

		Under 16 years	16-20	21-30	31-40	41-50	Over 50	Un-known	Total
From illness	Male	13	139	752	372	307	1,281	11	2,875
	Female	8	52	362	262	198	776	5	1,663
Poverty or misery	Male	3	3	62	70	67	191	2	398
	Female	4	3	17	37	29	85	—	175
Double suicides	Male	2	24	310	60	15	7	4	422
	Female	5	113	276	19	3	1	3	420
Infantuation or jealousy	Male	—	4	35	15	10	10	—	74
	Female	1	9	46	28	8	4	—	96
Remorse	Male	1	23	84	28	15	31	—	182
	Female	—	7	7	8	4	4	—	30
Domestic discord	Male	2	19	95	36	27	83	1	263
	Female	6	24	133	62	28	84	2	339
Fear from detection of crimes or impending punishment	Male	1	10	47	23	25	30	1	137
	Female	—	3	3	2	2	1	—	11
Pessimism	Male	3	46	162	54	35	104	4	408
	Female	3	23	81	16	20	57	2	202
Business failure and debts	Male	—	2	30	41	38	89	2	202
	Female	—	—	8	5	1	8	—	22
Divorce	Male	—	1	18	8	1	1	—	29
	Female	—	4	53	17	3	—	—	77
Disappointed love	Male	—	27	203	30	6	—	—	266
	Female	—	53	116	9	2	—	—	180

Table 11. Unnatural Deaths

	1932		1933		1934		1935		1936	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Murdered	828	588	846	593	985	707	992	664	952	692
Accidental deaths:										
Tidal waves	61	22	826	908	484	621	4	8	2	—
Floods	20	5	30	15	143	119	265	189	59	32
Shipwrecks	624	49	534	155	462	48	338	82	479	32
Fires	277	178	210	147	1,092	1,255	212	121	241	142
Earthquakes	1	1	2	—	—	1	5	4	3	—
Snow or frozen	188	32	232	52	342	95	182	28	477	116
Landslips, Collapsed houses, trees, etc.	260	46	718	85	1,333	769	620	139	545	88
At mines	595	26	748	34	840	35	1,037	26	1,297	310
Beasts & poisonous insects.	87	27	100	39	88	28	64	23	68	27
Railways, motor cars, tram-cars, etc.	6,206	2,525	2,657	741	3,044	811	3,623	967	2,887	852
Falling on the road, etc.	990	217	626	111	790	134	881	145	799	149
Total incl. others	11,965	3,896	14,585	5,407	17,315	7,407	16,177	5,283	16,085	5,367

Table 12. Statistics of Fire Brigade

(A) Official Fire Brigade

	No. of stations	No. of staff	Pump					Hose Carrier			Fire Alarms
			Gasoline		Steam		Hand cart	Auto-bike	Motor-cycle		
			Auto-bike	Motor-cycle	Hand cart	Horse wagon				Hand cart	
1928	150	8,621	170	4	1	1	6	49	11	198	826
1934	228	16,431	330	6	107	2	7	38	12	345	2,021
1935	232	16,374	346	5	103	16	4	32	13	363	2,052
1936	241	16,632	359	4	113	2	4	30	10	381	2,074
1937	243	17,372	370	5	109	14	4	29	11	442	2,086
1938	244	17,539	387	5	104	14	19	30	11	442	2,187

(B) Private Fire Brigade

	No. of ass'n	Members (1,000)	Pump			Hose-carrier		No. of Reservoirs	
			Auto-bike	Motor-cycle	Gasoline	Steam pump	Auto-bike		Motor-cycle
1928	10,865	1,917	533	110	4,364	324	30	8	95,019
1934	11,362	2,088	1,507	174	8,136	279	83	28	100,068
1935	11,446	2,106	1,738	213	8,806	233	77	36	103,266
1936	11,477	2,140	2,001	294	9,481	211	96	36	105,684
1937	11,489	2,150	2,395	345	9,966	196	126	33	108,544
1938	11,516	2,141	2,566	345	10,255	170	119	37	112,649

Table 13. Statistics of Fires

	No. of cases				No. of Households Destroyed		Estimated Loss		
	Accident	Raised	Unknown	Total	Total	per case	Total (¥1,000)	per case (¥)	per household (¥)
1933	16,132	1,488	1,760	19,380	19,471	1.06	35,817	1,914	1,835
1934	17,468	1,381	1,632	20,481	44,636	2.38	170,729	8,786	3,848
1935	16,171	1,244	1,649	19,064	20,054	1.15	53,912	2,940	2,688
1936	16,373	1,078	1,684	19,135	18,062	0.99	47,338	2,544	2,614
1937	15,993	932	935	17,813	17,496	0.95	49,849	2,793	2,850
1938	15,233	827	812	17,299	19,279	1.11	81,671	4,724	4,230

PRISONS AND PRISONERS

Just as in Western countries solitary confinement arrangement is in force in Japanese prisons. All prisoners under the age of 18 are kept in cells different from those for older ages. To Japanese generally living in a house which is practically one big room, though usually divided into a number of smaller rooms with sliding doors, the solitary confinement seems to be too sudden a change, and is apt to exert a morbid influence upon the prisoners. The solitary system is therefore sparingly enforced in Japan. Prisoners in penal servitude from compulsion and other inmates from option, are made to work at the workhouse, and rewards at certain rate are given. Workhouses are closed twelve days in a year, and a prisoner whose father or mother dies is allowed release from labour for three days. Moral instruction is given on holidays or Sundays, and ordinary education is given under 4 hours a day for prisoners of primary education grade and under 2 for those of higher grade. Those of still higher grade are left to their own devices, 3 books being allowed at one time, exclusive of dictionary. The daily ration per capita of prisoners consists of 0.95 pint of inferior rice and barley mixture and side-dish

costing not more than 10 sen. The bath is opened once in every 5 days in warm season and 7 days in the other. An interview, for 30 minutes or less, with relatives is allowed once every day for detention prisoners, once a month for those under sentence of imprisonment and once every two months for those in penal servitude. The number of letters to be sent or received is one in every ten days for a detention criminal, one in every month for an imprisonment and one in every two months for a servitude criminal. Taken altogether, the national characteristic of simplicity and lightheartedness is reflected even on prison life, and while the management is less stern, prisoners look less gloomy and dejected than the convicts in Western prisons. The Japanese appear to be more amenable to reform and better able to mix in society after discharge.

Wages Earnings of Convicts

The wage earning rate of convicts still stands very low in Japan, compared with advanced countries in the West. Formosa, however, is an exception, for the wage earned by its convicts meet the expenses of maintenance, and its prisoners are practically self-supporting.

Table 14. No. of Prisons, Prison Officers and Prison Inmates

	No. of prisons	No. of prison officers	Prison Inmates					
			Convicts	Suspects	Accused	In separate cells	Infants	Total
1927	157	7,574	37,990	141	2,550	293	7	40,981
1929	154	7,628	37,493	85	3,934	322	8	31,842
1930	154	7,608	41,188	127	4,634	481	7	46,437
1931	154	7,475	42,253	100	4,642	505	7	47,507
1932	155	7,486	46,324	77	5,624	477	6	52,580
1933	155	7,646	49,922	109	6,062	530	4	56,627
1934	155	7,735	48,904	80	5,273	572	8	54,837
1935	155	7,848	51,094	120	5,252	490	14	56,970
1936	156	7,980	51,977	47	4,628	462	9	57,123
1937	156	7,998	49,132	56	3,956	362	6	53,512
1938	158	8,091	46,686	46	3,437	269	4	50,442

Table 15. Convicts Classified By Sex and Crimes (End of Dec.)

Crime	Sex	1927	1928	1929	1930	1931	1932	1933	1934	
		Male	20,937	26,116	28,145	27,325	28,494	29,464	28,193	27,249
	Female	251	218	250	265	262	310	261	234	
Theft										
Burglary	Male	2,534	3,443	3,562	3,419	3,374	3,468	3,462	3,304	
	Female	11	3	3	2	4	4	7	4	
Gambling	Male	622	465	466	509	653	670	509	544	
	Female	11	5	2	6	3	10	4	3	
Fraud, blackmailing	Male	3,594	4,606	4,998	4,997	5,867	5,682	5,254	4,925	
	Female	43	35	46	76	70	63	75	61	
Usurpation	Male	1,103	1,374	1,613	1,642	1,813	1,811	1,697	1,616	
	Female	8	4	—	4	2	5	6	1	
Stolen goods concealed, etc.	Male	210	302	392	411	335	353	379	332	
	Female	4	4	2	12	9	3	5	—	
Forgery of coins	Male	99	108	128	131	118	104	89	71	
	Female	—	—	—	1	—	1	1	—	
Forgery of documents	Male	617	745	707	557	613	623	554	470	
	Female	9	5	3	3	1	4	7	8	
Obscenity, adultery, Bigamy	Male	542	554	663	696	701	724	729	708	
	Female	12	4	3	7	3	2	4	5	
Battery & assaults	Male	1,555	1,706	1,686	1,458	1,391	1,301	1,195	1,146	
	Female	15	15	15	12	13	14	8	10	
Murder	Male	2,924	2,408	2,521	2,419	2,402	2,533	2,506	2,414	
	Female	123	104	111	119	121	100	111	111	
Abortion	Male	12	15	8	11	12	11	9	8	
	Female	7	4	16	7	12	15	2	4	
Sedition	Male	82	40	49	21	6	3	3	1	
	Female	—	—	—	—	—	—	—	—	
Incendiary	Male	1,416	1,870	2,124	2,215	2,219	2,160	1,925	1,638	
	Female	181	172	174	187	196	206	183	162	
Others	Male	659	879	914	893	876	894	883	846	
	Female	13	6	12	6	7	10	7	3	
Special Laws	Male	382	1,099	1,331	1,461	1,492	1,409	1,022	790	
	Female	14	15	13	32	25	20	24	8	
Total	Male	37,288	45,730	49,272	48,165	50,366	51,210	48,427	46,072	
	Female	702	594	650	739	728	767	705	614	
Grand Total		37,990	46,324	49,922	48,904	51,094	51,977	49,132	46,686	

Table 16. No. of Convicts Classified By Age

Year	1927				1928				1929				1930				1931				1932				1933			
	Under 13	Under 20	Over 20	Total	Under 13	Under 20	Over 20	Total	Under 13	Under 20	Over 20	Total	Under 13	Under 20	Over 20	Total	Under 13	Under 20	Over 20	Total	Under 13	Under 20	Over 20	Total				
1927	876	1,760	35,354	37,990	817	2,023	46,064	48,904	821	1,956	48,317	51,094	868	2,041	49,095	51,977	877	1,902	46,353	49,132	804	1,881	44,001	46,686				
1928	735	1,826	38,627	41,188	821	1,956	48,317	51,094	868	2,041	49,095	51,977	877	1,902	46,353	49,132	804	1,881	44,001	46,686								
1929	717	1,950	39,586	42,253	868	2,041	49,095	51,977	877	1,902	46,353	49,132	804	1,881	44,001	46,686												
1930	858	2,059	43,407	46,324	877	1,902	46,353	49,132	804	1,881	44,001	46,686																
1931	918	2,199	46,805	49,922	804	1,881	44,001	46,686																				

Table 17. Convicts Classified By Sentence

Year	Imprisonment									
	Below 1 year	Below 3 yrs.	Below 5 yrs.	Below 10 yrs.	Below 15 yrs.	Above 15 yrs.	Life time	Confinement	Detention	Total
1928	7,734	14,036	6,016	5,514	1,556	825	465	23	242	36,411
1929	14,577	21,705	7,926	4,985	497	509	518	176	201	51,094
1930	14,803	21,949	8,213	5,040	470	494	533	284	191	51,977
1931	13,176	20,834	8,277	5,030	459	489	541	213	113	49,132
1932	10,894	20,343	7,972	4,822	449	461	558	80	107	46,686

Table 18. Revenue of Prisons

(Unit: ¥1,000)

Year Ending Mar. 31:	General			Total incl. Others	Extra Ordinary	Grand Total
	Earning from labor	Rental of Property	Miscellaneous			
1928	6,502	0.9	15	6,518	47	6,565
1929	7,797	0.4	16	7,813	31	7,845
1930	8,230	0.4	33	8,264	37	8,301
1931	8,972	0.4	52	9,025	42	9,067
1932	10,402	0.4	58	10,461	57	10,517
1933	17,487	0.2	67	17,554	69	17,622
1934	21,738	0.2	69	21,807	94	21,901
1935	24,600	0.2	65	24,666	56	24,722

* Estimate.

