transport and of preventing the constitution of a monopoly.

#### MADAGASCAR

*Railways.* The railways are autonomously administered by the State. The construction of the permanent way was carried out by the Colony, operation of the various lines being in the hands of one of the official departments of the Colony, with an independent budget.

There are no regulations applying to *motor transport services*.

#### UNION OF SOUTH AFRICA

*Railways.* The railways are the property of the Union of South Africa. They are administered by a Minister of State assisted by a Board of Commissioners. They are, however, operated in principle on commercial lines. Revenue must cover as far as possible the sums required for the operation and upkeep of the railways and the amortization of the costs of their installation. All profits go to the railways and are not paid into the Treasury. The system therefore consists of State owned and operated railways having an independent budget.

*Motor transport services* are regulated, and operate under concessions issued by the 'Road Transportation Board'.

#### AUSTRALIA

*Railways.* The Australian railways generally belong to the State they serve. The system is therefore one of Government administration. The management of the railway system is in the hands of a Board of Commissioners who are responsible to the State Parliament.

*Motor transport.* Motor transport services are likewise regulated independently by each State. Concessions are issued by the Road Boards, who only authorize transport enterprises to operate over routes where there is no danger of them entering into competition with other means of transport.

## 2. OBLIGATION TO OPERATE ON A PERMANENT BASIS

This obligation is as a rule stipulated in the concession. In some countries, however, it is provided for by law, and in that case legal provisions may be applicable either directly or indirectly. Generally speaking, in regard to the railways, the obligation to operate on a permanent basis is directly laid down by law, although the laws of certain countries deal with the question indirectly by stipulating that the concession must contain this obligation. This obligation, therefore, also applies indirectly to motor transport.

The obligation to maintain a regular service generally implies that the concessionary enterprise must run its vehicles at regular intervals between certain localities, according to certain conditions which are fixed in advance. The companies are also usually obliged to provide themselves with sufficient material to meet traffic requirements.

The railways in every country are bound by this obligation, which follows from the very nature of their operation. The tendency towards a reduction of the obligations of the railways, which has been in evidence during recent years, does not so much affect the principle of the maintenance of a regular service as its application. The tendency has therefore been to reduce the number of trains, particularly since the advent of motor transport competition. In certain cases the obligation to maintain a daily service has been altered, more especially in goods traffic, into an obligation to run trains of a certain capacity once or twice a week.

However, in certain countries, especially Germany, the tendency has rather been in the direction of running a greater number of short trains or even rail-cars. The obligation to operate on a permanent basis remains unchanged, only the method of application varies.

The principle of operating on a permanent basis applies to local railways as well as to the main-line railways.

As regards motor transport, this obligation is generally limited

to passenger services operated directly or jointly by public bodies and to enterprises operating by virtue of an exclusive concession.

Goods motor transport services are usually not subject to this obligation, the object of the public authorities being mainly to limit competition. However, in certain cases where motor services have been substituted for rail services, and more especially for light railways, they naturally have to comply with the same obligation as their predecessors.

In railway and motor transport alike, the obligation to operate on a permanent basis is frequently the corollary of subsidies granted, especially in respect of the conveyance of mail.

### 3. OBLIGATION TO CARRY

The accepted international definition of this obligation is contained in Article 5 of the International Convention on the Transport of Goods by Railway (Berne Convention). According to this article every land transport enterprise must effect all operations of transport, in conformity with the provisions of the Law or as stipulated in the Concession, provided:

- (a) the consignor also complies with the provisions of the law;
- (b) the transport can be effected by normal means;
- (c) the transport is not hindered by unavoidable circumstances which the transport operator is not required to remedy.

There are, however, certain exceptions to the obligation to carry. Under the Berne Convention, for instance, the railways are not obliged to accept objects which have to be loaded, transhipped, and unloaded by special means unless the stations where such operations are to be effected are suitably equipped.

The obligation to carry applies primarily to the railways. It corresponds to that of accepting all contracts offered, at terms fixed in advance, and most public services are subject to this obligation irrespective of whether they are operated by the State or private enterprises. Just as the Administration of the Post,

Telephone, and Telegraph Services is obliged to transmit all messages in accordance with certain duly published conditions, so also the railways are generally compelled to carry out on request all transport operations. This obligation implies a restriction of the freedom of contract.

The nature of this obligation is such that it cannot be interpreted as applying to all places and all conditions of shipment. Thus the railways, according to the Berne Conventions, are only obliged to accept shipments which can be transported without delay. A further common corollary of the obligation to transport is that shipments must be effected in the order of their acceptance for transport. As a rule, the obligation to carry includes that of maintaining a regular service which in turn is based on the exclusive right of operation set forth in the Concession.

The obligation to carry is not as a rule encountered in the case of motor transport. It is usually only applied to regular public transport enterprises, particularly passenger services, and enterprises operated under a concession.

Competition between the railway which is bound to maintain a regular service and carry in accordance with specific conditions, and motor transport which enjoys considerably more freedom, has resulted in a tendency to weaken the obligation to carry, hitherto placed on the railways by national and international legislation. This tends to increase the number of exceptions to the absolute obligation which, in its classical form, covers all cases other than *force majeure*.

It is to be noted, moreover, that the American railways and those of most colonial countries have never, as a rule, been so strictly bound by the obligation to carry. Owing to the necessity of opening up new regions to traffic, and the impossibility of foreseeing its future development, the public authorities could not place any absolute obligation on the railways compelling them to provide themselves with material in excess of that required to meet existing needs.

## 4. TARIFFS

## GENERAL PRINCIPLES

## 1. RAILWAY TARIFFS

## A. GENERAL DEFINITION

The notion of public service necessarily implies the establishment of a scale of charges applicable to all users, since the relations between a public service and its users are not determined by individual contracts, but rather by the adhesion of the users to a general set of conditions. The undertaking whereby the user agrees to accept those conditions, which are established in advance, is frequently referred to as a contract of adhesion. The section of the conditions dealing with the remuneration of the service constitutes the tariff. Tariffs, the actual form of which is extremely varied, are not as a rule, however, limited to the establishment of a scale of charges. The general part contains the actual terms of the contract to which the user gives his adhesion.

## B. LEGAL BASES

Tariffs may be established on different legal bases. These bases vary according to the extent to which the transport enterprises are under State control. For the sake of clarity, railway tariffs, which are the oldest and most characteristic, are dealt with first in the present report. What applies to them applies likewise, *mutatis mutandis*, to motor transport which is dealt with farther on in the report.

(a) In countries where the railways are State owned and directly operated by it, there is a tendency to assimilate the tariffs to laws and ordinances. The tariffs are actually put into force by the authorities responsible for the administration of the railways, in the same way as administrative regulations or ordinances.

(b) In countries where the railways are operated by private companies, on the other hand, under a system of licences or

concessions with an absolute *de facto* monopoly, the companies establish their tariffs autonomously.

Neither the method of establishing the tariff nor its scope is, however, the same in all these countries. The law lays down the general principles with which the tariffs must conform and specifies that they must be submitted for approval to special tribunals or commissions. Only tariffs which have been approved in this manner are recognized as valid in case of dispute.

(c) In countries where the railways have been granted concessions with a *de facto* monopoly or exclusive operation rights, the tariffs are frequently in the form of standard agreements established and applied by the concessionaries in their relations with the users of their services. In order to be valid, these agreements must be confirmed by the public authorities or even promulgated by law as forming part of the terms of operation (*Cahiers de Charges*). These terms comprise the whole of the obligations placed upon the railways by the general provisions of the law and the concession contract. They are, as it were, a complement to the conditions laid down in the original concession contract, or a total or partial set of regulations in pursuance of those conditions, and are given the same force as a law or ordinance. It is more especially in the establishment of the *Cahier des Charges* that the tendency of these countries to regard the concessionaries as public agents is most in evidence.

(d) In other countries where the railways, although State owned, are operated by independent companies or autonomous bodies (particularly in central Europe) there are general and special tariffs. The general tariffs which establish fixed scales of charges for the principal categories of goods must be confirmed by the public authorities and officially promulgated. The railways may, however, introduce complementary provisions to these general tariffs or special tariffs, provided they also are duly confirmed and that they conform with the general principles of the law (equal application of tariffs, &c.); in that case the procedure of confirmation may be simplified.

Briefly, tariffs may be as follows:

(a) laws and ordinances (railways directly controlled by the State);



- (b) standard contract terms offered by private companies to their customers within certain limits laid down by the law (Anglo-Saxon system).
- (c) standard agreements established by the concessionary companies subject to administrative control: these agreements are either promulgated as a law or confirmed by decree (Latin system);
- (d) Government regulations of which the principal sections are laid down by law, the remaining section being autonomously established under the control of the authorities by the railways themselves (central European system).

### C. GENERAL FORM OF TARIFFS

Tariffs are generally divided into two parts: (a) the part forming the scale of charges proper; (b) the part containing the general provisions. These general provisions vary according to the legal system of the different countries. There are two main groups as follows:

(a) Countries where the transport contract is governed by the general principles of common law as interpreted by judicial decisions and by special laws (Anglo-Saxon group), and countries whose civil code determines the fundamental principles in relation to which all other provisions are merely in the nature of regulations in application of these principles (Latin group). In these countries the general part of the tariffs is limited to reproducing certain special conditions regarding the shipment of goods.

(b) Countries where legislation regarding rail transport is governed by special laws superimposed upon the general law. In these countries the detailed provisions of the laws are frequently reproduced in the general parts of the tariffs which as a rule have force of law either fully or in part (central Europe, south-eastern Europe, Russia, and Japan).

### D. STRUCTURE OF GOODS TARIFFS

Goods tariffs are generally divided into two main sections as follows: (a) tariffs applicable to *fast goods* traffic (Grande

Vitesse); (b) tariffs applicable to *slow goods* traffic (Petite Vitesse). In certain countries there are also tariffs for *accelerated fast goods* traffic (Grande Vitesse Accélérée).

A distinction is likewise drawn between the two following tariff systems: (a) *tariffs which include a different scale of charges for complete wagon-loads and less than wagon-load lots* (small consignments); (b) *flat-rate schedules* applicable to all loads irrespective of their size.

Apart from these distinctions, all the tariff systems include two categories: (1) *general tariffs*; (2) *special tariffs*. Distinctions are introduced into each of these categories according to the particular conditions prevailing in the country in question. All the *general tariffs* establish a certain number of categories of goods (classes, series) according to which the goods appearing in the nomenclature attached to the tariffs are grouped.

The number of these categories or series varies. In several countries the goods in each category are graded according to their weight and the method of packing.

The characteristic feature of the *special tariffs* is that they apply either to certain given traffic relations or routes taken by traffic, or to certain categories or types of goods, or to given quantities of goods.

Since 1920 the special tariffs have undergone a certain evolution through the general change which has occurred in the economic situation. There have been two phases in this evolution: the *first* from 1920 to 1927-8 and the *second* from 1928 onwards.

The *first* is characterized by the predominant influence exercised by industrial and commercial requirements. After the War considerable changes took place in the location of industries, thus compelling the companies to adopt special (exceptional) tariffs for new traffic relations. The nature of these industries likewise changed, entailing the transport of different raw materials, products, and fuels to which the old tariffs could with difficulty be applied. Lastly, technical changes necessitated the transport of a new type of material to which special tariffs were applied. The transformation of international trade after the War and the closer relations existing between the markets of the different continents also resulted in turning traffic into new channels.

These changes (particularly in the development of new countries) gave rise to a similar evolution in sea transport, resulting in a transformation of the hinterland of the seaports.

Nor did the governments and railway companies take up a merely passive attitude in face of the new situation; they adopted a more direct line of action by endeavouring through tariff measures to influence the volume of traffic and the direction taken by it.

This combination of circumstances gave rise to the introduction of several types of special tariffs which even if they did not vary to any great extent in their form and structure were nevertheless not the result of the same considerations and facts:

- (a) tariffs to facilitate the location of entirely new industries or the moving of old ones;
- (b) tariffs applicable to new classes of goods which formerly did not occupy an important place in traffic;
- (c) tariffs intended to encourage the activity of certain districts or particular branches of home industry;
- (d) tariffs intended to attract or deflect the flow of traffic in particular directions.

Following the creation, after the War, of new States which had as yet no domestic market or unified transport system, tariff measures of a more or less temporary nature were adopted with a view to ensuring the unification of the country.

Since 1927-8 the particular conditions created by the development of the motor transport industry have introduced a new factor into the situation. Obligated to adapt themselves to a form of competition hitherto unknown to them, the railways have endeavoured to offset the facilities offered by the new means of transport by introducing the following three features into their tariffs:

(a) Increased number of special tariffs so as to extend particular facilities to the greatest possible number of types of goods. This extension of the special tariffs has had the effect of cutting down the main categories of goods covered by the general tariff, the greater part of the traffic now being covered by special tariffs established independently of the main categories. This pro-

cedure was first applied to goods of the classes at the top of the scale. These goods to which special tariffs were not formerly applied or only to a limited extent have benefited by a larger number of new tariffs since motor transport began to deflect them from the railway.

(b) The multiplicity of special tariffs has led to the unification of the tariff system which no longer tends to be based on different classes of goods but on a specific method of rating which is identical for all the special tariffs, despite the diversity of rate schedules, the nature of the goods, and traffic relations.

(c) At the same time these special tariffs have been extended to many lines of traffic where they were not applied until motor transport competition began to make itself felt.

The tariffs applied to small consignments may be taken as an example. Up to the advent of motor transport, the railways applied hardly any special tariffs to small consignments, but in view of the indifference displayed by the new means of transport as to whether a consignment is large or small, certain railways have been compelled to adopt the same attitude in the hope of recovering their lost traffic.

Simultaneously with this extension of the special tariffs, a process of unification has taken place so that a single standard tariff may now be applied to a large number of types of goods irrespective of category.

Special tariffs have been established by many different methods, including the following:

- introduction of new special scales of charges;
- placing of goods in a lower class;
- creation of intermediate categories;
- reduction of general scales of charges, particularly over short distances up to two or three hundred kilometres;
- refunds in the form of reduced charges.

In conclusion, it may be said that special tariffs are at the present time taking an increasingly important place. In certain countries they are even applied to as much as 70 per cent. of the total traffic in ton-kilometres.

### E. PASSENGER TARIFFS

In the evolution of passenger tariffs two phases may be distinguished which are almost identical with those noted in respect of goods tariffs.

During the first phase following the War the railways continued to apply the old system of tariffs. In most countries the system provided for three classes, although in certain countries of central and eastern Europe, and in countries of mixed race (Africa, India, &c.) there were four. The scales of fares were established as follows: the charges as a whole, which corresponded as nearly as possible to the costs incurred by the enterprises, were spread equally over all the passengers irrespective of classes. In addition to these flat-rate charges established according to distance, there were additional charges for first and second class, which were intended to cover a part of the additional costs required for the provision of first- and second-class accommodation. The greater part of the revenue came, however, from the classes by which the majority of passengers travelled, i.e. third and fourth class. In certain countries the scale of fares decreased with the distance; in others additional charges were made in the case of fast and express trains. Even if these tariffs were not a source of profit to the railways, they generally enabled them to cover operation costs and a part of their fixed charges. They were based on the assumption of a given total volume of traffic and a certain ratio between passenger-kilometres and available seating accommodation.

In the U.S.A. the system of passenger tariffs was entirely different. The American railways had and still have a single class. A flat-rate charge per mile is made. A service of coaches with special accommodation, sleeping-cars, &c., is operated by the Pullman Company which owns its own rolling-stock and uses the permanent equipment of the railways in the same way as the Cie Internationale des Wagons-Lits or the 'Mitropa' Company do in other continents. This company makes an additional charge over and above the ordinary fare, established on the basis of the railway tariff. A part of this additional charge goes to the railway company.

The situation soon, however, changed: (a) The increased quantity and weight of rolling-stock with the accompanying speed-

ing up of services, considerably reduced the degree of commercial utilization of the railways. The dead weight of express trains rose to 90 or 95 per cent. of the total weight of the train, the passengers and their baggage representing not more than 5 to 10 per cent. of that weight. These considerations led the railway administrations to reduce the number of classes with a view to concentrating traffic, the general tendency being to divide the traffic between a medium price and largely used class and a little used class at a higher price. Certain countries, on the other hand, tend to suppress either first class or the intermediate classes, whilst in others the complete unification of classes has been contemplated and in a number of cases effected, particularly over short distances. (b) In addition to these technical considerations, other measures of a more general nature were introduced.

The development of motor transport has more particularly affected passenger traffic, although statistics do not always show a noticeable decrease in the total passenger-kilometre returns as compared with the pre-war figures. This is due to the development of urban centres and the extension of suburban services. The increase of these services which has been continuous since the War, despite motor transport competition, has offset the decrease in railway-passenger traffic in short and medium distance interurban services where passengers have been attracted to the motor transport services. In the face of this competition the railways have introduced special tariffs and new facilities in interurban passenger traffic over short and medium distances, including, in particular, reduced charges for the conveyance of motor-cars belonging to passengers. On the other hand, the suburban tariffs, already reduced to a fairly low level for social reasons, now have a tendency to rise.

As the structure of passenger tariffs has never been so complicated and intricate as that of the goods tariffs, it has not been affected to the same extent by the evolution which has been taking place in recent years. In certain countries, particularly those where tourist traffic plays an important part or where the population is in the habit of travelling frequently, a general tendency to reduce the railway passenger tariffs to the minimum is noticeable, the purpose being to substitute the revenue obtained from a

proportionately larger number of passengers paying a lower rate for the revenue obtained from a limited number of passengers paying the full share. In some countries these reductions exceed 70 per cent. On Sundays, public holidays, and on the occasion of large manifestations, trains have been organized in which passengers travel almost free. By the adoption of this policy, which has been followed more especially in countries where the railways are directly under the control of the State, the public authorities have been able to create new revenue from other sources to offset the loss of profits in their railway passenger services.

Numerous social and other contributions which the railways have been obliged to make since the War have also helped to lower the passenger tariff level. Nor must it be forgotten that passenger traffic has rarely been a source of profit to the railways and that in most countries the costs of passenger services have been partly covered out of the revenue from goods traffic.

## 2. MOTOR TRANSPORT TARIFFS

The structure of motor transport tariffs is as a rule less clearly defined than that of the railway tariffs.

### (a) *Origin.*

Tariffs applicable to passenger traffic were the first introduced in connexion with motor transport, particularly in urban services—which are not, however, dealt with in the present report—and with motor postal services in extension of the railways. In this connexion, the Berne Convention of 1923 on the carriage of goods by rail provides for the possible extension of the railway régime and railway tariffs to certain regular motor transport lines.

Apart from these first attempts to apply railway tariffs to motor transport, however, and not taking into account the charges specified in the police regulations, particularly in towns, motor transport tariffs have developed along definite lines. Whilst the railway tariffs originated from general considerations frequently foreign to actual transport questions, motor transport tariffs were framed with the sole aim of establishing the charges most profitable for the operator.

These tariffs have developed in a different way in passenger and goods transport.

*(b) Tariffs applicable to passenger transport by motor vehicle.*

In most countries the application of such tariffs is laid down in the case of regular common carrier services either by law or in the concession contract. As transport operations of this kind have always been subject to regulations, the price of transport has hardly ever been fixed by private contract. Almost everywhere tariffs have to be confirmed by the authorities, particularly in the case of motor transport enterprises effecting public services. These tariffs, like those of the railways, sometimes comprise several classes. They may also include reductions for social or other reasons. As in the case of the railways, there is, however, a tendency for the classes to disappear. The establishment of the tariffs varies according to the administrative system:

(1) The tariffs of motor transport enterprises operated by the public authorities are fixed by ordinances or decrees.

(2) The tariffs of enterprises operating with exclusive rights under a concession may be established by the carrier and confirmed by the competent authorities. Sometimes also the authorities lay down the maximum tariff, the carrier being at liberty to establish, within the stipulated limits, the actual tariff to be applied.

(3) Under the licence or authorization system, the tariffs, if any, are established by the carriers themselves and confirmed by the competent authorities.

(4) Motor transport enterprises which are entirely free also establish tariffs in order to simplify their accounts.

It is more especially the regular common carrier services that operate according to tariffs. Tariffs are also as a rule compulsory in the case of taxis, while not in the case of private hire cars, although it sometimes happens that large car-hiring enterprises establish tariffs, for the reason mentioned in (4) above.

*(c) Tariffs as applied to goods transport.*

Generally speaking, goods transport by motor vehicle has from the outset escaped the tariff system. This form of transport has



tended rather to return to a system of prices established in the same way as industrial prices. Thus, carriers have generally based the price of transport on the cost price of the particular operation, taking into account the possibility of finding a return load. For that reason such prices differ essentially from the railway tariffs as established in America, for example, where they are based solely on the estimated average cost-price for a given traffic relation over a fixed period, i.e. on aggregate operations. In the establishment of goods motor transport prices, special attention has been paid to the factors which determine the nature of the service, viz. weight and volume of the goods, their nature (fragile, perishable, &c.). The value of the goods has exercised no direct influence on the price of transport. While it is an essential element in the establishment of railway tariffs, it has only been taken into consideration from two points of view in motor transport operation:

- (1) from the commercial point of view—with a view to obtaining from the consignor the maximum amount he is prepared to pay as compared with the railway tariffs;
- (2) from the legal point of view—in order to determine the liability of the carrier in the event of loss, damage, &c. In such cases the value of the goods is important for insurance purposes.

This method of establishing motor transport prices was bound in the long run to shake the very foundations of the railway tariffs. As already mentioned, the old classifications have partly been abandoned and sometimes even rendered inoperative by the number of special tariffs which have been introduced. It is natural also that the public authorities and the railways should have tried to lessen the effects of this method of establishing prices, by compelling motor transport to adhere to the tariff system. It should be noted, however, particularly in new countries, that motor transport tariffs have sometimes been made compulsory for reasons of a general nature; this is particularly so in the case of regular motor transport lines (common carriers). The introduction of measures of this kind have as a rule been prompted by the desire of the public authorities to extend to motor transport the principle of equal treatment of users. On the other hand, motor

transport services which replace local or branch lines in new countries have been compelled to adhere to time-tables and have been assimilated to public services under such strict conditions of operation that the application of tariffs became inevitable, even if those tariffs were no more than a flat-rate charge established according to the weight and volume of the goods and the length of journey.

There are two kinds of tariff, as follows:

(a) In certain countries, particularly those which have subjected motor transport to more or less strict public control, attempts have been made to impose the railway tariffs—generally those applying to the highest classes—on motor services. In certain cases the rates have even been increased. They rarely, however, include more than one class; they are most frequently encountered on lines operating as an extension of the railway and which for that reason are subject to the same régime as the railways themselves.

(b) In countries having a more liberal system, where regular common carrier motor transport services are subject to the grant of either an authorization or a concession but not to any permanent control, the public authorities have generally limited their intervention to the establishment of maximum charges. Minimum charges are almost non-existent outside the first category.

In the case of goods transport by taxi the tariff regulations are generally the same as those applied to the transport of persons.

As a general rule, occasional transport operations are not subject to any tariffs, and are treated in the same way as operations effected by lorry for the owner or possessor of the lorry. In Germany, however, the observance of a tariff is compulsory for occasional goods transport over distances exceeding 50 km. The legislation of certain countries specifies the obligation of the owners of lorries, even if only on paper, to let their vehicles to monopoly offices or companies. By the application of this system the owners would be obliged to pay to the monopoly organization a certain sum to be deducted from the hire charge for transport operation effected by their own vehicles. This system is an extreme measure which, however, has never been applied to its fullest extent. Its

full application would result in the establishment of a complete monopoly of motor transport.

As it is much more difficult to control the application of tariffs in the field of motor transport than in the case of the railways, the public powers in certain countries have tried to encourage its control through motor transport associations, and thus utilize competition as a means of limiting competition.

## EXAMPLES FROM SPECIFIC COUNTRIES

### A. RAILWAY TARIFFS

#### UNITED STATES OF AMERICA

The characteristic feature of the American railway tariffs is the method of their establishment. They are not based on an estimate of what the traffic can bear but on calculations made by the railways themselves and confirmed by the Interstate Commerce Commission, of the cost price of transport and the minimum return on the invested capital. As the American railways, which developed under a régime of liberty, still operate a fairly large number of competing lines, the tariffs *are not based on distance* but are applied to fixed *itineraries (traffic relations)*. Thus, the carriage of goods from New York to Chicago costs a fixed sum irrespective of whether those goods are transported over the New York Central line, the Lehigh Valley, or the Pennsylvania railway, the distance by each of these lines being different.

There are in the United States, as elsewhere, general tariffs and special tariffs.

*A. General tariffs.* The general tariffs are divided into six principal classes, which include all the goods appearing in the general nomenclature (consolidated freight classification), the first class being the highest rated. In certain classes of goods a distinction is made between car-load lots and less than car-load lots (L.C.L.). The element of quantity only enters into the question in the case of car loads. The difference between the rates for car loads and less than car-load lots is considerable, the charges in the latter case being distinctly higher. The less than car-load traffic on the American railways has consequently decreased considerably.

The general tariff also lays down certain charges which are higher than the first-class rate, as well as intermediate schedules.

The tariffs are not applied in the same way throughout the entire territory of the United States. The country is divided into three districts for tariff purposes: (a) the official district; (b) the southern district; (c) the western district. All transport operations effected between two points in any one district are governed by the tariff applicable to that district. Transport operations between stations in more than one district are subject to the so-called 'official' district rating. The limits of these districts do not correspond with State boundaries.

These three districts have been established to allow more flexibility in the application of the tariff. The conditions of traffic are too variable in the different regions of the United States for the same goods to be rated in the same class throughout the whole territory without application of the modifications contained in the three tariff schedules of the three districts.

The 'official' district includes the original colonization areas where industrial development is very advanced and where the different branches of industry and agriculture are fairly evenly distributed, i.e. the New England States, the Great Lakes region, and the central eastern region. This latter region is bounded by a line running from Chicago (by Indianapolis, Cincinnati, and Pittsburg) to Philadelphia. The other districts are either areas of new colonization or regions devoted to a single form of cultivation and where it is extremely difficult for the railways to find return freight.

*B. Special tariffs.* A number of *exceptional tariffs* have also been introduced to enable the railways to adapt themselves to competitive conditions or deal with particular situations. These tariffs are established in the same way as the general tariffs and are based on the same principles. They must be approved by the Interstate Commerce Commission.

## MEXICO

The tariff system in Mexico is very simple. No distinction is made between fast and slow goods service. There are twelve

classes of General Tariff. As in the U.S.A., there are ratings above the first class, these being  $1\frac{1}{4}$  to 3 times higher than the first class. The sole difference is that the classification provides for wagon-load lots and less than wagon-load lots. There are likewise certain exceptional tariffs according to which the merchandise in question is rated in a lower category. The rate schedules are established according to distance.

### GREAT BRITAIN

The joint tariff of the British railways consists of two principal parts: the General Classification of Merchandise other than Dangerous Goods, and the Classification of Dangerous Goods; both of these include general or special regulations as well as the classification proper. This latter refers, in both divisions of the classification, to the joint Scale of Standard Charges in which the charges are established for all classes and distances.

*A. General tariff.* Each of the two divisions comprises twenty-one classes, the twenty-first being the highest-rated class. The British tariffs are as a general rule based on what the traffic can bear. The number of classes and the right of the railways to grant reductions of as much as 40 per cent. without having to apply for special authorization and even greater reductions with the sanction of the Railway Rates Tribunal, render this tariff exceedingly flexible.

Application of the different classes does not correspond with an exact division of all the goods appearing in the nomenclature of the tariff. The idea of quantity has likewise been introduced. Thus, the same goods conveyed in different quantities are rated in different classes. The rating also varies according to the method of packing. As the British wagons have a relatively small loading capacity (the majority of the old wagons being 5 to 10 ton), the tariffs applicable to consignments in relatively small quantities are more favourable than in other countries and facilities granted to consignments in large quantities (more than 10 tons) relatively less great. The six lower classes are, however, restricted to loads of more than 6 tons and therefore to complete wagon-

loads. In the first four classes, i.e. the lowest, a distinction is made between goods carried in wagons belonging to the railways and those carried in privately owned wagons. These latter benefit by a considerable reduction.

It should be noted in this connexion that the number of privately owned wagons (about 520,000) is almost as great as the number belonging to the railways (about 632,000). The development of the privately-owned wagon in Great Britain is due to the liberal view taken in that country in matters of transport. The railway is still regarded as a public way on which the vehicles of all may travel.

All the British tariffs are based on distance, the charge becoming less as the distance increases. In this connexion there are four scales of rates: (*a*) for the first 20 miles; (*b*) for the next 30 miles; (*c*) for the next 50 miles; (*d*) for distances exceeding 100 miles. The rate applied varies considerably, the rate applicable beyond 100 miles being in certain cases almost four times less than that applicable up to 20 miles. This graduation is bound to affect motor competition which is favoured by the relatively high rates for the first 20 miles. It is to be noted, however, that in the case of goods coming within the higher classes (usually valuable goods), the graduation of the railway tariffs is less marked than in the case of goods to which the first ten classes are applicable.

The British railways make additional charges for door-to-door delivery, which may include both collection and delivery or one or other only.

The tariffs usually include the charges for tarpaulins and for loading and unloading, except in the case of goods of the higher classes, i.e. from the eleventh to the twenty-first, when they are paid by the user unless he wishes to undertake these operations himself.

*B. Special tariffs.* The number of special tariffs is very high. The nomenclature of the general tariff provides for the possible application of these tariffs to almost all the goods it contains. The conception of the special tariff proper only applies to reductions of more than 40 per cent., the railways being at liberty, in certain determined relations, to grant reductions of up to

40 per cent. on their tariff which is always a maximum tariff. Further reductions must be approved by the Railway Rates Tribunal.

The British railways are allowed a measure of liberty to enter into agreements with certain traders. Such agreements may provide for the establishment of agreed charges, under the terms of the Road and Rail Traffic Act of 1933. These charges, which must be approved by the Railway Rates Tribunal, may be based on a single factor: by weight, per package, or even according to the value of the goods, and applicable to all distances without distinction. Exceptional rates are granted to all traders tendering regular traffic.

The British railway tariffs are published by the railways and must be accessible to the public in all stations. In the case of the special tariffs, publication in the forwarding and delivery stations is sufficient.

#### FRANCE

The French tariffs, which are established by the railway Administrations themselves subject to confirmation by the public authorities, are based on the *Cahier des Charges*. This *Cahier des Charges* is a law completing the terms of the concession. A nomenclature includes all the goods which can be shipped by rail. It is not, however, very detailed and only gives a general denomination of the goods. Goods are grouped in four classes, a corresponding kilometric schedule constituting the maximum tariff for each class.

*A. General tariff.* The general railway tariff established on this basis is more flexible. A distinction is, however, made between (a) the general slow goods traffic tariff (Petite Vitesse), and (b) the general fast goods traffic tariff (Grande Vitesse).

*The general tariff for slow goods traffic* groups all the different types of goods in six series. The nomenclature in respect of these tariffs is, however, considerably more detailed than that contained in the *Cahier des Charges*. All the goods included in this nomenclature are classified in one of the six series. The charge as well as the scale upon which it is applied is different for each series.

The principle on which these scales are established is, however, always the same, the charge decreasing with the distance. Although the classification of the goods according to the tariff cannot correspond with that of the *Cahier des Charges*, there is no actual contradiction between them because the four classes only constitute a maximum tariff. The six series of the general tariff are merely variants coming within the limits of this maximum tariff.

No distinction as to the weight of the goods is made in the tariff. The same schedule per ten-kilometre applies to all quantities alike. All consignments of parcels up to 40 kg. per consignment are subject to a uniform charge which, so to speak, constitutes a seventh series. In this series no account is taken of the nature of the goods, the charge being established on a kilometric basis instead of on a sliding scale.

The general tariff for slow goods traffic is in reality applied to a relatively limited number of consignments, for more than 90 per cent. of the slow goods shipments are carried under a system of special tariffs.

*The general tariff for fast goods traffic* makes a distinction between parcels and goods—foodstuffs—gold and silver coin and bullion, valuable papers, works of art—vehicles—coffins—live stock. In the fast goods traffic tariff no account is taken of the nature of the goods; there is therefore no nomenclature. The charge is established on a sliding scale and decreases with the distance. This scale varies according to the categories enumerated above (parcels, goods, foodstuffs, &c.). The general tariff is more frequently applied to fast goods shipments than to those by slow goods service. It has been estimated that the proportion of goods transported by fast goods service under the system of special tariffs is only 50 per cent. In the case of foodstuffs, on the other hand, the incidence of special tariffs is much more frequent.

All the French tariffs are established in pre-war francs. A coefficient of increase is applied to them. The coefficient of the general slow goods and fast goods traffic tariff is the same in all cases (370 per cent.), and is established by law. Other coefficients are, however, applied to certain special tariffs and by certain secondary and local railways.



*B. Special tariffs.* There are thirty different special tariffs.

Each tariff includes a number of headings, each of which may apply to one or more types of goods. The basic charge may in principle vary in respect of each heading and each type of goods. All the charges under any one heading are, however, established on a sliding scale according to the quantities shipped. Thus, a distinction is made in a large number of special tariffs between the following:

consignments up to 1 ton
„ of 1 ton to 5 tons
„ of 5 tons to 10 tons
„ of 10 tons to 20 tons
„ of over 20 tons.

The basic charges may or may not be established on a sliding scale according to distance. In this connexion the system of charges varies considerably. There are flat rates, kilometric rates, and rates which decrease with the distance.

There may be five variants of the thirty special tariffs; four of these variants are designated by the hundred column of the index figure. They include the following:

the special tariffs (from 1 to 30) applicable to one railway system only;

the special tariffs applied to shipments between the great French railway systems; these are numbered from 100 to 129;

the special tariffs applied to export and transit traffic; these are numbered from 300 to 329;

the special tariffs applicable in relations between the French railway systems and the Saar Territory system; these are numbered from 200 to 229;

the special tariffs applicable to joint export or transit traffic on the French railways and those of the Saar territory; these are numbered from 400 to 429.

The variety of the special tariffs is still further increased through the frequent alterations made in the different chapters of these tariffs and even in certain of the goods contained in them. The amalgamated freight tariff, applicable to all the railway systems, has undergone more frequent change than any other in recent years. Although this tariff makes no distinction between the

different types of goods, the method in which the charges are applied varies considerably (flat rates, kilometric rates, weight classification, &c.).

The French tariff system also presents the two further peculiarities as follows:

the special reduced tariffs are only applied at the request of the consignor;

the amount of the additional charges and surtaxes varies considerably and is very high.

