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NATIONALIZATION OF RAILWAYS
IN JAPAN

BY

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PREFACE

THIS work was commenced in a German university as a doctoral dissertation. When it was almost completed the present world-war broke out, making the fulfilment of my hopes for the time being impossible. It is, however, an unexpected pleasure to me that the present war has brought this dissertation from Germany, where most of the railway systems are already nationalized and the practical need of any further discussion is therefore very slight, to the United States, where the question of governmental acquisition of the means of communication is now frequently discussed and where as a consequence this essay may be of use in affording some data to the public.

A few words may be added as to the purpose of this dissertation and the manner in which it has been carried out. Although most economic problems can in general not be considered apart from other discussions, the problem of railway nationalization is a particularly difficult one in that it ought to be discussed with equal care from the point of view of state policy and national defence, as well as from that of economics. Since it is, however, impossible for us to treat this question from all these standpoints, we shall limit ourselves to a discussion from the side of economics.

Although political economy cannot be easily defined, it may be said that the chief function of the economist is the discussion of how to increase the wealth of nations, or more exactly, production as well as productivity. The standard of right and wrong, if any, in political economy is to be based on a consideration of the increase or decrease of wealth from the point of view of the whole community.

Every discussion of sociology, politics and ethics, as well as a study of the distribution and consumption of wealth, should rest upon this economic basis.

This conception may be criticized in that it starts from the whole. But it must be borne in mind that the whole cannot exist without the individual. The individual may be called the steam and the whole the steam-engine; while according to Aristotle the former may be said to be the *matter* and the latter the *form*.

The relation of the individual to the whole must be thoroughly grasped, because it leads to two important economic principles—socialistic and individualistic.

In my opinion, the socialist or state-socialist, who insists upon the governmental acquisition of the means of production in whole or in part, ignores the egoism, which is the main source of our acts; whereas the individualist, who opposes governmental intervention in any case, often disregards the public interest.

In dealing with the problem of railway nationalization, we must attempt to ascertain the influence which railroads have exerted upon the wealth of nations as wholes. With this relation as a basis, two sides of railway enterprise—the financial and the social—are to be studied. In both cases there is a difference between the principles of private and of public economy. The question as to which of these principles is or should be applied in state-railroad administration is the central point of the whole discussion; it gives rise to the problem of monopoly, of taxation, and of economic development in general.

It is my conviction that at every stage in the development of a nation's economic life each of these two economic principles—the individualistic and the state-socialistic—should be applied, but in all cases with moderation.

What, then, are the economic conditions in Japan? In

my opinion, there are two great intellectual and physical obstacles in Japan which have hitherto hindered the development of its economic life. They are the lack of the individualistic idea (or independent spirit) of the people and the lack of capital. The Japanese people, who were for a long time under the idealistic-stoic influence of Buddhism and Confucianism, as well as subjected to the despotic pressure of the feudal system, have a very weak, independent emotion, so that the economic life of the nation has naturally been depressed to a low level. Under such conditions the state-socialistic idea spreads rapidly among the people. This is shown by the fact that most of the great industries in Japan have been started or aided by the government. The reader of this dissertation will realize that the nationalization of the railways in Japan was effected under such political and economic circumstances. Our effort must, therefore, be to remedy these defects. We can see that conditions in Japan—especially in the two points mentioned—contrast strongly with those in the United States.

In this dissertation no reference will be made to Formosa, Saghalien, Korea or Manchuria, as this would necessitate a discussion of colonial railways. In connection with the subject of railway nationalization, the problem of the replacement of the present narrow gauge by the world's normal gauge, as well as that of the improvement of administrative system, ought properly to be discussed. Both of these points will, however, be omitted owing to the difficulty experienced by the writer in securing adequate material.

The somewhat detailed account of the historical development of railways and railway rates, which, so far as I know, is not to be found in any non-Japanese work, is intended to furnish new material to the foreigner.

I wish to add that almost all the material found in this dissertation was gathered prior to August, 1914.

Europeans and Americans will realize how difficult it is to procure such material in Japan, owing to its scarcity—and especially is this true in the case of one who is studying in a foreign country. Moreover, the fact that the materials thus collected, especially of a statistical nature, are not in good shape, and are sometimes very confused, presents additional difficulties to the student.