References:

- Table Nos.: 1-2 a, 3-5 b, 6 c, 7-13 d, 14-18 e.
- a—Statistical Annual of Civil Cases, Department of Justice.
- b—Statistical Annual of Criminal Cases, Department of Justice.
- c—Research of Department of Justice.
- d—Department of Home Affairs.
- e—Reports on Prison Affairs, the Department of Justice.

CHAPTER XIII

SANITATION

MEDICINE

Introductory

Japan first came into contact with European civilization through medicine, strictly speaking, by that pioneer Christian missionary, St. Francis Xavier who arrived at Kagoshima in 1549. For about two centuries beginning with the middle of the 17th century, Nagasaki was the only point of contact which the semi-hermit nation had with the outside world, whither our young aspirants for medicine and other useful sources of knowledge flocked from all parts of the country to get initiated into wonderful arts and sciences by the doctors whom a small Dutch colony maintained for its benefit and for the enlightenment of such Japanese as came to them for instruction. Among the foreign doctors engaged by the colony were Thunberg (1776-77), a Swede, and von Siebold (1823-29), an Austrian, who left valuable works on Japanese flora and other scientific subjects.

The first physician engaged by the Imperial Government after the opening of the country to foreign intercourse was an Englishman, Dr. William Willis, who was placed in the charge of the first military hospital established in Tokyo. For the naval hospital Dr. W. Anderson, the author of a famous work on Japanese fine art, was engaged. Among the pioneer Americans in this field stand first Dr. J. C. Hepburn, also well

known as the compiler of the first Japanese-English dictionary, Dr. Alexander E. Vedder, an American naval surgeon, Dr. Eldridge, who came to the Hokkaido with Gen. Capron and rendered valuable services in framing Japanese regulations and training Japanese officers as regards quarantine. The first dentist, as the term is now understood, was also an American, Dr. Eastlake.

In the later stage of the history of the development of Japanese medicine, the preference was given to German specialists, and they were also given chairs in the Imperial University created in the meanwhile. In natal surgery, however, the British method and in dental surgery the American predominated. Among the German specialists who taught Japanese students, the names of Dr. Baelz for internal medicine and Dr. Scriba for surgery will long remain in the history of Japanese medicine.

Medical Practitioners, Dentists, Pharmacists, etc.

The total number of medical practitioners throughout Japan has shown an increase of roughly 2,200 annually. About 92% of the practitioners are male. The number of medical practitioners classified according to sex and qualifications is tabulated below:—

Table 1. No. of Physicians, Dentists and Pharmacists by Qualification and Sex

Year	(A) Medical Practitioners										Per 10,000 Population
	University Graduates Male	College Graduates		Educated Abroad		Independently Qualified by Examination		Total incl. others			
		Male	Female	Male	Female	Male	Female	Male	Female		
1932	13,561	22,829	1,532	51	6	10,809	343	48,188	1,881	6.94	
1933	15,579	23,611	1,905	56	5	10,478	304	50,578	2,214	7.41	
1934	17,034	24,542	2,304	61	6	10,023	329	52,377	2,639	7.23	
1935	18,822	25,305	2,687	62	6	9,735	336	54,552	3,039	7.45	
1936	20,104	26,070	3,095	69	8	9,471	329	56,274	3,432	7.57	
1937	21,699	26,656	3,471	67	6	9,132	302	58,020	3,779	7.65	
1938	22,952	26,612	3,951	74	7	8,664	306	58,670	4,264	7.18	

Year	(B) Dental Surgeons									
	University Graduates Male	College Graduates Male	College Graduates Female	Educated Abroad Male	Educated Abroad Female	Independently Qualified by Examination Male	Independently Qualified by Examination Female	Total incl. others Male	Total incl. others Female	Per 10,000 Population
1932	—	7,590	672	72	—	8,393	431	16,061	1,103	2.47
1933	—	8,377	762	78	—	8,345	416	16,806	1,178	2.61
1934	—	9,291	896	78	—	8,302	428	17,674	1,324	2.58
1935	—	10,171	1,035	79	—	8,317	405	18,570	1,440	2.66
1936	—	11,059	1,153	74	—	8,364	414	19,500	1,567	2.74
1937	—	11,973	1,258	79	—	8,344	416	20,398	1,674	2.83
1938	—	12,592	1,319	79	—	8,323	418	29,998	1,737	2.79

(C) Pharmacists

Year	University Graduates Male	College Graduates		Educated Abroad		Independently Qualified by Examination		Total incl. others		Per 10,000 Population
		Male	Female	Male	Female	Male	Female	Male	Female	
1932	347	8,715	818	25	—	9,697	868	18,684	1,786	3.09
1933	266	9,667	1,260	30	—	9,561	1,018	19,524	2,278	3.24
1934	287	10,757	1,745	31	—	9,553	1,012	20,526	2,757	3.41
1935	305	11,799	2,372	33	—	9,515	1,043	21,552	3,405	3.60
1936	338	12,680	3,013	33	—	9,548	1,120	22,599	4,133	3.80
1937	363	13,596	3,616	33	—	9,414	1,134	23,406	4,750	3.95
1938	384	14,227	3,997	32	—	9,069	1,057	23,712	5,054	3.98

Statistics of the other classes of professionals are as follows:—

Table 2. No. of Midwives, Nurses, etc.

Year	Midwives	Nurses	Acupuncture	Moxibustion	Shampoos
1932	54,655	89,684	4,936	4,712	35,812
1933	56,590	96,020	5,154	4,886	35,902
1934	58,270	102,921	5,052	4,890	36,330
1935	59,560	106,857	5,005	4,930	36,210
1936	60,967	113,987	5,155	5,066	36,312
1937	61,732	124,402	4,868	4,885	34,000
1938	62,209	120,010	4,938	5,042	34,839

Table 3. No. of Hospitals and Consulting Offices

Year	General Hospitals*			Charity Hospitals		Prostitutes Hospitals	Epidemic Hospitals	Isolation Hospitals	Consulting Offices	
	Government	Public	Private	Public	Private				Medical	Dental
1932	12	87	2,350	12	25	136	1,269	6,473	—	—
1933	—	88	2,452	12	23	133	1,261	7,398	—	—
1934	—	102	2,625	8	22	133	1,286	7,251	35,014	17,200
1935	—	101	2,803	8	26	121	1,294	7,117	35,772	18,066
1936	—	115	2,887	10	27	120	1,040	7,247	36,384	18,888
1937	—	125	2,907	11	35	117	1,010	7,044	36,838	19,586
1938	—	127	2,981	13	42	116	1,008	6,970	36,242	19,717

Note: * With accommodation for 10 or more in-patients only.

Table 4. Statistics of Insane Asylums

Year	No. of hospitals	No. of beds	No. of In-patients				At the end of the year	Aggregate number of in-patients treated a day
			Remaining from last year	Admitted in	Left Asylum	Died in Asylum		
1932	110	14,368	6,239	3,160	1,496	1,003	6,900	2,297,110
1933	120	15,996	*3,591	*9,515	*7,858	*944	*4,297	*1,523,919
1934	130	17,298	6,854	3,647	1,810	1,219	7,472	2,531,532
1935	143	18,981	*4,291	*10,614	*8,740	*1,103	*5,062	*1,838,438
1936	146	19,410	7,431	3,969	1,970	1,270	8,160	2,727,624
1937	151	21,325	*5,023	*11,232	*9,460	*1,132	*5,663	*2,059,427
1938	158	21,883	8,158	4,517	2,295	1,498	8,882	3,005,073
			*5,728	*13,520	*11,518	*1,231	*6,499	*2,396,912
			8,854	4,441	2,235	1,617	9,443	3,095,339
			*6,361	*14,148	*11,909	*1,658	*6,942	*2,712,775
			9,381	4,573	2,307	1,720	9,927	3,237,544
			*6,997	*15,960	*13,752	*1,588	*7,617	*3,137,413
			9,912	5,711	3,285	2,264	10,074	3,390,673
			*7,687	*17,756	*14,794	*2,149	*8,500	*3,392,785

Note: The asterisk denotes the number of paying patients.

Tuberculosis

The alarming spread of pulmonary tuberculosis in recent years even in the Army and the Navy, and especially among the students of universities and other high grade schools and among elementary school teachers have been arresting the earnest attention of both Government

and public. Tuberculosis is the cause for one of the largest numbers of deaths in Japan and accounted in 1938 for about 11 per cent of the deaths from all diseases. In 1914 and 1919 a law was enacted for establishing sanatoria for consumptives in cities that have a population of more than 300,000, and for a city of at least 50,000 souls.

Table 5. Conditions in Tuberculosis Hospitals

Year	No. of hospitals	No. of beds	No. of In-patients					Aggregate number of in-patients treated a day
			Remaining from last year	Admitted in	Left Asylum	Died in Asylum	At the end of the year	
1932	69	5,677	2,394 *1,264	3,599 *5,327	1,444 *3,725	1,843 *1,287	2,707 *1,688	921,180 *512,969
1933	76	6,177	2,701 *1,766	3,476 *1,554	1,471 *5,150	1,962 *1,977	2,744 *2,193	989,677 *762,433
1934	91	7,271	3,227 *1,832	5,348 *7,362	2,363 *5,341	2,510 *1,676	3,767 *2,112	1,276,341 *718,016
1935	106	8,090	3,785 *2,157	5,127 *8,619	2,606 *6,422	2,469 *1,945	3,921 *2,325	1,358,393 *834,390
1936	110	8,667	4,070 *2,360	6,348 *9,644	3,150 *6,838	2,853 *2,321	4,416 *2,844	1,512,407 *987,570
1937	116	10,607	4,249 *3,053	6,797 *11,974	3,379 *8,171	2,836 *3,083	4,831 *3,773	1,641,124 *1,314,804
1938	153	14,138	4,960 *4,131	9,275 *14,769	4,079 *10,246	4,159 *3,636	5,997 *5,018	2,083,111 *1,593,263

Note: The asterisk denotes the number of paying patients.

Table 6. Proportion of Men Affected With Tuberculosis

Year	Estimated Number Requiring Health Examinations	Number of Persons Examined	Number of Patients	Ratio of Patients per 1,000 of Examined	Number of Persons Ordered to Suspend Work
1932	1,883,508	1,517,146 *45,869	490	0.31	97
1933	1,835,992	1,526,142 *21,826	403	0.26	64
1934	1,878,039	1,563,268 *82,434	439	0.27	63
1935	1,998,544	1,676,760 *84,393	538	0.31	113
1936	1,803,099	1,442,758 *121,787	516	0.33	79
1937	1,596,010	1,252,114 *73,353	601	0.45	90
1938	1,759,210	1,322,977 *85,517	516	0.37	61

Note: The asterisk denotes those who had undergone health examination more than twice.

Leper Hospital

For the care and protection extended to this unhappy class of fellow mortals, Japan owes to the initiation and efforts of foreign missionaries.

In 1907 the Imperial Diet voted a measure for establishing leprosaria at state expenses, and five leprosaria were established one each near Tokyo, Osaka, Kumamoto, Takamatsu and Aomori.