## BELGIUM

*A. General tariff.* The Belgian tariffs differentiate between small consignments and wagon-load lots of 5 tons and over.

1. The following divisions are made in *small consignments* traffic: (a) express tariff; (b) inland parcels tariff; (c) fast goods tariff; (d) slow goods tariff.

(a) In the express tariff a distinction is made between general merchandise and perishable goods (this is the only case where such distinction is made). The charges paid by both these categories of goods, for consignments up to 15 kg., apply to all distances and include delivery charges. On the other hand, the delivery charges are not included in the case of consignments of more than 15 kg.

(b) In inland parcels traffic consignments up to 5 kg. may be sent up to any distance, the charge paid including delivery. The inland parcels traffic is entirely in the hands of the railways, and the Postal Administration takes no part in establishing the tariff.

(c) In fast goods traffic the charges for consignments up to 20 kg. apply to all distances, but delivery charges are not included. In the case of consignments of over 20 kg. the kilometric rate schedule is applied according to distance, delivery charges not being included.

(d) In slow goods traffic a distinction is drawn between shipments weighing less than 250 kg. and shipments of from 250 kg. to 5 tons. The kilometric rate schedule is applied in both cases, but delivery charges are not included.

2. *Wagon-load lot traffic* is divided into fast and slow goods services:

In the fast service a single rate schedule is applied similar to the one applied to parcels traffic by fast goods service; the charges for shipment by fast goods service are consequently very high.

In the case of slow service the goods are grouped in alphabetical order in a detailed nomenclature in which both the general and special tariffs are shown.

The charges included in the tariff are divided into eight classes which in turn are subdivided into three series called A, B, and C. The five higher classes—1, 2, 3, 4, and 5—comprise shipments up to 15 tons (5, 10, and 15), whilst the three lower classes—6, 7, and 8—include shipments up to 20 tons (10, 15, and 20); the first class is the highest.

Goods of the first five classes are carried in closed wagons. Those of the last three are carried in open wagons and if the consignor wishes his goods to be conveyed in a closed wagon he must pay an additional charge. The charges are established on a sliding scale according to distance.

*B. Special tariffs.* Special tariffs have been considerably extended during the last two years. They are subdivided into series. Special tariffs are generally competitive and established with a view to encouraging the development of national industry, the export of national products, and the import of raw materials. They are also intended to favour transit traffic coming from or going to the seaports, as well as transit traffic through Belgium from one point of the land frontier to another.

Lastly, there are certain special tariffs applying to fast traffic shipments sent in wagon-load lots. These tariffs take various forms: (a) placing of goods in a lower category; (b) reduction of charge by percentage; (c) reductions in the case of large shipments dispatched at regular intervals.

All rate schedules in Belgium give the charges per ton of goods.

## NETHERLANDS

*A. General tariff.* The tariffs in the Netherlands include three classes of consignment: (a) by express service; (b) by fast service; (c) by slow service. A distinction is always made between con-

signments of less than 5 tons and wagon-loads, including all types of goods.

The charge for *consignments of less than 5 tons* is the same for all types of goods with the exception of certain bulky merchandise, which is designated as such in the general nomenclature. There is therefore no classification of small consignments. The transport charges include delivery at the premises of the consignee, and this constitutes a serious form of competition for the motor transport enterprises.

This last measure was adopted for the first time in the Netherlands tariff of May 1st, 1933.

In the case of wagon-load lots there are four classes, subdivided into three parts, as follows: (a) 5-ton lots; (b) 10-ton lots; (c) lots of 15 tons and over.

The nomenclature is not very detailed and the tariffs of the highest class (Class A) are applied to all goods which do not figure in it.

In the case of both wagon-load lots and small consignments, the charge for fast service is double that applied to slow service, and five times higher in the case of express service.

The rate schedule is established according to distance.

*B. Special tariffs.* The special tariffs are likewise divided into two categories: (a) slow goods traffic; (b) fast goods traffic.

The special tariffs applicable to slow traffic are numbered in arabic figures from 1-24, and those applicable to fast traffic in roman figures from I to XII. These tariffs are applied more especially to particular routes or certain classes of goods. As a rule they either place the goods to be transported in a lower category, or establish a special rate schedule or fixed charge. The special rate schedules are numbered from 1 to 15.

## SWITZERLAND

The Swiss tariffs are published in considerable detail, although the system is not in itself complicated. They are the same as those used before the War and are published in three languages.

*A. General tariff. (1) Slow goods.* The nomenclature is not very

detailed. It consists of one column indicating three groups of tariffs numbered in roman figures I, II, III. Each of these tariffs is subdivided into two classes: class (a) for consignments from 5 tons up to 10 tons, and class (b) for consignments of more than 10 tons. Goods which do not appear in the nomenclature are placed in the general class A if the consignment weighs 5 tons to 10 tons, and in class B if it exceeds 10 tons. In the case of shipments of less than 5 tons there are two classes numbered 1 and 2. Goods appearing in the nomenclature come under class 2, class 1 being applied in other cases.

(2) *Fast goods*. In fast goods traffic a distinction is made between small consignments of less than 5 tons and those of over 5 tons; in the case of consignments of less than 5 tons there is a single class to which are applied the tariffs for small consignments by slow goods, class 1, with an additional charge of 100 per cent. In the case of consignments of over 5 tons the tariffs of the general classes A and B plus an additional charge of 100 per cent. are applied to all goods.

*B. Exceptional tariffs*. There are many exceptional tariffs, some of which apply to particular goods, while others are intended to favour transit or meet competition. The transit tariffs apply to almost all goods transported between the different frontier points. They are generally in the form of flat rates. Tariffs to meet competition have been more especially applied since 1921. Under these tariffs a reduction of the ordinary transport charges is as a rule granted on condition that the user furnishes proof that transport on other systems costs less. In such cases the railways apply a minimum kilometric charge and refund the difference plus 5 per cent.

In certain cases exceptional tariffs are applied to consignments conveyed entirely by rail. Reductions are also sometimes granted on application to users who undertake to use the railways for all their transport operations.

## ITALY

*A. General tariff*. Separate tariffs are applied to fast goods traffic and slow goods traffic.

*General tariff (fast goods service).* The general tariff for fast goods traffic comprises fifteen different tariffs, of which thirteen apply to specific goods frequently carried by fast goods train; the fourteenth applies to goods not covered by the first thirteen, and the fifteenth to exports of flowers, &c., by land frontier points. The tariff for fast goods traffic distinguishes between small consignments, 5-ton loads, and 10-ton loads. These fifteen tariffs include a scale of rates comprising twenty-four classes, of which the first is the highest, and which are applied on a sliding scale according to distance. A special nomenclature for fast goods traffic is applied to a limited number of types of goods which already figure in the ordinary tariff and also to the exceptional tariffs. The other categories of goods not covered by these tariffs are dealt with under Tariff 14 for fast goods traffic.

*General tariff (slow goods service).* The Italian slow goods traffic nomenclature is very detailed. This nomenclature classifies consignments according to weight, as follows: (a) less than 5 tons; (b) 5 tons; (c) 10 tons; (d) 15 tons (for certain goods, e.g. construction material, bolts, railway material, iron, and steel). This last distinction is very unusual. A single classification is, however, applied to certain categories of goods. The scale of rates is very detailed and includes fifty-one different classes numbered from 41 to 91.

The fast goods traffic and slow goods traffic tariffs are established on the basis of the pre-war lira but percentages of increase have been introduced since the War. In principle, the increase is 400 per cent. This figure is not, however, strictly adhered to in the case of certain types of merchandise, for which three groups have been established. The respective increases for these are 200, 300, and 350 per cent. These exceptions have been introduced in order to favour either home industries or imports of necessary raw materials.

The scales of charges are tapered according to distance.

*B. Exceptional general tariffs.* There are certain other tariffs, also of a general nature, but which are drawn up in a special manner and constitute a sort of supplement to the general tariff. These tariffs are intended to attract trade across the Peninsula or encourage national production. They generally provide for the

placing of goods in a lower category or the granting of rebates. There are likewise certain general competitive tariffs under which goods carried according to the general tariff are granted a reduction over distances of less than 300 km. in slow goods service and 200 km. in fast goods service. The amount of these reductions varies according to the nature of the goods transported.

*C. Exceptional tariffs.* All the exceptional tariffs which have been put into force are of a local character. In such cases the exceptional rating is established by lower classification. It is also frequently fixed on a sliding scale according to weight, with a view to encouraging large consignments. The percentage of increase is the same as that mentioned above.

## GERMANY

The German tariffs are established autonomously by the Reichsbahn and ratified by the public authorities.

*A. General tariff.* The general tariff is divided into two parts: (a) the tariff applicable to consignments of less than 5 tons (*Stückgut*); (b) the tariff applicable to consignments exceeding or paying for such weight.

The first part has no nomenclature. All goods, irrespective of their nature, are subject to the same rate schedule. The second part, which includes a very detailed nomenclature, groups all the goods appearing in it into seven classes: A, B, C, D, E, F, G. These main classes apply to all consignments of over 15 tons. There are, however, intermediate classes applying to loads of 5 to 10 tons and 10 to 15 tons. Differentials varying according to the main classes to which they refer are applied to these intermediary classes with a view to obtaining adequate utilization of loading space. In the first part of the tariff applicable to consignments of less than 5 tons (*Stückgut*) the charge is made on a sliding scale according to weight for all consignments of less than 1 ton.

The German tariff system differentiates between slow, fast, and accelerated fast traffic. As a rule the charges applicable to fast and accelerated fast traffic are respectively double and treble the basic charge.

Increases are applied in the case of bulky goods.

All the general tariff charges are established on a sliding scale according to distance.

*B. Special tariffs.* The special tariffs are divided into two categories: (a) exceptional tariffs (*Ausnahmetarife*); (b) transit tariffs (*Durchfuhr-Ausnahmetarife*).

The exceptional tariffs are variants of the general tariff, applicable to specific classes of goods. There are likewise exceptional tariffs comprising special rate schedules and fixed charges. The special tariff charges are also as a rule established on a sliding scale according to distance. Special tariffs are introduced mainly in order to encourage the economic activity of the country, e.g. to support certain branches of industry or commerce or certain regions, or to stimulate exports ('seaport tariffs').

The transit tariffs are intended to attract to the Reichsbahn traffic which would otherwise be carried by other railways. These tariffs have a nomenclature of their own. They only apply, however, to certain traffic, viz.:

between two frontier points;

between a frontier point and a port and vice versa.

Fixed charges are always made when these tariffs are applied.

## CZECHOSLOVAKIA

*A. General tariffs.* There are three kinds of goods consignments in Czechoslovakia as follows: (a) slow goods; (b) fast goods; (c) accelerated fast goods. In all three services a distinction is made between consignments of less than 5 tons and wagon loads of over 5 tons.

*Slow goods service.* As in Germany, there is no classification for consignments of less than 5 tons. The rates in this particular class are applied according to weight. Up to 1,000 kg. the graduation is per 10 kg., and above 1,000 kg. per 100 kg. Over 5 tons the tariffs are applied according to classes numbered in roman figures from II to XXII. The nomenclature includes five columns: a column for 5 tons; a column for 10 tons; a column for 15 tons. Only in the case of a very limited number of types of goods,



however, is a rate indicated for 15-ton lots. When a rate for 15 tons is not mentioned the 10-ton rate applies. The fourth column lays down whether the goods may be dispatched in open or closed wagon. Lastly, the fifth column refers to exceptional tariffs where they exist.

*Fast goods service.* The fast goods tariffs are somewhat complex. A distinction is drawn between two general categories of goods in fast goods traffic. The first category includes reduced tariffs and applies chiefly to perishable goods whilst the second comprises all the other goods generally forwarded by fast goods service.

In the case of small consignments to which reduced rates are applied the rating is according to the slow goods tariff; for all other consignments—if the distance is not more than 150 km.—the slow goods tariff is applied plus an additional charge of 50 per cent.; if the goods are dispatched over distances greater than 150 km., the slow goods rate is applied plus an additional charge of 100 per cent.

These tariffs are established in this way on a sliding scale with a view to meeting motor transport competition over short distances.

In the case of wagon-load lots a distinction is likewise drawn between reduced rate merchandise and other merchandise. Reduced rate merchandise is placed in the highest of the slow goods classes, i.e. class II for 5 tons and class v for 10 tons.

In all other cases the slow goods rating is applied with an additional charge of 50 per cent. when the distance is less than 150 km., and 100 per cent. when it exceeds 150 km. In the case of accelerated fast goods traffic a charge of 50 per cent., over and above the charges indicated above, is applied to all consignments.

*B. Exceptional tariffs.* There are three categories of exceptional tariffs. The first applies to domestic traffic. These tariffs are more especially applied to traffic going in a given direction and grant special rates to consignments from certain specified stations to all other stations. The main purpose of these domestic tariffs is to favour the industrial centres. They are applied in a number of different ways: (a) by placing the goods in a lower category,

(b) by granting a certain percentage of reduction, or (c) by the establishment of special schedules. In the latter case there are twenty categories indicated in arabic figures running from 1 to 20. The second category comprises the export tariffs applicable to different groups of goods as shown in a special list. There are some fifty of these tariffs. These tariffs refer to special schedules indicated by the letter E and numbered from E 1 to E 37. In the case of certain classes of goods there are special schedules for the carriage of lots of at least 1 ton. The third category consists mainly of tariffs established for a fixed period. The period fixed is generally one year and the tariffs are considerably lower than the general tariffs.

In order to encourage the traffic of the river ports, the Czechoslovakian railways have introduced a special category of tariffs applicable to goods arriving at or going to these ports.

## AUSTRIA

*A. General tariffs.* There are three types of goods service in Austria: slow goods, fast goods, and accelerated fast goods.

In all cases the consignments are divided into two groups: (1) small consignments of less than 5 tons; (2) consignments of more than 5 tons.

In the case of shipments by accelerated or other fast goods service, there is a small nomenclature covering some forty types of merchandise to which reduced rates are applied.

Goods not included in the above nomenclature do not benefit by the reduced rate schedule which is established according to distance.

The Austrian nomenclature in regard to shipments by slow goods service is very detailed and includes seven different rate schedules.

The detailed nomenclature indicates the class to which the goods belong. These classes vary according as the consignment is less than 5 tons, from 5 to 10 tons, or over 10 tons.

Whilst the charges for consignments of less than 5 tons in slow goods traffic are entirely independent of the fast and accelerated fast traffic charges, the charges for consignments of over 5 tons

in fast and accelerated fast traffic are in ratio to the slow traffic charges.

In slow goods traffic there are eighteen classes, of which seven apply to consignments of 5 to 10 tons and the remainder to consignments of 10 tons and over.

In *fast goods traffic* a distinction is made between goods carried at the ordinary rates and goods carried at reduced rates. If they appear in the reduced rate list and would be subject to the charge applied to the highest class if forwarded by slow goods service, they are carried at the same price as in slow traffic. When they come within the highest class but one, they are charged at the same rate as the highest class; in the case of other goods in lower classes, the slow traffic tariff is increased by 50 per cent.

All goods not included in the list of merchandise carried at reduced rate pay the wagon-load charge applying to slow goods traffic, increased by 50 per cent.

In accelerated fast goods traffic the fast goods traffic tariffs are applied, increased by 50 per cent. in the case of both reduced-rate and full-rate merchandise.

*B. Special tariffs.* The number of special tariffs has increased considerably in recent years, but it is to be noted that while in some cases they are established for an unlimited period, in others their duration is for a year and even less or for a specific period. These tariffs, which are intended to favour industry and exports, are established in a number of different ways: (a) placing of goods in a lower category; (b) special rate schedules; (c) reduction of percentage; (d) application of fixed charges. They may be applied to specific goods and particular areas.

These tariffs are sometimes applied to all types of goods in order to meet motor transport competition or to compete with other lines.

## HUNGARY

*A. General tariff.* The nomenclature is divided into three columns: the first deals with the classification of fast goods traffic; as Hungary is an agricultural country, and the transport of perishable goods an important item, fast goods traffic has been classified with the general tariff. This first column itself includes three

categories indicated by the letters A, B, and C. The second column deals with slow goods traffic rating for consignments of less than 5 tons. It likewise comprises three categories of goods numbered in roman figures from I to III. The third column deals with slow traffic in wagon-load lots. It comprises seventeen classes numbered in arabic figures from 1 to 17, each of which includes three types of consignment indicated by the letters *a*, *b*, and *c*, according as the consignment is of 5 tons, 10 tons, or 15 tons. The nomenclature is very detailed. There is no accelerated fast goods service in Hungary.

In fast goods traffic the schedules applicable to small consignments are applied with a reduction of 20 per cent. to wagons loaded with more than 5 tons. In the case of lots of more than 10 tons, the schedules indicated in the general nomenclature are applied. If they belong to category A, rating I for slow goods traffic is applied; if they belong to category B, rating II for slow goods traffic is applied, and if they belong to category C, rating III for slow goods traffic is applied.

*B. Exceptional tariffs.* The exceptional tariffs are divided into three categories. The first category applies to domestic traffic and only concerns a limited number of classes of goods; there are only four tariffs in this category. The second category which applies to export traffic is the most important. This category includes a nomenclature which refers to the general nomenclature, and as a rule grants reductions in fast goods traffic by placing the goods carried in a lower class. Few of these tariffs grant percentage reductions or include special schedules. It is to be noted that in certain cases, such as group B fast goods traffic, there are two subdivisions called B 1 and B 2. The purpose of these numerous export tariffs is to favour agricultural produce traffic.

The third category concerns temporary exceptional tariffs, generally established for a period of one year.

## JUGOSLAVIA

Despite the variety of gauge and the large number of transshipment operations necessitated thereby, the tariffs on all the Jugoslavian railways are the same.

*A. General tariffs.* The tariffs are divided into three categories according to speed of service: (a) slow goods; (b) fast goods; (c) accelerated fast goods service. A distinction is drawn in each category between small consignments and wagon-load lots. In all cases there is either a general tariff or exceptional tariffs.

The general tariff as applied to small consignments comprises six classes indicated by roman figures numbered from I to VI, the highest class being No. I. In the case of wagon-loads from 5 to 10 tons, there are more than eighty classes numbered in arabic figures, classes 3 and 4 being the highest; there is no class 1 or 2. The rate schedules are established per 100 kg., except in the case of live stock, where the rating is according to floor space. In the nomenclature applying to *slow traffic* the odd numbers apply to consignments of not less than 5 tons, and the even numbers to those of not less than 10 tons. In the case of a few goods the rating is established according to the loading capacity of the wagon. The rate schedules are established according to distance.

There are two schedules: (a) the ordinary schedule applied to domestic traffic and import and export traffic; (b) a special schedule applied to traffic from the Adriatic ports, established with a view to encouraging the use of the Jugoslavian seaports. Under this schedule reductions of as much as 40 per cent. of the ordinary rates may be granted.

In *fast goods traffic* small consignments (less than 5 tons) are carried at the slow traffic rate with a 50 per cent. additional charge; in the case of wagon-load lots, the slow traffic rate with an additional charge of 50 per cent. is applied when the goods transported belong to one of the higher classes (classes 3 to 26); lower grade traffic (classes 27 and above) is rated as slow goods in classes 25 or 26, with an additional charge of 50 per cent.

In *accelerated fast goods traffic* the fast traffic rates are applied with an additional charge of 100 per cent.

*B. Exceptional tariffs.* The number of exceptional tariffs has considerably increased in recent years. They are divided into two categories: (a) permanent exceptional tariffs; (b) temporary exceptional tariffs. The permanent exceptional tariffs comprise three groups, the first applying to domestic and import traffic, the

second to export traffic, and the third to transit traffic. The tariffs of the second group are usually valid for a year.

All these tariffs apply to particular types of goods; they sometimes make a reservation as to the minimum quantity which may be dispatched. They also apply to goods sent in certain directions, either between two specified stations or between two groups of stations. They are paid either at a fixed rate or on a schedule basis.

The temporary exceptional tariffs have the same general characteristics.

### RUMANIA

The Rumanian railway tariffs have been very unstable since the War. In *slow goods traffic* the nomenclature comprises a large number of items and includes four categories of tariffs: (a) the general tariff; (b) the so-called station tariff for certain traffic; (c) the seasonal tariff; (d) the export tariff.

The rates schedule is divided into two parts: the first part (general schedule) is numbered in roman figures from I to XI and differentiates between consignments of less than 5 tons, of between 5 and 10 tons, and of over 10 tons. There are also special rate schedules numbered from 1 to 30 in arabic figures. All these schedules are tapered according to distance and expressed in lei per 100 kg.

The general tariff gives a standard classification. The station tariff comprises about 300 different ratings established on a classification basis. The seasonal tariffs are applied in a very limited number of cases. In export traffic various forms of tariffs are applied, including reductions of the ordinary rate, placing of goods in a lower category, or application of a special schedule. There is also a very limited number of exceptional tariffs.

No fast goods or accelerated fast goods traffic yet exists in Rumania. There is only a parcels service by fast and slow passenger train. Even international traffic dispatched as fast goods or accelerated fast goods is conveyed by this parcels service. This service comprises two categories: (A) foodstuffs; (B) other goods. Two schedules are applied to each category, the first applying to consignments of less than 300 kg. and the second to those of over 300 kg.

## POLAND

*A. General tariffs.* There are fast goods and slow goods tariffs in Poland.

In each case a distinction is drawn between small lots, i.e. less than 5,000 kg., and wagon-load lots, i.e. consignments of more than 5,000 kg.

*Slow goods.* For *small consignments* there are three classes numbered from I to III in roman figures. The nomenclature indicates the class applicable to the goods in question. It should be noted that class I includes four subdivisions according to the weight of the consignment as follows: (a) up to 500 kg.; (b) 500 kg. minimum; (c) 1,000 kg. minimum; (d) 2,000 kg. minimum.

For *wagon-load lots* there are standard classes numbered from 1 to 18 and special classes lettered A, B, and C. Each of these classes includes subdivisions applying to lots of 5,000 kg., 10,000 kg., or 15,000 kg.

In all cases, except class 18, the transport charge is calculated according to weight or, more accurately, per unit of 100 kg.; in class 18 (live stock), weight is not taken into account but the floor space occupied. Class 1 is the highest, and all goods not included in the general nomenclature are rated according to it.

*Fast goods.* A distinction is drawn between fast goods and fast goods at reduced rate. Consignments which can be sent by fast goods at reduced rate are fairly limited in number and are included in a special list. There are two classes of *small consignments*: P. I for fast goods and P. II for fast goods at reduced rate. In the case of *wagon-load lots* a similar distinction is made, the two classes being indicated as P. 1 and P. 2. Each class includes three subdivisions applying to lots of 5,000 kg., 10,000 kg., and 15,000 kg.

*B. Special tariffs.* There are a considerable number of special tariffs in Poland, all of which bear a distinctive letter referring to the corresponding group in the general nomenclature. The special tariffs bear other distinctive signs indicating the class of traffic to which they are applicable. There are three groups, the first applying to domestic traffic and imports and exports by land frontier points, the second to imports and exports by seaports, and the third to imports and exports by river ports.

It should be noted that there are exceptional tariffs of a general nature for transport over short distances (up to 200 km.). This category of tariffs applies to all goods. There are likewise numerous special tariffs for particular goods, various traffic relations, and for traffic going in certain directions.

The tariff schedules are established according to distance but flat rates also exist.

## B. MOTOR TRANSPORT TARIFFS

### U.S.A.

There are no Federal regulations in the United States in regard to motor transport tariffs, although a Bill has been introduced putting common carriers under the control of the Interstate Commerce Commission as far as interstate traffic is concerned. Where any such regulations exist, they are limited to stipulating the filing of rates by common carriers, but publication is not compulsory. Only the large enterprises publish their tariffs.

There has been little attempt to regulate the rates of contract carriers. There is no nomenclature, or where it exists it is incomplete. Existing tariffs do not make any distinction between small consignments and full loads.

Such tariffs offer special advantages to regular consignments or consignments of a certain size. Contract carriers discriminate more between the different classes of traders than do common carriers. Their tariffs are, however, less stable. In the case of certain goods, such as fruit and cotton, seasonal contracts are made which result in a disorganization of the tariffs; special rates are established at harvest time. Generally speaking, the rates for live stock, fruit, and vegetables are higher than the railway rates. For coal and cotton they are not so high.

When motor transport enterprises find that they need no longer fear competition, they do not hesitate to raise their charges.

### GREAT BRITAIN

The Road Traffic Act, 1930, represents the first action taken by the British Government in regard to motor transport rates.



Under § 6 of Article 72 of this Act any person who considers that his interests are threatened by an application for a licence may apply to the local Transport Commissioner for a maximum and minimum fare to be set. In this way the right of the public authorities to intervene in the establishment of minimum tariffs is recognized.

### GERMANY

Regulations have been in force in Germany since the issue of the decrees of October 6th and 9th, 1931. According to Article 9 the licence may contain provisions concerning passenger fares.

In the case of commercial long distance goods transport, i.e. goods motor transport for third parties against payment over distances exceeding 50 km., the Minister of Transport of the Reich fixes uniform charges for the whole of the Reich (Art. 22). These charges have to be calculated in such a way that competition between the railways and motor transport is maintained on an equal footing, and they must not affect the bases of the railway goods tariffs which have been established in the general economic interest.

Before any important changes are introduced, the following bodies have to be consulted: (a) the Reichsbahn; (b) a higher Committee representing motor transport interests; (c) a special Board comprising seven representatives of business appointed by the Minister of Transport (this latter Board has since been abolished).

Transport charges and all alterations in connexion therewith are published by the Minister of Transport. They come into force 15 days after publication unless otherwise decided by the Minister. Transport contractors are not permitted to enter into contracts below the rates established by the Minister (Art. 22 of the decree of October 6th, 1931). The schedule of rates is published in the Bulletin of the Ministry under the title of *Motor Transport Tariff of the Reich for the Carriage of Goods and Live Stock*. The same procedure is followed if subsequent amendments are made in these tariffs.

Transport charges are calculated according to the distance

between the railway station nearest to the places of forwarding and delivery, as set forth in the railway tariff. When there are several stations at the place of forwarding or delivery the higher administrative authority, after consulting the local management of the Reichsbahn and the competent Chamber of Commerce and Industry, assigns districts to the different stations according to the direction followed by the various classes of traffic, and publishes particulars thereof (Additional decree of November 19th, 1931).

The foregoing provisions only apply to *long distance* goods transport as defined above.

### AUSTRIA

Since 1931 passenger and goods tariffs in Austria have been subject to State regulation.

These regulations have been drawn up in considerable detail.

*Passenger tariffs.* Paragraph 12 of the first regulation in execution of the law of 1931 regarding motor transport lines compels the operators of such services to establish tariffs giving all necessary information for the calculation of prices and additional charges. The tariffs must be approved by the authority issuing the concession and must be published in the papers appointed for the publication of official announcements. There is no obligation in Austria to establish maximum or minimum rates.

*Goods tariffs.* The Decree of June 9th, 1933, regulating goods traffic by motor-lorries lays down that every operation of transport beyond the confines of a municipality shall be subject to the observation of minimum rates.

The law stipulates that in general the uniform rates in groschen per kilometre and per 100 kg. shall be as follows:

	Up to 50 km.	Over 50 km. up to 100 km.	Over 100 km.
Goods in complete loads.	3	3	3.5
Other goods (including small lots) . . . . .	6.5	5	4

The law further stipulates the minimum weights chargeable in the case of complete loads.

In traffic relations where transport by motor-lorry causes competition with certain local railways, the highest rate scale is always applied to complete loads for all distances, whereas small consignments pay the normal rate plus an additional charge of 1 S. per 100 kg.

The provisions in regard to tariffs are not, however, applicable to traffic carried by the owner of the lorry for his own purposes.

## 5. PUBLICATION OF TIME-TABLES

The application of time-tables is one of the characteristics of regular transport service operation. Such services having at all times been subject to regulation, the granting of concessions has as a rule been made contingent on the concessionary's undertaking to operate his service according to a fixed time-table. The first transport services to be subjected to the compulsory application of a time-table were the postal services for the conveyance of passengers and mail. At first the application of a time-table was merely an obligation under public law resulting from the terms of the concession contract. Later, however, customers were also granted the right of demanding the application of a time-table, and it was at that time that publication became compulsory.

As the technical conditions of operation make it impossible for an unlimited number of trains to be handled at any one station at the same time, a traffic schedule is called for, and the time-table is nothing more than that plan. It is necessary, however, to differentiate between time-tables established for service purposes and those which must be published and of which the application may be demanded either by the public authorities alone, or by the public authorities and the private persons using or wishing to use the railway. Generally speaking the railways in all countries are obliged to publish passenger traffic time-tables and adhere to them. The sanctions applicable in the event of non-fulfilment of this obligation are the same from the point of view of administra-

tion as those applying to the obligation of the railways to maintain a regular service; from the point of view of the contract they vary according to national legislation. As a rule the railways are not liable in civil law for any delay in the running of their passenger trains. In the case of certain special fast train services, on the other hand, the companies furnish, under the conditions of the transport contract offered to their customers, special guarantees as to regularity of service and undertake to pay compensation in the event of delay.

Up to the advent of the motor-car, the railways were not bound to publish time-tables in respect of goods traffic. Even at the present time, except in certain colonial countries, this obligation is not imposed on them. In several countries the railways themselves have, however, published goods train time-tables. This question is dealt with in the chapter describing the measures taken by the railways to adapt themselves to the situation created by the advent of motor transport.

Regular motor transport services, in so far as they are public and subject to the obligation of holding a concession, have, on the other hand, always been obliged to publish and adhere to time-tables, not only in the case of passenger traffic where publication of a time-table is generally the condition itself of the granting of the concession, but often also in the case of goods traffic in so far as the service in question is a feeder service or has an exclusive monopoly.

For technical reasons, the larger motor transport undertakings usually run according to time-tables, especially in passenger traffic. However, such time-tables are not compulsory since they are not bound by the obligation to operate on a permanent basis, but are published for purposes of publicity with a view to showing the public the regularity of their services.

Almost all countries make a distinction between summer and winter time-tables. Any alteration in a compulsorily published time-table must be approved by the public authorities requiring such publication. Changes of this kind may, however, as a rule be introduced without previous notice.

In many countries the public authorities have made the co-ordination of railway and public motor transport time-tables com-

pulsory. Railways having their own motor transport services in extension of the railway or as feeder services had, however, already in many cases co-ordinated their time-tables in their own interest. It therefore frequently happens, particularly in the case of local railways, that the published time-tables apply both to the railway services and connecting motor transport services.

## 6. LEVIES FOR PURPOSES OF NATIONAL DEFENCE

### *Purpose.*

The political importance of transport in modern countries has incited every State to take some account in its transport policy of considerations of national defence. The extent to which this conception has influenced the policy of governments is obviously dependent upon the geographical situation of the country as well as numerous other factors. The fact that the line followed by the railways and roads is frequently governed by strategic considerations which do not always correspond to the economic interests of the country, represents an indirect charge on transport enterprises. On the other hand, governments have frequently granted facilities of various kinds, particularly to the railways, in compensation of these charges.

### *Nature.*

For the purposes of the present section, levies consist of certain determined services, to be rendered by the transport enterprises for the benefit of the public authorities, in virtue of specific obligations placed upon them. In countries whose administrative law is modelled on French law, these obligations are included in the *Cahier des Charges*. In the countries of central Europe, on the other hand, they are established either in the concession contract or by special laws which were introduced from time to time as the railways came to be operated directly by the State. In the Anglo-Saxon countries also these obligations, where they exist, are imposed on the railways by law.

In practically no country are motor vehicles subjected to obligations of this kind. The military authorities, moreover, usually have their own vehicles.

The levy is generally applied in respect of the following services: transport of soldiers and sailors as well as material intended for their fixed and mobile equipment, or even for their supplies. In certain countries the system of levies is carried so far as to apply to the transport of all persons and material of the Ministries of national defence. A special feature of these levies is that exceptions are frequently made to the general transport prohibitions. Thus, the railways are often obliged to carry explosives or inflammable or otherwise dangerous objects which, according to the general legislation, are excluded from normal transport operations.

Mention must also be made of the obligation to build and maintain certain constructions such as tunnels in such a way as to enable them to be used for purposes of national defence. Another somewhat similar example of this is the increasing use in certain countries of big multiple-axle wagons capable of carrying heavy war material but really employed to their full capacity in ordinary goods service. This is due to State influence, particularly in the case of State-owned and operated railways or railways in which State control is predominant. In a few countries, this obligation is expressly provided for in the *Cahier des Charges*.

The levies for purposes of national defence increase still further in time of war or where a state of siege exists. Levies for national defence, in certain cases, take precedence over all other services and their importance has sometimes become so great that governments have been themselves led to assume the direct operation of the railways in countries where they were privately operated. In certain countries this possibility is provided for by the law.

### *Compensation.*

As a rule, compensation is given, but not always. The amount of compensation need not, moreover, be equivalent to the service rendered. This disproportion between the amount of the levy imposed upon a transport enterprise and the relative smallness

of the compensation arises from the fundamental principle of servitude in public law which is generally considered as the basis of the system of levies. In those countries, particularly the Anglo-Saxon countries, where the principle of servitude is unknown, this disproportion is justified as representing a partial repayment of capital and material facilities granted by the public authorities to the railways and possibly also to the other transport enterprises. In other countries where the operation of regular public transport services is still considered a State privilege, the uncompensated levy or the disproportion between its value and the corresponding compensation is explained by the fact that transport operation is the exercise of a sovereign right. Nevertheless, for fiscal accountancy purposes even those few States which have retained this principle have provided for compensation to be made to the railways, even if only in the form of a book-keeping entry. In those countries, however, the compensation for the levies imposed on the railways should logically be regarded as a subsidy.

The amount of the compensation is always fixed by law. It is peculiar to the system of levies that the compensation is not as a rule established according to the nature of the objects carried. The tendency is rather towards compensation by payment of a lump sum or compensation based on the quantity of objects and number of persons transported. In countries where the railways are operated by private companies, however, general tariffs are applicable with specific reductions established by the law.

## 7. POSTAL LEVIES

### *Origin of postal levies.*

Public transport has always been closely linked with the postal service. Thus, the railways have been employed since the beginning for the conveyance of mail; motor vehicles have likewise been used in connexion with the postal service from the time they could offer some guarantee of regular operation.

### *Conditions of transport.*

(a) *Technical.* The carriage of mail not only calls for absolute

regularity of transport operation, but also special accommodation to allow of its separation from other shipments as well as special protection against outside influences.