Finally, I desire to acknowledge my indebtedness to the members of the economic faculty of the University of Halle, Germany, for their guidance; to Prof. Brodnitz, under whose leadership I began this thesis, and to Prof. Conrad, Prof. Waentig, formerly professor at the Imperial University of Tokyo, and Dr. Grünfeld, formerly adviser of the South Manchurian Railway Company, whose kind advice and corrections well-nigh enabled me to complete the dissertation. Especial thanks are, however, due to Prof. Seligman, of Columbia University, whose friendly aid has made possible the completion and the publication of this dissertation; also to Prof. Mitchell, who has kindly read the proof sheets; and to Miss Louise S. Benjamin and Mr. Paul B. Thomas, who have aided me with the translation of my dissertation from German into English.

For the collection of materials and for special inquiries, I am indebted to ex-Secretary of Communications Baron Goto, Former Director Matsuki, Director Morimoto, Councillor Aoki, Councillor Hirano, Vice-Councillor Hirayama and Clerk Matsuhashi in the Imperial Board of Railways in Tokio, Lawyer Umehara, Dr. Aochi in Tokio, Director Ishizuka in Yokohama and Manager Nakayama. I also owe a well-nigh inexpressible debt of thanks to my dear friend, Ihara, Director of the Industrial Company in Manila, to whose advice and peculiar assistance this study is in large part due.

T. W.

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WEIGHTS, MEASURES AND MONIES, WITH ENGLISH, AMERICAN, FRENCH AND GERMAN EQUIVALENTS.

Japan.	Great Britain.	United States of America.	France.	Germany.
<i>Ri.</i>	2.44030 Miles.	2.44020 Miles.	3.92727 Kilomètres.	3.92727 Kilometer.
<i>Ri</i> (Marine).	1.15152 Miles.	1.15151 Miles.	1.85318 Kilomètre.	1.85318 Kilometer.
Square <i>Ri.</i>	5.95505 Square Miles.	5.95501 Square Miles.	15.42347 Kilomètres Carrés.	15.42347 Quadrat-kilometer.
<i>Cho</i> = 10 <i>Tan</i> = 3,000 <i>Tsubo.</i>	2.45064 Acres.	2.45062 Acres.	99.17355 Ares.	99.17355 Ar.
<i>Tsubo.</i>	3.95369 Square Yards.	3.95367 Square Yards.	3.30579 Centiares.	3.30579 Quadrat-meter.
<i>Koku</i> = 10 <i>To</i> = 100 <i>Sho.</i>	4.96005 Bushels.	47.65389 Gallons. (Liquid) 5.11962 Bushels. (Dry)	1.80391 Hectolitre.	1.80391 Hektoliter.
" (Capacity of vessel)	$\frac{1}{10}$ of one Ton.	$\frac{1}{10}$ of one Ton.	$\frac{1}{10}$ de Tonne.	$\frac{1}{10}$ Tonne.
<i>Kwan</i> = 1,000 <i>Momme.</i>	8.26733 lbs. (Avoir.) 10.04711 lbs. (Troy.)	8.26753 lbs. (Avoir.) 10.04711 lbs. (Troy.)	3.75000 Kilogrammes.	3.75000 Kilogramm.
<i>Kin</i> = 160 <i>Momme.</i>	1.32277 lbs. (Avoir.) 1.60724 lbs. (Troy.)	1.32277 lbs. (Avoir.) 1.60754 lbs. (Troy.)	0.60000 Kilogramme.	0.60000 Kilogramm.
<i>Momme.</i>	2.11644 Drams. 2.41131 Dwts.	0.13228 Ounce. (Avoir.) 0.12057 Ounce. (Troy.)	3.75000 Grammes.	3.75000 Gramm.
<i>Yen</i> = 100 <i>Sen.</i>	2 nd 0 th 582.	0.4984 Dollar.	2.583 Francs.	2.0924 Mark.

The value of *Yen* given in this Annual is as follows:—

Prior to December, 1885	Gold	<i>Yen</i> (0.4 <i>Momme</i> of pure gold).
From January, 1886 to September, 1897	Silver	<i>Yen</i> (6.7 <i>Momme</i> of pure silver).
Subsequent to October, 1897	Gold	<i>Yen</i> (0.2 <i>Momme</i> of pure gold).