Table 7. Conditions in Leprosaria

Year	No. of Leprosarias	No. of beds	No. of In-patients					Aggregate number of in-patients treated a day
			Remaining from last year	Admitted in	Left Leprosaria	Died in Leprosaria	At the end of the year	
1932	14	4,265	4,029 *74	974 *18	378 *55	307 *1	4,318 *36	1,505,204 *19,228
1933	15	4,639	4,300 *35	1,451 *59	585 *24	308 *3	4,858 *67	1,629,958 *14,204
1934	14	4,457	4,287 *36	1,394 *5	415 *4	309 *5	4,957 *32	1,649,739 *11,839
1935	15	5,052	5,051 *32	1,618 *4	586 *7	275 *6	5,808 *23	1,908,827 *8,292
1936	15	5,757	5,712 *23	1,353 *1	592 *12	267 *1	6,104 *11	2,179,333 *4,057
1937	15	5,887	6,104 *11	1,536 *5	679 *2	412 *1	6,549 *13	2,345,683 *4,104
1938	17	8,108	6,871 *13	2,493 *9	1,204 *5	521 *1	7,639 *16	2,549,649 *5,730

Note: The asterisk denotes the number of paying patients.

Table 8. Conditions in Hospitals for Prostitute

Year	Number of Hospitals	Admitting Capacity	Remaining from previous year	Newly Admitted	Aggregate number of in-patients treated a day	Average number of days of patients stayed in Hospital
1932	136	5,371 †10	1,574 *19	53,241 *532	1,038,086 *10,749	18.94
1933	133	5,320 †10	1,265 *24	49,189 *745	957,891 *14,682	18.99
1934	133	5,420 †10	1,305 *26	48,354 *566	939,231 *14,331	18.98
1935	121	5,065 †9	1,187 *16	46,801 *381	878,522 *9,323	18.35
1936	120	5,049 †17	1,211 *19	51,824 *583	919,959 *15,923	17.45
1937	117	4,917 †14	1,323 *39	53,283 *339	952,922 *10,106	17.51
1938	116	4,985 †14	1,239 *16	67,485 *572	1,089,438 *16,244	15.95

Note: * Clandestine prostitutes.
† Beds in infectious disease rooms.

The number of licensed quarters at the end of 1938 was 434, with 9,012 houses possessing 45,289 licensed prostitutes.

Infectious Disease Hospitals.—The total number of infectious disease hospitals throughout the whole country as at the end of 1938 was 1,008. Their accommodating capacity was 24,160, which works out at 24 per hospital.

Isolation Wards.—At the end of 1938 there were 6,970 isolation wards which had an admitting capacity of 68,488 or 9.8 per ward on the average.

Isolation Houses.—The total number of isolation houses existing at the end of 1938 was 66. The accommodating capacity was 1,672 or 26.5 on an average.

Disinfecting Stations.—At the end of 1938 there were 46 disinfecting stations (established under the provisions of the Law for the Prevention of Infectious Diseases).

Patent Medicines

Patent Medicines Manufactured and Imported.—The output and import of patent medicines for 1938 totalled ¥129,043,820. Of this amount ¥138,621 represented imports (inclusive of consignments from colonies).

Retailers in Patent Medicines.—The number of retailers in patent medicines at the end of 1938 was 214,122.

Morphine, Cocaine and Salts, Medical Opium

All these drugs are placed under the strict control of the Public Welfare Minister and opium is a Government monopoly, the drug being imported mostly from Persia. A small quantity of poppy is cultivated in Osaka and Wakayama.

Sanitation

Sanitation in the modern sense of the term

in Japan may be said to have its genesis in the dispatch of Sensai Nagayo (d. 1910) to America and Europe not long after the establishment of the Imperial Government, and he is usually known as the "father" of Japanese sanitation. For vaccination Japan was indebted to the Dutch physicians at Nagasaki.

As the existing system of sanitary administration stands, there is the Sanitary Bureau in the Public Welfare Office as a central organ for controlling all matters of public hygiene, and subordinate to it are a number of consulting bodies and also experimental laboratories or research institutes. Thus the two hygienic laboratories, one in Tokyo and the other in Osaka, take charge of matters relative to medicine, food, beverages, and hygienic examinations and investigations; the Institute for Alimentary Researches studies questions of national alimentation, the Central Board of Health presents its view in response to an inquiry which may be put by the Public Welfare Minister as regards public health or the health of domestic animals, and so on.

Epidemic Laboratories

Two epidemic laboratories exist in Tokyo, one affiliated to the Imperial University of Tokyo and the other (private, founded by the late Dr. Shibasaburo Kitazato, the noted bacteriologist. Epidemic research work in Japan dates from Dr. Kitazato's return home in 1902 from his long study in Germany with Dr. Koch. At the instance of the late Yukichi Fukuzawa (founder of the Keio University) and the late Baron Ichizaemon Morimura, a laboratory was established in Tokyo with Dr. Kitazato as the director. Seven years later, it was transferred to State control on the recommendation of the late Dr. T. Hasegawa, then an M.P. From that time till its thorough reorganization in 1914,

the laboratory was the only centre of bacteriological research and training in Japan. When in 1914 the laboratory was transferred from the Home Office to the Department of Education, the Director (Dr. Kitazato) and all his assistants resigned and established the Kitazato Epidemic Laboratory. The Government laboratory was placed in charge of the late Dr. Baron Aoyama, Dr. H. Hayashi and others. It is now supervised by Dr. Yonejiro Miyajima, Professor of the Imperial University of Tokyo.

Trachoma

Control of the infectious eye-disease trachoma is regulated by a law which provides, among other things, that the Treasury grants to prefecture aid of one-sixth of the expenses incurred by enforcing preventive measures, while in turn a civic corporation is granted by the prefectural treasury one-sixth to one-fourth of its expenditure for similar purposes. The Public Welfare Office has trained a large number of specialists for fighting the spread of the diseases.

Table 9. Proportion of Men Affected With Trachoma

Year	Persons Examined	Severe Cases	Mild Cases	Suspected Cases	Total	Ratio of Patients per 100 Persons Examined	Number of Persons Ordered to Suspend Work
1932	6,029,241 *734,093	43,719	451,037	130,941	625,697	9.25	160
1933	5,901,344 *988,108	42,392	444,550	122,894	609,836	8.85	202
1934	5,681,134 *947,731	37,634	424,234	119,449	581,317	8.77	227
1935	5,981,741 *528,152	33,820	376,994	116,533	527,347	8.10	113
1936	5,889,362 *1,160,421	39,181	428,917	125,218	593,316	8.42	246
1937	6,522,554 *703,782	39,453	409,495	123,549	572,497	7.92	207
1938	5,790,199 *368,222	33,203	340,977	114,125	488,305	7.93	64

Note: The asterisk denotes those who had undergone health examination more than twice.

Infectious Diseases

The infectious diseases as recognized by law are cholera, dysentery (including 'ekiri') typhoid, or enteric fever, scarlet fever, small pox, exanthematous typhus, diphtheria, (inclusive of croup), plague, paratyphus, and cerebrospinal meningitis.

In the fiscal year ending Mar. 31, 1941 the sum of ¥1,573,345 was defrayed by the National Treasury for prevention of infectious diseases.

Vaccination.—Vaccination is compulsory. Everybody has to be vaccinated twice, first in the period ending June of the year following his birth and next when he has completed his ninth year.

Table 10. No. of Epidemic Cases and Mortality

Year	Typhoid fever	Dysentery	Diphtheria	Small-pox	Cholera	Scarlet fever	Cerebrospinal meningitis	Total incl. others
1932	35,519 cases 18.30 death(%)	32,251 cases 39.89 death(%)	21,866 cases 19.93 death(%)	305 cases 14.75 death(%)	4 cases 50.00 death(%)	8,257 cases 4.06 death(%)	238 cases 68.07 death(%)	103,261
1933	38,529 cases 18.77 death(%)	38,049 cases 37.37 death(%)	28,545 cases 18.48 death(%)	375 cases 14.93 death(%)	— cases	12,631 cases 3.23 death(%)	359 cases 61.56 death(%)	123,797
1934	42,595 cases 18.15 death(%)	42,952 cases 34.43 death(%)	30,109 cases 16.91 death(%)	320 cases 11.25 death(%)	— cases	16,688 cases 3.05 death(%)	1,187 cases 55.35 death(%)	138,359
1935	38,357 cases 17.84 death(%)	48,968 cases 30.77 death(%)	28,200 cases 15.51 death(%)	113 cases 13.51 death(%)	— cases	16,509 cases 3.11 death(%)	1,304 cases 56.67 death(%)	137,676
1936	36,938 cases 17.51 death(%)	52,075 cases 30.23 death(%)	28,234 cases 14.85 death(%)	178 cases 16.29 death(%)	— cases	16,707 cases 2.91 death(%)	1,008 cases 61.22 death(%)	139,911
1937	38,542 cases 17.17 death(%)	78,284 cases 23.54 death(%)	28,111 cases 14.14 death(%)	90 cases 6.67 death(%)	57 cases 35.09 death(%)	17,603 cases 2.73 death(%)	829 cases 57.33 death(%)	138,023
1938	42,259 cases 16.72 death(%)	79,729 cases 24.82 death(%)	28,587 cases 10.02 death(%)	60 cases 10.00 death(%)	17 cases 58.23 death(%)	19,161 cases 2.12 death(%)	994 cases 51.71 death(%)	171,077
1939	42,132 cases 16.79 death(%)	80,221 cases 25.20 death(%)	28,420 cases 13.56 death(%)	60 cases 10.00 death(%)	18 cases 61.11 death(%)	19,002 cases 2.12 death(%)	996 cases 53.01 death(%)	176,966

Burial and Cremation

Though existing grave-yards are left uninterfered with, those in newly-grown industrial

towns have not unfrequently been removed by administrative order. A new cemetery must be laid out in a place at least 120 yards from the

Burial and Cremation

Though existing grave-yards are left uninterfered with, those in newly-grown industrial towns have not infrequently been removed by administrative order. A new cemetery must be laid out in a place at least 120 yards from the nearest dwelling houses. Cremation claims a larger half of all bodies buried.

Deaths Classified by Causes

The number of deaths taking place throughout the whole country in recent years has fluctuated between 1,240,000 and 1,161,000. Tuberculosis, pneumonia, cerebral hemorrhage and diarrhoea and enteritis account for the largest number of deaths.