(b) *Legal*. As the postal service throughout the world is a State monopoly, it has been necessary to establish, either on a basis of contracts or by law, the conditions under which transport enterprises should carry the mails. The fact that the carriage of mail is as a rule effected by regular transport enterprises, generally common carriers, precludes the conception of total liberty of contract.

The obligation to transport mail is established in all countries in a general and permanent manner, either by law or by the *Cahiers des Charges* or concession contracts. As this permanent obligation takes precedence over all other transport obligations, it has been treated as a levy in the present report.

#### *Purpose of levy.*

The postal levy represents an obligation on the part of transport enterprises to convey mail at fixed hours under the conditions of safety required by the postal administration. The obligation is not always the same for letter post and parcels. In certain countries the railways are bound to convey the mails in special wagons which are the property of the postal administration. In other countries, on the other hand, the railways are compelled to supply wagons offering special conditions of safety. In others again mail may be carried in the ordinary passenger compartments. In every case the obligation to convey mail also includes that of transporting the officials responsible for handling it.

#### *Legal aspect of the levy.*

Like the levy for purposes of national defence, the levy for postal service is considered in many countries as a public servitude. In other countries where the State has assumed actual operation of both the postal and transport services—particularly passenger transport—this levy has been made one of the essential conditions under which transport enterprises may operate their service. In the Anglo-Saxon and certain extra-European countries the levies



imposed on the railways for postal purposes are frequently, however, the counterpart of subsidies or other material facilities which have been granted to them. Moreover, even in the few countries where the obligation of transport enterprises, particularly the railways, to convey mail is governed by a contract with the postal administration, that contract differs from ordinary contracts by reason of its public nature or by the fact that it is subject to official confirmation.

### *Compensation.*

Compensation may or may not be given. In countries where the notion of public servitude or that of government monopoly predominates, there is frequently no compensation in respect of the levy or when any compensation is paid it is not equivalent to the value of the service rendered. On the other hand, in countries where the levy is imposed by virtue of a contract, the principle of compensation in full of the conveyance of mail is generally recognized. Contrary to what takes place under the system of levies for purposes of national defence, however, this remuneration frequently constitutes an indirect subsidy; for that reason the obligation to convey mail may become an advantage.

This is particularly the case where motor transport services are established for the carriage of mail. In view of the need of ensuring the maximum of regularity of such transport services, the enterprises effecting them are frequently granted an exclusive concession in addition to the compensation they receive.

## 8. OTHER LEVIES

(SOCIAL WORKS, HYGIENE, COMMERCE, INDUSTRY,  
AGRICULTURE)

### *Origin.*

In addition to the two preceding categories of levies which have always existed, the development of social policy in the different countries and the general tendency of States to assist certain branches of economy and assume important social obligations

have given rise to further forms of levies which may be grouped under the heading 'Levies of a social nature'. Such levies are more particularly encountered in countries where the State control of transport is especially close. In these countries transport enterprises—particularly the railways—are required to undertake numerous duties which modern States assume, such enterprises being considered as public services.

#### *Nature.*

There is an essential difference between the transport of persons and goods, and special services. The levies which consist of the compulsory conveyance of certain goods are rare and confined to exceptional cases. They are not so much characterized by the obligation to carry (this obligation applies as a rule to all ordinary goods) as by the obligation to transport under special conditions. These conditions may consist of granting preference over all other operations of transport, or of effecting the transport operation at prices below the normal tariffs.

Levies consisting of the obligation to convey certain categories of persons are much more common. Generally speaking, almost all countries compel their railways to transport persons under special conditions. As the obligation to carry in itself arises out of a general principle, the levy consists of a modification of the conditions of transport for the benefit of the public authorities or certain categories of favoured passengers. The first category includes Members of Parliament, officials, prisoners, &c.; the other categories include school-children, students, workmen, &c. In countries where the State exercises a strict control over the railways, the first category generally travel free or, in the case of certain officials, at half fare. In conveyance of students and workmen, and transport operation in connexion with charitable work, the levy tends rather towards the granting of reductions. Social levies often serve the social policy of governments and consist of according special facilities to large families, war wounded, &c.

#### *Compensation.*

In countries where the railways are directly operated by the State, it would obviously be incorrect to speak of levies. In the

other countries, compensation for the levy is dependent upon the extent of the influence exercised on the enterprises by the State. In certain countries, particularly where the railways are operated on commercial lines, all social levies are repaid in full to the enterprises, either directly or in the form of taxation rebates. In other countries, however, the amount of compensation often is not equivalent to the value of the services rendered and represents a heavy charge on the enterprises.

In addition to the levy consisting of the carriage of passengers and goods under special conditions, there are also certain special services consisting more especially of the obligation to place the telegraph and telephone installations belonging to the railways at the disposal of the public authorities.

Motor transport services are rarely subject to any of these levies. The only levies of this kind placed upon them are as a rule the obligation to convey workmen, students, &c. under special conditions, provided such transport is effected on a regular public line (common carrier) operating under a concession with a *de facto* monopoly, or under an exclusive concession.

## CHAPTER II

# TAXATION PAID BY RAILWAYS AND MOTOR TRANSPORT

ONLY the more important and characteristic of the many different taxes paid by the railways and motor transport enterprises are dealt with in the present report.

These taxes do not, however, include State participation in profits, which generally takes one of the following two forms:

(a) *Participation in profits of private enterprises* operating under exclusive concessions. In such cases the right of participation is governed by the agreements entered into by the concessionaries and public authorities, or by the terms of the concession contract. It is generally the counterpart of a State guarantee as to capital remuneration.

(b) *Participation in the profits of enterprises belonging to the public authorities or operated by them.* It is to be noted in this connexion that, apart from their participation proper, the public authorities have always had a tendency to regard transport enterprises, particularly public transport services, as an important source of revenue from a taxation point of view. The regularity with which transport services must be operated, since they are indispensable to the public, has led governments and other public authorities to tax such enterprises more than any other industry.

There is even reason to believe that *certain of the present forms of schedule taxes were first applied to transport*; it was in fact in this field that the first taxes were levied on actual yield. The taxes paid prior to the great industrial revolution of the nineteenth century took the form of apportioned taxation. The only way the different branches of business were taxed was by presumptive assessments or flat-rate levies, by taxes on agriculture and on industry and commerce. Where taxes could be more easily levied, however, as for example in the case of mines in certain countries, a tendency soon developed to tax actual yield as was done in the case of transport. *At all times, and for the same reason, such enterprises have always been subject to dues based on regal rights.*

It may be said that the transport tax originates from the old tolls which are continued even to this day, more particularly in the form of a tax on transport documents. Transport development in the nineteenth century, however, created a tendency to replace the taxation of individual transactions (tolls) by the taxation of a greater number of operations over a given period. Moreover, the obligation of transport enterprises to keep accurate books for their own purposes, facilitated the alteration of taxation assessment.

In brief, there are *two forms of transport taxation*, the first based on the individual operation and the second on actual output. There are numerous variations of both methods. The second method is applied as follows:

- (a) tax on quantitative yield;
- (b) tax on gross or net revenue.

The first method which corresponds with the old tolls is generally applied in the following way:

- (a) tolls paid by the carrier;
- (b) tolls paid by the user.

The latter method is employed in all cases where the carrier has been made 'responsible third party' for collection of the sums due to the Treasury. The growth of transport in the nineteenth century, particularly the railways, made it almost impossible for the Inland Revenue authorities to levy direct tolls on the user, and by force of circumstances they were obliged to use the transport enterprises as intermediaries for their collection. This trend of policy received an impetus, moreover, from the tendency to regard these enterprises as public agents, 'Public Institutions' (*Öffentliche Anstalten*). Since the time when transport development first began, carriers even throughout the continent of Europe (in the Anglo-Saxon countries this method resembles the very general practice of 'collection at the source') have acted as *compulsory intermediaries or unpaid tax collectors of the Treasury* and thereby *inaugurated a fiscal policy* which has gradually been extended, particularly since the War, to so many other branches of economic activity.

Although this tendency had already begun to show itself before the advent of the railways, it was the development of the railways

and their quasi-monopoly of direct transport which led to the adoption of the fiscal methods and two principal forms of taxation mentioned above. The appearance of the motor vehicle and consequent resumption of transport competition created a tendency, particularly in road transport, to return to the old toll system which people thought had been finally abandoned. This evolution is also due to the high capitalization of the large transport enterprises, which has resulted in a relative increase of capital charges. Revenue, on the other hand, has shown a tendency to decrease. In these circumstances the Treasury has considered it advisable in many cases to collect taxes at the source, the incidence of such taxes being based on individual operations of transport. In the case of motor transport, however, the different enterprises have not been employed as intermediaries for the collection of these taxes.

At the present time there are four principal forms of transport taxation as follows:

- (a) taxation of actual output;
- (b) taxation of isolated operations of transport, through the intermediary of a 'responsible third party';
- (c) tolls;
- (d) common law taxation.

The large number of special taxes has resulted in exemption, varying in extent according to countries, being granted to transport enterprises (particularly railways) from certain general taxes.

The fundamental historical distinctions may be seen throughout the various forms taken by taxation in practice, but it would be difficult to bring them out clearly in each specific case. Our purpose is to throw light upon the essential characteristics of the various taxes and of their application to transport, and that necessarily involves a certain amount of generalization while in fact conditions vary from country to country. In the second part of this chapter, this gap is partly filled by examples taken from actual practice in certain countries.

A short description is given below of each of the principal taxes now paid by railways and motor transport in the different countries.

1. *Income Tax.* As this tax only applies to legal entities, it is always a schedule tax. It is generally based on the net profits of the enterprise, which may be calculated in various ways. In view of the wide ramifications of transport enterprise, particularly the railways, the necessity of verifying their net profits has tended to increase State control of their operation.

2. *Tax on capital.* This tax is comparatively rarely applied. Its application to the transport industry, as elsewhere, is not easy owing to the difficulty of determining the exact amount of capital liable to taxation. Moreover, the fact that the general financial organization of transport enterprises constitutes a homogeneous whole, has generally deterred legislators from having recourse to this form of taxation.

3. *Turnover tax.* These taxes are levied more especially upon motor transport and further references will be made to them later. They consist of 'special' surtaxes, including compensation charges for taxation release, a special luxury tax, and taxes to restrict competition.

4. *Land tax.* The land tax is of a twofold nature in its application to transport.

(a) This tax is limited as far as the railways are concerned by the fact that, although their permanent installations are very extended, their actual landed property, particularly on the continent of Europe, is limited in area. Furthermore, according to the legislation of a number of countries, particularly in the case of local railways, movable and immovable property are made legally indivisible for purposes of credit, and this in itself is sufficient logically to exclude the application of the land tax.

(b) In the case of motor transport, its great mobility and limited number of fixed installations render it practically exempt from the land tax.

5. *Tax on industrial and commercial enterprises.* This tax (*Gewerbesteuer* or *Patente*) does not particularly apply to transport enterprises. The concession contract or the agreements entered into by the concessionaries and public authorities generally specify exemption or special treatment in consideration of the payment of certain royalties. This tax, however, affects commercial

motor transport which is to a much greater extent subject to common law, particularly those enterprises not effecting public services.

6. *Transport taxes.* A distinction must be drawn between the taxes actually paid by the carrier and those levied on the user. In both cases, however, the basis of taxation is economically the same. Nevertheless, the tax levied directly on transport enterprises is frequently based on quantitative output expressed in ton-km. or passenger-km., whereas the tax levied on the user is generally a duty paid on the transport document on the basis of the particular transport operation.

These taxes are of very great importance, particularly for the railways. In the case of motor transport they are regularly applied to public passenger services. They have also been levied recently on public goods services.

7. *Special charges.* These are extra charges or temporary charges in addition to the transport taxes.

8. *Licence fees.* These fees apply more particularly to motor vehicles. In certain countries they represent the principal charge levied on motor transport. There are also certain charges for the registration of railway rolling-stock.

Details in regard to motor vehicle licences, which are payable in various forms and at many different rates, will be given farther on in the present report.

9. *Oil and fuel taxes.* These taxes, like licence fees, represent a heavy charge on motor traffic in many countries. They are of special importance in the fuel-producing countries. Importing countries often replace them by customs duties, sometimes combined with a system of taxation relief in favour of users other than the operators of transport enterprises. They are not, however, strictly confined to fuel used by motor vehicles. The methods of collection are also very varied. In this connexion, mention should be made of equalization taxes and charges resulting from compulsory admixture of alcohol. The former are intended to offset, partly or totally, the losses in customs revenue resulting from partial or total extraction of fuel from domestic products or from refining of imported crude oil. The compulsory



admixture of alcohol is either meant to bring revenue to State-monopolized production of alcohol or inspired by reasons of commercial policy with a view to influencing favourably the trade balance and encouraging home trade. The ratio may be as high as 30 per cent.

10. *Tax on pneumatic tyres.* These taxes, which only affect motor transport, do not represent a direct charge on it. They must be regarded rather as charges levied on a certain branch of industry of which the products are actually indispensable to motor transport, and which increase their price.

11. *Driving licence.* In some countries, the obligation to renew drivers' licences annually renders these fees akin to veritable taxes.

12. *Taxes on motor-car sales.* These are special additional taxes on turnover introduced with a view to the establishment of sumptuary taxes. They are on a sliding scale according to the price of vehicles.

13. *Customs duties.* Customs duties on motor vehicles and motor vehicle parts have been highly developed in most countries and usually constitute measures for the protection of the national motor industry. However, they are also levied in countries where there is no motor industry. In such cases, they are a form of taxation of motor transport. Import duties levied on railway material are almost always protective.

14. *Miscellaneous taxes.*

(a) *Tax on petrol stations.* In certain countries there is a tendency to tax petrol and oil stations.

(b) *Rank and parking fees.* The number and amount of these charges are very variable. They are more especially of a local and urban nature. They are not as a rule graded according to the size of vehicles. They may amount to a considerable sum, not only in the case of urban transport but also in regular interurban and regional public services. In certain cases they have been used to prevent the creation of new motor transport routes.

(c) *Tolls.* These charges are generally levied for the utilization of special roads (*autostrade*, &c.). As a rule they are not estab-

lished on a sliding scale according to distance nor according to the weight or horse-power of the vehicle.

### *RAILWAY TAXATION*

#### U.S.A.

A special tax on railway transport was only introduced during the World War.

The railways are subject, without exception, to all the taxes applicable to commercial enterprises.

Being based on property and not on revenue, these taxes are very much in the nature of standing charges. In this connexion it should be noted that they are levied on all railway property, including the permanent way.

The railways are obliged to bear a part of the costs incurred by the elimination of level crossings decided by the public authorities. An inquiry conducted in 1931 showed that the railways' share of these costs was 50 per cent. in thirty States and the District of Columbia and that it varied between 25 and 90 per cent. in the remaining eighteen States according to the location of the level crossing (urban, rural, &c.). Between 1926 and 1932, however, the number of new level crossings constructed (1,675 per year on average) still exceeded the number of those eliminated (1,477 per year). (See table on p. 349.)

*Taxes paid by the railways.* In theory none of these taxes is in the nature of a special tax, the rate and basis being the same as in the case of all other private enterprises.

1. *Federal taxes.* The Federal tax on the income of companies and corporations, the rate of which is given in the accompanying table, represents from 98 to 99 per cent. of the total Federal taxes.

2. *State and local taxes.* About 83 per cent. consist of taxes on property and rolling-stock, about 9 per cent. taxes on net and/or gross income, the remainder being franchise and/or privilege tax and miscellaneous taxes. Study made by the Association of Railway Executives for the years 1930-1.

*Payments in millions of dollars*

<i>Year</i>	<i>Federal taxation</i>	<i>Rate per cent. of Federal income tax</i>	<i>State and local taxation</i>
1923	77.0	12.5	253.9
1924	73.3	12.5	266.0
1925	86.4	13.0	271.1
1926	108.2	13.5	279.2
1927	84.6	13.5	290.5
1928	87.9	12.0	300.2
1929	89.4	11.0	306.1
1930	39.9	12.0	307.8
1931	10.2	12.0	292.7
1932	11.9	13.75 <sup>1</sup>	262.6

<sup>1</sup> Plus 0.75 per cent. in the case of consolidated returns for the parent and subsidiary companies.

*Expenditure incurred through the suppression and protection of level crossings (1st class railways)*

<i>Year</i>	<i>Capital account<sup>1</sup></i>	<i>Operating expenses account<sup>2</sup></i>		<i>Total</i>
	<i>Gross expenditure</i>	<i>Maintenance and Depreciation</i>	<i>Protection</i>	
(in millions of dollars)				
1920	7.9	12.6	26.4	39.0
1921	8.1	10.8	24.8	35.6
1922	9.6	10.8	21.0	31.8
1923	11.8	12.6	21.3	33.9
1924	13.8	12.1	21.6	33.7
1925	17.5	12.6	21.5	34.1
1926	21.4	13.1	21.3	34.4
1927	30.6	12.9	21.3	34.2
1928	27.0	13.2	20.7	33.9
1929	25.7	14.0	20.1	34.1
1930	30.2	12.7	19.5	32.2
1931	19.5	9.7	18.4	28.1
Twelve years	223.1	147.1	257.9	405.0

<sup>1</sup> Bureau of Railway Economics.    <sup>2</sup> Inter-State Commerce Commission.

## GREAT BRITAIN

The railways do not collect taxes from the public on passenger and goods transport.

For a long time a tax was levied on certain classes of passenger transport. In 1928 (the last year in which it was applied) it yielded £372,348. Its suppression under the Finance Act of 1929 compelled the railways to expend on work, with a view to unemployment relief, a sum equivalent to three-quarters of the capitalized value of the economies realized.

*State taxes.* The railways are subject to these taxes in the same way as all other commercial enterprises. They are based on profits.

*Local taxes (rates).* The railways were subject to these taxes up to 1928. They are levied by municipalities and, like the State taxes, are based on profits. In 1928 they amounted to about £6.5 millions in respect of the railways.

From 1929 onwards the railways benefited by a reduction of three-quarters of the local taxes, on condition that the amount thus saved was used for the granting of rebates on the charges applicable to certain traffics of the coal, iron and steel, and agricultural industries. Taxation relief can only make itself felt therefore indirectly, i.e. through an increase of the traffic benefiting from tariff reductions. As regards the remaining quarter of the local taxes still having to be paid, it is to be noted that in many instances these taxes are applied to other enterprises on the basis of their immovable property instead of their profits, which has given rise to the claim that the railways derive an advantage in that respect.

All the roads linking up the railway stations with the public highways were constructed at the expense of the railways; their total length amounts to some 765 miles. Their upkeep, together with that of level crossings, is estimated at £110,000 to £120,000 per year. In the case of level crossings, the railways as a rule contribute towards their suppression up to the amount of the capitalized value of the economies realized by their abolition.

## FRANCE

1. *Fee for registration of the deeds constituting the contract.* The Conventions lay down that registration fees shall be reduced to a

fixed fee. This fee, which was originally established at frs. 3, was later raised to frs. 6 (Art. 28 of the law of June 25th, 1920).

*Stamp duty* on the documentary evidence to be furnished by the contractors with whom the companies had entered into agreements for the carrying out of certain work.

*Stamp duty* on shares and debentures.

2. *Turnover tax.* The turnover tax is not applicable to the railways, by virtue of Art. 60, para. 3, of the law of June 25th, 1920. Nevertheless, when the company transacts business other than that covered by the concession (sale of pillows or bed covers, rent of stands for the sale of books, tobacco, &c.) it is subject to this tax.

3. *Land taxes and licences.* The companies are subject to the *land tax* governed by the laws of March 29th, 1924, and August 3rd, 1926, under Article 63 of the *Cahier des Charges*: 'the amount of the land tax shall be established on the basis of the area of the lands occupied by the railway and its dependencies; the assessment shall be calculated, as in the case of canals, in accordance with the law of April 25th, 1803.'

As regards buildings, Art. 63, para. 2, stipulates that 'the buildings and warehouses connected with the operation of the railway shall be assimilated to the buildings in the locality'.

The tax on buildings does not, however, apply to all the immovable property of the railway; the light equipment belonging to stations, goods sheds, platforms, and the light material employed for loading and unloading are, for example, exempt. On the other hand, the rails, switches, and turn-tables are considered as immovable.

*The licence tax (patente)* is only of a local character. Up to 1917 this tax consisted of a fixed fee of frs. 10 for all double-track lines or portions of double-track lines, and frs. 5 for single lines, and a proportional fee of one-twentieth of the renting value in the case of dwellings and one-fiftieth in the case of industrial establishments fitted with all the material means of production; these fees represented the basic charge to which were added the additional fractional charges levied for the benefit of the State, Departments, and Municipalities. The licence being no longer a State tax, the

basis charge is not now collected. It serves, nevertheless, as basis for the establishment and collection of the departmental and municipal fractional charges.

4. *Taxes on industrial and commercial profits.* The French railways are not liable for this tax because, as all profits are pooled, there are no individual profits in the real sense of the term.

5. *Miscellaneous taxes.* The companies are subject to the cleaning tax in respect of the streets giving access to their buildings. They may also be compelled to pay another similar tax called *taxe de curage*. In Paris they pay for the removal of household refuse from their buildings which are subject to the land tax. They also pay the taxes of syndical associations.

*Tax on the price of transport.* This tax dates from the introduction of the law of March 25th, 1817. It took the place of the 'Ferme Nationale des Messageries' which was abolished in the year VI of the Republican Calendar and applied to one-tenth of the total price. This tax was increased in the course of the nineteenth century. Before 1918 it amounted to 12 per cent. of the approved passenger tariffs. By the law of June 29th, 1918, a tax was introduced of 25 per cent. of the basic tariffs increased by 25 per cent. in the case of passenger tariffs, and of 5 to 10 per cent. of the basic tariffs increased by 25 per cent. in the case of goods tariffs, according to categories of goods. On April 12th, 1922, these percentages were raised to 31·25 per cent. in respect of passenger tariffs and to 6·25 or 12·5 per cent. in respect of goods. They were still further raised by the law of March 22nd, 1924, to 37·5 per cent. for passenger traffic and 7·5 to 15 per cent. for goods traffic. The tax was subsequently reduced to 32·5 per cent. in the case of passengers and 5 to 10 per cent. in the case of goods (law of February 29th, 1928).

The law of July 8th, 1933, however, reduced the rate of the tax of passenger seats and for the conveyance of securities and gold and silver coin and bullion, dogs, and luggage to 12 per cent. (all accessory charges included); the date for putting this reduction into force was fixed as November 1st, 1933, by a decree issued on that day.

6. *Miscellaneous.* The companies also collect the following charges on behalf of the State: stamp duty on receipts, stamp duty on luggage vouchers, stamp duty on parcels-post dispatch notes, stamp duty on receipts of payments, fees for security transfers, and the tax on the revenue accruing from transferable securities.

### BELGIUM

The privileged situation of the Société Nationale des Chemins de Fer Belges created under the law of July 23rd, 1926, by the Government, which conferred on it the right of operating the State railway system, is governed by Article 14 of the above law which runs as follows:

'Art. 14. Are exempt from stamp duty and formality of registration:

- '(1) The constitutive documents of the S.N.C.F.B. and the documents introducing amendments in its by-laws.
- '(2) All other documents relating to the constitution or transformation of the said company or the issue of securities.

'The S.N.C.F.B. shall be assimilated to the State in regard to the application of the laws concerning registration fees, stamp duties, fees for deposit of documents, mortgages and succession, and concerning the taxes assimilated to stamp duty, as well as the other direct and indirect taxes. The Company shall likewise be exempt from all taxes or charges for the benefit of provinces or municipalities.

'Publication in the *Moniteur Belge* and its annexes, of deeds concerning the above Company shall be free.'

*A transport tax* is levied by the railways on behalf of the State. The rate of this tax, which was formerly 0.25 per cent. for all rail transport operations, was raised to 1.25 per cent. by royal decree of August 14th, 1933, applicable to railways other than tramways. Since December 1st, 1933, the S.N.C.F.B. has levied this increase of 1 per cent. in the form of an additional charge on the price of transport.

## SWITZERLAND

The only tax levied on railway transport is the stamp duty of S. frs. 0·10 on consignment notes, of which the estimated yield is S. frs. 2,000,000 per year.

The Federal railways are exempt from all direct and indirect taxation. The private railways, on the other hand, are in principle subject to cantonal and municipal taxes on their property or revenue in the same way as any other private enterprise. There are, however, among the private railways certain enterprises which receive interest and even capital guarantees from the Cantons, and these guarantees involve exoneration from the taxes enumerated above.

## ITALY

A distinction is drawn between the State-owned and the privately owned railways.

*Tax on transport*, levied on users on behalf of the State.

For the transport of passengers, baggage, and goods by fast service, the rate is as follows: 13 per cent. on the State railways; 8 per cent. on privately owned railways. For the transport of merchandise by ordinary (slow) goods service: 2 per cent. on the State railways; 3 per cent. on the privately owned railways.

*Ordinary stamp duty*. The rate is 3 per cent. for the transport of passengers, baggage, and goods by fast service, and 0·80 per cent. for merchandise by slow goods service.

*Extraordinary stamp duty*. This duty applies to every consignment, the rate varying between 0·10 lira for a parcel by fast goods service and 1 lira for a wagon-load by slow goods service.

It should be noted, however, that the various fees and charges are levied at a flat rate on the basis of the tariffs in force before the War.

In addition to these payments there is a fee of 0·05 lira which goes to the war-wounded fund.

*State participation in financial results.*

(a) *State railways*. Any operation surplus of the State railways goes to the Treasury.



(b) *Privately owned railways.* The State participates in the gross receipts in a fixed proportion according to the conditions established by the terms of the concession. When the State grants a subsidy to a privately owned railway, its participation amounts to half the available net profits after allocation of a limited dividend on the authorized capital of the railway.

*Application of taxes and charges levied on all enterprises.* Contrary to what takes place in the case of the State railways, the privately owned railways are subject to these contributions like any other enterprise.

*Amounts of payments made.* See section dealing with Italy in the general part of the Report.

## GERMANY

The railways in Germany are operated under a special régime. Whilst their operation is on the one hand subject to a railway transport tax, they are exempt, on the other hand, from a large part of the principal taxes. This applies particularly in the case of the Reichsbahn, which was granted a special fiscal privilege under the law of March 13th, 1930, at the time of the constitution of the Company. This law exempts the Company from all existing direct taxes and any that may be introduced in the future for which it was not liable at the time of its constitution (February 12th, 1924), whether such direct tax be applicable to its gross or net receipts, its movable or immovable property, or its staff, or is a tax of any other nature emanating from the Reich, the States, municipalities or associations of municipalities, or other public bodies.

### *Reich Taxes*

#### *Taxes on railway transport (law of April 8th, 1917).*

Rate: Passengers	1st class	16 per cent.	Transport operations
	2nd	14	subject to this tax are
	3rd	12	exempt from the turn-
Luggage		12	over tax.
Goods <sup>1</sup>		7	

<sup>1</sup> (except coal and what are termed domestic service transport operations).

*Collection of tax.* The tax is included in the tariffs and the revenue accruing therefrom is paid into the Treasury.

## SWITZERLAND

The only tax levied on railway transport is the stamp duty of S. frs. 0·10 on consignment notes, of which the estimated yield is S. frs. 2,000,000 per year.

The Federal railways are exempt from all direct and indirect taxation. The private railways, on the other hand, are in principle subject to cantonal and municipal taxes on their property or revenue in the same way as any other private enterprise. There are, however, among the private railways certain enterprises which receive interest and even capital guarantees from the Cantons, and these guarantees involve exoneration from the taxes enumerated above.

## ITALY

A distinction is drawn between the State-owned and the privately owned railways.

*Tax on transport*, levied on users on behalf of the State.

For the transport of passengers, baggage, and goods by fast service, the rate is as follows: 13 per cent. on the State railways; 8 per cent. on privately owned railways. For the transport of merchandise by ordinary (slow) goods service: 2 per cent. on the State railways; 3 per cent. on the privately owned railways.

*Ordinary stamp duty*. The rate is 3 per cent. for the transport of passengers, baggage, and goods by fast service, and 0·80 per cent. for merchandise by slow goods service.

*Extraordinary stamp duty*. This duty applies to every consignment, the rate varying between 0·10 lira for a parcel by fast goods service and 1 lira for a wagon-load by slow goods service.

It should be noted, however, that the various fees and charges are levied at a flat rate on the basis of the tariffs in force before the War.

In addition to these payments there is a fee of 0·05 lira which goes to the war-wounded fund.

*State participation in financial results.*

(a) *State railways*. Any operation surplus of the State railways goes to the Treasury.

(b) *Privately owned railways.* The State participates in the gross receipts in a fixed proportion according to the conditions established by the terms of the concession. When the State grants a subsidy to a privately owned railway, its participation amounts to half the available net profits after allocation of a limited dividend on the authorized capital of the railway.

*Application of taxes and charges levied on all enterprises.* Contrary to what takes place in the case of the State railways, the privately owned railways are subject to these contributions like any other enterprise.

*Amounts of payments made.* See section dealing with Italy in the general part of the Report.

## GERMANY

The railways in Germany are operated under a special régime. Whilst their operation is on the one hand subject to a railway transport tax, they are exempt, on the other hand, from a large part of the principal taxes. This applies particularly in the case of the Reichsbahn, which was granted a special fiscal privilege under the law of March 13th, 1930, at the time of the constitution of the Company. This law exempts the Company from all existing direct taxes and any that may be introduced in the future for which it was not liable at the time of its constitution (February 12th, 1924), whether such direct tax be applicable to its gross or net receipts, its movable or immovable property, or its staff, or is a tax of any other nature emanating from the Reich, the States, municipalities or associations of municipalities, or other public bodies.

### *Reich Taxes*

#### *Taxes on railway transport (law of April 8th, 1917).*

Rate: Passengers	1st class	16 per cent.	Transport operations
	2nd "	14 "	subject to this tax are
	3rd "	12 "	exempt from the turn-
Luggage		12 "	over tax.
Goods <sup>1</sup>		7 "	

<sup>1</sup> (except coal and what are termed domestic service transport operations).

*Collection of tax.* The tax is included in the tariffs and the revenue accruing therefrom is paid into the Treasury.

Whilst the Reichsbahn always pays this tax, it is to be noted that the privately owned railways are for the most part exempt from it, either by application of the principle of abatements granted on the grounds of equity or by virtue of the fourth presidential decree of December 8th, 1931, which grants this exemption on condition that the proceeds thereof as well as any other saving realized as a result of the provisions of the said decree (particularly economies in wages) are utilized for the lowering of tariffs.

*Payments to municipalities for administrative purposes.* State-owned enterprises, including the Reichsbahn, are obliged to contribute towards the expenses of those municipalities where more than 5 per cent. of the civil population, including their families, are employed in State-owned factories or works. These payments are a contribution to the additional expenditure incurred by the same municipalities for purposes of general administration, primary schools, social schemes, and work connected with streets. The Reichsbahn is principally affected in this respect in places where there are railway stations and repair shops. The payments made to the Treasury under this head in 1932 amounted to 5 million RM.

*Exemption of Reichsbahn.* The Reichsbahn is liable neither for the company income tax nor for the tax on property (capital).

*Taxes levied by 'Countries' (Federal States) and municipal taxes.* The Reichsbahn is exempt from the *land tax* in so far as it is a State tax. It is, however, liable for the additional fractional charges levied by the municipalities, in accordance with the authority granted to them by the legislation of the different 'countries'. These taxes are only levied on the lands and buildings to which they already applied on February 12th, 1924.

The private railways are granted similar exemption, the permanent way in general having been declared exempt from the land tax.

The Reichsbahn is likewise exempt from the *licence tax* which the private railways still continue to pay. At the present time this tax is divided into two schedules: the tax on commercial or professional profits and the tax on working capital (*Betriebsvermögen*). The municipalities, which have the right to levy additional charges,

may replace the latter schedule by a tax on the total amount of wages paid.

Generally speaking, the company income tax (20 per cent.) and the licence tax amount to 30 per cent. of revenue.

<i>Transport taxes paid by the Reichsbahn</i>				
1929	1930	1931	1932	1933
		(in millions of RM.)		
325	289	236	180	177 <sup>1</sup>

<sup>1</sup> Provisional figure.

The figure for 1931 is made up of 121 million for passenger traffic and 115 million for goods traffic.

In order to arrive at the exact amount of the sums paid specifically under this head, it would be necessary to deduct the total of the turnover tax which is replaced by the transport tax and which was 0.85 per cent. up to 1931, 1.35 per cent. for a part of 1931, and 2 per cent. after 1932.

## CZECHOSLOVAKIA

### (STATE RAILWAYS)

#### *Transport tax.*

(a) *General tax.* This tax is collected on behalf of the State which refunds a part of it to the railway administration. This refund was originally 25 per cent. and later 40 per cent.; since 1931 it has been fixed as a lump sum payment of 400 million Kč.

#### *Rate:*

Passengers . . . .	20 per cent. of the price of transport
Goods . . . . .	15 " " " "

(b) *Special tax.* This tax amounts to 10 per cent. of the price of passenger transport and is paid into the State old-age pensions fund.

The State railway administration is not subject to any direct or indirect taxation, as the capital of the railway belongs to the State, which receives the net proceeds accruing from its operation.

## TAXATION PAID BY

*Receipts from taxes paid by users*

	1925	1926	1927	1928	1929	1930	1931
	(in millions of Kč.)						
Payments under (a)	708·3	643·57	715·53	749·78	765·61	670·44	
Refund	..	..	143·10	149·95	191·40	337·50	400
Net income under (a)	..	..	572·43	599·83	574·21	332·94	
Income under (b)	100	99·12	90·89	82·97	79·48	98·55	
Total payments by users	..	..	663·32	682·80	653·69	431·49	..

*MOTOR TRANSPORT TAXATION*

## UNITED STATES OF AMERICA

## A. FEDERAL TAXES

In 1932 the Federal Government introduced a petrol tax (in addition to State petrol taxes) of 1 cent per gallon which was raised to 1·5 cents in 1933, as well as a tax of 4 cents per gallon on lubricating oils and a tax on pipe-lines.

Certain 'emergency' taxation measures were also adopted, comprising an excise tax of 3 per cent. on the price of new motor-cars and motor-buses, and 2 per cent. on motor-lorries (tractors excepted), 2·25 cents per pound on the outer covers of pneumatic tyres and 4 cents per pound on inner tubes.

During the fiscal year 1932-3 these different taxes brought in a revenue of \$173,967,000, of which \$124,929,412 came from the petrol tax.

## B. STATE TAXES

(1) *General taxes.* The general taxes paid by motor vehicles are in the form of a property tax.