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APPENDIX TABLE I

ACCORDING TO "MEIJI SHIJUNENDO TETSUDO KYOKU NENPO" APPENDIX PP. 44, 46 AND 102-103

THE FINANCIAL RESULTS OF PRIVATE RAILWAYS

Working Year	Average mileage open to traffic	Capital invested yen	Operating revenues yen	Operating expenses yen	Operating income yen	Operating ratio in %	Operating Income		State subvention yen
							In % of capital	Per mile yen	
1883....	48.13	905,510	306,051	116,484	189,567	38.1	20.9	3,936	52,777
1884....	71.53	2,061,724	431,609	166,954	264,655	38.7	12.8	3,693	132,588
1885....	127.64	3,106,253	566,867	249,982	316,886	44.1	10.2	2,480	182,274
1886....	156.73	5,493,323	821,088	334,187	486,901	40.7	8.8	3,103	249,059
1887....	238.15	6,702,924	1,182,345	392,542	789,803	33.2	11.7	3,316	229,788
1888....	337.74	11,833,565	1,765,568	638,981	1,126,587	36.2	8.5	3,334	310,604
1889....	467.02	20,365,740	2,453,007	1,025,804	1,427,203	41.8	6.0	3,056	647,628
1890....	716.69	33,815,795	3,181,337	1,551,114	1,630,223	48.8	4.8	2,274	1,147,305
1891....	1,060.52	44,061,623	4,320,046	2,197,883	2,122,163	50.9	4.8	2,000	1,016,856
1892....	1,248.48	47,508,393	5,096,634	2,437,138	2,659,496	47.8	5.5	2,130	954,724
1893....	1,338.41	52,049,889	5,981,057	2,512,149	3,468,908	42.0	6.6	2,592	887,174
1894....	1,457.19	57,860,939	7,803,008	3,155,459	4,647,549	40.4	8.0	3,189	779,005
1895....	1,617.04	68,668,412	10,333,935	4,065,975	6,267,960	39.3	9.0	3,876	735,637
1896....	1,698.15	77,130,331	12,373,775	5,237,426	7,136,349	42.3	9.2	4,207	706,594
1897....	2,026.77	114,063,115	16,800,057	7,554,495	9,222,010	45.1	8.0	4,549	856,977
1898....	2,465.77	152,342,140	20,556,934	11,396,514	9,134,420	55.4	6.3	3,704	707,133
1899....	2,725.26	173,444,231	24,500,266	12,236,540	12,263,726	50.0	7.0	4,500	525,213
1900....	2,840.53	191,230,391	29,014,009	13,622,156	15,391,853	47.0	7.0	5,418	360,271
1901....	2,943.62	202,804,045	31,640,328	15,093,086	16,547,242	47.7	8.1	5,621	306,197
1902....	2,977.71	213,231,933	33,344,213	16,203,223	17,140,990	48.6	8.0	5,756	523,913
1903....	3,070.05	226,611,643	35,472,210	16,374,601	19,097,609	46.2	7.9	6,210	793,936
1904....	3,204.48	241,004,905	37,538,711	17,175,241	20,363,470	45.8	8.4	6,374	611,736
1905....	3,276.30	251,640,590	44,977,025	21,026,020	23,951,005	46.8	9.4	7,364	46,109
1906....	2,932.63	147,140,989	43,192,598	22,025,996	21,166,602	51.1	14.3	7,277	—
1907....	936.29	27,382,849	11,819,182	6,186,169	5,633,013	52.3	20.6	6,069	—

TABLE II

(ACCORDING TO "MEIJI SHIJUNENDO TETSUDO KYOKU NENPO" PP. 20-21, 76-77 AND 101-102
"MEIJI SHIJUVANENDO TETSUDOIN TOKEI ZUHIO" PP. 427-436.)