Table 11. Death Rate per 10,000 Population Classified by Causes

	Japan Proper (1938)	France (1935)	Germany (1935)	Italy (1938)	Holland (1934)	Great Britain (1936)	U.S.A. (1936)
Typhoid and Para-typhoid Fever	1.12	0.26	0.10	1.30	0.04	0.10	0.26
Measles	0.69	0.17	0.30	0.65	0.35	0.70	0.10
Scarlet Fever	0.06	0.08	0.20	0.05	0.06	0.10	0.19
Small Pox	0.00	0.00	—	—	—	—	—
Whooping Cough	1.23	0.20	0.50	0.49	0.37	0.50	0.21
Diphtheria	0.57	0.38	1.10	0.61	0.09	0.80	0.24
Influenza	1.06	1.83	2.70	1.94	1.27	1.50	2.63
Tuberculosis (Respiratory Organs)	14.88	10.65	6.20	5.87	3.17	5.80	5.06
Tuberculosis (Others)	5.73	1.62	1.10	2.08	1.37	1.20	0.50
Syphilis	0.61	0.06	0.40	0.49	0.27	0.30	0.98
Malaria	0.03	0.04	0.01	0.17	0.01	0.00	0.31
Cerebral Hemorrhage, Thrombosis and Embolism	17.57	11.87	9.70	13.51	6.11	7.40	9.08
Glycosuria (Diabetes)	0.42	1.09	1.90	1.04	1.45	1.70	2.37
Cancer and other malignant tumor	6.98	9.48	15.00	8.60	13.59	16.20	11.10
Diseases of Nervous System	7.73	3.78	2.80	3.40	2.05	2.80	1.68
Diseases of Heart	6.57	15.50	15.70	16.40	14.19	30.60	26.58
Alcoholism	0.04	0.28	1.10	0.10	0.03	0.02	0.29
Other Toxicosis	2.75	0.90	1.60	2.02	1.44	2.10	1.85
Bronchitis	3.62	1.71	1.60	4.35	1.35	4.60	0.34
Other Respiratory Diseases	5.15	8.95	2.50	21.61	1.02	1.20	0.87
Appendicitis	0.37	0.39	0.80	0.68	0.44	0.70	1.28
Diarrhea and Enteritis	16.19	1.59	1.70	10.57	0.82	1.40	1.63
Other Diseases of Digestive Organs	8.28	3.01	3.00	3.11	1.87	3.30	2.73
Nephritis	8.58	4.49	1.80	4.01	3.10	3.80	8.32
Congenital Debility Malformations, & Premature Birth	10.97	3.08	6.50	7.68	4.48	4.90	4.97
Senility	13.68	19.99	10.70	9.13	5.23	4.30	0.89
Suicides	1.69	2.01	3.00	0.72	0.85	1.20	1.42
Murdered	0.06	0.12	0.10	0.17	0.05	0.05	0.80
Unknown Causes	5.04	30.89	2.00	1.07	3.28	0.50	1.64
Pneumonia	16.36	6.80	9.00	21.61	5.84	7.20	9.30
Total including others	174.43	156.98	119.40	139.21	85.27	122.80	115.18

Table 12. Mortality of Infants

Months & Days	Mortality (%)								Total incl. unknown	Ratio in 100 natural Births
	Within 5 days	5-10 days	10-15 days	15-30 days	1-2 m.	2-3 m.	3-6 m.	6-12 m.		
1934	16.4	8.4	5.8	9.8	11.9	8.1	15.6	24.0	255,063	12.5
1935	17.0	8.6	6.0	10.2	12.0	8.2	14.8	23.0	233,706	10.7
1936	17.0	8.7	5.8	9.7	11.7	8.1	15.5	23.5	245,357	11.7
1937	17.5	8.1	5.9	9.8	11.8	8.0	15.2	23.6	230,701	10.6
1938	17.1	7.9	5.7	9.6	11.7	8.2	15.6	24.1	220,695	11.4

Table 13. Juvenile Mortality By Causes
(1938)

Age under:	One	Two	Three	Four	Five	Total	% to Total
Measles	1,728	1,711	699	309	196	4,643	1.25
Whooping cough	4,752	2,340	925	422	214	8,653	2.36
Diphtheria	317	843	711	556	446	2,873	0.77
Influenza	2,093	514	272	171	122	3,172	0.86
Dysentery	197	1,428	4,836	4,880	3,300	14,641	3.99
Tuberculosis	1,019	1,464	1,064	969	771	5,287	1.44
Syphilis	2,128	82	38	9	13	2,270	0.62
Lack of Vitamin B.	6,506	300	89	34	25	6,954	1.90
Meningitis	8,326	4,176	3,695	2,821	1,852	20,870	5.69
Nerve system	3,334	765	703	472	326	5,600	1.53
Trachitis	7,714	1,593	629	255	155	10,349	2.80
Pneumonia	42,540	16,256	6,274	3,029	1,717	69,816	19.00
Diarrhoea & Enteritis	36,860	21,605	8,658	5,675	3,293	76,091	20.70
Other digestive organs	1,690	657	4,169	1,961	1,107	9,584	2.61
Kidney trouble	1,518	874	1,220	1,064	769	5,445	1.48
Congenital Malformation	3,122	267	129	61	35	3,614	0.97
Congenital Infirmity	60,568	...	...	...	...	60,568	16.50
Premature Birth	5,410	...	...	...	...	5,410	1.48
Accidental	1,226	2,093	1,893	1,192	883	7,287	1.98
Total incl. others	220,695	62,437	39,348	26,322	17,050	365,852	100.00

Table 14. Poisoning By Causes

	Intentional		Accidental		Through Other's Injuries		Total	
	Cases	Deaths	Cases	Deaths	Case	Deaths	Cases	Deaths
1932	6,607	2,426	4,551	314	20	9	11,178	2,749
1933	8,087	2,912	5,947	394	38	18	14,072	3,324
1934	8,515	2,811	6,392	356	36	15	14,948	3,182
1935	8,434	2,795	6,236	345	29	13	14,699	3,153
1936	8,978	3,480	11,021	472	30	9	20,029	3,961
1937	7,456	2,924	5,164	332	44	22	12,664	3,278
1938	5,060	2,134	5,298	329	22	13	10,380	2,476

Port Quarantine

The infectious diseases which are subject to inspection of quarantine officers are cholera, small-pox, scarlet fever, plague and yellow fever. There are ten permanent quarantine stations. They are situated at Yokohama, Osaka, Tsuruga, Kobe, Moji, Nagasaki, Miike, Kuchinotsu, Matsu-shima and Sakito. Besides, there are five temporary quarantine stations, which are situated at Hakodate, Nagoya, Yokkaichi, Karatsu and Kagoshima.

The total number of vessels inspected in 1938 by both harbour offices and temporary quarantine stations was 19,852 Japanese vessels (with a tonnage of 73,778,168) and 4,917 foreign vessels (with a total tonnage of 31,805,608). The total number of persons inspected was 2,144,761 of which ship's crew numbered 1,377,771 and passengers 766,994. By these inspections 12 persons were found suffering from small-pox, 1 from typhoid and 51 from other notifiable infectious diseases, making a total of 64 cases.

Aerial Quarantine

With the establishment of international aerial routes the regulations pertaining to aerial quarantine were promulgated in April, 1927 and enforced on September 1, the following year. The legislation provides that the flying machines arriving in Japan Proper from places outside Japan or from Chosen or Taiwan are to be subject to sanitary inspection of the authorities concerned at the airports or other places where a flying machine lands or has been permitted to land. If any of the crew or passengers is found to be carrying bacilli of plague, cholera, small-pox or such other infectious diseases as designated by ordinance the patient is to be properly treated, the machine and all aboard the machine being detailed and disinfected.

Death Rates and Average Expectancy

According to the fifth life table published by the Cabinet Statistics Bureau in August, 1935, the average length of life in Japan is 46.9 years in the case of men and 49.6 years in the case of women.

Table 15. Expectancy of Life

Age:	Japan (1935-6)		England & Wales (1930-2)		U.S.A. (1929-31)		France (1928-33)		Germany (1932-34)	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
0.....	46.9	49.6	58.7	62.9	59.1	62.7	54.3	59.0	59.9	62.8
1.....	52.0	54.1	62.3	65.5	62.0	64.9	58.6	62.5	64.4	66.4
2.....	52.9	55.0	62.2	65.4	61.7	64.5	58.5	62.5	64.0	66.0
3.....	53.0	55.1	61.6	64.8	61.0	63.8	58.0	61.9	63.3	65.2
4.....	52.7	54.9	60.9	64.0	60.2	63.0	57.3	61.1	62.5	64.4
5.....	52.2	54.4	60.1	63.2	59.4	62.2	56.5	60.3	61.7	63.6
6.....	51.6	53.4	59.3	62.4	58.5	61.3	55.6	59.5	60.8	62.7
7.....	50.8	53.0	58.5	61.6	57.7	60.4	54.8	58.6	60.0	61.8
8.....	50.0	52.2	57.6	60.7	56.8	59.5	53.9	57.8	59.1	60.9
9.....	49.1	51.3	56.7	59.8	55.9	58.6	53.0	56.9	58.2	60.0
10.....	48.3	50.5	55.8	58.9	55.0	57.7	52.1	56.0	57.3	59.1
15.....	43.9	46.3	51.2	54.3	50.4	53.0	47.5	51.5	52.6	54.4
20.....	40.4	43.2	46.8	49.9	46.0	48.5	43.3	47.4	48.2	49.8
25.....	37.4	40.2	42.5	45.6	41.8	44.3	39.4	43.5	43.8	45.4
30.....	33.9	36.9	38.2	41.2	37.5	40.0	35.4	39.5	39.5	41.1
35.....	30.1	33.3	33.9	36.9	33.3	35.7	31.5	35.5	35.1	36.7
40.....	26.2	29.7	29.6	32.6	29.2	31.5	27.6	31.4	30.8	32.3
50.....	18.9	22.2	21.6	24.2	21.5	23.4	20.3	23.4	22.5	23.9
60.....	12.6	15.1	14.4	16.5	14.7	16.1	13.8	15.9	15.1	16.1
70.....	7.6	9.0	8.6	10.0	9.2	10.0	8.3	9.6	9.1	9.6
80.....	4.2	4.7	4.7	5.5	5.3	5.6	4.4	5.1	4.8	5.2
90.....	2.1	2.1	2.6	3.0	3.0	3.2	2.7	2.8	2.6	2.7
100.....	1.1	1.0	1.5	1.7	1.5	1.5	1.5	2.1	1.7	1.6

The Japanese Red Cross Society

The Japanese Red Cross Society originated in the voluntary relief service under the name of "Hakuaisha" and administered treatment to the sick and wounded during the Civil War (Satsuma Rebellion) of 1877. In November, 1886 the Japanese Government joined the Geneva Convention and the Japanese Red Cross Society, modifying its constitution in March, 1887, became a member of the International Red Cross Union in Geneva. In May, 1919, the Japanese Red Cross Society became officially affiliated with the League of Red Cross Societies. Since its formation the Japanese Red Cross Society has been favoured with the patronage of their Majesties the Emperor and Empress.

In 1901 the Japanese Red Cross Society was incorporated as a juridical person in conformity with the provisions of the Civil Code and the regulations relating to the Japanese Red Cross Society promulgated the same year. The Regulations require the institution to assist in sanitary service conducted by the Army and the Navy under the supervision of the respective Ministers, and the President and Vice-Presidents of the Society shall be commissioned by the Emperor on the recommendation of the Ministers of the Army and the Navy.

The activities of the Society in time of war and in ordinary times are well known and since its establishment, it has rendered meritorious

services, notably on the occasion of the Sino-Japanese War (1894-95), the Boxer Rebellion in North China (1900), the Russo-Japanese War (1904-05), the Chinese civil war at Hankow (1911-12), the World War (1913-18). During the World War the Japanese Red Cross Society sent relief units to England, France and Russia (1914-16), and also to East Siberia in 1918-22, to Saghalien in 1921-25, to Siberia in 1922-23, to Tsinan (China) in 1925-26 and again in 1928-29, to China on the occasion of the civil war, and to Manchuria and Chosen in 1931-33.

At present the Society is sending many relief units to North and South China in connection with the Sino-Japanese conflict.

The President of the Society is Prince Kuniyuki Tokugawa, and the Vice-Presidents, Mr. Nozomu Nakagawa and Prince Tadatsugu Shimazu.

As for the members of the Society, it consisted of 3,732,305 members at the end of Apr., 1940. Of this number, 55 were honorary members and 107,572 special members.

International Red Cross Conference.—The Fifteenth International Red Cross Conference was held in Tokyo in October 1934 under the auspices of the Japanese Red Cross Society. The Conference was opened on October 17 and lasted for thirteen days. It was attended by over 260 foreign delegates representing sixty-four nations, including the United States, Great Britain, France, Belgium, Germany, Holland,

Czecho-Slovakia, Soviet-Russia, Peru, New Zealand, etc., all being member-states of the International Red Cross League. The delegates consisting of prominent people of the countries concerned, including several distinguished personages, sat in conference for eleven days and discussed various important problems concern-

ing the Red Cross Work. Being the first international conference of the kind held in this country, it attracted much attention, and high tribute was paid to the late Prince Iyesato Tokugawa for his untiring efforts in furthering the cause of the Red Cross movement.