In January 1931, only fourteen States out of forty-eight exempted motor vehicles from the personal property tax. According

to estimates the amount of personal property taxes paid by motor-cars in 1932 was \$130,000,000.

(2) *Special taxes.* These taxes consist of the registration or annual licence fee and the petrol tax.

These two principal taxes have developed in an entirely different manner. While the *licence* or *registration fee*, i.e. the permit to use the roads (dating from the time when the number of vehicles had become sufficiently great to justify administrative control), was gradually transformed from an ordinary administrative fee into a regular tax of which the rate has been modified from time to time, the general adoption of the *petrol tax*, introduced for the first time in 1919 in four States (1 cent per gallon in most cases), has been very rapid.

Introduction of petrol tax:

1919	.	.	.	.	4 States
1921	.	.	.	.	11 "
1922	.	.	.	.	4 "
1923	.	.	.	.	16 "
1924	.	.	.	.	1 "
1925	.	.	.	.	9 "
1927	.	.	.	.	2 "
1929	.	.	.	.	2 "

i.e. all the forty-eight States and the District of Columbia. Missouri and Columbia alone have maintained the initial rate. All the other States have modified it—three times in most cases and as much as five times in three States. The average rose in 1932 to about 4 cents, as follows:

7 cents	.	.	.	.	2 States
6 "	.	.	.	.	6 "
5 "	.	.	.	.	8 "
4 "	.	.	.	.	17 "
3 "	.	.	.	.	12 "
2 "	.	.	.	.	4 "

The *licence fee* mentioned above has been established in a great many different ways since the various States abandoned the flat-rate registration fee which was generally applied up to 1914. The following summary shows the wide variety of taxation bases on January 1st, 1933:

*Private vehicles*

(a) *Private cars.* Three States and the District of Columbia have maintained or reintroduced a flat-rate fee of \$1 to \$3.50. Twelve States establish the rate on a sliding scale according to horse-power. Thirteen States base the fee on the net weight. Six States take the gross weight as basis, allowing a given weight per passenger. Three States use a combined system of calculation based on net weight and horse-power. Two States take the gross weight and horse-power as basis. Four States calculate according to the net weight and the number of times registered.

Each of the following systems is used in one State only:

Flat rate and gross weight.

Value of vehicle.

Value and net weight.

Cubic capacity.

List price of maker and number of times registered.

(b) *Trucks.* Eight States establish the rate on a sliding scale according to loading capacity; seven States according to gross weight; four States according to net weight; three States according to capacity and number of times registered (replaced in one State by a toll calculated in mills (thousandths of dollars) per mile run over 6,000 miles); twenty-one States take into account the 'type of tyre' combined with other factors as follows:

11 States	.	.	.	Type of tyre and loading capacity;
3 "	.	.	.	" " and gross weight;
1 State	.	.	.	" " and net weight;
2 States	.	.	.	" " and net weight plus an additional fixed fee;
1 State	.	.	.	" " and weight of chassis and loading capacity;
1 "	.	.	.	" " and horse-power and loading capacity;
1 "	.	.	.	" " and gross weight and number of wheels;
1 "	.	.	.	" " and weight of chassis and number of wheels.

Each of the following systems is used in one State only:

Value of vehicle and load capacity.

Net weight and number of times registered.



Capacity and horse-power.

Capacity and fixed fee.

Weight of chassis.

The District of Columbia alone applies a flat rate as in the case of touring cars.

For *vehicles* used for *hire purposes* (common and contract carriers) the following factors are taken into account in addition to or in replacement of those indicated above: Motor-buses: number of seats, gross receipts, distance covered or output in passenger-miles or ton-miles. Trucks: gross receipts and distance covered or output in ton-miles.

*This very great diversity* in the different bases of taxation gives rise to considerable variations in the maximum and minimum averages levied, in relation to the general average for the forty-eight States. Figures combining all types of registered vehicles are as follows:

	1929	1930	1931
Minimum	\$ 5.31	\$ 4.83 (California)	\$ 4.78 (California)
Maximum	\$28.42	\$38.15 (Oregon)	\$28.08 (Vermont)
Average	\$13.18	\$13.41	\$13.34

The average per vehicle accruing from the *petrol tax* is as follows:

	1929	1930	1931
Minimum	\$ 9.43	\$10.63 (Wisconsin)	\$11.87 (North Dakota)
Maximum	\$35.35	\$41.56 (Florida)	\$46.46 (Florida)
Average	\$16.69	\$18.62	\$20.83

The combined average figure for the two taxes has been estimated by the National Automobile Chamber of Commerce of the United States at \$34.10 in 1931 against \$21.60 in 1926 and \$12.21 in 1921.

According to calculations made by Mr. J. E. Walker, *Highway Tax Costs* (1931 edition), edited by the National Automobile Chamber of Commerce, figures in respect of special taxation in 1930 were as follows:

## TAXATION PAID BY

Private touring cars . . . . .	\$ 25.52
Average for all trucks . . . . .	\$ 53.78
i.e. double the figure for private touring cars	
3-ton trucks used by common carriers . . . . .	\$458.78
i.e. 18 times the figure for private touring cars	
Motor-buses (common carriers) . . . . .	\$573.00
i.e. 22½ times the figure for private touring cars	

It should be noted, however, that 85.8 per cent. of the trucks are privately owned and operated.

The fees for vehicles engaged in the business of transportation frequently include additional elements reflecting the earning capacity of the vehicle as well as an additional flat rate for the privilege of doing business.

All motor vehicles must be registered in the State where their owner is domiciled, except in the case of commercial vehicles operated by a subsidiary branch office or factory of a company of which the registered offices are situated in another State. In such cases the vehicles have to be registered in the State where the branch office or factory is located.

Practices vary greatly as to the extent to which commercial vehicles operated regularly or frequently in more than one State are required to be registered in the various States, but proposals are now being made for States to enter into reciprocal agreements for issuance of special licences to cover States other than the home State at equitable rates according to the conditions of operation.

(c) *County and municipal taxes.* The total of the various municipal taxes levied on motor-cars has been estimated at \$40,000,000. The counties are authorized to levy additional fractional charges on registration fees, established on a sliding scale for each year from the time the vehicle is taken into use and expressed as a rule as a fixed percentage of a decreasing percentage of the price of the vehicle.

The following figures published by the Bureau of Public Roads of the United States Department of Agriculture compare the revenue accruing from users (licence fees and petrol tax) and the total revenue for the years 1921 to 1932:

	State roads		County and Municipal roads		All roads <sup>1</sup>	
	Total	Users	Total	Users	Total	Users
	(In millions of dollars)					
1921	405.9	103.6	623.9	19.0	993.9	122.6
1922	504.7	113.1	560.0 <sup>2</sup>	33.0 <sup>2</sup>	949.9	146.1
1923	467.5	162.9	571.1	39.8	971.9	202.8
1924	555.4	222.6	602.3	43.8	1069.7	266.4
1925	664.4	289.1	683.0	71.4	1245.2	360.5
1926	673.2	358.8	775.4	77.6	1348.7	436.4
1927	733.8	416.7	840.6	87.1	1452.6	503.8
1928	849.3	493.3	835.3	104.2	1566.9	597.5
1929	961.8	565.3	790.1	122.4	1646.0	687.7
1930	1136.7	700.9	818.4	162.0	1860.7	862.9 <sup>3</sup>
1931	1092.6	639.6	808.1 <sup>2</sup>	160.1 <sup>2</sup>	1819.6	799.7
1932	898.3	574.7		no information		

<sup>1</sup> In the compilation of this column, account has been taken of the sums transferred by States to the local authorities and vice versa, and which already figure in the revenue of both groups. This method conforms to that followed by the Bureau of Public Roads.

<sup>2</sup> Estimate.

<sup>3</sup> Including \$17.9 millions of petrol tax revenue collected in 1927 and 1929 and not credited in those years.

## GREAT BRITAIN

Motor taxation in Great Britain has always taken *two forms*:  
 (a) the *licence fee*, i.e. the annual registration fee of vehicles in use;  
 (b) the *petrol tax*.

Following the introduction of motor transport, the Development and Road Improvement Funds Act, 1909, instituted a tax which was in reality no more than an extension of the existing tax on horse-drawn pleasure vehicles (Carriage Licence Duty) and a petrol tax of 3d. per gallon was introduced in the Finance Act of the same year. The first of these two taxes varied from £2 2s. od. in the case of a car of 6½ h.p. to £42 for cars of over 60 h.p. The formula<sup>1</sup> for calculating horse-power was prepared

$$^1 P = \frac{id^2}{2.5} \quad (i = \text{number of cylinders, } d = \text{cylinder bore in inches}).$$

by the Royal Automobile Club. Vehicles used for commercial purposes were, however, exempt from this tax and only paid a single flat-rate registration fee of £1 at the time the vehicle was taken into use. A rebate of 1½*d.* (50 per cent.) was likewise granted on petrol used for commercial purposes. This system remained in force until 1919, except for the War surtax on all petrol.

These provisions were repealed in the Finance Act, 1920, and all mechanically propelled vehicles using the roads were obliged to pay the licence fee. Motor vehicles were at first divided into six classes, as follows:

Motor-cycles.

Vehicles used for invalids.

Hire vehicles for the transport of persons (hackney carriages).

Special motor vehicles, particularly those used for agricultural purposes.

Vehicles for the transport of goods.

Other vehicles.

This classification, which was changed in 1928 and 1933, now indicates the different types of vehicle and the taxation rates applicable to them in greater detail than is to be found in other countries.

The different bases of taxation are as follows:

Weight of unladen vehicle (for lorries, tractors, &c., and for motor-cycles up to 1933).

Seating capacity in the case of hackney carriages.

Horse-power in the case of other vehicles, i.e. private cars (since January 1st, 1934, motor-cycles have been assessed according to cubic capacity).

An annual fixed fee is only paid in the case of vehicles for the use of invalids, of tramways, of special vehicles carrying no payload other than their own accessories or fuel, and of mechanically propelled agricultural engines.

The following vehicles only are exempt from all taxation: fire-engines, other vehicles used in the service of the fire brigade, ambulances, motor road-rollers, and vehicles belonging to the Government.

The Finance Act, 1928, had already instituted special reduced

schedules applicable to vehicles fitted with pneumatic tyres, whilst other amendments introduced by this same law provided for the extension of the taxation schedules applicable to motor-buses and lorries and changed the rates thereof. It is to be noted, however, that while the tax on motor-buses has been unlimited in theory since 1928, a fixed rate being levied for each seat in excess of 64 (last scale of the schedule), the maximum rate of tax paid by non-special lorries was that applied to vehicles of more than 5 tons. It was not until 1933 when the whole system was recast that this maximum rate was abolished.

The principal elements of this *recasting* are as follows:

*Lorries:*

(a) The rates for heavy vehicles were increased.

(b) Special schedules were introduced for vehicles using a fuel other than petrol (except in the case of agricultural vehicles and special vehicles of travelling showmen).<sup>1</sup>

(c) Instead of granting a rebate of 20 per cent. in the case of vehicles fitted with pneumatic tyres, the new rates assume that such tyres are used, an additional charge equivalent to the former rebate being levied on all other types of tyre. Agricultural vehicles weighing up to 4 tons are granted lower rates than before. On the other hand, the rate increases more rapidly in the case of vehicles weighing more than 4 tons. Special vehicles of travelling showmen, weighing up to 2.5 tons, are granted a similar reduction. Trailers, which up to that time had only paid a flat-rate fee, are divided into three classes: (1) up to 2.5 tons; (2) 2.5 tons to 4 tons; (3) over 4 tons, the rates being increased by 55 per cent., 150 per cent., and 235 per cent. respectively.

Special schedules were also established according to the means of propulsion.

Under these schedules, hackney carriages are divided into two classes: (a) where the means of propulsion is by steam, electricity, coal-gas, or light oils; (b) where the means of propulsion does not come within any of the categories given above, i.e. heavy oil, generator gas, &c. The progression of the rate is considerably

<sup>1</sup> A special system had been applied to electrically driven lorries since 1920.

more marked in respect of the second class and amounts, in the last section, to a comparative increase of 70 per cent.

In the case of lorries proper, excluding agricultural vehicles and those belonging to travelling showmen, where a distinction was formerly made between 'electrically driven vehicles' and 'other vehicles', new schedules have been applied to vehicles driven by steam or coal-gas, those using any fuel other than petrol, and other vehicles, i.e. those using generator gas or heavy oil.

As in the case of hackney carriages the progression of the rate is considerably more marked in respect of the latter class, and amounts in the case of a lorry weighing 9 to 10 tons to a comparative increase of 36 per cent.

The petrol tax (except the temporary War surtax), mentioned above, remained in force until 1920. It was reintroduced in 1928, being fixed at 4*d.* per gallon, but without the rebate formerly granted to commercial vehicles. It was, however, restricted to 'light oils', i.e. it was not applied to heavy oils used in 'Diesel' engines. This rate remained in force from April 25th, 1928, until April 27th, 1931, when it was raised to 6*d.* Shortly afterwards (September 10th, 1931) the rate was still further raised to 8*d.* per gallon, and finally, on April 25th, 1933, a tax of 1*d.* per gallon was imposed on heavy oils at the time of the recasting of the licence fee mentioned above.

Lastly, there is the fee payable on the issue of the driving licence, which has to be renewed every year.

*Revenue from special taxes paid by motor vehicles<sup>1</sup>*

<i>Year</i>	<i>Licence fee</i>	<i>Driving licence<sup>2</sup></i>	<i>Petrol taxes and dues<sup>3</sup></i>	<i>Total</i>
1928	£22,924,518	£689,509	£12,983,000	£36,597,027
1929	23,669,511	718,419	15,043,000	39,430,930
1930	25,154,511	743,912	15,908,000	41,806,423
1931	25,771,328	724,392	29,276,000	55,771,720

(Source: Road Fund Statistics.)

<sup>1</sup> Excluding: taxes on motor-cycles, agricultural machines, and tramways.

<sup>2</sup> Includes all vehicles.

<sup>3</sup> Taxes and dues on petrol consumed by all types of road vehicle.

*Principal schedules of motor taxation:**Private cars: £1 per h.p., with minimum of £6.**Hackney carriages:*

Vehicles	Driven by steam or electricity, or constructed or adapted to consume coal-gas or only capable of consuming light oils		Not subject to the charges shown in the left-hand column	
	Fitted with pneumatic tyres	Other vehicles	Fitted with pneumatic tyres	Other vehicles
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Up to 4 seats	10 0 0	10 0 0	10 0 0	10 0 0
4 „ 8 „	12 0 0	12 0 0	12 0 0	12 0 0
8 „ 14 „	24 0 0	30 0 0	32 0 0	40 0 0
14 „ 20 „	36 0 0	45 0 0	48 0 0	60 0 0
20 „ 26 „	48 0 0	60 0 0	68 0 0	85 0 0
26 „ 32 „	57 12 0	72 0 0	88 0 0	110 0 0
32 „ 40 „	67 4 0	84 0 0	108 0 0	135 0 0
40 „ 48 „	76 16 0	96 0 0	128 0 0	160 0 0
48 „ 56 „	86 8 0	108 0 0	148 0 0	185 0 0
56 „ 64 „	96 0 0	120 0 0	164 0 0	205 0 0
more than 64 seats, per additional seat	1 4 0	1 10 0	2 0 0	2 10 0

*Lorries (net weight unladen):*

	Electric	Steam or coal-gas	Petrol (light-oils)	Others
	£	£	£	£
Up to 12 cwt.	10	..	10	..
From 12 cwt. to 1 ton	15	..	15	..
„ 1 ton to 1.5 tons	..	..	20	..
„ 1.5 tons 2 „	20	25	25	..
„ 2 „ 2.5 „	25	30	30	35
„ 2.5 „ 3 „	30	35	35	45
„ 3 „ 4 „	35	50	50	65
„ 4 „ 5 „	40	70	..	90
„ 5 „ 6 „	45	90	..	120
„ 6 „ 7 „	..	..	..	150
Every ton above 6 „	10	15	..	..
„ „ 4 „	..	..	20	..
„ „ 7 „	..	..	..	25

Additional charge paid by vehicles not fitted with pneumatic tyres: up to 2 tons, nil; other categories, one-third.

Supplement payable when a trailer is used:

in the case of lorries up to 2·5 tons . . . . .	£10;
from 2·5 tons to 4 tons . . . . .	£15;
exceeding 4 tons . . . . .	£20.

N.B. Semi-trailers are taxed by adding their weight to the taxable weight of the traction vehicle.

## FRANCE

*Motor vehicle taxation* in France was dealt with in a series of detailed regulations under the budget law of April 8th, 1910. There were five scales of taxation according to the size of the Commune in which the taxpayer was resident. The tax consisted, first, of a fixed payment according to seating capacity varying, in the case of vehicles up to 12 h.p., between frs. 20 and frs. 50 (pre-war) for those having not more than two seats, and between frs. 40 and frs. 90 for vehicles having more than two seats, and secondly of a *pro rata* tax of frs. 5 per h.p. In the case of vehicles of over 12 h.p., the fixed payments under the first schedule were slightly higher and those of the horse-power schedule on a progressive scale, varying between frs. 7 and frs. 15 per h.p. The licence fee was recast after the War, and on January 1st, 1921, included a scale of rates established according to horse-power, varying between frs. 100 and frs. 500, 60 h.p. being taken as the maximum. The licence fee was again changed later, the new rates being as follows:

(a) Motor vehicles for the transport of *passengers or goods*:

Up to 5 h.p. <sup>1</sup> . . . . .	frs. 72 per h.p. (minimum fee—frs. 360)
From 5 to 10 h.p. . . . .	90 "
From 10 to 20 h.p. . . . .	108 "
From 20 to 30 h.p. . . . .	126 "
Over 30 h.p. . . . .	144 "
(b) Cycle-cars . . . . .	60 "
(c) Motor-cycles . . . . .	30 "

<sup>1</sup> Formula:  $P = KnD^2LV$  ( $P$  = h.p. for fiscal purposes;  $n$  = number of cylinders;  $D$  = cylinder bore in cm.;  $L$  = stroke in cm.;  $V$  =



The tax was reduced by half in the case of motor vehicles driven by gas generators or methyl alcohol and vehicles which were more than nine years old. In 1933 it was increased by 50 per cent. in respect of vehicles belonging to persons possessing more than two vehicles and used by their owners for the transport of goods for their own account. Exemption was granted to agricultural tractors, other mechanically propelled agricultural engines, &c.

One-tenth of the sums obtained are allotted to the Departments for the upkeep of their roads. The Departments and Communes also have the right to levy surtaxes within the limit of 8½ and 17 per cent. of the State tax. The revenue from this tax has been as follows:

	1928	1929	1930	1931
State Taxes	762,431,000	891,245,000	1,201,000,000	1,084,000,000
Departmental Taxes	..	..	103,000,000	44,749,000
Communal Taxes	..	..		76,458,000
				121,207,000

The law of December 23rd, 1933, abolished the State tax and replaced it by a surtax of frs. 50 per hectolitre on all liquid fuel.<sup>1</sup> The new tax came into force on February 1st, 1934.

The *taxation of petrol* in France is extremely varied. Up to the time of the introduction of the surtax just mentioned, it was as follows (estimate made by the motor industry):

	<i>Frs. per hectolitre</i>
1. Customs duty . . . . .	47
2. Inland Revenue duty . . . . .	15

revs. expressed in revs. per second;  $K$  = variable coefficient: 1 cylinder, 0.00020; 2 cylinders, 0.00017; 4 cylinders, 0.00015; more than 4 cylinders, 0.00013).

<sup>1</sup> A fuel mixture containing up to 30 per cent. of alcohol is, however, only subject to half this surtax, i.e. frs. 25 per hectolitre, on condition that such fuel is employed exclusively for driving the motors of agricultural engines, &c., public transport vehicles (including taxis), and vehicles of the departmental and municipal public services.

*Frs. per hectolitre*

3. Surtax (law of Dec. 30, 1928)	} for upkeep and improvement of roads . . .	2
4. „ (law of Mar. 31, 1931)		
5. „ (law of budget 1933)	. . . . .	5
6. Equalization surtax	. . . . .	10.40
7. Tax for National Office of Liquid Fuels	. . . . .	0.73
8. Flat-rate tax of 8 per cent. replacing the 2 per cent. import tax and subsequent turnover taxes (about frs. 9.56).		
9. Miscellaneous fees and charges (about frs. 0.41).		
10. Charges arising from the obligation to stock 25 per cent. of the quantities imported (about frs. 3.20).		

No. 6 is the tax created at the time when legislation was introduced for subsidizing industrial alcohol producers, with a view to lowering the price of alcohol used in petrol-alcohol mixture. It was frs. 5 at first, but the subsequent increase in the cost price of this petrol mixture compelled importers to increase the sales price, not only by these frs. 5 but by a further frs. 5.40, thus bringing the increase to frs. 10.40, which rate was confirmed by the law of July 4th, 1931.

The finance law of 1933 introduced a tax on gas oil of frs. 36 per quintal, applicable to motor transport.

The yield of the duties and taxes levied on mineral oil fuel in recent years has been as follows:

<i>Year</i>	<i>Customs duty collected</i>	<i>Inland Revenue duty</i>	<i>Surtax for road upkeep and improvement</i>	<i>Equalization tax</i>
	(000's omitted)			
1928	824,449	568,532	..	112,305
1929	1,147,584	501,352	230,186	130,310
1930	1,211,468	553,559	262,147	141,175
1931	1,387,439	600,425	341,951	170,000

The total has been reduced by 15/100ths (figure given by the Ministry of Finance) having regard to the fact that all imported fuels are not used by motor vehicles.

Lubricating oils are subject to the following special taxation:

Customs duty . . . . .	frs. 77 per quintal
Inland Revenue duty . . . . .	„ 18 „
N.O.L.F. tax . . . . .	„ 1 „

To the above taxes must be added the following charges:

*Increased tax on turnover (luxury tax).* Instead of being established at the ordinary rate of 2 per cent. this tax is fixed at 6 per cent. (prior to 1930 it was 12 per cent.) for vehicles for the conveyance of persons and 3 per cent. (6 per cent.) for vehicles used for the transport of persons and goods.

The yield of this tax after deducting the first 2 per cent. levied on all commercial operations has been as follows:

1928 . . . . .	frs. 160 millions
1929 . . . . .	„ 400 „
1930 . . . . .	„ 340 „
1931 . . . . .	„ 328 „

*Taxes on driving licences, duplicates, registration certificates, and international permits* were as follows:

1928 . . . . .	frs. 25 millions
1929 . . . . .	„ 25 „
1930 . . . . .	„ 25 „
1931 . . . . .	„ 30 „

*Installation fees* (Municipalities have been authorized to make additional charges independent of the State taxes for the issue of permits to petrol-filling stations. In the case of stations on the national and departmental highways the rate varies, according to the size of the town, between frs. 100 and 400 per year).

1928-9 . . . . .	exact figure unknown; in the neighbourhood of frs. 90 millions
1930 . . . . .	„ 105 „
1931 . . . . .	„ 115 „

The principle of taxing all motor vehicles alike according to horse-power, whether they are used for the conveyance of passengers or goods, which compels (particularly on account of Factor V of the fiscal h.p. formula which takes account of low speed engines) 5- and 7-seater touring cars and 20-seater motor-buses with the same engine, or even 2½-ton lorries, to pay the same

registration fee, remained in force up to 1933. Two further taxes taking into account the factors determining the definition of commercial vehicles were introduced by the laws of February 28th and May 31st, 1933:

*Tax according to weight:*

Motor vehicles or trailers of which the total weight under normal running conditions is

between 5,000 and 7,000 kg. . . . .	frs.	400 per year
„ 7,000 and 10,000 kg. . . . .	„	600 „
„ 10,000 and 13,000 kg. . . . .	„	900 „
exceeding 13,000 kg. . . . .	„	1,200 „

All vehicles are considered separately, except semi-trailers which are regarded as part of their tractor and are exempt from the trailer registration fee mentioned below.

*Tax according to road space occupied:*

vehicles measuring 10 to 15 sq. m. . . . .	}	frs.	600
or the width of which exceeds 2 m. . . . .			
vehicles measuring 15 to 20 sq. m. . . . .		„	800
vehicles measuring more than 20 sq. m. . . . .		„	1,000

*Registration fee paid by trailers:*

less than 500 kg. . . . .	frs.	100
500 to 2,000 kg. . . . .	„	200
exceeding 2,000 kg. . . . .	„	400

*Turnover tax* (2 per cent.) is applied to motor transport under the budget law of 1933.

## BELGIUM

In the years following the War, the *registration fee system* was developed with a view to distributing equally the burden of taxation among the different categories of vehicles. It was not until 1933 that a series of measures were applied, the evident purpose of which was to assist the railways by taxing motor transport.

In 1921, for instance, motor vehicles of all categories were taxed exclusively on horse-power, a considerable reduction being

allowed in the case of vehicles carrying goods or belonging to the medical corps (frs. 3 and frs. 6 respectively instead of the normal rate of frs. 12 per h.p.). By the law of December 3rd, 1925, however, an annual tax called the *taxe de roulage* was instituted. The following table shows the extent of its development on January 1st, 1933:

(a) *Private cars*

	<i>Basic rate</i>	<i>Fractional surcharges</i>	<i>Amount payable</i>
1. H.p. schedule:			
for first 24 h.p.	frs. 40 per h.p.	25 per cent.	frs. 50 per h.p.
each additional h.p.	„ 60 per h.p.	25 „	„ 75 per h.p.
2. Value schedule:			
frs. 40,000—60,000	„ 250	25 „	„ 312.50
„ 60,000—80,000	„ 400	25 „	„ 500.00
„ 80,000—100,000	„ 600	25 „	„ 750.00
„ 100,000—125,000	„ 800	25 „	„ 1,000.00
„ 125,000—150,000	„ 1,000	25 „	„ 1,250.00
„ 150,000—200,000	„ 1,500	25 „	„ 1,875.00
„ over 200,000	„ 2,000	25 „	„ 2,500.00

(b) *Hire cars*

	<i>Basic rate</i>	<i>Fractional surcharges</i>	<i>Amount payable</i>
1. H.p. schedule:			
for first 24 h.p.	frs. 24 per h.p. <sup>1</sup>	60 per cent. <sup>1</sup>	frs. 38.40 per h.p.
each additional h.p.	„ 36 per h.p. <sup>1</sup>	60 „ <sup>1</sup>	„ 57.60 per h.p.
2. Value schedule: same rate as under (a) 2.			

<sup>1</sup> From April 1st, 1932, to December 31st, 1932, only 10 per cent.

(c) *Vans and light lorries* (weighing less than 2,000 kg.)

1. Horse-power schedule: same rate as under (b) 1.
2. Value schedule: nil.

(d) *Light motor-buses and charabancs* (weighing less than 2,000 kg.)

	<i>Basic rate</i>	<i>Fractional surcharges</i>	<i>Amount payable</i>
1. H.p. schedule:			
for first 24 h.p.	frs. 24 per h.p.	100 per cent.	frs. 48 per h.p.
each additional h.p.	„ 36 „	100 „	„ 72 „
2. Value schedule:			
frs. 40,000—60,000	„ 250	100 „	„ 500
„ 60,000—80,000	„ 400	100 „	„ 800
„ 80,000—100,000	„ 600	100 „	„ 1,200
„ 100,000—125,000	„ 800	100 „	„ 1,600
„ 125,000—150,000	„ 1,000	100 „	„ 2,000
„ 150,000—200,000	„ 1,500	100 „	„ 3,000
„ over 200,000	„ 2,000	100 „	„ 4,000

(e) *Heavy lorries* (weighing over 2,000 kg.)

	<i>Basic rate</i>	<i>Fractional surcharges</i>	<i>Amount payable</i>
		per cent.	
1. Weight schedule:			
type of tyres:			
pneumatic	frs. 30 per 100 kg.	100 <sup>1</sup>	frs. 60 per 100 kg.
cushion	„ 37.5 „ „	100 <sup>1</sup>	„ 75 „ „
solid rubber	„ 60 „ „	100 <sup>1</sup>	„ 120 „ „
metal	„ 75 „ „	100 <sup>1</sup>	„ 150 „ „
2. Value schedule:			
nil			

<sup>1</sup> From April 1st, 1932, to December 31st, 1932, only 10 per cent.

(f) *Heavy motor-buses and charabancs* (weighing over 2,000 kg.)

1. Weight schedule: same rate as under (e) 1.
2. Value schedule: same rate as under (d) 2.

(g) *Motor-cycles*

	<i>Basic rate</i>	<i>Fractional surcharges</i>	<i>Amount payable</i>
		per cent.	
With side-car . . . . .	frs. 24 per h.p.	25	frs. 30 per h.p.
Without side-car, including cycles with auxiliary engine . . . . .	„ 20 per h.p.	25	„ 25 per h.p.

When a motor has been more than 10 years in use, the horse-power tax is levied on a basic rate of frs. 20 per h.p. up to 24 h.p. and frs. 30 per h.p. over 24 h.p., the maximum amount chargeable being 5 per cent. of the gross taxable value on January 1st of the year in which the tax is levied. The tax on weight in such cases is reduced by one-third. A special reduction of two-thirds is granted to vehicles driven by generator gas or steam, and to electrically driven vehicles taxed on weight.

Horse-power:  $P = 4VN + \frac{P}{400}$  ( $V$  = cubic capacity of one cylinder,  
 $N$  = number of cylinders,  
 $P$  = weight empty).

Value: list price depreciating at the rate of 10 per cent. per year.

Weight: vehicle ready for the road.

*The following surtaxes were introduced by decree on August 14th, 1933, to come into force on October 1st, 1933:*

Applicable to vehicles used for the transport by road of goods beyond a radius of 20 km. from their centre of operation, except vehicles used exclusively for transport for hire or reward:

(a) vehicles taxed according to horse-power:

Up to 10 h.p.	frs. 80 per h.p.
Each h.p. over 10 h.p.	„ 120 „

(b) vehicles taxed according to weight:

First 3,000 kg.	frs. 100 per 100 kg.
Additional weight up to 4,000 kg.	„ 150 „ „
Additional weight over 4,000 kg.	„ 200 „ „

By the law of December 30th, 1933, they were, however, replaced retroactively from the day they ought to have come into force (October 1st, 1933) by the following surtaxes:

For vehicles used, even if only temporarily or in an accessory capacity, for the transport of goods by road:

(a) vehicles taxed according to horse-power:

frs. 25 per h.p.
and „ 38 „ over 10 h.p.

(b) vehicles taxed according to weight:

frs. 32 per 100 kg. up to 3,000 kg.
„ 46 „ „ over 3,000 „
„ 62 „ „ over 4,000 „

The increased rate of taxation is not applicable to tractors fitted with solid rubber tyres nor to trailers with metal tyres where such vehicles are exclusively used within the precincts of the seaports.

The tax on vehicles using heavy oil fuel is doubled, i.e. the basic tax, the fractional charges, and the surtax.

The following vehicles are exempt from all registration fees including the surtax :

vehicles used in public services, authorized motor-bus services or those operating under a concession, the motor-cars of certain public authorities, vehicles undergoing tests, vehicles employed exclusively in the service of the S.N.C.F.B., and motor appliances.

*The charges paid on fuels* (petrol, benzol, and heavy oil fuel) are in the nature of a tax. Since January 1st, 1933, fuels imported in the form of refined or purified light oils pay frs. 137.50 per hectolitre of Customs duty, instead of frs. 115 (the rate in force as from March 1st, 1932). Light oils obtained by the treatment of crude oil or its derivatives in Belgium are subject to an excise duty of frs. 91.50 per hectolitre. Imported benzol fuels pay the same rate as petrol; domestic benzol fuels, on the other hand, are exempt from the excise duty.

A royal decree of October 18th, 1933, instituted a flat-rate transmission tax of 9 per cent. on light mineral oils and benzol, whereas the same products only pay a flat rate tax of 2.5 per cent. when used in the treatment of raw materials for industrial purposes or in the manufacture of industrial products.

*A transport tax* of 2.5 per cent. was formerly levied on road transport. A decree of August 14th, 1933, raised it, however, as from October 1st, 1933, to 20 per cent. for the conveyance of goods by road for hire or reward, over distances of more than 20 km. This increase was abolished by the above-mentioned law of December 30th, 1933, so that since January 1st, 1934, the tax on all motor transport operations for hire or reward has been brought back to the uniform rate of 2.5 per cent.

*Rank and installation fees* (municipal and communal charges) vary according to districts.

*The transfer tax* is levied in the form of a luxury tax at the rate of 7 per cent., at the time of handing over the car, except



when such transactions take place between manufacturers and dealers, who pay the ordinary rate of 2.5 per cent.

The fee payable on issue of the *police number plate* is frs. 18.

Year	Annual tax ( <i>'taxe de roulage'</i> )	Duty paid on petrol	Total (Cols. 1 & 2)
	(000's omitted)		
1925	47,300	42,993	90,293
1926	100,000	90,091	190,091
1927	72,000	151,307	223,307
1928	76,100	181,651	257,751
1929	84,000	210,928	294,928
1930	78,600	232,010	310,610
1931	83,700	294,761	378,461

### SWITZERLAND

The registration fee is levied by the Cantons. It is established as a rule according to horse-power. Certain Cantons, however, tax motor-lorries according to load capacity. The only common feature of these charges is the federal formula which serves as basis of horse-power calculation:

$$P = 0.4id^2s$$

( $P$  = power expressed in h.p.;  $i$  = number of cylinders;  $d$  = bore in cm.;  $s$  = stroke in m.)

Generally speaking, the minimum taxable horse-power is 5 h.p., the rate applied varying between 100 and 150 Swiss francs. The rate per h.p. over 5 h.p. varies between 10 and 50 Swiss francs. In Cantons where lorries are taxed according to load capacity, the following rates are reported:

Up to 200 kg.	.	.	.	frs.	50
„ 1,000 „	.	.	.	„	150
Per 50 kg. over 1,000 kg.	.	.	.	„	50

Certain Cantons levy additional charges of 20 per cent. on lorries of which the capacity exceeds 1,500 to 2,000 kg., whilst others levy an additional charge of 40 per cent. on lorries fitted with solid tyres.

## TAXATION PAID BY

*Revenue from motor vehicle taxation*

	1930	1931
Taxes and registration fees .	S. frs. 24,673,858	S. frs. 28,873,517
Duties and taxes on petrol (S. frs. 23 per 100 kg.) .	„ 35,987,233	„ 39,933,781
Sub-total . . . . .	S. frs. 60,661,091	S. frs. 68,807,298
Customs duty on motor vehicles and accessories .	„ 21,713,000	„ 23,638,416
Total. . . . .	S. frs. 82,374,091	S. frs. 92,445,714

The above figures do not, however, represent the total revenue derived from motor taxation. The two following fees, for which no data are available, should also be included:

- (a) annual driving licence fee;
- (b) concession fee for conveyance of passengers.