THE FISCAL RESULTS OF STATE RAILROADS

Fiscal year	Average mileage open to traffic	Capital invested yen	Operating revenues yen	Operating expenses yen	Operating income yen	Operating ratio in %	Operating income	
							In % of invested capital	Income per mile
1872.....	16,22	—	174,930	113,464	61,466	64.9	—	3,775
1873.....	18,00	—	441,615	233,830	208,785	52.7	—	11,599
1874.....	31,08	—	592,671	346,803	245,868	58.5	—	7,906
1875.....	38,27	—	644,459	403,823	240,636	62.7	—	6,276
1876.....	62,61	—	1,284,466	434,001	850,465	33.8	—	13,551
1877.....	65,11	—	910,336	526,248	384,088	57.8	—	5,896
1878.....	65,11	—	1,011,739	555,117	456,622	54.9	—	7,010
1879.....	72,17	—	1,243,531	512,674	730,857	41.2	—	10,121
1880.....	76,27	—	1,555,797	608,224	947,573	39.1	—	12,413
1881.....	83,72	—	1,713,980	677,586	1,036,394	39.5	—	12,353
1882.....	102,69	—	1,840,394	926,548	913,846	50.3	—	8,884
1883.....	116,11	—	1,564,910	631,132	933,778	40.3	—	8,040
1884.....	125,51	—	1,362,686	612,148	750,538	44.9	—	5,974
1885.....	139,32	14,887,085	1,194,815	589,628	605,187	49.3	4.0	4,341
1886.....	194,77	17,279,951	1,301,119	622,995	678,124	47.9	3.2	3,478
1887.....	235,52	22,447,622	1,698,873	677,124	1,021,749	39.9	3.8	4,336
1888.....	335,27	29,797,433	2,313,811	967,585	1,346,226	41.8	4.0	4,015
1889.....	534,50	31,618,348	3,771,030	1,663,417	2,108,213	44.1	6.1	3,944
1890.....	550,49	32,760,841	4,213,804	2,001,273	2,212,531	47.5	6.3	4,018
1891.....	550,49	34,241,504	4,110,141	2,426,900	1,683,241	59.0	4.5	3,057
1892.....	550,49	35,418,997	4,580,632	2,166,199	2,414,433	47.3	6.4	4,385
1893.....	557,49	36,103,252	5,384,455	1,942,375	3,442,080	36.1	8.7	6,173

TABLE II *Continued*
 (ACCORDING TO "MEIJI SHIJUNENDO TETSUDO KYOKU NENPO" PP. 20-21, 76-77 AND 101-102
 "MEIJI SHIJUNANENDO TETSUDOH TOKKI ZUHIO" PP. 427-436.)

THE FISCAL RESULTS OF STATE RAILROADS

Fiscal year	Average mileage open to traffic	Capital invested yen	Operating revenues yen	Operating expenses yen	Operating income yen	Operating ratio in %	Operating income	
							In % of invested capital	Income per mile
94.....	564,26	37,650,657	5,819,413	2,181,696	3,637,717	37.5	8.5	6,435
95.....	586,27	39,279,435	8,004,233	2,951,561	5,052,672	36.9	11.0	8,617
96.....	611,17	43,653,043	8,273,652	3,815,603	4,457,989	46.1	8.6	7,294
97.....	647,53	46,317,417	9,727,450	4,786,049	4,941,441	49.2	7.3	7,630
1898.....	724,02	60,050,614	11,165,889	6,380,951	4,784,938	57.1	7.8	6,608
1899.....	816,68	69,970,049	13,804,375	6,706,112	7,098,263	48.6	10.1	8,689
1900.....	895,50	85,573,511	16,045,775	7,271,565	8,774,210	45.3	10.2	9,796
1901.....	1,019,66	100,590,209	16,776,519	8,547,226	8,229,293	50.9	8.1	8,070
1902.....	1,131,17	125,714,859	18,336,582	9,066,165	9,270,417	49.4	7.3	8,195
1903.....	1,282,06	139,366,330	20,109,115	9,896,901	10,212,214	49.2	7.4	7,995
1904.....	1,382,16	152,101,298	21,406,137	9,463,971	11,942,166	44.2	7.0	8,640
1905.....	1,470,22	159,918,445	24,056,140	11,129,154	12,926,986	46.3	7.1	8,793
1906.....	2,149,60	168,286,895	35,478,317	18,247,601	17,230,716	51.4	10.2	8,015
1907.....	3,080,47	361,897,919	69,775,161	35,751,943	34,023,218	51.2	9.4	8,547
1908.....	4,512,80	753,836,988	79,821,583	42,850,637	36,961,946	54.0	4.9	8,190
1909.....	4,580,20	784,863,769	82,236,436	42,060,989	40,175,547	51.0	5.1	8,771
1910 ¹	4,767,30 ²	823,196,507	89,336,592	43,249,372	46,087,220	48.0	5.5	9,665
1911.....	4,950,30 ²	872,229,998	100,179,818	45,768,256	54,411,562	46.0	6.2	10,991

¹ The figures of this table refer only to the R. R. of Japan proper. The figures differ a little from those of the early report of the State R. R. Bureau owing to the difference in the accounting basis.