Table with multiple columns and rows of data, likely statistical or tabular information related to the Red Cross work mentioned in the text.

References:
Table Nos. 1-10 a, 11-12 b, 13 a, 14-15 b.
Key: a—Sanitary Bureau, Department of Welfare.
b—Cabinet Statistics Bureau.

CHAPTER XIV

PRESS AND PUBLICATIONS

PRESS—NEWSPAPERS AND MAGAZINES

Introductory Remarks

Journalism in Japan in its modern sense is only about sixty years old. But it had existed in a crude and incipient form for nearly three centuries. As soon as the country began to settle down in peace and quiet under the stern but benevolent administration of the Tokugawa Shogunate, there appeared in Yedo (present Tokyo) occasional news-letters containing the latest scandals in towns and the happenings at the Shogun's court. These sheets were popularly called "Yomiuri," meaning "sold by hawking about" and were printed from wooden blocks. It was in memory of these historical sheets that the present "Yomiuri Shimbun" was named.

The first periodical publication which went by the name of a newspaper was the "Batavia Shimbun" printed in Yedo towards the close of the fifties of the last century. Its contents were mostly translation from Dutch papers published in Batavia. It was followed by "Shimbunshi" at Yokohama and the "Seiyo Zasshi," "Chugai Shimbun" and "Koko Shimbun" in Tokyo. None of these, however, was printed more than once a week.

The first Japanese daily newspaper was the "Yokohama Mainichi Shimbun," which made its appearance at Yokohama in 1871. It was followed in quick succession by the "Nichi Nichi" in 1872, "Hochi" in 1873. "Yomiuri" in 1874, all published in Tokyo, and so on. The spread of education and the steady growth of wealth, combined with epoch-making events like the wars with China and Russia, and the inauguration of the representative form of government, have led in recent years to a remarkable development of the Press both in its influence and its circulation. There are now papers that claim a daily circulation of as much as a little over a million copies.

Peculiar Features of Japanese Press

There are two outstanding features of the Japanese Press. One is the necessity of depositing with the authorities by any daily or by any periodical discussing current politics a security ranging from ¥2,000 to ¥750, according to the frequency of publication, and the other is that almost all vernacular papers use dummy

editors or publishers, the peculiar device being a relic of bygone days when the censors were authorized to fine or even imprison at their own discretion editors or publishers for an article judged prejudicial to public order or social decency.

The Press Law.—The revised law is much conformable with the increasing liberal spirit of the times, and at present no editor or publisher can be fined or otherwise punished except by a decision of a court of law. Under the measures in force those amenable to the law are:—

- (1) One who actually edits the paper, as well as the nominal editor; (2) One who signs published matter; (3) In regard to a correction or contradiction of matter published, one who demands the insertion of the correction or contradiction.

The 13th article of the Press Law provides for the protection of the interests of private individuals, especially as regards libels. It entitles the party concerned to oblige the newspaper to insert a contradiction in one of the three following issues and using the same type as that in which the original paragraph appeared, and in columns equally conspicuous as those in which the offensive matter was printed. The contradiction must be accompanied by the name and address of the sender and must not exceed the length of the original statement, any excess to be paid for at the journal's usual advertising rates. Failure to comply with this requirement involves a penalty of from ¥500 to ¥2,000.

The newspapers are not allowed to publish details of the preliminary examination of a criminal case before the case comes up for public trial; nor to publish matters relating to criminal cases under preliminary examination when their publication has been prohibited by procurators; nor to publish the proceedings of new cases which are being heard in camera.

Censorship and Freedom of Discussion

As applied at present censorship is strict only in regard to those articles or publications that are prejudicial to public order or good morals. In other words, the attention of censors is chiefly directed towards controlling the spread of rabid socialism, Communism, and also ideas implying

lese-majesty. The vigilance of censors has lately become very much tightened as regards matters prejudicial to good morals and "dangerous thoughts." On the other hand freedom of discussion, which too often invited official interference in former days, is now treated with due respect. Opposition papers can attack a government policy with perfect impunity. In short, the power wielded by the Press in guiding public opinion is far more potent in Japan than is generally thought by the foreign students of Japanese journalism.

Circulation, Capital and Prices

The daily volume of circulation of newspapers in Japan Proper is roughly estimated at 6 million copies per day, i.e. 1 per 11 to 12 people, so that Japan may be said to occupy a respectable position in the world's statistics on newspaper subscribers. A characteristic of these and other large newspapers is the diffusion of circulation over a wide territory. The large newspapers of Tokyo and Osaka divide the country into roughly two areas, the Osaka papers supplying the southern half of Japan and the Tokyo papers the northern half. The influence of these large newspapers in the prefectures is becoming increasingly accentuated due to the quickening in means of transportation, coupled with the efficient news gathering network which they maintain. One of the latest experiments of the Osaka papers is the establishment of branch printing establishments in other parts of

Table 1. Number of Newspapers Published in Japan Proper

	With deposit				Total incl. others	Without deposit				Total incl. others
	Daily	Weekly	Semi-monthly	Monthly		Daily	Weekly	Semi-monthly	Monthly	
1933.....	1,179	461	1,920	2,877	6,678	210	261	876	3,342	5,182
1934.....	1,219	470	1,978	3,107	7,081	215	258	712	3,287	5,084
1936.....	1,222	506	1,896	3,231	7,180	219	295	599	3,152	5,921
1936.....	1,226	564	1,878	3,467	7,531	209	498	483	3,215	5,289
1937.....	1,208	609	1,812	3,747	7,797	214	574	407	3,286	5,471
1938.....	1,103	619	1,585	3,949	7,739	176	323	277	2,575	4,304
1939.....	816	486	949	3,800	5,977	118	261	143	1,606	2,699

Leading Newspapers

There are over 1,800 dailies throughout the whole country. Most of them are local papers with limited circulation and hardly worth being

the country to which news is telephoned and photos transmitted by wire.

The newspaper publication is now a highly risky enterprise, for one must be prepared to lose at least 2 million yen in starting a new daily. At present there are 9 newspaper concerns with subscribed capital of 1 to 5 million yen.

Most papers are issued in the morning, but all leading papers in Tokyo and Osaka issue evening editions. Some papers in Tokyo now issue noon editions besides morning and evening editions. Two of the largest papers in Japan have a circulation each of over 1 million. The number of pages of the morning editions are usually 8, the evening editions 4. The price per copy is 3 or 4 sen each for the morning and either 3 or 2 sen for the evening editions.

Advertisement Tariff

For papers with large circulation the tariff ranges between ¥1 to ¥2 per line of 15 characters. The revenue from this source reaches the neighborhood of ¥400,000 a month for some of the best earners. Some leading papers specialise in certain advertisements, for instance, the Tokyo Asahi and the Tokyo Nichi Nichi ranking first in the line of publishers' advertisements.

Statistics on Press

The returns compiled by the Police Bureau give the number of dailies and periodicals existing at the end of the last few years as follows:—

called newspapers as the term is generally understood. The list appended represents leading dailies (vernacular newspapers) in Tokyo, Osaka, Nagoya and other big cities.

Table 2. List of Leading Newspapers in Japan

(A) Japanese Language

Name	Established	Publisher	Editor	Address	Kind
Asahi Shimbun, Tokyo ...	1888	S. Uyeno	T. Ogata	Tokyo	General
Tokyo Nichi-Nichi ...	1872	S. Okumura	M. Takata	Tokyo	General
Hochi Shimbun ...	1872	B. Miki	R. Ikeda	Tokyo	General
Yomiuri Shimbun ...	1874	M. Shoriki	K. Shibata	Tokyo	General

Name	Established	Publisher	Editor	Address	Kind
Chugai Shogyo Shimpō ...	1876	T. Tanaka	T. Obama	Tokyo	Commerce
Miyako Shimbun ...	1884	E. Fukuda	N. Yamamoto	Tokyo	General
Kokumin Shimbun ...	1890	S. Tanaka	K. Karashima	Tokyo	General
Asahi Shimbun, Osaka ...	1879	S. Uyeno	J. Harada	Osaka	General
Osaka Mainichi ...	1876	S. Okumura		Osaka	General
Kahoku Shimpō ...	1897	J. Ichiriki	G. Ichiriki	Sendai	General
Shin-Aichi ...	1888	U. Oshima	H. Tanaka	Nagoya	General
Nagoya Shimbun ...	1906	M. Koyama	Y. Mita	Nagoya	General
Hokuriku Times ...	1908	S. Imamura	T. Fujita	Toyama	General
Kyoto Nichi-Nichi ...	1912	Y. Urata	K. Tsujihara	Kyoto	General
Chugoku Shimbun ...	1892	S. Yamamoto	K. Nakano	Hiroshima	General
Fukuoka Nichi Nichi ...	1877	M. Nagae	C. Abe	Fukuoka	General
Hokkai Times ...	1887	Y. Abe	K. Nagauchi	Sapporo	General
Taiwan Nichi-Nichi Shimpō ...	1898	T. Wawahara	T. Osawa	Taihoku	General
Keijo Nippo ...	1906	Y. Taguchi	K. Niizuma	Keijo	General

(B) English Language

Name	Established	Publisher	Editor	Address	Kind
Japan Chronicle ...	1891	S. Forley	E. A. Kennard	Kobe	British
Japan News Week ...	1938	W. R. Wills	W. R. Wills	Tokyo	American
Japan Times & Advertiser ...	1897	T. Goh	Y. Morri	Tokyo	Japanese
Osaka Mainichi ...	1922	S. Takaishi	T. Uehara	Osaka	Japanese

Foreign Journalism in Japan

The publication of English newspapers by foreigners, mostly British and Americans, is a feature of journalism in Japan. Formerly there existed 9 foreign papers in Tokyo, Yokohama, Kobe and Nagasaki, and some of them date much earlier in creation than the vernacular papers, these being the Japan Gazette and the Japan Mail both of which, however, going out of existence many years ago, the latter having been incorporated with the Japan Times. At present there remain only five papers, two run by Japanese and the rest (one being a weekly) by foreigners. The circulation being necessarily limited, subscription rate is relatively high.

About the time of the Japan-China War (1894-5) there existed three English dailies in Yokohama, namely, the Japan Mail, the Japan Gazette and the Japan Herald, three in Kobe, namely the Kobe Chronicle (present Japan Chronicle), the Hyogo News and the Kobe Herald, two in Nagasaki, namely, the Nagasaki Rising Sun and the Nagasaki Press, besides one weekly in Yokohama, namely, the Eastern World edited by a German-American (late F. Schroeder) and one Russian paper in Nagasaki. They were all conducted and edited by foreigners and there existed no paper edited in any foreign language conducted by Japanese until the Japan Times appeared in 1897 in Tokyo as the only English paper edited by Japanese. Of the above mentioned, there remain now only three, the rest having disappeared one after another.

News Agencies

This form of news supply organs has made a marked development in recent years, especially since the World War. At present there

are about a dozen news agencies in Tokyo and 8 in Osaka, Kobe, Yokohama and Nagoya.

Domei Tsushinsha (est. 1936) The Domei Tsushinsha was established by the co-operation of the leading newspapers and the Japan Broadcasting Association through the good offices of the Government and opened to business on January 1, 1936 using the Shimbun Rengo Tsushinsha as its nucleus. Subsequent negotiations with the Nippon Dempo induced it to participate in the Domei news service. As a result, the Nippon Dempo's news service department, together with the domestic and overseas branches, joined the Domei on May 31. Almost all city and rural newspaper also joined it on the same day. Thus, the Domei has come to control 70 branches at home and abroad. At the same time its advertising department joined that of the Nippon Dempo. So the Domei and the Nippon Dempo are destined to co-operate closely, the former as the greatest news agency and the latter as the greatest advertising agency.