## ITALY

The licence fee (called the *bollo*) was introduced in Italy in 1905 and subsequently amended by successive laws in 1910, 1914, 1920, 1921, and 1923. The system of taxation now in force is governed by the law of 1923, the rates payable in respect of each h.p. according to the 'Treasury rating' being published in the Official Bulletin. The original rates have been modified, particularly in the case of passenger cars having more than 4 cylinders, which pay reduced rates under a series of decrees issued since January 1st, 1928. The date of expiration of these rates has been extended until December 31st, 1936. The tax amounts to about 500 lire per year in the case of small cars, between 1,500 and 2,500 lire for medium-powered cars, and 6,500 lire (maximum) for large cars. A special scale is applied to lorries. Various deviations have, however, been made from the original system, with a view to the development of the motor-car in Italy. Motor-cars newly delivered

<sup>1</sup> Formula:  $P = 0.0878\pi V^{0.8541}$  ( $P$  = power;  $\pi$  = number of cylinders;  $V$  = surface of piston multiplied by stroke, in c.c.;  $0.6541$  = exponential value of  $V$ ). In the case of two-stroke engines  $P$  is multiplied by 1.4.

from the works of less than 12 h.p. and of which the price is below 12,000 lire are tax exempt up to the end of their first year of service. The following vehicles are tax exempt for a period of three years: (a) lorries of 3 to 5 tons of Italian construction driven by heavy oil fuel; (b) six-wheel lorries; (c) lorries using gas generators; (d) agricultural tractors; (e) machines used for road construction; (f) lorries disposed of to private persons by the State. Vehicles of old construction (before 1924) are granted reductions of up to 30 per cent. of their horse-power.

The old local taxes were finally abolished in 1931. Rank and installation fees applicable to hire cars and petrol-filling stations are the only admissible charges; their rate must not exceed  $\frac{2}{3}$  rds of the rate of the licence fee. A *surtax* of 40 per cent. is also levied by the State for road improvement. Users effecting more than 100 ton-km. per year are subject to a *special surtax* of 100 to 30,000 lire per year; this surtax has been in force since 1932.

By decree of November 28th, 1933, a *surtax* was placed on trailers, in addition to the flat rate fee of 150 lire, the rate being as follows:

Pay load up to 3,000 kg.	40 lire per 100 kg. per year
„ from 3,000 to 5,000 kg.	60 „ „ „
„ exceeding 5,000 kg.	70 „ „ „

The *taxation of petrol* and other fuel was considerably increased by a decree of September 24th, 1931, which raised the sales tax as follows:

Petrol	from 30 to 80 lire per quintal
Petroleum	„ 5 „ 14 „ „
Mineral oils, excluding crude oils for direct use as fuel	„ 8 „ 22 „ „

and introduced further sales taxes applicable to the residue of mineral oils for use as fuel; particulars of these taxes are as follows:

Density (at 15° C.)	Rate
Exceeding 0.880	2 lire per quintal
Between 0.850 and 0.880	12 „ „

These two rates were raised to 10 and 30 lire respectively by a decree of January 23rd, 1933.

Independently of the sales tax, import duties had been increased to 88.10 lire per quintal in the case of petrol and 44 lire in the case

of lubricating oils, to which must be added the general increase of 15 per cent. *ad valorem* applied to all import duties.

The special charges applying to passenger motor transport are 2 per cent. (stamp) of the receipts in the case of lines operated under a concession and 0.10 lira per ticket issued in the case of temporary or touring services.

*Revenue derived from special taxes*

	1931-2	1932-3
	millions of lire	
Licence fee ( <i>bollo</i> ) and contribution towards road improvement (surtax)	193	193
Import duty on petrol (including 15 per cent. <i>ad valorem</i> )	322	313.9
Sales tax	110.1	220.9
Sales tax on domestic petrol	31.7	80.0
Import duty on lubricating oils (including 15 per cent. <i>ad valorem</i> )	37.0	No figures available
Sales tax, ditto, ditto		
Stamp duty on passenger motor transport	(1927: 2.9)	

## GERMANY

The present system of motor taxation in Germany is established on two main bases: the licence fee and petrol duties. The licence fee is, however, gradually disappearing through the exemption granted under the law of April 10th, 1933, to new touring cars and motor-cycles, irrespective of their horse-power and country of manufacture.

I. *The licence fee* was introduced in the Reich by the law of 1906 on stamp duty. It should be noted, however, that the original assimilation of licence fees to stamp duty dates from 1899, although at that time it was limited to the Grand Duchy of Hesse. The Reich tax mentioned above, which remained in force until January 4th, 1924, was restricted to motor-cycles which paid an annual flat rate fee, and to passenger cars for personal use. Vehicles operating commercially (taxis, &c.), motor-buses, and lorries were not subject to this tax. The rates for passenger cars varied accord-

ing to horse-power calculated on a formula established by the Verein Deutscher Motorfahrzeugindustrieller, which remained in force up to the reform of 1928 and which was as follows:

$$P = 0.3id^2s$$

( $i$  = number of cylinders;  $d$  = cylinder bore in cm.;  $s$  = stroke in metres). The rates consisted of a flat rate fee and an additional charge per h.p.

By the law of April 8th, 1922, amended in 1923 and put into force on January 4th, 1924, vehicles which had hitherto been granted exemption were subjected to the tax, which was renamed *Kraftfahrzeugsteuer* (motor-vehicle tax). The scale of taxation of motor-cycles comprised five rates, varying between 10 and 35 RM. (Cycles fitted with an auxiliary engine continued, however, to be exempt.) Passenger cars were compelled to pay a steeply graded fractional h.p. tax.

The tax on motor-buses and lorries was established according to the weight of the vehicle in normal running condition, on a decreasing scale with a maximum flat rate charge for vehicles of over 4,000 kg.

Electric or steam-driven lorries, and tractors having no loading accommodation, paid half rate.

These rates were raised in 1926, when a surtax of 25 per cent. was introduced replacing the contributions towards road construction provided for in the legislation of the 'countries'.

Lastly, with a view to encouraging the motor industry which complained of the graduation of the scale of taxation, the 1906 formula was abandoned under a new law put into force on April 1st, 1928, the cubic capacity only being taken into account after that date. The new rates of taxation were as follows:

*Motor-cycles* (Vehicles having up to three wheels and weighing not more than 350 kg. under normal running conditions): Not exceeding 200 c.c.—exempt. Others: per 100 c.c. or fraction thereof—8 RM.

*Private cars*: per 100 c.c. or fraction thereof—12 RM.

*Motor-buses and lorries*: per 200 kg. of net weight of vehicle or fraction thereof—30 RM. (additional charge of 20 per cent. if not fitted with pneumatic tyres).

Surtax paid by *trailers*: 100 RM. per trailer (maximum allowed: 2 trailers).

Semi-trailers (single axle) pay half rate.

*Electric or steam-driven vehicles, and tractors with no loading accommodation*: per 200 kg.—15 RM.

The *surtax* was fixed as follows:

- 20 per cent. in 1928;
- 15 per cent. in 1929;
- 10 per cent. in 1930 (taxis exempt).

This *surtax* was reduced to 5 per cent. by decree of March 21st, 1932.

*Comparative development of tax from 1924 to 1932*

	1924	1926	1932
		<i>including 25 per cent. surtax</i>	<i>10 per cent. surtax</i>
In Reichsmarks			
Motor-cycles:			
0.5 h.p. = 393 c.c.	10	38	36
2 " = 524 "	15	50	53
Private cars:			
4 h.p. = 1,047 c.c.	80	150	146
6 " = 1,571 "	120	225	212
8 " = 2,094 "	200	300	278
12 " = 3,142 "	400	525	423
16 " = 4,189 "	680	850	555
20 " = 5,236 "	1,000	1,250	700
Lorries, Motor-buses:			
600 kg.	60	113	99
2,000 "	120	375	330 pneu-
3,500 "	180	575	654 matic
5,000 "	200	750	908 tyres
7,000 "	200	1,000	1,271

A law of March 16th, 1931, made several amendments in the tax, including in particular an increase of the rate applicable to electrically or steam-driven vehicles and tractors with no proper loading accommodation from 15 to 20 RM. per 200 kg.

The following vehicles are exempt from the tax: vehicles used exclusively for the transport of tools to the place where they are to be used and for the operation of those tools (when such vehicles are used for agricultural purposes, exemption is extended to the conveyance of persons and goods); motor vehicles belonging to the Reich, the 'countries', and municipalities and used

exclusively for dealing with outbreaks of fire, ambulance work, and the construction or care of roads; army and police motor-cars, except with seating accommodation for less than 8 persons.

The law of May 31st, 1933, is the counterpart, in regard to passenger cars and motor-cycles already in use, of the law of April 10th, 1933, mentioned in the introductory paragraph. Under this law these vehicles are granted exemption from the licence fee on payment of a lump sum charge varying from  $1\frac{1}{2}$  to 3 times the annual tax, according to the date of the first registration of the vehicle.

Any resultant decrease of the revenue of the 'countries' through licence tax appropriation is made good by the Reich out of general budget funds.

II. *Petrol duties* up to 1930 consisted of Customs duties pure and simple, the maximum rate having remained unaltered since 1879. When, however, the Government found that the figures of the tariff in question showed that these duties 'furnished (in 1928) approximately, 11 per cent. of the total Customs receipts', it decided that they 'must be made to contribute a larger share to the financial requirements of the Reich' (Memorandum of the Minister of Finance on motor taxation, of December 18th, 1930). The rate applicable to petrol derived from petroleum was therefore raised in April 1931 from 6 RM. to 10 RM. and again in July 1931 to 17 RM. per 100 kg.; a duty of 10 RM. was also placed on carburants extracted from coal (benzol). At the same time an equalization charge of 3.50 RM. per 100 kg. was levied on domestic carburants. Under this same law the Government was authorized to compel importers and producers to purchase a proportionate quantity of alcohol to be used as motor fuel, and a decree was issued on July 4th, 1930, obliging them to purchase a fixed quantity of alcohol from the Alcohol Monopoly Administration as follows:  $2\frac{1}{2}$  per cent. up to March 31st, 1931,  $3\frac{1}{2}$  per cent. during the financial year 1931, and 4 per cent. during the financial year 1932. This percentage was, however, changed by a decree of September 19th, 1931, which established certain provisions proportioning the sales price of the alcohol sold by the Monopoly Administration to the percentage mentioned above. The price was, for example, 50 RM. per hectolitre where the compulsory purchase amounted to 10 per cent.

The Monopoly Administration does not insist on actual delivery of the alcohol, but undertakes to repurchase it at a considerably lower rate (7.50 RM. per hectolitre at the beginning of 1933). This paper transaction scheme shows clearly that this particular schedule of fuel taxation, as in several other European countries, is nothing more than a subsidy granted to a section of agriculture. According to estimates made by the interests concerned, in January 1933, the fiscal charge borne by a litre of petrol was about 0.20 RM., of which 16.23 Pfg. were Customs duty and 4.31 Pfg. payable under the provisions regarding the compulsory purchase of alcohol, i.e. 35 per cent. of the average sales price paid by the consumer.

Customs duties, including the surtax of 29 per cent. in respect of tare levied since May 29th, 1931, are as follows:

	<i>In Pfennigs</i>	
	<i>per litres</i>	<i>per kg.</i>
Petrol (density 0.740)	16.23	21.93
Benzol ( „ 0.880)	17.95	20.40
Gas oil ( „ 0.840)	4.03	4.80

The equalization tax on domestic fuel was reduced from 3.80 to 1.00 RM. per 100 kg. in 1932 and to 0.10 RM. as from the third quarter of the same year.

*Revenue derived from the special taxation of motor traffic in Germany*

	1928	1929	1930	1931
	thousands of RM.			
(1) Annual tax on motor vehicles	181,338	209,482	208,917	192,711
(2) Taxes and duties on fuel consumed by motor vehicles	43,000	51,000	120,200	193,500
(3) Charges arising out of the obligation to mix alcohol with petrol	..	..	15,000	34,000
(4) Charges arising out of equalization of prices of domestic and imported fuel	24,000	28,000	32,000	64,000
<b>Total</b>	<b>248,338</b>	<b>288,482</b>	<b>376,117</b>	<b>484,211</b>

N.B. The figures in regard to the taxes and duties on fuel only include those paid on fuel actually used by motor vehicles.



## CZECHOSLOVAKIA

The licence fee was introduced in 1927. In the case of private cars it is based on cubic capacity,<sup>1</sup> and on weight in the case of utility vehicles. The following figures show the rapid increase of its rate when applied to private cars:

Up to 1 litre . . . . .	300 Kč.
From 1 to 1.5 litres . . . . .	500 „
„ 1.5 to 2 „ . . . . .	800 „
„ 2 to 2.5 „ . . . . .	1,200 „
„ 2.5 to 3 „ . . . . .	2,200 „
„ 3 to 3.5 „ . . . . .	3,500 „

N.B. The maximum rate is 8,000 Kč.

*Motor-buses*: per 100 kg. or fraction thereof over 50 kg.—50 Kč.

*Lorries*: per 100 kg. or fraction thereof over 50 kg. calculated on the weight of the vehicle and its loading capacity—35 Kč.

*Additional charges*: cushion tyres—20 per cent.  
solid tyres—50 per cent.

*Petrol taxation*: consists of Customs duties and import tax and a tax on mineral oils.

The following duties and charges are also paid by motor transport: (a) *Customs duty on pneumatic tyres*, the revenue from which is considerable; (b) *A tax of 30 per cent. on the price of passenger transport by motor-bus* (introduced in 1930). This latter tax may be regarded as the first of a whole series of new and additional taxes which are dealt with farther on in the present report.

*Revenue derived from special taxation of motor traffic*  
(In millions of Kč)

	1928	1929	1930
(1) Licence fee . . . . .	80.67	87.38	88.58
(2) Tax on passenger transport by motor-bus . . . . .	..	..	10.89
(3) Import tax on mineral oils . . . . .	47.88	56.86	64.19
(4) Customs duty on imported mineral oils . . . . .	26.78	28.64	21.76
(5) Taxes on mineral oils . . . . .	29.42	33.81	38.27
(6) Import duty on pneumatic tyres . . . . .	23.62	28.07	33.50
<b>Total . . . . .</b>	<b>208.37</b>	<b>234.76</b>	<b>257.19</b>

<sup>1</sup> Formula:  $N = \frac{0.785d^2cn}{1,000,000}$  ( $N$  = c.c. in litres;  $d$  = bore in mm.;  $c$  = stroke in mm.;  $n$  = number of cylinders).

To these figures must be added the registration fee and the taxes levied by districts for upkeep of the roads. Statistics regarding the revenue from these taxes are not, however, available.

*Additional taxes introduced by the law of December 23rd, 1932, (No. 198), put into force on December 31st, 1932.*

(a) *Tax on common carrier passenger transport services.* The rate of taxation is 30 per cent. of the price of the journey if effected on Czechoslovak soil. In the case of irregular transport services operating partly on foreign territory, the tax is levied at the rate of 0.10 Kč. per kilometre in respect of the portion of the journey effected in Czechoslovakia.

The following services are exempt from this tax:

Regular common carrier services operating within the limits of municipalities or running to the railway station bearing the name of the municipality.

Transport operations effected by vehicles belonging to air transport companies, where the price of transport on land is included in the air transport charge.

The Government has power to lower the rates indicated above should the tax on railway transport be reduced.

The Government is authorized to sanction, under certain conditions, the payment of a lump sum in lieu of the tax.

Any transport operation effected by a vehicle with seating accommodation for more than 8 persons, including the driver, is considered as a common carrier service.

(b) *Tax on commercial passenger motor transport (in vehicles with seating accommodation for less than 8 persons, including the driver):*

(a) Vehicles fitted with internal combustion engines:

Up to 1 litre c.c. . . . .	800 Kč. per year
From 1 to 2 litres c.c. . . . .	1,200 " "
Over 2 litres c.c. . . . .	1,800 " "

(b) Vehicles having another system of propulsion (steam, electric) . . . . .

	1,200 " "
--	-----------

The operator of a transport vehicle registered abroad must either furnish proof as to the cubic capacity of his vehicle or pay a fixed charge of 4 Kč. per day.

(c) *Tax on goods transport.* The following operations are exempt from this tax:

Goods transport by lorry or trailer where such (ancillary) transport is effected between different plants of a single enterprise situated in the same municipality.

Goods transport effected by vehicles belonging to State administrations.

Goods transport effected by vehicles belonging to the railways, when the price of such transport is included in the railway tariff.

Transport operations effected by or on behalf of the postal administration.

Goods transport effected by vehicles belonging to public bodies (provinces, cantons, and municipalities) provided such operations are exclusively in connexion with the construction, repair, cleaning, or administration of the roads or streets or the removal of refuse.

Goods transport effected by vehicles specially equipped for fire and ambulance services.

Transport of goods and baggage by vehicles belonging to air transport enterprises, where the price of transport on land is included in the scale of rates applicable to the portion of the journey made by air.

Goods transport effected by agricultural tractors between farm buildings and fields under cultivation by the owner or user of the vehicle; this provision is extended by analogy to the members of co-operative societies.

#### 1. Rates of taxation:

(a) Motor-cycles fitted with side-cars for delivery of goods, motor-tricycles . . . . .	450 Kč. per year
(b) Tractor with trailer—per h.p. or fraction thereof in respect of the tractor and per 100 kg. or fraction of the capacity of the trailer . . . . .	25 " "
(c) Tractors without trailer—per h.p. or fraction thereof . . . . .	50 " "
(d) Other vehicles driven electrically, or by steam or internal combustion engine, for the transport of goods—per 100 kg. or fraction of loading capacity . . . . .	50 " "
(e) Trailers—per 100 kg. or fraction of loading capacity . . . . .	25 " "

2. In the case of commercial *transport* operations for hire or reward the above *rates* are *trebled*.

3. The holders of common carrier service concessions for the conveyance of passengers and their luggage must pay an annual tax of 450 Kč. under this head, if they wish to avail themselves of their right to transport up to 100 kg. of goods.

The rates for vehicles and trailers registered abroad are as follows:

Headings 1 (a) and 3	.	.	2 Kč. per vehicle per day
„ 1 (b) to (e)	.	.	4 „ „ „

The domestic rates are applied to them on application.

The law of December 23rd, 1932, gives no definition of h.p. value, whereas the formula used for calculating cubic capacity appears in it and serves as sole basis for establishing the amount of the licence fee where engine power is taken into consideration. It may be assumed, however, that h.p. value is calculated according to the formula in force before 1927.<sup>1</sup>

*Charges other than those levied by the State.* There are a number of provincial taxes, the revenue from which is used for road upkeep. No figures are, however, available regarding them.

<sup>1</sup>  $N = \frac{id^3}{1613}$  ( $N$  = engine power expressed in h.p.;  $i$  = number of cylinders;  $d$  = bore in mm.).

### CHAPTER III

## MEASURES TAKEN BY THE RAILWAYS TO MEET MOTOR TRANSPORT COMPETITION

As long as the railways were assured of a *de facto* monopoly, their administrative regulations remained very strict, only undergoing modification at long intervals with the march of technical progress. Consequently, few changes have been made in railway material, operation regulations, and commercial policy during the last fifty years. The great railway enterprises were not obliged to take any measures to meet changing transport methods during that period of stable conditions, and for that reason the administrations in almost all countries were little adapted to any rapid transformation.

The position was completely altered by the appearance of a new means of transport which could convey passengers more rapidly and goods more conveniently, and which soon became a dangerous competitor of the railways.

The railways were thus obliged to adapt themselves to the new situation which had arisen. Inquiries were undertaken with a view to gaining a better knowledge of the requirements of users, new material was taken into use and administrative regulations were brought up to date, so that at the end of a few years considerable changes could be seen in railway operation methods.

This naturally only applies to the railways of those countries where the extent of the problem of motor competition was fully realized at an early date. There is no doubt that, in some cases, the efforts of the railways either started too late or was insufficient. This frequently led to railway losses which could have been avoided by modernization of operation and which actually have been unjustifiably attributed to motor competition. Despite all efforts tending towards regulation of the relations between the two means of transport, the general conviction has been established that the first step towards real co-ordination of road and rail must be looked for in the improvement of railway operation

methods. There can be no doubt that in recent years the railways throughout the world have made serious attempts to regain lost traffic.

All these attempts of the companies bear witness to the very great efforts made by the railways to adapt themselves to new conditions by transforming their interior organization. Many measures of this kind have been adopted varying widely according to railway systems and countries. In order to obtain a clear idea of the question as a whole, it is necessary to consider the problem under two main headings, the first consisting of the technical measures and the second of the tariff measures adopted by the railways. A third series of measures which deal with neither technical nor tariff questions have been grouped under the heading 'other measures' and included with the technical measures. Although not strictly speaking of a technical nature, they are, like certain administrative measures, more or less closely related to the technical side of railway operation.

## 1. TECHNICAL AND OTHER MEASURES

### 1. *Speeding up of trains.*

In *passenger traffic* the speeding up of trains has been principally effected by employing more powerful locomotives. The results obtained in this way are, however, limited by the condition of the permanent way. As the weight of the train increases with the speed, the bridges and the rails (where there is a curve) can only stand the additional strain within certain limits. It has, therefore, been necessary to adopt other measures which include the suppression of intermediate stations and, in international traffic, the simplification of customs formalities at the frontier.

In *goods traffic*, additional speed has been made possible by the introduction of continuous braking and the modernization of marshalling and transshipment operations. The railways have extended their time-tables to include goods traffic. It is possible at the present day in most countries to dispatch goods according to time-tables, and by trains which sometimes attain the same speed as ordinary or even express passenger trains.

## 2. *Introduction of short and light trains and rail-cars.*

In *passenger traffic*, short trains have been introduced, especially over short and medium distances. Suburban services have organized shuttle-service trains in which the locomotive is situated in the middle of the train.

Rail-cars are likewise employed for the same purpose. The problem in this case consists of effecting more rapid transport by using a lighter unit of which the decreased weight is compensated by a greater adherence to the rails. In this connexion various types of wheels of different materials have been used. In certain cases these services have attained very high speeds, sometimes exceeding 160 km. per hour. They are particularly useful in services running at short intervals. It has not yet been possible, however, to settle the difficulties arising out of the old switching systems and signalling methods which are still employed. Generally speaking, these rail-cars are still in the experimental stage. Up to now it has not been possible to say whether the employment of the internal combustion engine on rail enables the railways to make any substantial economies in operation.

In *goods transport*, trains have been introduced consisting of two or three wagons connected by covered gangways and accompanied by employees of the company who sort the goods during the journey. The employment of these trains is, however, merely an extension of the measures which had already been adopted before the War, particularly for the transport of perishable goods in small quantities. The means of loading and unloading have likewise been improved, more especially by the utilization of platforms, small containers, &c. Details in regard to the latter will be given farther on in the present report.

## 3. *Rail-cars fitted with pneumatic tyres.*

Trials are being made in several countries with an interesting type of rail-car fitted with pneumatic tyres.

## 4. *Extension of office hours for consignment and delivery of goods.*

The extension of the hours of service for the forwarding and delivery of goods is merely an extension of a measure which had

likewise already been applied to certain perishable goods even before motor transport competition had begun to make itself felt. In most countries at the present time, ordinary goods may be handed in to railway stations or delivered by those stations outside normal working hours, including Sunday, upon payment of accessory charges.

5. *Night goods traffic.*

The night goods traffic services have been developed in marshalling yards and at transshipment points, so as to ensure connexion by the next train. In the majority of ordinary stations also, goods handed in outside normal working hours can be loaded or unloaded during the night.

6. *Speeding up of operations in stations.*

With a view to speeding up operations in stations, improvements have been made in the equipment used, either on the wagons themselves or on the platforms and permanent way. In this way it is now possible to obtain an uninterrupted service of goods trains during the night in traffic relations where this facility was previously lacking. In the same way faster service has been obtained, particularly in the carriage of foodstuffs, by establishing direct services between the stations and the central markets.

7. *Door-to-door delivery.*

Before motor transport competition began to make itself felt, the railways generally obliged traders to collect or deliver their goods at the station. If the persons concerned did not themselves do so, this service was effected by private enterprises on payment of a special charge. With a view to offsetting the advantage which motor transport possesses of being able to collect goods at the premises of the consignor and deliver them at the premises of the consignee, the railways have created their own door-to-door services. Certain railways already include in their goods tariffs the charge made for service of this kind.

8. *Development of the construction and operation of private sidings.*

Even before motor transport competition began to make itself felt the railways were always willing to place private sidings at the



disposal of traders. These private sidings have the advantage of bringing the wagon to the premises of the enterprise, which almost amounts to a form of door-to-door service. In certain cases the railways even rent their hauling material against a small payment for shunting operations on private sidings. They generally make a further charge for supply of material and supervision. The conditions of establishment and utilization of private sidings are laid down in contracts passed between railways and traders. Motor transport competition has led the railways to grant particularly favourable conditions and especially to reduce the charges made.

9. *Establishment, extension, and publication of goods train time-tables.*

There was no practical advantage in publishing goods time-tables until the reorganization and modernization dealt with in the present chapter had been undertaken. About 1929, however, certain countries of central Europe, particularly Germany, drew up the first goods train time-tables for important traffic over the principal lines. Despite their somewhat unusual feature of not being strictly binding upon the railways, these time-tables enable the user to calculate in advance the time necessary for a particular operation of transport. In order to establish public goods train time-tables it was, however, necessary to reduce the length of stops in marshalling yards or establish through traffic between the different places appearing in those time-tables.

The number of goods time-tables published is now tending to increase and their application is being extended to certain international routes. Lastly, numerous special routes have been established at the request of users, either over one railway system or over a number of different systems.

10. *Installation of consolidating depots.*

(a) in railway stations;

(b) outside railway stations.

To enable users to dispatch goods without inconvenience and loss of time, services have been created for the collection and consolidation of goods. These feeder services are either established

in the stations themselves or outside the station in different parts of large towns where the same methods of operation are followed.

### 11. *Utilization of containers and similar equipment.*

Railway goods traffic has been more particularly exposed to motor competition through train operation being limited to the permanent way. This limitation, which formerly passed almost unnoticed, has now, however, entirely changed the aspect of land transport by breaking up the original loading units. In the early days of railway development certain companies had already conceived the idea of rendering the wagon body mobile and thus facilitating a continuous transport operation. The means of transshipment were not, however, sufficiently perfected at that time to enable this project to be realized in practice.

Since the time when goods transport by motor vehicle began to develop, the railways have gone back to their first idea which not only provides for a detachable wagon-body but also for that body to be divided into fractional parts, thus creating a loading unit of less than the present-day wagon. This latter tendency, combined with increased load capacity, has rendered railway transport more flexible. Furthermore, the employment of containers which make possible the suppression of a large part of the packing material has enabled the railways to furnish better transport services. Particularly in the traffic of foodstuffs and other perishable or fragile goods, the railways are using containers as a means of recapturing the traffic which has been taken from them. But the container cannot merely be regarded as a weapon to assist the railways in meeting road competition, since it creates a rational division of labour between the two means of transport by leaving to the motor carriers those transport operations for which they are most suited.

The development of container traffic has taken place simultaneously in a large number of countries, and this has led the railways and their national and international organization to unite with the road transport organizations in conducting a joint study of container traffic problems, and in February 1933 the International Container Bureau, which includes representatives of the two means of transport, was formed for that purpose under the auspices of the International Chamber of Commerce.

12. *Connecting services with motor transport and joint time-tables.*

The railway companies began at an early date to establish joint road and rail time-tables, not only in collaboration with their own subsidiary companies but also with other motor transport operators with whom they had entered into agreements. These joint time-tables did not as a rule involve the motor transport services in any additional expenditure as it was to their interest, in any case, to await the arrival of trains, just as it was to the interest of the railways to synchronize the arrival of their trains with the motor transport services. Naturally the system of joint time-tables is principally applied where the railway companies have their own subsidiary motor services. Nevertheless, it is to the interest of private companies—for reasons which can be readily understood—to adjust their services to the railway time-tables. Through force of circumstances therefore collaboration between the two means of transport has been established. It may be said that the introduction of joint time-tables was one of the first forms of co-operation between road and rail.

13. *Closing of secondary stations.*

Certain railways have closed a number of secondary stations in unimportant localities. Experience has shown that it is in these places of lesser importance that motor transport competition is invariably keenest, and for that reason the railway companies have no interest in maintaining a staff and equipment the cost of which is out of proportion to the insignificant turnover of the business they handle.

14. *Employment of Pullman and other similar cars.*

With a view to attracting passengers demanding the maximum of comfort, Pullman-car services have been extended to lines upon which they have hitherto been rarely used (suburban lines or excursion lines). The same policy has been carried still further by increasing the number of open cars used for sight-seeing purposes during the fine season. In certain countries cars have been introduced in which dances can be held, as well as convertible sleeping-

cars in which tourists can pass the night when the train is halted at a station.

### 15. *Organization of motor services.*

The railways have organized and operate their own motor transport services, the profits of which they retain. Services of this kind were first organized in passenger traffic; goods services were not introduced until later. There are five principal types of service of this kind:

(a) *Feeder services.* These services are intended to attract traffic to certain roads leading to the railway stations so that goods coming from various directions may be drawn to the railway. These feeder services, which seem to have been one of the earliest measures adopted by the railway companies, generally also include motor transport services for the delivery in different areas of incoming goods which have been transported on a main-line railway.

(b) *Parallel services.* In certain cases where they have seen that a parallel road service was taking traffic from them, the railways have introduced their own motor transport services over the same route. Such services have sometimes preceded those of private enterprises, and in other cases they have come after them. In the latter event different forms of affiliation have been adopted, varying from the creation of a company operated by the railway itself to the financial participation of the railway in independent enterprises. Parallel services have been more particularly organized for passenger transport in areas of special interest from a scenic point of view. The creation of parallel services of this kind is not, however, entirely governed by commercial considerations; in this connexion certain companies have introduced services to enable travellers to visit areas not served by the railway.

(c) *Complementary services.* Complementary services have generally been created by the railway companies to operate in certain areas which hitherto had not come within their commercial sphere of action. Such complementary services bring an additional flow of goods to the railways and enable them to serve markets previously beyond their reach, thus making it possible to develop areas which have been economically backward in the past. The

creation of such services which have naturally brought additional traffic and increased profits to the railways may be regarded as a direct extension of the railway system.

(d) *Replacement services.* Replacement services are more particularly employed over short distances and on local lines. Up to now, except in a few cases, the railway service has not been completely replaced by motor lines. As a rule only a part of the traffic is handled by motor transport. It is thought that the complete suppression of railway services is not desirable in passenger traffic, and still less so in goods traffic. The replacement of all trains obviously represents a considerable economy in railway operation costs through the reduction of upkeep expenditure on the permanent way, stations, and switch- and signal-boxes, whereas with their partial suppression certain expenditure is still necessary for the upkeep of the permanent way, stations, &c.

Account must also be taken of road transport costs which not only consist of purchase and maintenance of motor vehicles, but indirectly road costs. Sufficient experience has not yet been gained as to whether motor transport is capable of supplanting the railways at all seasons, particularly at harvest time or other peak periods. The issue is influenced, not only by the extremely complex question of costs of both means of transport, but also by the public interest in the maintenance of certain lines of traffic.

(e) *Consolidation and delivery services.* The consolidation and delivery services mentioned above are generally effected by motor-lorries which have proved the most suitable form of transport for this kind of work.

#### 16. *Agreements between railways and existing motor transport enterprises.*

The railways have sometimes found it preferable to come to an agreement with existing motor transport services rather than create new services of their own. Agreements of this kind take a number of different forms. In certain cases the railway companies have entered into agreements with motor transport undertakings, generally with the approval of the public authorities, whereby the motor transport enterprises operate services on behalf of the railways. Such services may or may not include the financial participation

of the railway companies. Motor transport enterprises operating on behalf of the railways act as feeder services by reaching remote districts and linking them up with a railway station. The operation of these services is undertaken by the motor transport companies for their own account. In some cases, however, the railways grant them a subsidy. Certain motor transport enterprises are operated on behalf of the railways in order to meet competition from other independent motor transport enterprises. In such cases the payment of a subsidy by the railway is generally the rule. Sometimes these services are even operated at the expense and for the account of the railways, who then receive all the revenue accruing therefrom. Lastly, motor services may be created to replace trains on local lines.

In certain cases these agreements are merely entered into by the railways to enable them to exercise some control over the independent motor transport services. Where there is competition, the motor transport companies are occasionally obliged to pay an indemnity to the railway companies.

#### 17. *Collaboration with forwarding and transit agents.*

The railway companies have entered into contracts with forwarding and transit agents for the collection and delivery of goods at traders' premises. In such cases the transit agents often establish close collaboration with the railways, either by organizing new consolidated freight services or by fixing new charges. The railways grant them all facilities compatible with the services they effect, and, in a number of cases, this collaboration has brought back to the railway customers who were using the road exclusively.

#### 18. *Simplification of traffic formalities.*

Motor transport competition has compelled the railway companies to reduce the number of formalities to be complied with by the public in countries where such formalities were formerly numerous. The measures adopted in this connexion include the acceptance at one receiving counter of several lots of goods for conveyance under different conditions, and simplification of the consignment note.

19. *Publicity services.*

With a view to increasing the number of their customers, the railways in recent years have redoubled their efforts to place within the reach of the public full information as to their tariffs and timetables. This publicity is effected in a number of different ways, including: (a) the display of posters depicting scenes in the districts served by the railway; (b) the distribution of tracts and propaganda brochures showing the various journeys and trips which can be made and the reductions in fare. Propaganda of this kind has also been broadcast.

2. **TARIFF MEASURES**1. *General reduction of tariffs.*

Motor transport competition has compelled the railways to make general reductions in their tariffs. Such reductions have not, however, been introduced in all countries at the same time. In certain countries, moreover, prices have not been lowered even at the present time, despite the competition caused to the railways by motor transport.

It is difficult to say whether the tariff reductions which have been made during the last few years are entirely due to motor transport competition, or whether they are partly the result of the general economic crisis and monetary crisis in the different countries.

General reductions have not, as a rule, been granted in goods traffic. Such reductions as have been introduced have taken the form of special measures applicable to particular lines or specific categories of goods. They have sometimes also been applied to transport operations over short distances and high-grade merchandise.

