

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, INDUSTRY, 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