Press Association and Clubs

Of the press association the most important is the Shimbunkisha Kyokai (Journalists' Association), intended to represent the press of Tokyo on all important questions of public interest. It has a membership of over 300. The Shunju Kai containing some 50 members is a social club of leading members of the vernacular newspapers. To facilitate reporting newspapermen organize themselves, with official approval, into clubs identified with various departments of the Government or other leading institutions of State. The International Journalists Association chiefly functions as a social club composed of native journalists (active or retired) and resident foreign journalists.

The number of books and periodicals published has yearly been on the increase, particularly since the World War. Reprint of old costly works by subscription and on the instalment plan has of late become a special feature in the publishing enterprise. On the whole, books are published at higher prices than before, for obvious reason. The statistics of books for the last few years excluding minor items, are as follows:—

Table 4. Ordinary Publications by Subjects

Year	Subjects									
	Literature	Education	Music	Religion	Language	Geography	Social Problem	Arts	Politics	Law
1932.....	2,271	2,224	1,009	933	813	741	1,323	712	614	574
1935.....	2,669	2,041	1,407	1,696	967	1,191	804	915	1,047	774
1936.....	3,189	2,581	1,885	1,651	1,341	1,397	1,252	1,817	1,127	876
1937.....	2,656	1,830	963	1,312	1,378	1,372	1,414	1,107	1,322	835
1938.....	2,452	1,677	908	1,263	1,621	972	1,222	812	945	833
1939.....	3,000	1,527	1,148	1,432	842	969	1,818	490	592	913

Year	Subjects									
	Medical	Economics	Engineering	Industry	History	Biography	Philosophy	Physics	Text Book	Total incl. others
1932.....	695	1,236	378	384	421	294	548	461	2,111	22,104
1935.....	827	1,482	804	1,488	530	584	1,245	660	2,260	30,347
1936.....	985	2,000	862	1,884	460	547	1,248	602	1,458	31,996
1937.....	927	1,707	1,035	1,751	455	411	1,106	429	2,790	30,722
1938.....	989	1,745	993	1,363	503	583	751	422	1,948	29,644
1939.....	807	1,589	694	925	370	342	605	512	1,619	28,054

Publication Law

Publication by subscription having been grossly abused and even made use of as means of fraud, a measure to deal with this special kind of publication was enacted as law in April 1910. The principal provisions are that the publisher is to deposit with the authorities as security the sum of ¥500 if the price of the book to be published is below ¥10 and ¥1,000 if the price is above that sum.

The publication of collected works by subscription in cheap form has been an outstanding feature in Japan's publishing community in recent years. The enterprise was started by the Kaizosha in 1927, with "Contemporary Japanese Literature," followed in rapid succession by the "World Literature" series by the Shincho-sha, the "World's Great Thought" series by the Shunjusha, the "Popular Literature" by the Heibonsha, the "World Dramatic Works" by the Kindaisha, the "Modern Plays" by the Dai-ichi Shobo and so on. The two first named series have secured 300,000 and 400,000 subscribers respectively.

Copyright

By the law revised in 1910 and 1934 and based on the resolution of the International Convention of Copyright held at Berne in 1908, the protection covered by the new legislative act has

References: Tables Nos. 1-4 a, 5 b. Key: a—Dept. of Home Affairs, b—Dept. of Finance.

Table 3. Publications

Year	Ordinary Publication (Original & Translation)	Periodicals
1933.....	24,025	91,489
1934.....	26,31	85,966
1935.....	30,347	65,426
1936.....	31,996	56,285
1937.....	30,732	49,986
1938.....	29,466	55,183
1939.....	28,054	43,791

Note: Official Publications are Excluded.
Classified according to subjects the following lead the list of ordinary publications works in recent years excluding minor items:—

been considerably enlarged in scope. The law no longer requires the registration of copyright merely for the purpose of protecting it against piracy, but registration is required when copyright is to be used as an object of pledge, and generally as an object of market value. The fee is ¥10 for a book, 50 sen for a newspaper or periodical, 45 sen for drama or photo.

Import and Export of Books

The import of foreign books did not exceed ¥500,000 a year in the pre-war days, but grew to ¥1,884,000 in 1921 and ¥2,290,786 in 1937, about 80 per cent. of the total value passing through the port of Yokohama. Foreign book imports have been greatly restricted since 1938 in consequence of the Sino-Japanese hostilities. The value of import and export in the past few years is as follows:

Table 5. Import and Export of Books

Year	Import	Export
1929.....	¥2,703,968	¥1,285,999
1930.....	2,385,860	1,433,796
1931.....	2,080,765	1,649,522
1932.....	1,775,625	1,348,451
1933.....	1,531,506	1,388,137
1934.....	2,266,436	1,921,996
1935.....	2,466,878	2,255,833
1936.....	2,105,545	2,585,736
1937.....	2,290,786	2,822,348
1938.....	1,811,062	3,529,556
1939.....	1,789,958	4,282,710

CHAPTER XV
ARTS AND CRAFTS

JAPANESE PAINTING IN MEIJI ERA AND AFTER

Japanese painters in the early part of the Meiji era may conveniently be divided into two circles, Tokyo and Kyoto, each presenting a marked contrast to the other. Broadly speaking, the style of Tokyo painters was characterized by a dash of masculine treatment while their brother craftsmen of Kyoto were refined and aristocratic in their manner of delineation.

Similar difference separates the subjects treated by the two schools, those of Tokyo being strong in historical pictures based on antiquarian researches, landscape colour prints as modified by the technique of European style painting, "ukiyo-e" of the freest style showing a development of purely Japanese technical skill, "bunjinga" or pictures of the Southern Chinese school, while the Kyoto artists mainly painted what may be defined as pictures of popularized court style, as represented by the Shijo and Maruyama schools as they were then called. The Tokyo painters derived the motifs from literature, while their Kyoto brethren mostly devoted themselves to depicting from nature, though somewhat superficially, their favourite subjects being birds, flowers, animals and landscape. In fine, Tokyo was idealistic and Kyoto realistic.

About the middle of the Meiji era (1868-1912) the Tokyo Fine Art School was founded by the Government with the object of coordinating the efforts of artists of the two capitals and for studying the principles and technique of Western style painting. In 1909 another institution with a similar purpose, the Kyoto School of Pictorial Art, was established in Kyoto by the authorities of that ancient capital.

In 1894 a national industrial exposition was held in Kyoto and the occasion served to show the characteristics of the painters of the two cities in a way more distinct and conspicuous than before. Thus while Kyoto artists were inclined to imitate the objective method of representing things in European style, the artists of Tokyo were more eclectic, inclined to studying various phases of Oriental and Occidental painting. In 1907 the first Annual Art Exhibition of the Education Department was opened. The Tokyo painters showed how far they had succeeded in digesting and assimilating both the spirit and technique of Western painting

and in many respects they strongly influenced the Japanese school painters of the country, but in Kyoto the Western influence remained rather superficial; it chiefly consisted in improving the technique of painting from life. On the whole, however, the progressive artists of the two capitals were so keenly affected by the foreign style that about seven or eight years after the inception of the Government Art Exhibition, those painters who stuck to the traditional style and went no further found themselves left behind in the general march of aesthetic movement. As an instance showing how Tokyo painters were bent on opening a new field, it may be stated that toward the close of the Meiji era the "heroic" touch disappeared from their works.

The opening years of the Taisho 1912-26 era that followed the Meiji were marked by a systematic development of art. In 1919 the "Teikoku Bijutsu-in" or Imperial Academy of Art was created. It took over from the Education Department the task of holding an annual art exhibition. Before this transfer the Education Department had held twelve annual exhibitions, and these twelve years form an epoch in themselves. The consummation of the study of different schools of painting up to this period expressed itself in the secession of the more liberal elements from those artists who preferred to be generally faithful to the traditional orthodoxy. Some of the secessionists organized themselves into new schools and held their own exhibitions. Within a few years after the "Teiten" or the Imperial Academy exhibition replaced the Education Department Exhibition, those "independent" organizations increased in number and what is worth special mention, even cubism was attempted in this country.

Another notable event is that the increasing cosmopolitan spirit since the World War has brought about a highly interesting phenomenon as regards art, exchange show of works of living Japanese masters and those of European, especially French, German and Italian painters having become almost a regular function.

Naturally Japanese painters have become less strict and more and more free as regards the restraint of classical canon and traditional treatment, and with their observation grown increasingly accurate, and aided by new equipments

borrowed or adapted from more scientific Western brother craftsmen a complete change has come over their production. They have had to appeal to a new taste of modern people who have become highly sentimental. Another thing to be especially noted is that the traditional monotony has disappeared and individual freedom is allowed unrestrained activity. What is interesting is that while Japanese painters now freely use imported colours they are also taking special pains in producing works full of modern significance with their traditional style of simple silhouette. In a word the pictures now in ascendency are those in which the Western style is suitably engrafted upon the stock of the traditional painting of Japan.

The principal styles and schools that represent the latest tendencies may be summed up as follows:—

1. **The new Yamato style.** This is gaining fair popularity. The favourite subjects treated are for the most part landscape, but some painters prefer human figures. The features of the style lie in the use of bright and beautiful colours, trying to bring out the sense of perspective by the contrast and combination of colours. In vigorousness it compares favourably with Western style paintings and is especially fit for ornamental purposes. This school is represented by Teruo (or Eikyu) Matsuoka and is followed by Tekison Uda and a host of successful young artists scattered almost all over the country.

2. **Gen Paintings.** These are pictures of women derived from colour prints, and aim at

expressing sentiments in the concrete. The forms are often exaggerated and sometimes grotesque as in a caricature, but this method of expression is no doubt effective. Kiyokata Kaburagi, Keigetsu Kikuchi and Koka Yamamura stand as leaders of this school, with a large number of followers, especially among lady painters.

3. There are two schools in painting flowers and birds. One takes as a model Chinese masterpieces of Sung and Yuan schools, and devotes itself to depicting natural objects at rest minutely, while the other aims at them in motion by simple brush-strokes. Both schools have made remarkable progress in recent years. The champion of the former school may be found in Heihachiro Fukuda and that of the latter school in Seiho Takeuchi. These two schools will probably comprise the largest percentage of the Japanese painters of modern times.

4. Another school figuring of late is that of free technique. It is mostly represented by painters who were first initiated in Western style and have passed to the Japanese. Very often art critics and those who formerly took to realistic style draw pictures of this style. Insho Domoto, Kansetsu Hashimoto, Keisen Tomita and Ryushi Kawabata sit at the head of this group.

5. A revived painting in black and white has recently become much in evidence, especially among master-painters. It is characterized by freedom in technique and skill in expressing with interest. Kolchiro Kondo and Taikan Yokoyama are among the best known of this school.

ART SOCIETIES AND EXHIBITIONS

Imperial Academy of Art and its Reform

The Imperial Academy of Art (The Teikoku Bijutsu-in) was founded in 1919 and is the only art society under government control. It conducts an annual exhibition popularly known as "Teiten."

The "Teiten" is composed of four sections: Japanese style painting, Western style painting, Sculpture, and Applied Arts. The last named having been added in 1927, when colour printing was also included in the second section. The hanging committee consists of the Academicians who sit on it by rotation or ex-officio and those appointed every year from among the artists of established fame. There are two ways of recognising the merit of superior works, i.e. "Academy prize" and "Honorary mention," the former consisting of a certificate and a purse of ¥1,000. Besides, a certain number of artists are "recommended" every year from among

those who distinguished themselves in previous exhibitions. They are privileged to exhibit their works without examination.