These tariff reductions have either been in the form of a percentage decrease or of a new rate schedule established on a fresh basis.

2. *Shorter delivery period.*

The reduction of the delivery period reacts indirectly on the tariff system. Obviously if the period for delivery is decreased,

the compensation to be paid to the user in the event of non-delivery is proportionately greater.

It is to be noted that in certain countries like France when the user asks for the application of an exceptional tariff, he does not benefit from the different advantages in regard to the period of delivery.

### 3. *Introduction of a flat rate for small consignments.*

In view of the advantages offered by the flat-rate charges made by motor transport for the carriage of small consignments, the railways in certain countries have also introduced a flat rate applicable to this class of traffic, the charge being established solely on the weight of the package to be transported.

### 4. *Reduced tariffs for consolidated consignments.*

The reduced tariffs applied to amalgamated freight have increased in number during recent years, and are continuing to do so as a result of motor transport competition. It is to be noted, however, that some of these tariffs had already been put into force in certain countries before road competition had begun to make itself felt. Rating is irrespective of the nature of the goods.

In France, a 'wagon-kilometre' tariff has been introduced in certain traffic relations, the charges being similar to those made by the motor transport services. These tariffs are generally applied to forwarding agents who collaborate with the railway by organizing consolidated consignments.

### 5. *Reduction of load unit of wagons.*

Before the advent of motor transport, the load unit of wagons in most countries had been established at 5 tons. Through this regulation, motor transport was later able to capture a part of the consignments of less than 5 tons which up to then had been carried by the railways. To meet this new competition, special railway tariffs were established applicable to minimum quantities of 3 tons, 2 tons, and even 1 ton.



6. *Reduction of tariffs in fast goods services.*

Reduced tariffs in fast goods traffic have been less considerable as competition is not so keen in this particular service.

It is more especially in the carriage of perishable goods and live stock by fast goods service that the users have been given certain advantages.

7. *Door-to-door rates.*

Before motor transport competition began to make itself felt, the railway rates, as a rule, only applied from station to station. After the advent of the motor-car, however, a tendency arose to include collection and/or delivery services in the tariffs. These tariffs generally establish either an inclusive rate comprising the charges for collection and delivery at traders' premises, as for instance in Holland in the case of consignments of less than 5 tons, or additional charges graduated according to areas.

8. *Container tariffs in fast and slow goods services.*

As a general rule the railway tariffs are affected by the employment of containers. The very fact of being able to dispatch goods without packing decreases the weight of the consignment, with a consequent lowering of the cost of transport. The loss and damage caused to goods when other means of transport are employed are likewise avoided, and this represents a further saving for both carriers and users.

These container tariffs are applied in both fast and slow goods traffic. At the present time the slow traffic services are more employed than the fast services. This is explained by the speeding up of ordinary goods traffic coupled with the more rapid loading and unloading of containers, which have reached a point where the delivery periods otherwise applicable in fast traffic are often equalled. Certain countries allow reductions in the charges for handling by crane.

9. *Express packages.*

Express packages may weigh up to 20 kg.<sup>1</sup> and are carried by fast or express trains. In most cases the railway companies have

<sup>1</sup> In certain countries, as for instance Germany, the maximum weight is higher.

created special services for the collection and delivery of consignments of this kind.

They have even gone so far as to fix time limits for the delivery of express packages.

In countries where express services existed before the advent of the motor-car, the railway companies have been obliged to lower their tariffs in order to meet the competition caused by the new means of transport.

#### 10. *Development of postal parcels service.*

Postal parcels are dispatched by rail under a special convention existing between the postal service and the railway companies. This convention stipulates that the railways shall effect the transport of these parcels, the user being left the option of having them conveyed by certain trains.

#### 11. *Rebate to traders according to importance and regularity of traffic tendered.*

With a view to attracting new customers and retaining existing customers, the railway companies now grant certain rebates to traders, provided they undertake to consign their goods regularly or at fixed periods or in certain quantities. These rebates are sometimes also granted to consignees who have signed a contract with the railway company.

#### 12. *Introduction of special tariffs in goods traffic.*

In recent years a multiplicity of special tariffs have been introduced by all the railway companies in every country. This increase in the number of special tariffs may be regarded as one of the most important measures taken by the railway companies with a view to meeting motor transport competition. These tariffs are sometimes applied unconditionally. Generally speaking, however, the user only benefits by them in certain cases, either by undertaking not to have his goods carried by a competitive motor line or by agreeing to their conveyance over a certain route.

Where motor transport competition is encountered, reductions in the rate schedules are introduced when necessary for lots of more than a certain tonnage, and these rate schedules are inserted

in special tariffs. Such reductions are generally applied on a sliding scale according to weight.

### 13. *Joint road and rail tariffs in goods traffic.*

In certain cases the existing tariffs may be considered as applicable to joint road and rail traffic. When, for instance, a railway line is replaced by a motor service, the fact of the goods passing from the railway to the motor service gives the schedule applied the nature of a joint tariff. The tariffs applied to goods collected and delivered by motor vehicles in door-to-door services can likewise be regarded as a form of joint tariff.

### 14. *Passenger traffic.*

Generally speaking the railway companies have made a considerable effort to meet motor transport competition in passenger traffic.

The various efforts they have put forward have taken many forms, of which the principal are as follows: (a) reduction of additional charges for travelling by express train; (b) introduction of week-end tickets; (c) introduction of return tickets; (d) introduction of collective tickets; (e) introduction of round-trip tickets. The reduction of the additional charges in the case of express trains naturally does not alter the price of actual transport, but merely applies to the supplement payable for the privilege of travelling by certain trains. Instead of being granted an actual cash reduction, the passenger is in certain cases allowed to travel a greater distance at the same price.

On almost all the railway systems special tariffs applicable to week-end tickets are granted in passenger traffic to the suburbs of certain large towns, sea-side resorts, seaports, and tourist and winter sports centres. The reductions in respect of week-end tickets may be as much as 40 to 60 per cent. Collective tickets are issued in various forms to families, societies, school-children, and excursion and holiday parties. Lastly, very reduced tariffs are applied to round-trip tickets.

### 15. *Joint road and rail tickets.*

In certain countries a large number of railways issue tickets available by road or rail over certain routes. Reductions are some-

times made in the price of these tickets, while in other cases they are issued in the form of return tickets.

16. *Special tariffs for passengers with motor-cars.*

In certain countries, special tickets, which may be in the form of return tickets, are issued for use over certain routes to persons travelling alone or in a party and taking their motor-car with them on the train. These tickets are, as a rule, issued under extremely favourable conditions to the user, and enable him to transport his car by rail at a very reduced cost.

### EXAMPLES OF MEASURES TAKEN IN CERTAIN COUNTRIES

#### U.S.A.

1. *Technical and other measures.* The great distances over which rail transport operation has to be effected in America have caused the railway companies to take all possible steps to secure maximum acceleration of traffic. This tendency has been strengthened by the need for rapid transport at harvest time of the various crops peculiar to specific regions as well as by the fact that the majority of the American railways are single-track. However, since motor transport hardly enters into competition in the carriage of large quantities over long distances, the measures adopted by the American railways in this connexion cannot be directly attributed to the situation created by the development of motor transport.

On the other hand, the efforts of the American railways to improve goods stations and transshipment equipment, and develop door-to-door services, are a direct consequence of the new situation. The results obtained in this field, permitting a better utilization of rolling-stock, enabled the American railways during the last period of prosperity to handle a volume of traffic twice as heavy as in 1920 without materially increasing their rolling-stock. In this connexion, the close co-operation between the railways and traders on 'Shippers' Advisory Boards' and 'Traffic Clubs' is particularly important.

In certain cases, these bodies, whose aims and organization are not always clearly defined and whose general management is usually in the hands of an agent of the railways, have developed into veritable transport exchanges where traders explain to the representatives of the railways why they prefer one type of transportation rather than another and the railways work out means of meeting the traders' wishes. It is noteworthy too that the railways have either introduced or permitted the use of a large number of special-type wagons built to meet the technical requirements of American traffic.

Whilst all these measures are to a certain extent connected with the relationship between rail and road, they cannot, however, be regarded as exclusively directed towards adaptation of the railways to the new situation. The steps taken by the railways to meet motor competition may be classified in the following three groups:

- (1) Closing down of stations and branch lines.
- (2) Organization of joint road-rail services.
- (3) Extension of door-to-door services.

In passenger traffic the railways have in many cases acquired an interest in existing motor transport companies or founded subsidiary companies. Some of these, as for instance the Greyhound Line which is controlled by the Pennsylvania Railroad Company, operate parallel services over very great distances.

Rail-car trains have recently been tried out in fast traffic. It is also interesting to note that the railways have been able to deal successfully with bus competition, through the partial electrification and improvement of their suburban services. With a view to providing additional comfort for passengers, the latest coaches, especially dining- and sleeping-cars, are being fitted with air-conditioning equipment.

In merchandise traffic, not only have the railways established a similar form of co-operation with existing hauliers or founded subsidiary companies, but they are also collaborating to a greater extent than hitherto with forwarding houses. As competition is particularly felt in 'smalls' (L.C.L.) traffic the railways have tried to recapture a part of this traffic by organizing freight amalgamation wherever possible. The closing down of stations has necessitated the introduction of motor services in districts no longer

served by rail, particularly for the transport of agricultural produce in which road-haulage competition had become a real menace. The American railways have endeavoured to develop container services, especially in the east, where a large proportion of the traffic consists of small consignments. After this traffic, which had been built up by the railways in collaboration with some of the more important forwarding enterprises, had reached a certain point, its further development was, however, checked by a rate decision of the Interstate Commerce Commission. One of the most important facilities recently offered to traders is the organization of railway warehouses fitted with up-to-date improvements and located at various points in the large cities as well as in the vicinity of stations.

2. *Tariff measures.* No material changes have been made in the passenger fare structure. Special fares have only been introduced in suburban traffic and in special cases. Experiments in general reduction of the basic fare have given disappointing results, but the question is being further considered.

During the summer season considerable reductions are made in the case of group travel and journeys made for purposes of study. In suburban traffic, more especially, 'commutation tickets' are issued, which can be used by individual members of the same family.

With a view to increasing receipts, goods rates were generally increased in 1931. In certain cases the Interstate Commerce Commission has allowed the railways to introduce competitive rates. The whole railway rating policy in the United States is still passing through a period of evolution.

## GREAT BRITAIN

1. *Technical and other measures.* The British railways have increased the speed of their trains, particularly in the more important express services; new train services have also been introduced. Light trains and steam or Diesel-electric rail-cars have been put into service on local lines. Closing down of passenger stations has taken place on a large scale, and, on local lines, slow trains have been suppressed in favour of road services. No goods

stations have, however, been closed down. Experiments are being made with vehicles which can run on road and rail alike. Generally speaking, the railways have not increased the hours of service in their forwarding offices for the reception and delivery of goods, but extended hours of service have been introduced in perishable foodstuffs traffic to the important centres, with a view to offering traders the same facilities as motor transport. The speeding up of operations in marshalling yards has been accomplished more particularly by the employment of electric switching.

The British railways have extended their cartage areas for collection and delivery. In certain classes of traffic they have improved their warehousing services, and even accept to pack goods and put them into place at destination. Thus the railways have assumed most of the functions of forwarding agents, particularly in the case of household removals, and are prepared to undertake the whole work of moving and installation.

The railways have also introduced a special warehousing and commercial distribution service termed 'Railhead Distribution'. Under this system traders are able to consign their goods in bulk for successive delivery or to several consignees and thus secure the benefits of wagon-load rates. The distribution facilities offered to traders at these 'railheads' may include delivery services by motor-vans bearing the trader's name, and provision of all necessary clerical assistance.

Door-to-door services have likewise been improved by the employment of containers, of which the British railways have now more than 10,000 in service. By adapting them to the requirements of traders they have succeeded in generalizing this new means of transport. The importance attributed to containers may be judged by the fact that all the latest open trucks are constructed with a view to the best utilization of floor space when loading containers. The fact that the average load transported by British goods wagons is in the neighbourhood of  $3\frac{1}{2}$  tons tends to encourage the general employment of container services; compared with continental practice, the loads are therefore relatively small.

The railways have the right themselves to operate motor transport lines. With a few exceptions, however, they have preferred to acquire an interest in the majority of the important

bus enterprises. Collaboration is assured by means of joint commissions consisting of an equal number of railway and motor transport representatives. Goods time-tables are not published; extracts are, however, available to the public. The railways undertake to observe agreed limits of time for delivery in favour of those traders for whom delivery within a definite period is indispensable. Generally, conveyance under such conditions is liable to a special charge of 2s. 6d., irrespective of the size of the consignment. This service is called 'registered transit'. Consigning formalities have been reduced to the minimum. Propaganda has been developed as far as possible, and the number of brochures increased. Propaganda services have also been extended and include personal calls on traders by the agents of the railway companies. Only goods requiring special protection need have special packing; certain types of goods are accepted as 'damageable goods not properly protected by packing'.

2. *Tariff measures.* No general tariff reduction has been introduced with a view to meeting motor transport competition: the period of validity of week-end tickets has been extended, and the number of day-return tickets increased, particularly between localities where motor traffic is heavy. Tickets which are valid for both the rail and road portions of the journey are issued for all joint services shown in the time-tables. There is a special rate for the conveyance of passengers' motor-cars in order to induce them to patronize the rail.

No reduction of goods tariffs has been made, but there are a number of exceptional rates. In the case of consolidated shipments, all the goods are rated according to the highest class in the tariff, if the classification does not apply to the whole consignment. The weight unit in wagon-loads has not been reduced. The railways have always granted door-to-door rates, without having recourse to the services of forwarding agents. The tariff applicable to traffic in containers provides for charges on the net weight of the goods, with percentage differentials corresponding more or less to the saving in packing effected through the use of containers. This tariff permits of grouping in one container consignments for several consignees in the same delivery area.



## FRANCE

1. *Technical and other measures.* In passenger traffic the railways have improved the comfort of their carriages, generalized the use of steam heating and electric lighting, placed a large number of corridor coaches in service, equipped carriages used for suburban traffic with wide doors, and extended convertible sleeping-car (*couchettes*) services to 2nd and 3rd class.

High-speed rail-cars have been successfully introduced on certain lines. The French railway companies have not as a rule opened motor transport services in replacement of trains. They have either placed them in the hands of subsidiary companies or invited private enterprises to organize them. Such motor-bus services have in most cases been introduced on local lines where there was an operation deficit, especially in regions of interest to tourists. These measures have as a rule given satisfactory results. All the companies issue individual return-tickets, for combined travel by railway and motor-coach, which include reductions of fares on the railway section of between 20 and 40 per cent. These special tickets are issued on presentation of the motor-coach tickets of certain tourist services organized by the railways. Wherever motor services are effected by subsidiary companies of the railways or other undertakings with which they have entered into an agreement in respect of connecting services, the railways do their utmost to fix the time-tables, having due regard to the requirements of local users, so as to ensure connexion between trains and motor-coaches.

In goods traffic, the application of the automatic braking system has allowed of a marked increase in speed, particularly for trains running over long distances. Appreciable reductions of stopping-time at intermediate stations and marshalling yards have also been effected. Certain railways have closed down goods stations where traffic was of little importance. Equipment has been improved with a view to speeding up operations in marshalling yards. Goods train time-tables have been improved so as to ensure rapid connexions where a profitable exchange of traffic exists. Numerous special itineraries have been created at the request of users. Certain railways publish leaflets showing the time-tables followed

by goods trains in the more frequent traffic relations. The French railways are endeavouring to reduce the number of formalities to be fulfilled by the public. No regulations exist in France as to the packing of goods. The railways have even accepted goods in cardboard packing and in paper bags. They encourage users to employ containers. Lastly, they have extended the acceptance of loose goods or goods in recipients without a cover. Collection services have been increased inside and outside stations. In this connexion an organization of railway agents (*correspondants*) have been set up including several of the more important forwarding houses.

2. *Tariff measures.* No tariff reductions have been introduced. Special week-end reductions are, however, granted on all the railways. These reductions vary between 40 and 60 per cent. In the case of return-tickets no change has been made in the existing reduction of 25 per cent. on 1st-class tickets and 20 per cent. on 2nd- and 3rd-class, except in certain suburban services. The period of validity of these tickets varies according to distance and is extended for certain public holidays. Reduced rate excursion-tickets are issued on all the railways, valid for fifteen days or a month and giving the right to unlimited travel on certain sections of line. Round-trip and special excursion-train tickets are also issued. The reductions in the case of special trains may be from 40 to 60 per cent. The railways grant reduced fares to large families in the holiday season. A special rate has been introduced for passengers' motor-cars. No general tariff reduction has been made in goods service, but steps have been taken to provide for special tariffs according to particular circumstances.

There is a special tariff for the conveyance of express parcels and postal packages. Two special tariffs have been introduced for the carriage of consolidated consignments between certain stations. In certain cases the railways have been led to reduce the minimum weights chargeable for wagon-load lots. Exceptional tariffs have been instituted in the case of certain goods where a danger was offered by motor transport competition. The application of the reductions granted is in certain cases made contingent upon the shipment of a determined tonnage. Reductions are as a rule established progressively according to tonnage. In certain specific traffic relations a wagon-kilometre tariff has been introduced, the

rates of which apply equally to all categories of goods and are approximately the same as those charged in road haulage. When the companies undertake cartage outside the stations, the users pay the costs of such haulage. The cartage charges are fixed by the Minister of Public Works. There are special tariffs for container services.

Recent French legislation leaves the railways greater liberty both in the field of rating and operation, thus facilitating adaptation to the new traffic conditions.

### BELGIUM

1. *Technical and other measures.* The relatively short distances in Belgium and the absence up to now of any regulation of goods motor transport have compelled the Belgian railways to modernize their methods of operation on an extensive scale.

In passenger traffic, rolling-stock has been improved and trains speeded up. In many cases slow trains running at long intervals have been replaced by light trains often consisting of only two coaches, whilst express shuttle services consisting of faster and smaller units (limited trains, *trains-bloc*) have been introduced between important centres. A number of steam and motor rail-cars have also been put into service.

Acceleration has also been the principal aim in goods traffic. With this end in view, automatic braking has been introduced and marshalling operations rationalized. The degree of utilization of rolling-stock has been improved by better planning of train rosters. Goods time-tables for international traffic have likewise been introduced in the course of this reorganization. The delivery periods for express packages and fast and ordinary goods services have been reduced, the time limit for fast goods being cut from 4 to 2 days, and for ordinary goods from 5 to 4 days. Dispatching operations are continued during the night.

The Belgian railways have also made efforts to develop door-to-door services by putting several hundred small-type containers into service. Furthermore, traders are given advice by the railway as to the dispatching and packing of their merchandise.

Railway-owned motor vehicles are only used in the cartage

services in Brussels and Antwerp. In all other cases, cartage operations are delegated to forwarding agents.

An especially favourable rate for forwarding houses' consignments has been introduced with a view to developing amalgamated traffic and, more especially, inducing the forwarding agents to consign by rail. Only in a very few cases have railway passenger services been closed down and replaced by through bus services.

2. *Tariff measures.* Although return-tickets have not been introduced, the Belgian railways have granted the usual reductions for week-end and group travel, the rebates being 25 per cent. in the first case and 12 to 50 per cent.—according to the number of persons travelling—in the second case.

Cheap excursion trains and holiday-tickets should also be mentioned. The reductions granted to workmen and school-children, already in force before the War, have been further developed.

In goods traffic, a number of measures have been adopted with a view to bringing small consignments back to the rail. In addition to the reduced delivery periods mentioned above, a scale of flat rates for small packages has been introduced. A particularly significant feature of the new accelerated services is the conveyance of consignments of certain perishable goods of 5 tons and upwards as fast goods. This advantage is extended to all consignments of home-grown fruit exceeding 2 tons.

Special tariffs are likewise applied to regular traffic subject to a guaranteed minimum of traffic by the consignor. The Belgian railways have also introduced a number of competitive rates properly so called.

## NETHERLANDS

1. *Technical and other measures.* The short distances and the competition of a highly developed inland waterways system placed the Dutch railways in an extremely difficult position in goods traffic when motor transport stepped into the field. Their efforts have been directed not only towards the better equipment of passenger coaches, general speeding up of traffic, and the introduction of holiday or other excursion trains, as in other countries, but they have also decided upon the employment on a large scale

of rail-cars with a view to handling the traffic on non-electrified lines by utilizing small units in place of long trains.

During 1934, 40 Diesel-electric stream-lined three-coach trains have been put into service. Stations used by less than 10 passengers per day have been closed down. On the lines with the busiest passenger traffic electric traction with overhead system (half-hour service) and Diesel-electric traction (hour service) successfully defy the competition of road traffic. The speed attained in regular service is at present 100 km. (62 miles) an hour. Diesel-electric units, however, can attain a speed of 140 km. (87 miles) an hour. Such a unit rests on 4 bogies, develops 820 h.p., and contains 160 seats. Two units can be coupled and be driven as a single unit.

On the electric lines (181 km.) the average traffic density is 20,000 passengers per 24 hours, on the Diesel-electric lines (253 km.) the average traffic density amounts to 6,000-12,000 passengers per 24 hours. On all lines together this is only 2,500 passengers per 24 hours. While the electric and Diesel-electric lines form together only 12 per cent. of the total length of the system, their traffic amounts to one-half of the total traffic.

The fast half-hour and hour services introduced since 1908 and greatly extended since 1926 (also applied to some steam lines) have proved a great success by increasing the speed of the trains.

Acceleration of trains has also been the principal aim of the Dutch railways in goods traffic. The average speed of trains for the carriage of wagon-loads has been raised to 55-60 km.p.h. (34-7 m.p.h.).

The transport of small consignments has been completely altered. From May 15th, 1934, it is arranged as follows: The Netherlands are divided into about 40 groups of stations. The small consignments in every group are collected and transported by road to a central station of the group, where they are reloaded into the wagons. From these wagons special 'smalls' trains are formed, run at a speed of about 75 km.p.h. (48 m.p.h.), directly to the other central group stations. From there the goods are distributed to their destination either by rail or by road. In that way small consignments between any two points in the Netherlands are delivered within 24 hours. Moreover,

an effort is being made to reduce considerably the number of wagons in use for this kind of traffic.

The Dutch railways have paid less attention to marshalling yard operations, but they have greatly improved train rosters and connexions, thus making possible the publication of goods time-tables.

On May 1st, 1933, when the goods tariffs were reduced, the Dutch railways availed themselves of that opportunity to introduce the free delivery at domicile of *all* small consignments.

The subsidiary company, the Company 'Van Gend & Loos', up to that date commissioned to carry out the delivery service on payment of the charges fixed in the tariffs, now delivers such consignments in all places of some importance, where it has an agency, *free of charge* to the consignees. That Company, moreover, carries out a collecting service at special reduced prices. In that way a door-to-door delivery is established in effective competition with motor transport.

The sphere of action of the Dutch railways in goods traffic is being extended by the introduction of joint goods services with through-tariffs for places not served by the railway, run by the Motor Transport Company 'A.T.O.' (formed for these and other purposes) in connexion with the Dutch railways.

In order to be able to reduce the number of station employees and at the same time accelerate goods traffic, less important stations are included in these through-tariffs, unremunerative sections of line or stations being closed down entirely or only partly kept open, for instance, for wagon-loads only; in the latter case, the stations are included in the through-tariff.

2. *Tariff measures.* As regards passenger traffic fares were reduced by 17 per cent. in 1933. For the present this has led to an increase of passenger traffic, though earnings have decreased.

As in other countries, special excursion trains at reduced fares (between 40 and 60 per cent.) have been introduced. Five hundred and forty trains of this kind were run between May 1st and October 31st, 1932.

In goods traffic, a general reduction of the rates for the highest classes of goods took place in 1933. Uniform rates for small consignments were also introduced, with reduced rates for short distances.

At the same time, reductions were made in the fast goods tariff and an express package service was introduced. In view of the competition caused by inland navigation, it has long been customary in the Netherlands for the railways to make the granting of rate reductions contingent upon the obligation to consign all traffic by rail. Special competitive rate reductions exist in the form of reimbursement agreements between the railway forwarding agents and traders.

### SWITZERLAND

1. *Technical and other measures.* Despite keen motor competition the Swiss railways have not introduced any essential changes in passenger traffic, although in some cases accommodation has been improved. The introduction of short trains is still under consideration and the use of rail-cars has up to the present been found too expensive.

Mention should, however, be made of the speeding up of traffic through extensive electrification, and of the excellent publicity service of the Swiss Federal railways which has been developed especially with a view to attracting tourist traffic.

As regards goods traffic, the railways have been fairly active. In particular they have accelerated their goods services by the introduction of automatic braking, reduced length of stops at stations, and improved connecting services. Wagons arriving at marshalling yards, for example, are more rapidly transferred to unloading points and transhipment to connecting local trains accelerated.

Train rosters have been greatly improved. The Swiss Federal railways have published a general goods time-table for transit traffic and individual time-tables for small consignments in domestic traffic. Traffic has also been speeded up by attaching goods wagons, especially on Sundays and holidays, to light engines and passenger trains. No necessity has yet made itself felt for the introduction of amalgamating depots.

There are no railway-owned passenger or goods motor services. In passenger traffic, the railways work in very close collaboration with the Postal Administration and have introduced joint fares and time-tables. In goods traffic collaboration between the railways and motor transport is ensured by the S.E.S.A. and the A.S.T.O.

These two organizations meet motor competition by door-to-door service and have loosened up the tariff structure by introducing flat-rate charges.

2. *Tariff measures.* The Swiss railways have continued to develop their system of reduced fares already introduced before the War, to attract tourists and promote excursion traffic. These measures include, in particular, the following innovations: week-end tickets, especially for sports purposes, with a 50 per cent. reduction which is, however, not extended to express train supplements; organized group travel, with a competent railway official as guide; excursion trains between certain towns or to popular excursion points. The reduction on return tickets is 20 per cent. Special reductions are also granted to families. The close collaboration existing between the Federal railways and the passenger motor services operated by the postal authorities, has made possible the issue of joint tariffs and tickets.

Wagon-load rates were reduced by between 15 and 40 per cent. as from August 1st, 1929. A general rebate based on quantity is granted in 'smalls' traffic, varying between 5 and 30 per cent., the latter figure applying to consignments of 1,000 kg. Similar rebates are also granted in fast goods service. The introduction of a tariff for amalgamated goods is in keeping with these tendencies. The essential feature of the Swiss tariff measures is, however, the close collaboration between the railways and the S.E.S.A. This organization can grant special rates to traders who undertake to consign certain minimum quantities. In other cases it quotes special door-to-door rates to meet motor competition, which are substantially lower than the ordinary railway rates plus usual cartage charges.

Cartage charges vary in the different towns, but are graduated everywhere by zones. In certain cases they amount to twice the corresponding railway rate.

In a mountainous country like Switzerland cartage services to country districts are bound to play an important part. Consequently it has been possible through a suitable graduation of cartage charges, to loosen up the tariff structure within the framework of the door-to-door services.

Door-to-door delivery has been introduced in all places where there is a S.E.S.A. agency. Even when the S.E.S.A. enters into



rate agreements with traders, in competition with road transport, on the basis of what have proved to be remunerative motor transport charges, the principle is maintained—despite the absence of any obligation to publish such agreements—that nobody shall receive an advantage in any form whatsoever which would not be granted to all others under equal conditions.

## ITALY

1. *Technical and other measures.* In recent years, the policy of operation of the Italian railways has been directed towards traffic acceleration. This has been accomplished by large-scale electrification and the construction of new connecting lines to reduce route mileage. The importance of accelerated service was particularly pressing in Italy by reason of the important place occupied by perishable goods traffic (e.g. fruit and vegetables) where motor competition with its door-to-door service was bound to make itself strongly felt. The suppression of smaller stations and halts and the modernization of marshalling operations represent the more important measures adopted in that connexion.

A number of large goods stations with up-to-date equipment have been completed in the last few years. Although marshalling operations are generally interrupted during the night a very marked acceleration has nevertheless been realized. A decisive part has also been played by improved train rosters adapted to local traffic requirements and variations in the volume of the trade. These measures have led to the publication of a goods time-table for international traffic. The Italian railways have paid particular importance to the transport of small consignments. The measures adopted in this connexion include: introduction of short light goods trains, the wagons of which are intercommunicating (as on the German *Leig-Züge*); sorting operations on the train, institution of consolidation depots, and provision of wagons for minimum loads of 2-2½ tons in 'smalls' traffic. This is a further instance of measures introduced to meet the specific conditions of production obtaining in Italy. According to the Italian State Railways, the greater flexibility and speeding up of goods traffic realized in this way increased the average speed of goods transport on main

lines by 28 per cent. in 1931-2 as compared with 1928-9. The acceleration is particularly noticeable in long distance traffic.

The Italian railways have taken active steps to deal with the problem of passenger traffic. They have introduced a number of short special trains, organized group travel, and considerably improved passenger service traffic in general by suppressing halts and stations and by electrification.

The railways have made agreements regarding joint operation of goods and passenger services with established motor transport enterprises; as a rule they do not, however, run any motor services of their own. In principle, joint services based on joint time-tables are only organized in conjunction with public motor transport enterprises. Even where joint time-tables for through rail and road services exist, there are no through rates or fares, but inclusive end-to-end prices established by adding together the transport charges of both means of transport. The National Institute of Transport (Istituto Nazionale Trasporti), a body created by the Government, is responsible for developing door-to-door traffic with the co-operation of existing motor transport enterprises, or introducing special door-to-door services with a view to restricting motor competition. For the same reason the railway cartage charges for collection or delivery have been unified.

2. *Tariff measures.* The rating measures taken by the railways have generally originated from the supposition, based on geographical considerations, that motor competition is only felt up to distances of 300 km. (185 miles). Consequently, the rates for the highest classes of goods over hauls up to 300 km. have been reduced by 20 per cent. on the average. Furthermore, an express package service has been introduced between a large number of stations. A characteristic feature of the rate policy adopted by the Italian railways to meet motor competition is the stipulation that special reductions will only be granted to traders who undertake to consign a certain quantity of goods by rail.

In passenger traffic, a number of noteworthy measures have been taken all more or less tending to fill trains and divert traffic from the road, including fare reductions of as much as 70 per cent., and in some cases even 80 per cent. Over small distances, however, no reduction or only a slight reduction is granted.

Reductions for return tickets amount to between 20 and 60 per cent., according to the incidence of competition; the reduction for week-end tickets is 50 per cent. and that for trips on special occasions, 70 per cent.

### GERMANY

1. *Technical and other measures.* Constant improvement of passenger traffic had already become one of the principal aims of the German railways before the War. Since the development of motor transport the Reichsbahn has concentrated its efforts primarily on the acceleration of traffic in general.

The question of constituting door-to-door goods services has not had the attention of the Reichsbahn to the same extent as in other countries, the main reason probably being that more than one-half of all wagon-load consignments originate and terminate in private sidings. Nevertheless, the Reichsbahn has introduced important technical improvements in this field.

Furthermore, the rating policy of the Reichsbahn which had already developed before the War in accordance with general economic considerations has kept the charges for primary commodities such as coal, iron, stones, ores, &c. (representing more than half of the total traffic) so low that the effect of motor competition has been almost exclusively limited to high-grade traffic and small consignments of considerably smaller bulk. Consequently, apart from the general acceleration of transport, the measures taken by the Reichsbahn with a view to recovering the goods traffic lost to road transport have been chiefly aimed at high-grade traffic consisting of smaller loads and small consignments of general merchandise. In these classes of traffic important improvements have been achieved, not only by rating measures, but also by better transshipment equipment, simplified consignment formalities, the introduction of door-to-door services by putting several thousand small-capacity containers into service, and by conveying railway wagons to traders' premises on road by means of special vehicles called *fahrbares Anschlussgleis* ('wheeled private sidings'). Certain classes of bulk traffic have been considerably accelerated by the introduction of wagons fitted with skips or hoppers. A very remarkable attempt to speed up traffic menaced

by motor transport competition has been made by the Reichsbahn through the adoption of short light goods trains (called *Leig-Züge*) or, in some cases, goods rail-cars, loading and unloading operations being speeded up by the employment of special loading appliances. Goods time-tables have also been published.

A typical instance of development in Germany is furnished by the sustained efforts of the Reichsbahn to provide a forwarding service either in collaboration with large forwarding houses or under their own management. The Reichsbahn has also itself formed its own goods motor transport services. The tendency of the Reichsbahn to employ motor vehicles is likely to grow concurrently with the building of the *Reichsautobahnen* (*autostrades*).

Passenger traffic has been accelerated to a remarkable extent: between Berlin and Hamburg, for example, there is a rail-car service attaining a maximum speed of nearly 100 m.p.h. and further high-speed services of a similar nature are to be introduced. In this connexion it is important to note that joint rail and road services have already been organized on an extensive scale; rail and air services have also been introduced.

2. *Tariff measures.* The principal measures adopted in this field are the reduction of the rates applicable to the higher classes and the reform of the rating of small consignments by the introduction of a uniform system of rating irrespective of the nature of the merchandises.

Further successful efforts of the Reichsbahn to intensify the utilization of its installations and meet motor competition have been made by applying especially favourable rates to amalgamated consignments of variously classified merchandise.

In this connexion, it is also interesting to note that the Reichsbahn has obtained the statutory extension of the railway rates applicable to the highest classes to commercial long-distance motor traffic.

## CHAPTER IV

# SOCIAL AND LABOUR LEGISLATION<sup>1</sup>

### I. GENERAL

#### I. INTRODUCTORY

THE running of a railway involves risk to the life, health, and property of those who use the railway, a risk the user cannot avoid owing to the monopoly position held by the railways. It also involves risks to outside third parties. The risk becomes a concrete danger, involving damage to life and property, when the railway staff is overworked, overtired, insufficiently nourished or clothed, too young or too old, or not sufficiently or incorrectly trained. The risk is increased by the fact that the railway is obliged to maintain a regular service, and cannot, for staff reasons, simply cancel the running of a particular train. This explains why the State has, from the very beginning, intervened in the relationship between the railway and its employees.

Not only the public, however, but the staff themselves run risks. Thus arises the idea of the protection of labour in social legislation which influences the conditions of work of railway employees. The State also requires the railways to observe certain regulations in favour of the staff which may be quite unrelated to the interests of the users.

Finally, the State may intervene in the relationship between the railways and their staff as part of its policy towards the wage-earning classes as a whole, as for instance when efforts are made to improve the general position of the wage-earner apart from any question of industrial protection.