² Since 1910 the 26 miles of the Yokohama private R. R. managed by the government are included.

TABLE III
(ACCORDING TO THE TETSUDO KOKUYU SHIMATSU IPPAN, APPENDIX PP. 58-65)
PURCHASE PRICE AND ACCOUNTING BASIS FOR NATIONALIZATION OF RAILROADS

Name of companies	Date of nationalization	Mileage open to traffic on the day of nationalization	Costs for construction up to the day of nationalization yen	Operating income in per cent of capital invested %	Purchase price yen	Costs for construction after the day of nationalization which were not agreed upon by the Government; round yen	By the agreement of Government increased to round yen	Fixed purchase price, round yen
Hokkaido	1906 10.1							
Tanko		207	12,152,354	12.3939306	30,366,135	10,461	11,550	¹ 30,488,657
Kobu	1906 11.11	27	4,895,013	14.5186701	14,213,803	51,374	56,724	14,270,527
Nibon	1906 11.11	860	55,057,845	12.4967668	137,609,011	55,110	61,466	137,670,477
Ganetsu	1906 11.11	49	2,729,243	—	2,521,498	—	—	2,521,498
Sanyo	1906 11.11	414	38,128,695	10.2973818	78,525,147	146,387	163,855	78,689,002
Nishinari	1906 12.11	4	1,751,238	—	1,704,509	—	—	1,704,509
Kiushiu	1907 7.11	446	56,323,731	10.0979318	113,751,106	2,320,867	2,593,728	116,344,834
Hokkaido	1907 7.11	158	11,365,391	—	11,365,391	—	—	11,365,391
Kioto	1907 8.11	22	3,457,794	—	3,340,468	—	—	3,340,468
Hankaku	1907 11.11	70	6,932,817	—	6,927,850	—	—	6,927,850
Hokuetsu	1907 11.11	85	7,307,031	5.3013839	7,747,475	—	—	7,747,475
Sobu	1907 9.11	73	6,153,763	10.4435349	12,853,409	15,618	17,745	12,871,154
Boso	1907 9.11	29	2,215,543	—	2,135,000	—	—	2,135,000
Nanao	1907 11.11	34	1,532,488	—	1,490,000	—	—	1,490,000
Tokushima	1907 11.11	21	1,331,748	—	1,310,000	—	—	1,310,000
Kwansai	1907 10.11	280	24,789,882	7.2635863	36,012,690	102,687	117,183	36,129,873
Sanyo	1907 10.11	26	2,772,299	9.9144393	5,497,159	36,824	38,355	5,535,514
Total		2,823	238,896,884		467,370,657	2,739,331	3,060,606	¹ 470,542,235

¹ 110,972 yen of which is the price of land purchased.

VITA

THE author was born on May 16, 1883, in the province of Kanagawa, Japan, as a son of a landowner. He graduated in March, 1902, from the Yokohama Commercial School; in July, 1907, from the Nippon University of Tokio, where he studied law and economics, and passed in November, 1908, the State examination for the position of government high civil officer, Bunkwan Koto Shiken, in the following subjects: Constitutional Law, Civil Law, Criminal Law, Administrative Law, International Law, Economics and Finance. In January, 1909, he became a clerk in the Imperial Board of Railways on the recommendation of Baron Goto, the then minister of communications and now a member of Upper House. In December, 1910, he was appointed assistant councillor (Tetsudoin Sanjiho). In January, 1911, he received a government commission to study railway policy in Germany. At the University of Berlin he studied from April, 1911, to March, 1913, under Professors Wagner, Von Schmoller, Sering, Bernhard, and Von der Leyen. He also worked on budgets and railway accounts with Oberregierungsrat Holtze in the Ministerium der öffentlichen Arbeiten and with Oberfinanzrat Dr. Schneider in the Finanzministerium. From April, 1913, he studied in the University of Halle, pursuing courses in Economics and Philosophy under Professors Conrad, Waentig, Brodnitz, Aubin, Grünfeld, Krueger, Menzer and Stammler. There also he began

this dissertation. Owing to the outbreak of the war, he was compelled to leave Germany in August, 1914. In October, 1914, he registered in Columbia University, where he took courses in Economics and Philosophy under Professors Seligman, Seager, Clark, Chaddock, Mitchell and Woodbridge, and attended the seminar of Professors Seligman and Seager.