Reform of the Academy. The Imperial Academy of Art has for years been vitiated with evils attendant on strife between various schools and groups to such extent as to threaten to deteriorate the art and craft of the country. In view of this deplorable situation, the late Mr. Matsuda, Minister of Education in the Okada Cabinet, and Mr. Hirao, Minister of Education in the Hirota Cabinet, took steps to rectify the situation. Negotiations were carried on by Minister Hirao in 1936 with the conflicting parties without reaching an agreement.

The problem was finally settled smoothly in June 1937 with the establishment of the Imperial Board of Art (Teikoku Geijutsu-in). The object of this body is to promote the art and cultural standing of the country. The Board is

divided into six sections viz. fine art, literature, music, noh drama, architecture, and calligraphy. Those appointed as members of the Board are as follows:

Table 1. Imperial Board of Art
(Teikoku Geijutsu-in)

President: Dr. Tohru Shimizu
Chief Secretary: H. Honda

(October, 1939)

Members

- Asakura Fumios.
- Araki Teijiro (Juppo)j.
- Arishima Mifuma (Ikuma)w.
- Ishii Mankichi (Kashiwatei)w.
- Itaya Kashichi (Kazan)a.
- Nishiyama Suishoa.
- Ito Chutab.
- Inouye Michiyasu (Nanten-so)l.
- Umehara Ryusaburow.
- Umewaka Manzaburon.
- Ohno Churyum.
- Onoe Hachiro (Shishu)c.
- Katori Hidejiro (Hozuma)a.
- Kaburaki Kenichi (Kiyokata)j.
- Kawai Mataheil.
- Kawai Yoshisaburo (Gyokudo)j.
- Kawabata Shotaro (Ryushi)j.
- Kawamura Manzo (Manshu)j.
- Kikuchi Kanji (Keigetsu)j.
- Kikuchi Kanl.
- Kitamura Seibos.
- Kiyomizu Rokubeis.
- Koda Nariyuki (Rohan)l.
- Koda Nobukom.
- Kokubu Takatanel.
- Kosugi Kunitaro (Hoan)w.
- Kobayashi Shigeru (Kokei)j.
- Komura Teijiro (Suiun)j.
- Saito Tomoo (Sogan)s.
- Saito Shigekichil.
- Sasaki Nobutsunal.
- Sato Seizo (Chozan)j.
- Shimizu Kamezoa.
- Takahama Kiyoshi (Kyoshi)l.
- Takeuchi Tsunekichi (Seiho)j.
- Tachibana Itoem.
- Tatebatake Yaichiro (Taimu)s.
- Tanizaki Jun-ichirol.
- Chiba Taneakil.
- Tsuda Nobuos.
- Tokuda Suetoshi (Shusei)l.
- Tokutomi Hichiro (Soho)l.
- Tomimoto Kenkichia.

- Naito Shins.
- Nakazawa Hiromitsuw.
- Nakamura Fusetsuw.
- Hashimoto Kaiichi (Kansetsu)j.
- Hiraguchi Taketaro (Denchu)j.
- Fujii Hirotsugus.
- Fujishima Takejiw.
- Bunno Tokiyoshim.
- Hosho Asataro (Shin)n.
- Maeda Renzo (Seison)j.
- Matsubayashi Atsushi (Keigetsu)j.
- Minami Kunzow.
- Miyake Yujiro (Setsurei)l.
- Mushakoji Saneatsul.
- Yasuda Shinsaburo (Yukihiko)j.
- Yamazaki Chouns.
- Yamashita Shintarow.
- Yasui Sotarow.
- Yokoyama Hidemaro (Taikan)j.
- Yuki Sadamatsu (Somei)j.
- Wada Eisakuw.
- Wada Sanzow.

Note: a—Applied Art.
b—Architecture.
c—Calligraphy.
j—Japanese painting.
m—Music.
n—Noh drama.
s—Sculpture.
w—Western painting.

Dr. Tohru Shimizu, President, is a noted jurist and Privy Councillor. The members consist of all the members of former academy and leading members of various art societies.

The "Bunten."—The "Bunten" referred to above is composed of four sections: Japanese style painting, Western style painting, Sculpture, and Applied arts, the last named having been added in 1927, when colour printing was also included in the second section. The hanging committee consists of the Academicians who sit on it by rotation or ex-officio and those appointed every year from the artists of established fame.

Table 2. Chief Members of Hanging Committee for 1939 Exhibition of Fine Arts held by The Dep't of Education

- Japanese Painting: Suisho Nishiyama
- Western Painting: Kunzo Minami
- Sculpture: Fumio Asakura
- Applied Arts: Shushin Katori

Table 3. Results of "Bunten" Fine Art Exhibition (Former "Teiten")

	Japanese Painting			Western Painting			Sculpture			Applied Art		
	No. Examined	No. Passed	Special Prize	No. Examined	No. Passed	Special Prize	No. Examined	No. Passed	Special Prize	No. Examined	No. Passed	Special Prize
1934.....	1,845	264	12	3,398	225	11	455	152	5	1,097	214	11
1935.....	1,731	191	8	...	...	..	194	17	..	797	214	5
1936.....	1,561	367	8	2,006	374	6	415	124	4	769	194	12
1937.....	1,485	118	2	2,424	131	8	382	63	5	815	109	2
1938.....	1,382	139	4	2,270	...	10	...	...	10	...	...	7
1939.....	1,296	123	3	2,156	215	10	324	118	9	598	126	7

Note: Figures from 1937 are for the "Bunten"; those previous are for the "Teiten" Exhibition.

Cultural Decoration

With a view towards honoring persons who have distinguished themselves in the various arts and sciences the Government established in 1937 a meritorious order known as the Cultural Decoration (Bunka Kunsho). Nine persons were granted this decoration in 1937 among whom were the following four artists: Saburosuke Okada, Takeji Fujishima, Tunekichi (Seiho) Takeuchi and Hidemaro (Taikan) Yokohama.

Private Art Societies

Principal private art societies are the following:—

The Nippon Bijutsu-in.—This society comprises a group of painters who may roughly be said to represent the new school of painting in Japanese style. It was founded in 1898, and fell into abeyance in 1913, but was revived by Taikan Yokoyama and Kanzan Shimomura (d. 1930). The admission into this group is very strictly guarded so that its membership is highly valued by artists and the public in general. Besides keeping a training school, it holds an annual exhibition every autumn. Some of the noted members are mentioned below:—

Taikan Yokoyama, Buzan Kimura, Yukihiko Yasuda, Kokei Kobayashi, Denchu Hiragushi, Kampe Arai, Gakuryo Nakamura, Koba Yamamura, Tsuruzo Ishii, Usen Ogawa, Tsunetomi Kitano, Senson Mayeda, Shokan Ochi, Chozan Sato, Takezo Shinkai, Tsuruzo Ishii.

The Nikakai.—This society was founded in 1914 by Ikuma Arishima and other well known artists of the Western school. As a result of a conflict within its ranks Mr. Arishima as well as Hakutei Ichii, Shintaro Yamashita, Sataro Yasui and Yuzo Fujikawa seceded from the society and joined the Academy. Among the present active members of the Nikakai are: Tokusaburo Masamune, Hanjiro Sakamoto, Moriichi Kumagai, Kigen Nakagawa, and Tsuguji Fujita.

The Shunyo-kai.—Several artists who formerly belonging to the Nippon Bijutsu-in rebelled against it and organized an art society of their own named the Shunyo-kai in 1922. This society holds an annual exhibition of the works of its members in spring. Among its prominent members are Hoan Kosugi, Hakuyo Kurata, Gen-ichiro Adachi, Sohachi Kimura. Miei Kosugi was the only member of the society that joined the Imperial Academy.

Besides the above, there are several other art societies either of Japanese or Western school painters, or both combined or of sculptors, or painters and sculptors combined. Of these the more prominent are the Kokuga-kai

(of which Kenkichi Miyamoto and Ryuzaburo Umehara joined the academy), the Seiyusha (of which Ryushi Kawabata joined the academy), the Kozosha (of which Sogan Saito joined the academy), the Asakura-juku (of which Fumio Asakura joined the academy).

Art Museums and Schools

Among the many art museums in various cities the more noted are as follows:—

The Imperial Household Museums in Tokyo and Nara (one located at Ueno Park, Tokyo and the other at Nara Park, Nara); Tokyo Museum at Yushima Ni-chome, Hongo-ku, Tokyo; the Tokyo Fine Art Academy Library at Ueno Park, Tokyo; the Toyo Bunko (Toyo Library) at Kamifujimae-cho, Hongo-ku, Tokyo; Okura Museum of Antiques at Aoi-cho, Akasaka-ku, Tokyo; Bijutsu Kenkyujo (Fine Art Institute) attached to the Imperial Academy of Art, Ueno Park; Onshi Kyoto Museum at Shichijo, Yamatokoji, Kyoto (donated to Kyoto Municipality by the Imperial Household); Uzumasa Koryuji Treasure House attached to Koryuji Temple at Uzumasa, Kyoto; Ninnaji Treasure House attached to Ninnaji Temple at Hanazono-cho, Kyoto; Kitano Shrine Treasure House of Kitano Shrine at Kyoto; the Shosoin Temple in Nara.

Leading educational institutions devoted to the study of fine arts are as follows:—

The Government Fine Art Academy, Ueno Park, Tokyo; Tokyo Higher Industrial Art School, Shiba-ku, Tokyo; Teikoku Bijutsu Gakko, Kichijoji, Tokyo; Osaka Bijutsu Gakko at Gotenyama, Osaka prefecture; Kyoto Higher Industrial Art School at Yoshidamachi, Kyoto; Kyoto Painting School at Imakumano Hiyoshi-cho, Kyoto; Kyoto Bijutsu Kogei Gakko at Imakumano Hiyoshi-cho, Kyoto.

Besides, there are the Kawabata Painting School in Tokyo which was founded by the late Kawabata Gyokusho, a master painter of Japanese school in the Meiji-Taisho era, and art schools maintained by the Shunyo-kai, the Nikakai and other art societies.

NATIONAL TREASURES

Under the National Treasure Preservation Law amended in 1929 all valuable art objects and structures belonging to private persons, besides those owned by the State, religious or public bodies are to be registered and protected and placed under Government protection as "national treasures," the State granting aid for their upkeep and repair. The owners are under obligation to submit them to public inspection for a certain period at museums or galleries.

Table 4. List of National Treasures

At Year End	Articles					Total	Structures owned by:					Total
	Pictures	Engravings	Applied arts, etc.	Swords, etc.	Scripts		Shrines	Temples	State	Public	Private	
1935	870	1,920	392	377	796	4,355	517	676	113	96	162	1,569
1936	919	1,966	409	299	890	4,583	522	684	123	102	165	1,638
1937	946	1,995	422	421	965	4,749	528	692	123	111	184	1,638
1938	979	2,016	434	438	1,046	4,913	545	702	123	113	203	1,686
1939	1,001	2,033	456	456	1,135	5,081	---	---	---	---	---	---
1940 (Aug.)	1,026	2,033	460	470	1,170	5,159	---	---	---	---	---	---

Mainly to check the outflow of rare or valuable art objects to foreign countries the Government enacted a law in 1933 for control of the sale or transfer of such objects to foreigners. According to the law the export of all rare or

valuable art objects to foreign countries must obtain the permit of the competent authorities, those violating the law being punished with servitude or fine. The measure became operative on April 1 the same year.

MUSIC

Japanese Music

Music in Japan exists in two distinct forms, one of them Japanese music handed down from old Japan, and the other Western music which was introduced from Europe and America after the Restoration of Meiji (1868).

"Gagaku."—The indigenous music may be classified into three kinds. The first is called "gagaku," or elegant music, brought from China and India about 14 centuries ago. It consists of a large orchestra with extremely complex harmony and is one of the most advanced styles of formal music. It has long vanished from among the people and is retained only as a classical ceremonial music at the Imperial court. But of late some earnest students of music have commenced researches as to its artistic merit and there is a sign of its revival.