In the case of the railways the number of employers is small. There may be a larger or a smaller number of railway companies, in addition to or without the State, but even in those countries where the number of companies is large by comparison with other countries, as for instance in Spain and the United States,

<sup>1</sup> This chapter has been written with the co-operation of Mr. Erich Rath, Dr. P. Wohl's assistant at the International Container Bureau.

it remains infinitesimal compared with the number of employees. The limitation in the number of employers, together with the fact that the State, where it is not itself an employer, in any case already exercises a far-going control over the operation and management of the railways, constitutes an important guarantee for the carrying out of any regulations laid down in labour legislation. The legislator is therefore in a position to draft his regulations with a maximum of concrete detail and with reference to specific conditions.

Whereas the number of employers is very restricted, the number of employees, on the other hand, is very large. The railway is essentially a large-scale, even a giant industry. This facilitates organization among the employees, and as a matter of fact railway employees have from the earliest days formed trade unions running often to hundreds of thousands of members, wherever such organization was not forbidden. The unions in turn try to influence legislation and conduct the negotiations in regard to conditions of employment on behalf of their members. The individual workman no longer bargains about the terms of employment himself, these being instead embodied in collective or tariff contracts to which the unions are powerful negotiating parties. The size of the railway industry leads to highly developed specialization. The employee is either an engine-driver or a stoker or a guard or a signalman, and the same individual does not combine two or more of these functions. The existence of collective contracts tends to make these divisions rigid. The staff is divided into grades; a wage rate is fixed for each grade, and frequently it is laid down that apart from emergencies the employees falling into one grade need not or must not do the work of employees of another grade. A similar division also exists among the clerical grades.

Conditions in the motor transport industry are quite different. Of course, the protection of the public, the user, and the employee is no less important here than in the case of the railways. The number of employees is also very considerable, particularly if the staff of petrol stations and garages and related clerical labour is included. But the number of employers is considerably greater in most countries, both relatively and absolutely, than in the case of the railways. The absolute number of employers being much

greater, there is much greater difficulty in controlling the execution of regulations concerning the employment of labour, especially those dealing with hours of work. Consequently the State displays much more hesitation in introducing legislation for the motor transport industry.

In striking contrast to the railway industry, the number of employers is also large relatively to the number of employees. The motor transport industry is a small-scale industry, each business unit having perhaps ten or five or even one employee, and the owner and the members of his family frequently working alongside of his employees. Collective bargaining is less predominant, and terms of employment are more often settled directly between the parties concerned. Conditions of employment are consequently less favourable than on the railways. There is also less security of employment. Even in the case of railways run by private enterprise, railway employees often enjoy a quasi-official status (practical impossibility of dismissal or termination of employment subject to long notice, right to pensions, &c.), whereas in the case of the private transport companies this is probably never the case. The smallness of the individual business unit in the motor transport industry also prevents anything like the same degree of specialization of labour as on the railways, and consequently there is less play for collective bargaining or state regulations concerning operating or other conditions. Occasionally one comes across a regulation stipulating that a lorry driver must be accompanied by another employee, but the driver cannot refuse the work of loading and unloading, the carrying out of freight formalities, receipt of payments, &c. In recent years, the same has also become increasingly true of omnibus drivers.

The small business unit being characteristic of the motor transport industry, the employee himself is very often not at all interested in regulations imposed for his protection. He is an employee, but only provisionally, his object being to purchase a lorry or an omnibus and to become an employer himself. He wants to earn as much as possible in the quickest possible time, and is often prepared to work longer than the regulation number of hours. These are considerations which play no part with the railway employee.

All this does not mean that conditions of employment for motor drivers are entirely or largely unregulated. But for practically all countries it is true to say that they are much less regulated than in the case of the railways. In most countries the railway employee is subject to legislation which applies specifically and exclusively to him, to his needs, and to the conditions of his work. The motor driver is, as a rule, only affected by legislation which applies to wage-earners as a whole. In so far as specific regulations concerning him exist, they are aimed at securing traffic safety rather than at adjusting his conditions of employment to those of railway employees. On the whole the railways are subject to very much more far-reaching and rigid regulations as regards their employees than are the entrepreneurs in the motor transport industry.

The above observations require some modification in regard to two particular classes of motor transport. Where the entrepreneur carries on his business without any employees, either on his own or with the help of members of his family, he is subject to no labour regulations at all. Here the railways are comparatively in a still more unfavourable position. On the other hand, there is the case of ancillary motor transport, i.e. motor transport which is neither public nor private carrier and forms part of a manufacturing or other business (*Werkverkehr*). In all countries, by far the largest number of lorries are employed in this class of traffic. The workmen in ancillary motor transport are employed by organizations which employ other classes of workmen as well, and the former usually fall under the same regulations as the latter. Further, motor drivers in ancillary motor transport in small and medium-sized businesses have as a rule other duties to fulfil which take up a large part of their time. In collective contracts they are consequently not treated as transport workers, so that even in countries such as Great Britain where regulations exist governing specific points in the conditions of employment of workers in ancillary motor services, the employees in question are governed by general labour legislation as far as their labour contracts are concerned.

However, as already pointed out, in all cases, whether specific or general labour legislation applies, the application of the regula-



tions is much more difficult to control in the motor transport industry than on the railways.

## 2. HOURS OF WORK

In various legal texts, the expression 'effective working time' is employed. By this is meant the time spent by the worker in acts which are necessary for the accomplishment of his specific task. In other countries the expression 'hours of duty' appears. This may include the whole time which the worker passes in the performance of duties connected with his service. The following example shows the possible interpretations in actual practice: outward journey, 3 hours; engine cleaning,  $\frac{1}{2}$  hour; free time,  $\frac{1}{2}$  hour; return journey 3 hours; preparatory work,  $\frac{1}{2}$  hour before and  $\frac{1}{2}$  hour after journey. In this case, the net period of service may be reckoned at 8 hours; but it might equally well be considered as lasting 7 or  $7\frac{1}{2}$  hours. Similar examples can be cited from the field of railway transport: yard-workers often have idle periods of  $\frac{3}{4}$  hour or even more, while conductors and train crews often spend 2 hours in a town other than their base. Such facts as these will make it necessary to establish the legal definitions of the term 'working time' in the special section devoted to conditions in the various countries.

In several countries *overtime* may be included in the staff roster of the railways, if the strict observance of the regular average working hours would require the institution of relief shifts which it would be impossible or extremely difficult to arrange, or which would lead to extraordinary expense. In some countries the special case of auxiliary crews is brought under this general rule. In extraordinary circumstances the personnel may almost everywhere be employed longer than the established working time, if this is rendered necessary by late trains, break-downs, traffic rushes, or other coercive reasons. With a view to greater elasticity, many laws and labour agreements define them not on a daily but on a weekly or even a monthly basis.

The question of overtime is of decisive importance for motor transport operations as well, but few obligations are imposed on the motor transport enterprises in this respect. For this reason,

recent legislation is seriously occupied with the undue length of the working time of motor drivers. Thus the French railways have asked the Minister of Labour whether the 8-hour day legislation could not be applied to motor transport; and in the British Road Traffic Act the time for which drivers and attendants may remain continuously on duty is expressly limited.

In order to avoid excessive fatigue of the workers, many laws, staff regulations, and labour agreements include rules regarding intervals and rest periods. In general, these interruptions occur after the first half of the work period. Their length is different in the various countries; but it may be noted in general that these intervals may not be of less than twenty minutes. Shorter interruptions of work are not to be counted as intervals; while on the other hand, in many countries an interruption lasting longer than half an hour is still considered as an interval. The rest periods and intervals are to be passed at the place of residence, so far as the service allows, and, if the worker so desires, are to be sufficiently extended to permit him to take his meals during this time. Many legislations allow the entire omission of intervals, provided the work period does not exceed eight hours. The legislations also differ greatly regarding the number of intervals. It varies between a minimum of one and a maximum of four.

In addition to these intervals and rest periods, the personnel of all industrial enterprises also have certain days of rest. In general Sunday should be the day of rest. When this is impossible, it must be made up for in the course of the week. In line with this requirement it is generally specified that the required number of days of rest may be distributed over a period of 10 or even 14 days. The question of the minimum duration of the 'day of rest' is also differently treated in the different legislations. It varies between 20 and 38 hours. Here again there are hardly any regulations for motor transport.

### 3. *PROTECTION OF LABOUR*

The railway managements have had to install special sleeping accommodation at various points of their systems, and likewise rest-rooms, wash-rooms, and dining-rooms. These requirements are generally specified in the wage-agreements, but often also in

the ordinary legislation. In addition, special protective devices must be installed in the case of particularly dangerous machinery. For instance, the management of the railway from Djibouti to Addis-Abeba must, in order to avoid accidents, employ an American clutch-coupling, which can be released by means of a lever at the side of the wagon. In Finland and a number of other countries, the railways are required to supply the yard-workers with gloves, and in some cases the locomotive engineers and firemen must be provided with special goggles.

Special winter clothing, however, is, according to the rules of the railway, to be supplied by the worker at his own expense.

#### 4. *WAGES*

It is impossible to give any sort of comparative survey of the wage conditions of the different countries. The report prepared by the Salter Conference takes the following position on the wage question:

'The system under which the rights of railway employees are protected is the counterpart of the organization of the railway administration and no change in the legal position, even if practicable, would be likely to change the position substantially. The less favourable conditions obtaining over a part of the haulage industry are due to the great number of individual units in that industry. But it would not only be impracticable to make the railways free to compete in these respects on equal terms with those particular hauliers who work their men for excessive hours at inadequate wages, it would be in the highest degree socially undesirable. Injustice to the employees and also in the interests both of the railways and of those hauliers who are struggling to maintain satisfactory wage-rates and conditions of work, it is of the utmost importance that our efforts should be devoted to end the abuses in these respects which have so far attended the organization of the industry in so many small units.'

#### 5. *SOCIAL POLICY*

The social insurance systems of the different countries are far from uniform, and only those provisions generally representing the heaviest burden on the transport industry are mentioned below.

(a) *Health insurance.* Transport workers are in general not protected against illness inherent to the profession. The railways, however, have in many cases undertaken to employ a special medical staff to supervise the health of the personnel. In addition, in some countries convalescent homes have been established, which the railway workers can enter for a small charge. The railways also take measures with a view to maintaining a good standard of health through good nourishment, by setting up special co-operative stores for their employees or concluding special agreements with private business houses for easier conditions of payment. In some countries, also, the station restaurants are required to serve good meals to the employees at a fixed price. In addition in some countries there exists sickness insurance, applying, of course, to railway and the motor transport workers.

(b) *Accident insurance,* which generally includes all workers, is sometimes extended in its scope as regards railway workers through international agreements. Thus there is, for example, a treaty between Hungary and Austria regulating the question of the insurance of railway employees who are temporarily occupied, or, in the case of stations or stretches of track near the boundary, permanently employed in the territory of the other country.

In place of old-age insurance, in so far as it exists, most railways have a pension fund for their workers, who, after they have reached a certain salary-level, are considered as permanent staff. The pensions are laid down in the staff regulations.

(c) *Other charges.* The unfavourable situation of public finances has carried with it further semi-political burdens, particularly for the railways. Thus there is assistance to part-time workers, and unemployment insurance, the cost of which must also be borne in part by the employer. In some countries unemployment insurance has been transformed into voluntary labour service, or into compulsory labour service: this has been the case in Bulgaria and Germany. Thus the German Reichsbahn, in the struggle against unemployment, has had to undertake great expenditure, especially through increased staff, the creation of new possibilities of employment, and greater use of material. In 1933, it expended

a total of about 1,400,000,000 RM., including wages of workers engaged in maintenance of way and in shop-work. In addition all temporary workers, contrary to the usual custom, were kept on the pay-roll throughout the winter. Among special political burdens imposed on the railways, levies for national defence must be mentioned. Thus in many countries the railways must grant leave to their employees from time to time for army service periods or for exercises in the militia, or a special military training is given them. In most cases, the military legislation requires that the payment of wages continue during these periods.

## 2. EXAMPLES TAKEN FROM SPECIFIC COUNTRIES

### UNITED STATES OF AMERICA

Only the obligations created by labour legislation and social policy for first-class railroads are dealt with here.

The duration of the work-period of the employees is settled partly by legal enactment, partly by staff regulations and the decisions of the competent bodies, and partly by wage agreements. Federal legislation concerning train-crews includes the law of 1907, known as the 'Sixteen-Hour Law', and the law of 1916, known as the 'Adamson Act'. The Sixteen-Hour Law prescribes for interstate railways a maximum work-period of 16 working hours; extra hours are, however, permitted in case of accident or 'Act of God'. For the signalling and switching staff, this law prescribes a daily work-period of 9 hours, or, in the case of any one day, of 13 hours. The Adamson Act is concerned with the same persons as the Sixteen-Hour Law described above. It provides that, beginning January 1st, 1917, the normal working day shall be fixed at 8 hours in all labour agreements and service regulations. At the same time, wages shall remain unchanged, even in the case of employees who are paid on a mileage basis (see Canada). The assumed speed, or basis of reckoning time, was set at  $12\frac{1}{2}$  miles an hour, instead of 10 as before. The system of payment on a mileage basis has, however, since been replaced by a mixed system in which both time and distance are taken into account.

The economic crisis brought the American railroads a heavy decline in traffic. This unfavourable situation naturally affected the employees also, nearly one-third being laid off in three years. The average number of railroad employees and train-personnel was 313,329 in 1929, and only 202,644 in 1932. Wages and salaries were sharply cut, and in addition, many workers were employed in a lower capacity and received correspondingly lower pay. On the Texas Pacific Missouri Railroad, all locomotive firemen were replaced by locomotive engineers of fifteen to twenty-four years experience. On June 16th, 1933, the American Government promulgated the Emergency Railroad Transportation Act, which confers complete authority over the railroads on the Federal Coordinator. At the same time the 40-hour week was imposed on the railroads and further dismissals were forbidden.

Under the old Railway Labor Act (Adamson Act), disputes over wage scales and working conditions had to be submitted to an arbitration board. This is, however, not the case in the motor transport industry. One consequence of this is that wages may be lower and hours of work longer in motor transport than on the railroads. Here again the railroads are at a disadvantage in comparison with motor transport. It is said that motor drivers are made to work even beyond the limit dictated by considerations of safety, some of them working from 14 to 18 hours several times a week. The weekly wage of these drivers is only \$10 to \$15. Unemployed men who are capable of driving a motor-car are said to be willing to work for board and lodging.

The Federal Government has also dealt with this situation in its National Recovery programme. Provisions had already long been in force in the States of Montana, North Dakota, South Carolina, and Washington, according to which bus and truck drivers were forbidden to drive for more than 10 hours out of 24, and must be given an uninterrupted rest period of 8 hours. In other States, however, the uninterrupted driving time varied from 7 to 14 hours, and the working time from 10 to 18 hours in the course of a 24-hour period. In some States rules are provided which distinguish between service period and working period. In the State of Ohio, on the other hand, the only provision is that no part of the free time may be passed in or on a motor vehicle. In many States it is

also forbidden for one driver to sleep in the car while the second drives. On September 20th, 1933, a Code was signed by the Automobile Transport Industry, which, in order to avoid unfair competition, provides for a 40-hour week.

Mr. Whalen, President of the National Recovery Administration in New York State, declared in the course of a speech, that overtime is forbidden in all cases, since it would be contrary to the intention of the whole National Recovery programme.

Unemployment insurance exists only in the State of Wisconsin. It is supported entirely by the payments of the employer, if he employs more than ten workers.

### CANADA

Conditions of work and wages are determined on the basis of negotiations with the management of the railways. Disputes are submitted to the Railway Board of Adjustment. The regulations regarding working time make no distinction between working period and service period. A weekly working period of 48 hours is prescribed. The length of the annual vacation varies according to the nature of the work. Most employees have two weeks vacation after a year's work. Under certain circumstances intervals are counted in with the working period, but in any case there is no special stipulation as to the minimum length of the rest period between two working shifts. Overtime is paid 50 per cent. more than the normal rate, and an additional 10 per cent. is added for overtime in excess of the 48-hour week. Special wage-classifications are included in every wage-agreement. Train-crews are paid in proportion to the length of the distance covered. The majority of the other employees are paid on an hourly basis.

The two largest railway companies (Canadian Pacific and Canadian National) have established pension funds. The pensions are accorded at the age of 65 and after 15 years of service. In case of premature incapacity for service, exceptions can be made. The railways offer free transport of building material for the construction of homes by their employees. The wearing of a uniform is compulsory. For certain categories of employees it is furnished free of charge, while others must bear half the cost. An annual

physical examination of the employees by company doctors takes place. No other health measures are prescribed.

Motor transport in the Province of Ontario is subject to a special regulation which fixes the working time of the drivers at a maximum of 10 hours within a 24-hour period. This regulation applies to 'public vehicles'. In the Province of Saskatchewan, this working time, designated as 'actual driving time', is fixed at 9 hours. The term 'public vehicles' here applies to motor-buses, lorries, and taxis. On Prince Edward Island the Public Vehicles Act provides that the workers must be at least 21 years old and that they may not drive more than 10 hours. Compulsory insurance exists since 1927. In 1930 it was developed into a compulsory public insurance plan. A system of unemployment relief, supported by the Dominion Government, was introduced in 1932. It is, however, not compulsory.

#### BRAZIL

In Brazil a Social Insurance Law, passed in 1923, prescribes disability, old age, and life insurance for the railways. Since 1927, the railways have established pension funds for retired employees. On October 1st, 1931, the social insurance plan was extended to the motor transport industry.

#### URUGUAY

In Uruguay there is a law which prescribes for the railways the establishment of old age, life, and disability insurance. The cost of this insurance is defrayed one-third by the workers and two-thirds by the employers.

#### ARGENTINE

In the Argentine there is since 1929 a law establishing the 8-hour working day. In application of this principle, a law was passed on December 31st, 1930, regarding hours of work on the railways. The normal duration of actual work may not exceed 7 hours. The term 'work', as applied to the personnel of steam and electric locomotives, is defined as including the entire time spent in the care and preparation of the engine in the round-house,



and also the entire time during which the employee may not quit his post and during which the responsibility for the whole train or for the locomotive rests upon him. Intervals lasting less than an hour and a half, during which the employee is permitted to leave his post, are counted in as working time. Intervals which last longer than an hour and a half are counted as working time to the extent of 50 per cent. Overtime is paid at a rate of 50 per cent. higher than the normal rate, if it occurs on working days; on holidays it is paid at double the normal rate. Thirty days annual vacation are provided for; if the needs of the service do not permit this, semi-annual vacations of a fortnight each are to be given instead.

At the same time a law was also promulgated concerning the hours of work of motor-bus conductors. Here, too, the 8-hour work-period was established, or the weekly work-period of 48 hours. Actual working time is defined as including the entire time during which the employees and workmen must be present in order to obey the directions of the company. Scheduled intervals are not counted as working time, nor are any interruptions of work during which the employees and workmen can dispose of their time. Night work may not exceed seven hours.<sup>1</sup>

Since 1889 old age, disability, and life insurance has been in force for workmen, and since 1911 for employees as well. The charges placed on the railways and on the motor transport enterprises in this field are therefore equal; the contributions are borne half by the workers and half by the employers.

#### GREAT BRITAIN

The relations between the railway companies and the workers are defined by the Railway Act of 1921, which provides for the establishment of joint councils. All questions relating to rates of pay, hours of duty, and other conditions of service are, in default of agreement between the companies and the railway trade unions, referred to the Central Wages Board, or, on appeal, the National

<sup>1</sup> If the work is divided into shifts, overtime is permitted; but it may not exceed a total of 8 hours in a three-weeks' period.

Wages Board. The railway personnel has the 8-hour day. At small stations, however, employees often work 10 or 12 hours. No agreement contains a provision forbidding the companies to prolong the working time in exceptional cases. Twelve hours of rest must in all cases separate two working shifts. The number of days of rest in the year, likewise, is not fixed by any agreement. The length of the vacation varies from one wage-group to another: the uniformed employees are entitled to 6 days' vacation annually. The employees who are paid monthly salaries have vacations of 12 to 18 days. Sunday and night work are paid 25 to 50 per cent. higher than the normal rates, but the term 'night work' applies only to work done between 10 p.m. and 4 a.m. Rates of pay are established according to several classes.

The railway companies have built dwelling-houses which are rented very cheap. In addition, the companies have provided at the stations modern sanitary arrangements for the locomotive and train crews, as well as dining-rooms; where these do not exist, the workers are allowed special prices in the station restaurants. Certain categories of workers are required to wear uniform. Those employees who come in direct contact with passengers are furnished their uniforms free of charge. Every employee must undergo a medical examination by a company doctor at least once a year. Several convalescent homes are at the disposal of the train personnel.

General sickness and disability insurance has been in force since 1911, and obligatory old age and life insurance since 1925. Railways and motor transport enterprises are alike subject to this insurance legislation.

The question of hours of work and wage-conditions in the motor transport industry also received the special attention of the Salter Conference (see the general section of this paper). The report declared, in one of its recommendations, that the licensing of motor transport enterprises should 'be conditional upon payment of reasonable wages and observance of proper conditions of service, in respect of the driver'. The proposed control system provides that the local authorities (area transport commissioners) shall publish the generally recognized basic wages. The Com-

mission did not, however, propose that the licence should be cancelled or withdrawn in case of enterprises offering inadequate wages or unfair working conditions. These measures would be taken by the Minister of Transport or of Labour only after the adoption and publication of definite rules. The laws according to which the working time of motor drivers is calculated are the Road Traffic Act of 1930 and the Road and Rail Traffic Act of 1933.

Under the Road Traffic Act of 1930, no motor driver may drive more than  $5\frac{1}{2}$  hours without interruption, or more than 11 hours within a 24-hour period. The driver has a right to 10 hours uninterrupted rest period between two working shifts. In exceptional cases this may be reduced to 9 hours, provided the driver be allowed 12 hours the next day. The term 'driving' is defined as including the whole time spent on actual driving or on other work in connexion with a vehicle or its load.

These regulations are applied to the drivers of lorries and omnibuses engaged in public transport as well as to all other drivers of motor vehicles.

It should be mentioned in conclusion that the National Conference of Friendly Societies and the British Medical Association have submitted to the Government a scheme for a general and uniform health service, which would be concerned particularly with the workers engaged in transportation.

#### FRANCE

The French 8-hour law of April 23rd, 1919, fixed no time limit for the publication of the administrative regulations for the various branches of economic activity. After a long parliamentary struggle the working time for railway workers was fixed at a maximum of 8 hours a day, on the average, and 2,384 hours a year. Over a given period the total working time may not exceed as many times 8 hours as there are working days in the period. Where the nature of the work makes it impossible to distinguish accurately between working time and periods of interruption of work, the time of presence is assimilated to the maximum authorized working time. Working periods must be broken by two intervals at most, or

exceptionally three. One of these intervals must last at least an hour and a half, the other or others 1 hour each. A rest period of at least 10 hours must separate two successive work-periods, and two days of rest may not be separated by more than 10 working days. Not more than eight night shifts may be worked consecutively, every work-period being considered as a night shift which includes the whole of the period between 1 and 3 a.m. All employees have an annual vacation of at least 15 days. Regarding the actual duration, the rules in force in the various companies differ. Under a special law of May 7th, 1929, the 8-hour day is prescribed for the employees of the Paris-Lyons-Mediterranean Railway, but locomotive engineers, firemen, and train crews are excepted.

For motor transport, so far as furniture removal is concerned, the 8-hour day is in force. This working period is, however, exceeded by most of the other motor transport enterprises. On this account the railway companies have addressed to the Minister of Labour the Interpellation mentioned in the general section above.

Social legislation, including disability, old age, and life insurance, was made compulsory in France in 1930, and in 1931 was extended also to railway workers. Half the cost is borne by the workers and half by the employers.

### SPAIN

In the Royal Decree of April 3rd, 1919, the work-period was already fixed at 8 hours daily and 48 hours weekly. A distinction is made between time of service and working time. For the train crews, for example, half the period of mere presence is counted as working time. One day a week free of service is prescribed. The train crews have 52 free days in the year. The payment for over-time varies.

Health insurance and a pension fund have been established by law. Most of the railway companies give their employees a pension at the age of 60, after twenty years' service. Uniforms are prescribed and are furnished. There is no regular railway medical service. In case of accident the railway company pays the hospital expenses; in case of illness they are paid by the employee.

The taxi-drivers and also the drivers of motor-trucks are authorized to conclude agreements on the basis of 48 hours a week; overtime must then be subject to special agreements, but the number of hours of work may not exceed 72 a week.

#### PORTUGAL

In the transport industry the working time must be divided into shifts. The normal working time is 8 hours, but it can be extended. All transport agencies, railways as well as motor vehicles, and also the postal service, are subject to this provision.

#### BELGIUM

The Belgian railways are placed under the control of Parliament and of the Ministry.

The law establishing the Belgian National Railway Company dated July 23rd, 1926, provides that the Staff Regulations are to be established by a commission equally representing both parties, whose members are to be appointed by the Council of Administration and the labour organizations respectively. In the Staff Regulations thus established provision is further made for the formation of a Central Commission and several regional commissions on a similar basis of equal representation. Among the functions of the Central Commission are: examination of all labour contract questions, those touching the safety and health of the personnel as well as all questions in general directly affecting the workers; the formulation of an opinion on all questions of a general character on which the Commission may be consulted by the Minister of Railways, the Council of Administration, or the General Management, especially in cases where an indirect interest of the personnel appears to be involved; participation in the management of institutions for the benefit of the personnel. The regional commissions co-operate, among other things, in the settlement of questions regarding rewards and promotions. In conclusion, Article 13 expressly specifies that the company, being an autonomous body, is subject to the provisions of the general law as regards duration of work and freedom of organization.

Since 1922 the working time may in no case exceed 10 hours per day, and work in excess of 12 hours, including intervals, is forbidden. The normal working day is set at 8 hours. The first 2 hours of overtime are paid 25 per cent. above the normal rate, and all further overtime 50 per cent. above the normal rate. Overtime on holidays is paid double the normal rate.

'Working time' is defined as including not only the actual time of service on the locomotive or train, but also the time strictly necessary for indispensable preparation at departure and arrival, as well as the time spent in readiness for work in the station or the shop, and all interruptions of work outside the place of residence, if they do not last longer than 8 hours. If the personnel has an interval of more than 2 hours away from the place of residence, this time is deducted from the actual working time, and the service period in which this interruption falls is prolonged by 2 hours. Every absence is further counted as working time which is devoted to examination or giving of evidence in court in suits concerning the railway itself; and so is the time passed in theoretical training courses. The employees receive 14 days' vacation annually, while workmen receive no vacation. Additional leave, on salary, is granted, for example, for the discharge of military duties. As regards payment, the personnel is divided into three groups:

- (1) Officials and employees.
- (2) Commissioned workmen.
- (3) Non-commissioned workmen.

By a law of September 19th, 1930, the 8-hour day was extended to the motor drivers employed by the Belgian National Railway Company. This applies, however, only to the motor-lorry drivers employed at the stations of Brussels (Tour and Taxis), Brussels-North, Antwerp Central, and Stuyvenberg. Wages, salaries, and pensions were reduced by 6 per cent. from 1930 to 1931. The total number of workers on the pay-roll declined from 111,658 in 1929 to 94,023 in 1931.

Since 1924 compulsory old age and life insurance has existed in Belgium, of which half the cost is borne by the workers and half by the employers. The burdens imposed are alike for the motor transport industry and the railways. The social burdens of the railways include also a pension fund and the construction and pur-

chase of cheap dwellings for their employees. Thus, in 1931, retirement pensions were paid to 39,086 persons, whose average age was 52 years in the case of workmen and 56 in the case of officials and employees. The above-mentioned organization for facilitating the purchase and construction of cheaper dwellings had provided, up to the end of 1931, 1,094 loans amounting in all to 29.3 million francs.

The motor transport enterprises also have in principle a fixed working period of 8 hours and a weekly working time of 48 hours, since they come under the general 8-hour law. They are classed as land-transport enterprises. This law, however, is not applied to enterprises where hours of work are undetermined by reason of the nature of the work or are subject to seasonal influences. For this reason, taxi enterprises, as well as numerous motor transport enterprises, are excepted from this law. In the case of these enterprises, only the working period between 8 p.m. and 6 a.m. is forbidden, and there must be at least one free day for 14 working days. Two hours of overtime a day are allowed, but the annual total of overtime must not exceed 100 hours.

#### LUXEMBURG

The working time of the railway employees is fixed according to the conditions of work prevailing in the neighbouring countries, i.e. 8 hours. Actual working time includes neither intervals nor the time necessary for changing clothes, &c. It includes, however, all preparatory tasks which the personnel must accomplish according to rosters. The normal duration of the statutory rest-period is 38 hours. In no case and under no pretext may the employees abandon their service on the ground that their working time has been prolonged beyond the normal period.

A compulsory old-age, disability, and life insurance has been in force since 1931, half the cost being borne by the employers and half by the workers. Unemployment insurance has also been introduced, in which the Central Government and the local authorities participate to the extent of 25 per cent. each. The division of the remaining 50 per cent. between workers and employers has not yet been determined.

## NETHERLANDS

The service and rest-periods of the railway workers are determined on the basis of the royal decree of October 27th, 1875; various modifications were introduced in 1923. The provisions of this decree apply to the whole personnel, with the exception of the directors, managers, and superintendents. Working time is not yet settled; for the train crews it amounts to 9 hours on the average, with a maximum of 12 hours. For the personnel charged with the maintenance of the track it amounts to 11 or 12 hours. Intervals are not deducted if they are less than 30 minutes in length or if they are after 9 p.m. and before 9 a.m., and if they are not specified in the roster or cannot be passed at the place of residence. The weekly rest-period is 30 hours. An extra day off each quarter is allowed every employee who is not duty-free every other Sunday. Vacations of 10 to 18 days with pay are granted, and in addition special leaves of absence in case of the death or illness of near relatives. Leave of absence without pay is granted for the discharge of military duties and civic duties in the courts or in respect of elections.

A decree has been in force since March 18th, 1928, fixing the maximum working time for bus drivers at 12 hours within a 24-hour period. Intervals of more than  $\frac{1}{2}$  hour are deducted from this actual working time. The aggregate actual working time in the week may not exceed 55 hours. Between two working shifts there must be an unbroken rest-period of 12 hours. Disability, old age, and widows' insurance has been in force since 1919; the entire cost is borne by the employer.

## SWITZERLAND

Working time is defined by the law of March 6th, 1920. This law concerns not only all enterprises of the Federation itself, such as the railways, the postal service, &c., but also all transport enterprises operated under Federal concessions. Distinctions are drawn, however, between the three categories of railway workers. Only the personnel actually employed on the trains and the permanent way comes under the above law. The shop workers fall



under the general laws governing industrial labour. There is no special legislation for office workers. The working time may not exceed a daily average of 8 hours on a fortnightly basis. If the working time is extended to 10 hours owing to lateness of trains, this time must be made up for by shorter hours on succeeding working days. Only time in excess of the 8-hour average on a fortnightly basis counts as overtime; it is then paid 25 per cent. higher than the normal rate. The number of hours of overtime may not, however, exceed 150 in the year. Time passed in readiness for work is not counted as working time; but the sum of working time and time spent in readiness may not exceed 13 hours daily. Rest-periods must be of at least 11 hours' duration. A special scale has been established for vacations. The train personnel receives from 7 to 28 days. The Federal railways have a pension and aid fund and a sickness fund. Disability pensions are paid after 5 years of service. In addition, the law has established a system of accident insurance, which provides sick-benefits, accident pensions, funeral expenses, and support of the family of the victim. The Federal railways have in addition an extensive railway medical service; a medical examination takes place at least every five years. A large number of dwelling-houses are available for the employees, as well as arrangements such as baths and rest-rooms in the stations. Uniforms are furnished to the personnel.

Labour legislation regarding motor transport is far from uniform in Switzerland. Besides the Federal legislation, regulations are in force in the Cantons of Basle (City), Berne, Lucerne, Zurich, and Glarus. In the three last-named Cantons, motor transport enterprises are excepted from the laws concerning the protection of labour.

In the Canton of Basle (City) the working time for lorry drivers is fixed at a maximum of  $9\frac{1}{2}$  hours a day or 51 hours a week. For taxi-drivers it is fixed at 10 hours a day and a maximum of 60 hours a week, and for drivers of private cars at 10 hours a day and a maximum of 54 hours a week.

In the Canton of Berne the following regulation for lorry drivers has been in force since 1927: they must quit the steering-wheel after 10 hours' driving at most, and they have a right to a 10 hours' rest-period. This provision applies also to drivers of all

sorts of motor vehicles which carry more than eight persons. It applies, therefore, to buses and sight-seeing cars. This regulation further states expressly that interruptions lasting less than 2 hours are to be counted as working time.

It is interesting to note that the original draft of this law provided for a maximum daily distance to be covered of 250 kilometres. This provision was removed, however, from the text as finally adopted, because it was evident that the danger of road traffic depends not only on the distance covered, but also, and to a much greater extent, on the state of the roads, on the nature of the region, on the weather, and on other circumstances.

The working time for all transport enterprises operated under concession is, as already mentioned above, regulated by Federal legislation which limits the average working time to 8 hours a day over a period of 14 days. For taxi-drivers the working time may be extended to 9 hours, since the greater part of the work consists in being present and ready for work. In this connexion may be cited the definition of working time in the transport industry, given by the Federal law of 1920, which states that 'readiness for service' includes all the time spent in mere presence, but with the obligation to be constantly ready for duty.

The above-mentioned law applies also to the postal administration. In this case also, therefore, the maximum of 8 hours applies.

### ITALY

The entire scheme of Italian labour legislation is based on the Carta del Lavoro (Labour Charter) of 1923. In line with this charter a new law was promulgated on March 16th, 1933, concerning the rules governing hours of work in industrial enterprises. The regular actual working time in private and public enterprises of all sorts may not exceed 8 hours a day and 48 hours a week. In Article 3, however, special authority is granted the Government to issue special rules for the personnel of the State Railways and other public transport enterprises operated under concession. Under certain circumstances, hours of work may be increased by virtue of collective agreements (wage agreements).

A compulsory system of old age, disability, and life insurance

has been in force since 1919, half the cost being borne by the workers and half by the employers. In September 1931 a health insurance provision was added, which is in force for all transport enterprises through a collective agreement. The expenditure of the Italian State Railways for social purposes includes contributions to pension and aid funds, 343,860,533 lire, contributions to the Welfare organization, 5,912,116 lire, financial assistance, 2,369,267 lire, health service, 5,634,049 lire; for the 'After Work' (*dopo lavoro*) organization, 2,318,950 lire.

The political burdens consist of the fact that out of 350,000 workers an average of 2,800 are constantly serving in the militia, while 1,000 others are delegated to the administrations of the labour organizations.

#### GERMANY

Authority having been granted by law, the Government issued in 1923 an ordinance concerning hours of work. The 8-hour day was established as standard, but prolongation up to 10 hours was permitted. The emergency law of 1927 on hours of labour confirmed these provisions. Parallel with this evolution, the service regulations of the railway administration were also modified. For the majority of the workers the hours of work are fixed either by the Staff Regulations (§ 15) or by the prescriptions regarding duration of service, or by the wage agreement. The weekly working time varies between 48 and 60 hours. The average duration of the regular working time for the locomotive crews amounts to 54 hours, and the time on duty 58 hours.

Intervals of specified duration are not provided for. Every interruption occasioned by operating or traffic conditions and lasting thirty minutes or less is counted as 'readiness for service'; only interruptions of work lasting more than 30 minutes are considered as intervals. Resting time is defined as including every period of time free from service requirements and lasting, in the case of locomotive workers, at least 10 hours without interruption, provided this rest-period is passed at home. With a view to suitable arrangement of staff rosters, off-duty periods of less than 8 to 10 hours may also be counted as resting time, but they must last at least 5 hours. The personnel has 52 days of rest per annum, each

including at least 32 consecutive hours of resting time. Rosters should not include more than three consecutive shifts of which more than 1 hour falls within the period between midnight and 4 a.m.; they must never, however, include more than seven such shifts.

Overtime is compensated for by relief from service. As regards vacations, there are special classifications, on the basis of age and pay; locomotive engineers, e.g., have 17 to 31 days' vacation a year. Short leaves of absence for special reasons are not counted, nor are long leaves of absence for the discharge of duties as member of the Reichstag or of a Landtag. In these cases the salary is continued.

Compulsory old age and disability insurance has been in existence since 1889, its scope being extended in 1911. The total expenditures of the Reichsbahn in the field of Social Insurance amounted in 1932 to 22,217,000 RM. for health insurance, 44,317,000 RM. for disability insurance including the workers' pension fund, 1,219,000 RM. for employees' insurance, 17,597,000 RM. for accident insurance, and 18,767,000 RM. for unemployment insurance. To these contributions on the part of the Reichsbahn are to be added the contributions of the insured persons, so that the total contribution for Social Insurance in respect of the Reichsbahn amounted, in 1932, to 199,209,000 RM. (In 1931 the amount was 238,728,000 RM.) The average annual sum spent for Social Insurance *per capita* of the workers employed amounted to 259 RM. The Reichsbahn has its own health insurance fund and its own organization for the care of sick railway employees. The expenditure for accident insurance, which, in the case of the railway as well as in that of motor transport, falls almost entirely on the employer, amounted in 1931 to 22 millions. After the reorganization of the Social Insurance System in December 1931, the accident insurance boards were relieved of the further payment of small pensions (10 and 15 per cent.), while accident pensions of 20 per cent. are paid only as a transitional measure and cease after two years.

The German insurance system is so complex that it is difficult to reach concise conclusions regarding it without falling into errors. For that reason only the unemployment insur-

ance plan will be dealt with in any detail. On March 31st, 1932, the number of unemployed workers in Germany was 6,034,100. Of these, 1,578,788 were cared for by unemployment insurance. The remainder were at the charge of the Emergency Relief, the local welfare funds, and private charity. The total cost of unemployment relief amounted to 3,010,000,000 RM. The rates of aid to part-time workers are in line with those paid to the unemployed. In order to end this severe national crisis by stimulating the public labour market, the Government urged the creation of possibilities of reincorporating part of the unemployed in economic life. Thus the German Reichsbahn set up a programme for the relief of unemployment which was financed by a 4½ per cent. tax-exempt National Railway loan, 257 million RM. being obtained. The Reichsbahn recently spent another 100 million RM. for the creation of employment, which it was obliged to finance from its own resources. In the autumn of 1932 40,000 temporary workers were employed in supplementary work.

Then came the introduction of voluntary labour-service. The working time of the volunteers is at least 36 and at most 40 hours. In addition to their board and to suitable lodging, they are paid a maximum of 2 RM. weekly for a period not exceeding 20 weeks. In the case of work which is of special value to the nation, this period may be extended to 40 weeks. The volunteers also come under the provisions of the Social Insurance system and the laws for the protection of labour. They are insured in case of illness and accident. In so far as the Reichsbahn has work done by the volunteer labour service, the existing rules governing the type of work in question are binding.

In the field of motor transport industry, we can cite only the terms of the wage-scale agreement between the General Omnibus Company of Berlin and the German Transport Workers' Union. This wage-agreement, like the other wage agreements concluded in the German motor transport industry, contains provisions regarding working time, which in principle is fixed at 8 hours. The management may call for 1 hour of overtime daily, if economic conditions so require, but only after agreement with the union. Only the working time between the moment when the car is taken

out of the garage and the moment when it is returned is counted as actual working time; all additional tasks and interruptions of work are not counted, but special tasks are also paid apart. The duration of service may not exceed 10 hours daily; there must be a rest period of at least 10 hours between two successive shifts, and after 6 working days the driver must have a free day. In a wage agreement concluded with the German Postal Administration it is stipulated that the working time of the motor drivers shall be 48 and 54 hours a week. Recently full powers in respect of wage agreements were conferred on the Commissioners (*Treuhänder*) of Labour. These officials have unlimited authority for the establishment of wage-agreements, and for the modification or suppression of existing agreements; their decisions are not subject to any period of notice but take immediate effect. On the other hand, the law does not allow the contracting parties themselves to retain any possibility of control over the agreement.

#### CZECHOSLOVAKIA

The 8-hour working period was legally instituted immediately after the end of the World War. The working time of the train workers may not exceed 192 hours in a 4-week period. Working time includes time spent in preparation, time *en route*—this includes auxiliary work—educational courses (2 hours a month) and voyages on duty. In so far as the conditions of work for the various classes of work do not specify that the remuneration in respect of overtime is included in the additional benefits of that class, overtime is paid at a rate 25 per cent. higher than the normal rate. Resting time amounts normally to 10 hours at the home station and 6 hours at the far end of the run. Interruptions of work at the far end of the run are counted as rest periods. The law requires that the employees must have, at least once a week, an unbroken rest interval of at least 32 hours, which as a rule should fall on Sundays. However, the rules are modified as concerns locomotive and train crews, so that they have a full 32-hour rest interval only once in 3 weeks. As regards vacations, the employees are divided into four groups: officials, salaried workers, subordinate employees, and helpers (*workmen*). Vacations vary between 6 days and 5

weeks. Special leave is granted on particular grounds, and is not counted in the regular vacation.

Motor drivers are covered by the same 8-hour law; they too have a right to a 32-hour period off duty, but the Minister for Public Welfare can authorize exceptions to this law, if the working time does not amount to more than 112 hours in the course of 4 weeks. This exception applies also to goods transport enterprises. Motor-bus drivers, if they do not have Sunday off, must be allowed an unbroken rest period of 24 hours in the course of the week. Taxi-drivers and the drivers of vehicles belonging to hiring companies are also subject to this rule.

The law concerning motor vehicle traffic, dated December 23rd, 1932, imposes a special obligation to insure against accidents. The licence is conditional on observation of this requirement.

Since 1924 a compulsory old age, disability, and life insurance system has been in existence, half the costs being borne by the employers and half by the workers.

### AUSTRIA

Labour and wage conditions of the Austrian Federal Railways are regulated by the service ordinance, the 'Dientspragmatik', and by the wage ordinance and the law regarding the salaries of Federal employees. The working time is fixed at 8 hours a day and 208 hours a month. Half of the time passed in readiness for service is counted as working time. However, the time necessary for preparation for the trip, as well as 60 per cent. of the time of stops in stations, is also counted as working time. Vacations are granted according to the wage ordinance, the personnel being divided into four groups: officials, subordinate employees, workmen, and helpers. The railways have set up a pension fund, which also grants aid in case of disability and accident. The monthly contribution of an employee amounts to 1.4 per cent. of his salary. There are a large number of social welfare services. Thus dwelling-houses have been built for the personnel; the locomotive crews have special recreation rooms; and the railway possesses a number of convalescent homes for the personnel and the members of their families. Medical examinations by company doctors

must take place every five years up to the age of 45, and every three years thereafter.

As regards motor transport, there is a law of December 20th, 1928, which regulates the working conditions of private car drivers (chauffeurs). The working time is fixed at 8 hours. Overtime is permitted on condition that it be paid 25 per cent. higher than the normal rate; but it must not exceed 12 hours a week. The motor driver must have 1 free day for 6 working days. One week's vacation is granted after a year's work, 2 weeks after 5 years. Special legislation exists for the drivers of motor vehicles belonging to industrial and commercial enterprises, but the provisions are similar to those just described.

#### HUNGARY

The Hungarian railways possess a pension fund and a workers' aid fund. The expenditure of the Hungarian railways for this purpose amounted in the years 1930 and 1931 to 64,996,233 pengö for 23,960 retired employees, 9,400 widows, and 4,400 orphans. Former employees belong to the workers' aid fund; in 1930 and 1931, 5,800 former employees, 2,600 widows, and 570 orphans received support. A total of 4,941,859 pengö were spent for this purpose.

#### JUGOSLAVIA

Working conditions are made uniform by the general directorate of the railways in collaboration with the Ministry of Transport. Working time is defined by a law of 1923. For the train crews, it is fixed at 8 hours. No provision is made for rest on Sundays, but there must be 2 free days in the course of a month. Three categories, each of which consists of various groups, are distinguished as regards rates of pay. A pension fund and a sick fund were created by the law of 1923. Adjoining certain central stations, special hospitals have been built, in which the employees are treated after examination by company doctors. Special dwelling-houses exist for the train workers. The rent is deducted from wages. Uniforms are supplied free of charge; they are compulsory. Current medical examinations are not provided for.



## RUMANIA

The law of April 9th, 1928, limits the working time in road transport, whether of goods or of persons, to 8 hours. However, this refers only to actual working time, excluding intervals.

Since 1932 old age, disability, and life insurance has become obligatory and is paid half by the employer and half by the worker.

## BULGARIA

In Bulgaria labour conditions are fixed by the general directorate of the railways and harbours by means of service orders and circulars. There is no law regulating labour conditions in general, only the service of the workers in the depots and shops and of those engaged in the maintenance of the permanent way is regulated by the industrial legislation. In regard to working time, a distinction is made between actual working time and hours of presence, but no rule exists regarding maximum hours of work. According to the labour ordinance, the working time depends on the number of workers available. Since the work on the main lines is organized on the basis of three shifts, the working time here is 8 hours. There are no fixed vacations. Special leave is granted only in case of important family events or court proceedings. As regards rates of pay, the workers are divided into six classes. The pay-roll counted 15,271 employees in 1930.

In this figure, however, the time workers engaged on the maintenance of the permanent way are not included. The Bulgarian Government instituted in 1920 a law creating compulsory labour service, and regulating the service obligation of all men up to the age of 40. The duration of the service is three months. The subsistence cost of a man engaged in this service is calculated at 89 leva a day (about 4s. 3d.). After incurring a deficit at the beginning, the result of this compulsory labour service is now calculated as leaving a profit. The permanent council of the railway declared in its session of October 1929 that 40 per cent. of the railway lines constructed since the War are to be credited to the compulsory labour service.

## POLAND

The same regulation of the hours of work applies to railway and motor workers. They amount to 8 hours a day, excepting Saturdays, when they are reduced to 6 hours.

The social legislation is not uniform for the different provinces nor for the different occupations. Where old age, disability, and life insurance exists—in the western provinces—it is paid half by the employers and half by the workers.

## ESTONIA

The working time of railway employees is fixed at 8 hours a day, 47 hours a week, and 204 hours a month. For locomotive crews, a maximum working time of 240 hours a month is established, including both actual working time and time spent in readiness for work. An hour spent in readiness for service counts as  $\frac{1}{2}$  hour of actual working time. Only hours in excess of the maximum period mentioned are counted as overtime. The first two hours of overtime are paid 50 per cent. above the normal rate, and all further hours double the normal rate. The total overtime may not, however, exceed 156 hours in the year. Sixteen grades are provided as to rates of pay. Health and old age insurance have been established, as well as disability insurance, pensions and aid for widows and orphans. Examinations by railway doctors must take place at least every three years. Uniforms are provided by the railway. A sanatorium and a children's home are at the disposal of the workers.

## FINLAND

In the law of July 1st, 1927, which established the 8-hour day in Finland, the railway is excepted. However, the 8-hour day is established for the railway in the Railway Traffic Regulations, as well as in the law of November 27th, 1917.

In motor transport the working time is fixed at 192 hours in the space of 4 working weeks. Workers over 18 years of age may, with their consent, put in overtime up to a maximum of 200 hours in the year. The Trade Inspectors may, if the situation demands it, call for 150 hours overtime on their own authority. Over-

time is paid 50 per cent. above the normal rate for the first 2 hours, and double the normal rate for further overtime, even if it is less than an hour. The Finnish law here speaks of regular, actual work.

### DENMARK

The conditions of work are determined by negotiation between the management and the workers' unions. The real power of decision, however, rests with the Minister of Transport, who leaves the details to the management of the railways. No distinction is made between hours of service and working time. The normal working time is fixed at 208 hours a month. The locomotive workers have a right to 52 days of rest in the year. These rest-periods should amount to 36 hours, but may be reduced to 33. The maximum amount of overtime allowed is 15 hours a month. Two-thirds of the time spent in readiness for service is counted as working time, if the employee is on the premises of the railway, and one-third if he is at home. There are 18 classes in respect of rates of pay. There is a system of disability and sickness insurance and a pension fund. The Danish railways, in 1930, paid out 7,678,800 crowns in pensions and assistance, which represents 5.3 per cent. of their total expenditure. The railways have built dwellings in various places; in the case of a married worker, the rent amounts to 12 per cent. of his wages and is deducted from them. In the case of an unmarried worker, 8 per cent. is deducted. The tenant must pay 40 per cent. of the cost of repairs. Uniforms are compulsory, and are furnished by the railway. At least every five years the employees must be examined by the railway doctors. A convalescent home is provided for the locomotive crews, but members of their families may also enter.

Disability insurance exists for members of the sick fund who are in a difficult economic situation. Health insurance is not compulsory. Unemployment insurance is also optional, and its cost is borne solely by the State and the workers. The employers and the workers are obliged to contribute, however, to the national fund for unemployment relief.

## SWEDEN

For the train workers, the provisions of the royal proclamation of June 4th, 1920, and the modifications of 1921 and 1922 are in force. The time of service for the State Railways is fixed at 208 hours a month. It may not be exceeded. Time spent in readiness for service at the place of work is counted as working time to the extent of 50 per cent., further waiting-periods at stations away from home being counted in full. The minimum duration of the daily rest-period for the train workers is 9 hours, but rest-periods away from the home station may be shortened at the wish of the workers, if no overstrain is to be feared on the homeward journey. There are certain days ('home days') on which the worker is in principle off duty, but is not allowed to absent himself from his home. These days are employed as a means of compensation, to permit the maximum hours of work being observed, and they serve to a limited extent, in the case of the private railways, as a substitute for days of rest. No account is taken of overtime work of less than  $\frac{1}{2}$  hour's duration, caused by lateness of trains. Fractions of 30 minutes or more count as full hours. A special scale exists for vacations, according to which locomotive engineers are allowed from 17 to 35 days.

The 8-hour day law affects only those categories of motor drivers whose work is regular. For the drivers of the postal service a maximum working time of 208 hours a month is prescribed. The 8-hour day is in force also for the motor drivers of industrial and commercial enterprises employing more than 4 workers; but there is no restriction on overtime.

Insurance is optional, and the cost is borne entirely by the worker.

## NORWAY

The working time of workers and employees is settled by negotiation between the unions and the management. However, a law exists for the locomotive engineers, which provides for an 8-hour working day. A set of rules has been established, which provides a basis of equating service time with working time. Thus, 4 hours' presence are equivalent to 1 hour of work. The service time may not in any case exceed 12 hours. A rest-period is of

30 hours' duration. Intervals of less than  $\frac{1}{2}$  hour are counted as working time. The employees have 21 days vacation a year. Overtime is paid 50 per cent. higher than the normal rate. The employees are classified in 17 groups for wage purposes.

There is no compulsory insurance, but the railroads grant their employees a pension at the age of 70, and a disability pension amounting to two-thirds of the old age pension is paid in case of total incapacity for work. To obtain a pension, it is further necessary to have completed thirty years' service. This pension system was established in 1924. The pension fund also grants loans for the construction or purchase of dwellings. The employees may take their meals in the station restaurants; a discount of 25 per cent. is allowed them. Uniforms are compulsory except in the case of the locomotive crews. From 50 to 70 crowns a year are paid for this purpose. At least every five years there must be a medical examination by the railway physician.

#### BRITISH INDIA

Working time is determined on the basis of the Indian Railways Act of 1890. It amounts to 60 hours a week, and is limited to a maximum period of 84 hours a week. However, all work, including readiness for work, is considered as active service. After every 6-day working-period a rest of 24 hours must be allowed.

Regarding motor transport, no information is available.

#### JAPAN

Working time for the transport enterprises is not fixed by law. In the case of the railways it averages 13 hours; in the case of motor transport, 8 hours. Rest-periods last 2 hours and  $1\frac{1}{4}$  hours respectively; there are 5 rest-days a month in the case of the railways, and 3 in the case of motor transport.

#### UNION OF SOUTH AFRICA

As the income of the railways again declined in the years 1931 and 1932 by 10.05 per cent., the management undertook to reduce expenses. Thus salaries and wages were diminished by 11.85 per

cent. The economy was effected by superannuating employees over 50 and dismissing temporarily employed workers. In addition, the pay of the other categories of workers was cut from 2 to 10 per cent. A decree of the Minister of Labour, issued in 1925, which fixed the wages of motor drivers in certain areas (Wages Act), also regulated the hours of work of drivers of buses and other motor vehicles carrying more than seven persons. The normal working time may not exceed 48 hours a week nor 9 hours a day. Every additional hour or fraction thereof is paid 50 per cent. higher than the normal rate. The driver has a right to 1 day off per week. All work which is required on the free day is paid at double the normal rate. A period of service may not in any case last more than 12 hours. The hours of work must be consecutive, except that there may be an interruption of at most 45 minutes for the midday meal, or a rest-period of 2 hours. All other interruptions count as working time.

#### NEW SOUTH WALES

In this State of the Commonwealth of Australia, the Staff Regulations for the railways are established from time to time by decision of Court. On August 17th, 1933, the Court decided against the railwaymen who were seeking a reduction of working time to 44 hours. It was declared, however, in the statement of the reasons for the decision, that the public bodies would have to take up the question of this economically important modification in working conditions. About the same time the Ministry prohibited all overtime work.

Regarding the bus drivers, a decision of November 15th, 1927, fixed their working time at 44 hours for the 6-day week. The work may be done in shifts, but no shift may last longer than 8 hours. The driver must have at least 1 day of rest for 2 weeks of work. For the drivers of taxis and other motor vehicles for hire, a decision of 1926 fixes the maximum working time at 44 hours a week. The work must be divided into shifts, each shift lasting not more than 7 hours and 20 minutes. One day off must be allowed in each week. The work is divided up by agreement between employer and driver in such a way that, in a 2-week

period, the driver works seven shifts of 7 hours and 20 minutes each in the first week, and five shifts of the same length in the second week. The drivers are allowed 40 minutes for meals.

#### WESTERN AUSTRALIA

In Western Australia a wage-agreement was concluded in 1927, according to which the hours of work for taxi-drivers were fixed at 96 hours for two weeks, 56 hours for any one week, and 9 hours for any one day. In 1928 a Transport Workers Act was passed, conferring on the Governor-General full power concerning enlisting, duration of work, and other questions affecting labour conditions.<sup>1</sup> In addition, there exists since 1908 a law establishing old age and disability insurance.

<sup>1</sup> A 44-hour regulation for the railway workers has been in existence since 1924.

TABLE I  
THE LEGAL BASES OF RAILWAY AND MOTOR TRANSPORT ORGANIZATION

Country	Concession or Licence		Obligation to operate on a Permanent Basis		Obligation to Carry		Tariffs: (a) General (b) Exceptional		Publication of Time-Tables		Levies for purposes of National Defence		Postal Levies		Other Levies. (Social works, Hygiene, Commerce, Industry, Agriculture)	
	Railway	Motor Transport	Railway	Motor Transport	Railway	Motor Transport	Railway	Motor Transport	Railway	Motor Transport	Railway	Motor Transport	Railway	Motor Transport	Railway	Motor Transport
U.S.A.	concession	certificates of public convenience and necessity for common carriers (licences)	yes (5)	yes for common carriers	absolute within the limits of loading capacity	yes for common carriers	yes (a, b)	common carriers must file tariffs	not compulsory but general custom	no	yes	no	yes	no	no	no
CANADA	concession	licences	yes (5)	yes (1)	absolute within certain limits	..	yes (a, b)	..	compulsory	compulsory (1)	yes	..	yes	..	yes for certain authorities	..
MEXICO	concession	licence	yes (5)	..	absolute within certain limits	..	yes (a, b)	maximum tariff (1)	compulsory	compulsory (1)	..	..	yes	..	yes, in the case of immigrants, colonists, works of charity, commercial travellers, &c.	..
GREAT BRITAIN	concession	licence	yes (5)	no	absolute within certain limits	no	yes (a, b)	minimum tariff in certain cases	compulsory	compulsory (1)	yes	..	yes, at special rates	..	yes, workmen's trains	..
IRISH FREE STATE	concession	concession (termed 'licence')	yes (5)	..	absolute within certain limits	yes (1), in certain cases	yes (a, b)	maximum tariff in certain cases	compulsory	compulsory (1) in certain cases	yes	no	yes	..	..	..
FRANCE	concession	licence (autorisation)	yes (5)	yes (1)	absolute within certain limits	no	yes (a, b)	maximum tariff (1)	compulsory	compulsory (1) in certain cases	yes	..	yes	..	yes, in the case of members of Parliament, war wounded, large families, &c.	as in the case of railways for (1)
SPAIN	concession	concession	yes (5)	..	absolute within certain limits	..	yes (a, b)	..	compulsory	..	yes	..	yes	yes (1)	yes in certain cases	..
BELGIUM	concession to operate	licence (1)	yes (5)	yes (1)	absolute within certain limits	no	yes (a, b)	..	compulsory	yes (1)	yes	..	yes	..	..	..
LUXEMBURG	State operation and concession	concession (1)	yes (5)	yes (1)	absolute within certain limits	no	yes (a, b)	maximum tariff laid down in concession conditions (1)	compulsory	compulsory	..	..	yes	yes	..	..
NETHERLANDS	concession and concession to operate	licence (1)	yes (5)	yes (1)	absolute within certain limits	no	yes (a, b)	..	compulsory	compulsory (1)	no	..	yes	..	yes in certain cases	..
SWITZERLAND	State operation or concession	concession (1)	yes (5)	yes (1)	absolute within certain limits	no	yes (a, b)	tariff fixed by the Postal Administration	compulsory	..	yes	..	..	..	..	..
ITALY	State operation or concession	concession (1)	yes (5)	yes (1)	absolute within certain limits	..	yes (a, b)	minimum tariff in certain cases	compulsory	compulsory (1)	yes	..	yes	yes (1)	yes	..
GERMANY	autonomous official management	licence (1, 3)	yes (5)	yes (1) if expressly stipulated in licence	absolute within certain limits	yes (1) if expressly stipulated in licence	yes (a, b)	over 50 km. minimum tariff (3)	compulsory	compulsory (1)	yes	..	yes	..	yes in certain cases	..
CZECHOSLOVAKIA	autonomous official management	concession (1, 2, 3)	yes (5)	yes (1)	absolute within certain limits	yes	yes (a, b)	tariffs are compulsory	compulsory	compulsory (1, 3)	yes	..	yes	..	..	..
AUSTRIA	autonomous official management and concession	concession (1)	yes (5)	yes (1)	absolute within certain limits	yes on interurban lines	yes (a, b)	minimum tariffs (1) and (3)	compulsory	compulsory (1)	yes	..	yes	..	yes in certain cases	..
HUNGARY	autonomous official management and concession	concession (1, 2, 3)	yes (5)	yes (1) in certain cases	absolute within certain limits	..	yes (a, b)	no	compulsory	compulsory	yes	..	yes	..	yes, in the case of students, societies, &c.	..
JUGOSLAVIA	State operation or concession	licence (1, 3)	yes (5)	yes (1, 3)	absolute within certain limits	..	yes (a, b)	..	compulsory	..	yes	..	yes	..	yes in numerous cases	..
RUMANIA	autonomous official management	concession	yes (5)	..	absolute within certain limits	..	yes (a, b)	..	compulsory	..	yes	..	yes	..	yes in numerous cases	..
POLAND	autonomous official management and concession	concession (1)	yes (5)	..	absolute within certain limits	..	yes (a, b)	..	compulsory	..	yes	..	yes	..	..	..
LITHUANIA	State operation—few concessions	concession (1)	yes (5)	..	absolute within certain limits	..	yes (a, b)	..	compulsory	..	yes	..	yes	..	..	..
LATVIA	State operation	concession (1, 3)	yes (5)	..	absolute within certain limits	..	yes (a, b)	..	compulsory	..	yes	..	yes	yes (1)	..	..
ESTONIA	State operation	concession (1, 3)	yes (5)	yes (1) for part of the year	absolute within certain limits	..	yes (a, b)	maximum tariffs for rural lines	compulsory	..	yes	..	yes	yes (1)	yes	..
FINLAND	State operation	licence (1, 3)	yes (5)	..	absolute within certain limits	..	yes (a, b)	tariffs fixed in the licences	compulsory	yes (1)	yes	..	yes	..	..	..
DENMARK	State operation or concession	licence (1, 3)	yes (5)	..	absolute within certain limits	..	yes (a, b)	must adhere to certain published tariffs	compulsory	yes (1)	yes	..	yes	..	..	..
SWEDEN	State operation or concession	concession (1, 3)	yes (5)	as stipulated in the concession	absolute within certain limits	yes (1)	yes (a, b)	tariffs fixed by the Authorities for (1) and in certain cases for (3)	compulsory	..	yes	..	yes	..	..	..
NORWAY	State operation or concession and/or	concession (1, 3)	yes (5)	as stipulated in the concession	absolute within certain limits	as stipulated in the concession	yes (a, b)	..	compulsory	compulsory (1, 3)	yes	..	yes	..	..	..
BRITISH INDIA	State operation	licence	yes (5)	yes (1)	absolute within certain limits	..	yes (a, b)	..	compulsory	..	yes	..	yes	..	..	..
NETHERLANDS: EAST INDIES.	State operation or concession	concession (1, 2, 3)	yes (5)	in certain cases as stipulated in the concession	absolute within certain limits	..	yes (a, b)	..	compulsory	no	yes	..	yes	..	yes	..
FRENCH INDO-CHINA	concession	licence (1, 2, 3)	yes (5)	not indicated in the recent law	absolute within certain limits	not indicated in the recent law	yes (a, b)	maximum tariffs	compulsory	yes	yes	..	yes	..	yes	..
CHINA	State operation or concession	licence	yes (5)	..	absolute within certain limits	..	yes (a, b)	..	compulsory	yes (1)	yes	..	yes	..	yes	yes (1)
JAPAN	autonomous official operation	concession	yes (5)	..	absolute within certain limits	..	yes (a, b)	..	compulsory	..	yes	yes (1)	yes	yes (1)	..	..
UNION OF SOUTH AFRICA	State operation	concession	yes (5)	..	absolute within certain limits	..	yes (a, b)	..	compulsory	..	yes	..	yes	..	..	..
AUSTRALIA	State operation	concession (1, 3)	yes (5)	yes on 'controlled routes'	absolute within certain limits	..	yes (a, b)	..	compulsory	..	yes	..	yes	..	..	..

(1) Regular Passenger Lines; (2) Occasional Transport of Passengers; (3) Transport of Goods against Payment; (4) Transport of Goods by Private Lorry (*Werkverkehr*); (5) Both Main Lines and Local Railways.



TABLE II  
RAILWAY AND MOTOR TRANSPORT TAXATION

Country	Income Tax		Tax on Capital		Turnover Tax		Land Tax		Tax on Industrial and Commercial Enterprises		Taxes on Transportation				Special Taxes on Railway and Motor Transport		Registration Fees (Licence duties)	Tax on Fuel and oil	Taxes on Tyres	Driving Licence Fees	Miscellaneous Taxes			Taxes on sales of Motor Vehicles	
	Rail	Road	Rail	Road	Rail	Road	Rail	Road	Rail	Road	Passengers		Goods		Rail	Road					Road Transport				
											Rail	Road	Rail	Road							Rail	Road	Rail		Road
U.S.A. <sup>1</sup>	F & S	F & S	S	S	S	S	S	S	S	S	-	-	-	-	S & F	S & F	S	S & F	F	S	S	S & F	S & F	S & F	
GREAT BRITAIN	x	x	-	-	-	-	•	x	x	x	-	-	-	-	-	-	x	x	-	x	•	•	•	•	
FRANCE	x	x	•	•	•	x	x	x	x	x	x	•	x	•	•	x	-	x	•	x	•	x	•	x	
SPAIN	x	x	•	•	•	•	•	•	•	•	x	x	x	•	•	•	•	•	•	•	•	•	•	•	
BELGIUM	-	x	•	•	•	x	•	x	•	x	x	•	•	•	•	x	x	x	•	•	•	•	•	x	
LUXEMBURG	x	x	x	•	•	x	•	•	•	•	x	•	•	•	•	x	x	x	•	x	•	•	x	•	
NETHERLANDS	x	x	•	•	•	x	x	x	•	•	•	•	•	•	•	x	x	•	•	•	•	x	x	•	
SWITZERLAND	•	x	•	x	•	•	•	•	•	•	•	x	•	•	x	x	x	•	•	x	•	x	•	•	
ITALY	•	•	•	•	•	•	•	•	•	•	x	x	x	•	x	x	x	x	x	•	•	•	•	•	
GERMANY <sup>2</sup>	-	x	-	x	•	x	x	x	-	x	x	-	x	-	•	•	x	x	•	•	•	•	•	•	
CZECHOSLOVAKIA	•	•	•	•	•	x	•	•	•	•	x	x	x	•	•	x	x	x	•	•	•	•	•	•	
AUSTRIA	x	x	•	•	-	x	x	x	x	x	x	x	x	x	x	x	x	x	•	x	•	•	•	•	
HUNGARY	•	x	•	•	•	x	•	•	•	•	x	•	x	•	•	x	x	x	•	•	•	x	•	•	
POLAND	-	x	•	•	•	x	-	x	•	•	•	x	•	x	•	x	x	x	•	x	•	•	•	•	
FINLAND	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	x	•	x	•	•	•	•	•	•	
DENMARK	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	x	x	x	•	•	•	•	•	•	
SWEDEN	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	x	x	x	x	•	•	•	•	•	
NORWAY	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	x	-	x	x	•	•	x	•	•	
NETHERLANDS: EAST INDIES	x	x	•	•	x	x	x	x	•	•	•	•	•	•	•	x	x	x	•	•	•	•	•	•	

x indicates 'yes'; - indicates 'no'.

'no information' is shown by: •

<sup>1</sup> F = Federal taxes; S = State taxes.

<sup>2</sup> Reichsbahn.

<sup>3</sup> Only on other than transport operations.

TABLE III  
MEASURES TAKEN BY THE RAILWAYS TO MEET MOTOR TRANSPORT COMPETITION

MEASURES		COUNTRIES																							
		U.S.A.	Great Britain	France	Spain		Portugal	Belgium	Saar Territory	Netherlands	Switzerland	Italy	Germany	Austria	Hungary	Yugoslavia	Bulgaria	Poland	Lithuania	Latvia	Estonia	Sweden	Norway	Tunisia	
					Norte	M.Z.A.																			
TECHNICAL AND OTHER MEASURES	1	Speeding up of trains	(a) passenger traffic	xxxx	xxx	xxxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	2	Introduction of short and light trains and rail-cars	(b) goods traffic	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	3	Rail-cars fitted with pneumatic tyres		xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	4	Extension of office hours for consignment and delivery		xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	5	Night goods traffic		xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	6	Speeding up of operations in stations		xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	7	Door-to-door services		xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	8	Development of the construction and operation of private sidings		xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	9	Establishment, extension, and publication of goods train time-tables		xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	10	Installation of consolidating depots	(a) in railway stations	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	11	Utilization of containers and similar equipment	(b) outside railway stations	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	12	Connecting services with motor transport and joint time-tables	(a) passenger traffic	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	13	Closing of	(b) goods traffic	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	14	Employment of Pullman and other similar cars	(a) secondary stations	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	15	Organization of motor services	(b) stations on local railways	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	16	Agreements between railways and existing motor transport enterprises	(c) other similar cars	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	17	Collaboration with forwarding and transport agents	(a) feeder services	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	18	Simplification of traffic formalities	(b) parallel services	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	19	Publicity services	(c) complementary services	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	20	Modification as to the conditioning of goods	(d) replacement services	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
TARIFF MEASURES	1	General reduction of tariffs	(a) passenger traffic	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	2	Reduction of short distance rates	(b) goods traffic	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	3	Shorter delivery period		xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	4	Introduction of a flat rate for the transport of parcels		xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	5	Reduced rates for consolidated consignments		xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	6	Reduction of load unit of wagons		xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	7	Reduction of rates in fast goods services		xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	8	Door-to-door rates		xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	9	Container tariffs	(a) fast goods service	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	10	Express parcels	(b) slow (ordinary) goods service	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	11	Development of postal parcels service		xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	12	Rebates to traders according to importance and regularity of traffic tendered		xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	13	Introduction of special tariffs in goods traffic	(a) conditional	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	14	Joint road and rail tariffs in goods traffic	(b) unconditional	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	15	Passenger traffic	1. Reduction of additional charges for express trains	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	16	Joint road and rail tickets	2. Introduction of:	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	17	Special tariffs for passengers with motor-cars	(a) week-end tickets	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
		(b) return tickets	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	
		(c) collective tickets	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	
		(d) round-trip tickets	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	
		(e) holidays	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	
		(a) families	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	
		(b) societies	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	
		(c) excursions	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	
		(d) schools	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	
		(e) holidays	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	

P = Passenger services. G = Goods services. x indicates that the measure in question has been taken.