"Utai."—The second kind is vocal and is called "utai" as an accompaniment to the "no" dance. Originated in the time of the Ashikaga Shogunate (1338-1602) and a favorite pastime of the "samurai" class in the feudal period, it has lately become less exclusive and is now very popular among all classes of gentlefolks.

"Zokugaku."—The third is comprehensively called the "zokugaku," or people's music as distinguished from the aristocratic "gagaku" or "utai" and has developed among merchants and tradesmen. The most common form of it is vocal with accompaniment of a stringed instrument called "samisen," which originally came from the Luchu Islands some 270 years ago. The "nagauta" is one of the most popular tunes of all and is widespread among all classes of women. Other varieties of "samisen" songs are

practically professional and among their performers are "geisha" girls. The "koto," or lyre, is chiefly taught to daughters of respectable families. The "shakuhachi," or bamboo oboe, and "biwa," or lute, have also a select following.

Western music

As regards Western music in Japan a singing lesson was first included in the curriculum of common education by Mr. Mason in 1879, while the Tokyo Academy of Music, the only Government institution of the kind then, was the sole center for introducing more artistic forms of European music such as the piano, violin and orchestra. Graduates of the Academy have contributed much to popularizing the Western music.

Since about the time of the Great War the works of the great masters have become increasingly popular in Japan and with the improvement in gramophone recordings the country at large has come in contact with the highest forms of occidental symphonies and songs. Mention must also be made of the important part of radio broadcasting in familiarizing the populace with western music, and in fostering the development of symphonic orchestras by the granting of subsidies, and in encouraging talented musicians by transmitting their performances on the air practically every day of the year. The appearance of gramophone recordings by Toscanini and others is as much an event among musical circles in Japan as in other parts of the world, and a number of music magazines have sprung up to cater to public demands.

MOTION PICTURE

Motion pictures as a source of amusement and recreation for the public at large have won a

wide following in Japan in the last two decades. The number of motion picture goers in 1933

aggregated 349,411,060 persons, and admission revenue reached approximately ¥94,340,000. The average admission charge per person was twenty-six sen.

Films by Countries of Origin.—In the early days all of the motion pictures shown in Japan were of foreign origin, but with the establishment of the cinema industry in Japan domestic productions have enjoyed increasing popularity and at present hold a dominant position as compared with imported productions. In 1938 the

number of cinema productions censored in Japan amounted to 44,874 or 25,563,900 meters of which 41,060 or 22,365,455 meters represented domestic productions, 2,981 or 2,239,122 meters American and 833 or 959,323 meters European.

Producing Companies.—The motion picture trade is practically controlled at present by two groups of interests, these being the Shochiku and the Toho.

Table 5. Motion Picture Films Censored in Japan Classified by Countries of Production
(Unit: 1,000 meters)

Year	Japan	U.S.A.	Europe					Total	Grand Total (reels)
			England	Germany	France	Italy	Soviet		
1933	13,722	2,086	36	226	101	44	25	441	16,199
1934	15,322	2,278	62	253	156	20	19	624	18,224
1935	16,652	2,432	114	433	305	8	38	945	20,029
1936	18,267	2,699	113	387	380	30	9	939	21,906
1937	21,782	2,884	100	401	377	72	31	1,020	25,686
1938	22,609	2,339	125	455	255	90	3	973	25,921

Note: Inclusive of reprint reproduction and those receiving recensorship.

Productions by Kinds.—Motion pictures which fall under the category of amusements accounts for about 94 per cent of the total number of pictures shown. This is followed by propaganda pictures with 4 per cent, and educational pictures with 2 per cent. Of those pictures classified as amusements, melodramas are most popular and account for over one-half of the

total number of pictures of this classification. This is followed by the native version of the "wild west" type of adventure productions.

Sound pictures have been growing in popularity of recent years and in 1937 about 78 per cent of the domestic productions were sound pictures.

Table 6. Censorship of New Films Classified by Producers
(Unit: 1,000 meters)

Year	(A) Japanese Pictures												
	Shochiku		Nikkatsu		Shinko		Daito		Toho (P.C.L.)		Total incl. Others		
	Talkie	Silent	Talkie	Silent	Talkie	Silent	Talkie	Silent	Talkie	Silent	Total		
1934	137	62	79	105	23	134	8	149	19	1	372	749	1,122
1935	177	18	116	44	145	28	3	161	39	3	716	572	1,288
1936	181	4	191	2	180	..	6	156	54	..	1,057	492	1,549
1937	208	1	192	..	181	..	36	118	140	..	1,303	358	1,661
1938	186	2	164	1	169	..	110	36	161	1	1,187	184	1,371

Year	(B) American Pictures														
	Universal		Fox		Paramount		M.G.M.		Warner 1st Nat'l		Columbia		Total incl. Others		
	Talkie	Silent	Talkie	Silent	Talkie	Silent	Talkie	Silent	Talkie	Silent	Talkie	Silent	Total		
1934	75	0	59	..	121	..	113	3	55	4	..	..	661	32	694
1935	78	..	69	..	161	0	81	..	55	2	..	..	648	17	665
1936	70	..	..	..	141	..	91	..	54	..	124	..	717	15	732
1937	69	..	..	..	126	..	88	..	72	..	80	..	640	13	653
1938	18	..	..	..	52	2	39	..	3	..	39	..	301	9	310

Year	(C) European Pictures												
	British		German		French		Italian		Soviet		Total incl. Others		
	Talkie	Silent	Talkie	Silent	Talkie	Silent	Talkie	Silent	Talkie	Silent	Total		
1934	10	..	58	11	25	2	4	..	9	..	108	15	123
1935	21	..	74	4	53	1	..	..	7	..	168	9	176
1936	15	..	67	2	56	0	4	3	..	..	155	8	163
1937	9	..	58	9	55	0	12	0	6	..	153	10	164
1938	23	0	54	4	29	2	27	3	0	..	139	11	149

Classification of Movie-Goers.—It is estimated that 75 per cent of the movie-goers in Japan are adults and 25 per cent children. Statistics for the amusement district of Asakusa, Tokyo indicate that 25 per cent of those attending the motion pictures consists of students, another 25 per cent of salaried men and middle to higher class families and 50 per cent of the lower class brackets. This ratio is subject to change according to districts.

The studios of these companies have grown into large affairs representing heavy capital outlays. The Shochiku Company, for instance, is capitalized at ¥37,401,000, fully paid-up, and has studios in Ofuna, about twenty-five miles

south of Tokyo, and at Kyoto. It operated 592 motion picture and play theaters in 1938 and its gross revenue amounted to approximately ¥15,000,000.

The total investments in the motion picture industry in 1939 were estimated at 80 million yen, representing about 60% of the entire investments in the theatrical industries.

Theaters.—There were in 1938 a total of 1,875 motion picture theaters in Japan. Of this number about 52 per cent had a seating capacity of from 100 to 500 persons. Theaters with a seating capacity of over 1,000 persons numbered 7.9%.

Table 7. Statistics of Motion Picture Theaters in Japan Proper

Year	No. of theaters				No. of customers (in one million)			Admission Rate (¥)					
	Japanese films	Western films	Both		Adults	Minors	Total	Rural			Suburb		
			Total	Max.				Min.	Ave.	Max.	Min.	Ave.	
1934	1,078	46	416	1,538	158	41	199	3.50	0.05	0.29	0.50	0.05	0.20
1935	1,117	59	410	1,586	147	37	185	2.50	0.05	0.29	0.50	0.02	0.20
1936	1,130	64	433	1,627	160	42	203	2.50	0.05	0.27	0.60	0.05	0.22
1937	1,234	49	466	1,749	203	43	246	1.50	0.03	0.28	0.60	0.15	0.24
1938	1,373	56	446	1,875	283	66	349	2.00	0.05	0.24	0.70	0.05	0.29

References:

Table Nos.: 1-4 a, 5 b, 6-8 c.

Key: a—Department of Education.

b—Department of Imperial Household.

c—Department of Home Affairs.

CHAPTER XVII

SOCIAL PROBLEMS

GENERAL REMARKS

Social affairs in Japan are grouped under eight heads, viz., control and granting of aids, relief arrangements, economic improvement, labor, protection, health arrangements, protection of children, social education, and general arrangements. At least three features distinguish social affairs in Japan, i.e. the benevolence of the Imperial Court, the traditional custom of good neighborhood, and the deep-rooted spirit of ancestor-worship.

SUMMARY OF PROMINENT SOCIAL AFFAIRS

Poor people.—No reliable census is yet available in Japan on this head, whatever figures there may be being tentative and anything but accurate. According to the investigation carried out in 1929 by the Tokyo Municipal Office, the percentage of the poor is about 3.6 of the whole population. Later on, the Social Welfare Bureau of the same office reported that the ratio was 7.6%. Again, the Social Affairs Bureau of the Home Office calculates that the poor population is estimated to form at least 1% of the total population of Japan proper that amounts to roughly 70,000,000, and that the ratio of the destitute is probably 10% of the poor, i.e. 70,000.

Housing Question.—The housing question under consideration by the Home Office starts with the inquiry carried out in 1920 when the

shortage of dwelling houses throughout the country was returned at 122,000. To fill this deficiency the authorities devised measures to supply easy term to the building guilds organized under law and took a similar step of encouragement. From 1919 to 1926 the Deposits section of the Treasury supplied about ¥67,600,000 to the guilds at the rate of interest of 4½, houses built by the guilds and public corporations amounting to over 32,000. There is the question of slum renovation, the slum statistics for the whole country being 216 colonies (41,448

At the end of Aug., 1938, the building guilds numbered 3,191 with membership of 34,967. The construction expenses for the year amounted to ¥71,332,000.

Other Economic Provisions.—There are briefly described below:—

Public Lodging Houses at the end of March 1938 numbered 155, the average number of lodgers per month being 299,991.

Public Markets at the end of March, 1938 numbered 328 with a total turnover of ¥54,124,000.

Public Dining Halls at the end of March, 1938 numbered 65 with the number of meals served averaging 821,562 per month and turnover was returned as 16,224 per year.

Public Bath-houses at the end of March, 1938 numbered 177, visitors numbering 340 per house per day on an average.

Table 1. Various Economic Provisions for Masses
(Year Ending March 31)

	No. of lodging houses	No. of lodgers	Aver. No. of lodgers per month	Aver. No. of lodgers per year per house
Common Lodging Houses.	1933	3,374,738	281,228	21,225
	1934	2,947,800	245,650	19,393
	1935	3,211,727	267,523	21,128
	1936	3,476,659	289,706	22,562
	1937	3,686,593	307,216	23,784
	1938	3,599,897	299,991	23,225

	No. of markets	Turnover per year (¥1,000)	Aver. Turnover per month (¥1,000)	Aver. Turnover per market (¥1,000)	
Public Markets	1933	56,609	4,717	186.2	
	1934	291	51,280	4,273	176.2
	1935	277	52,090	4,341	180.8
	1936	277	52,939	4,412	191.1
	1937	278	54,354	4,529	195.9
	1938	328	54,124	4,510	165.0

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	No. of halls	No. of visitors (1,000)	Aver. No. of visitors per month	Turnover per year (Yen)	Aver. Turnover per hall (Yen)	
Public Dining Halls	1933	68	10,884	906,996	1,454,837	21,100
	1934	70	11,876	989,681	1,457,908	20,827
	1935	68	11,106	925,477	1,226,874	16,579
	1936	68	10,586	882,191	1,154,403	16,976
	1937	70	10,247	853,884	1,109,963	15,859
	1938	65	9,859	821,562	1,054,573	16,224

	No. of bath houses	Visitors per year	Turnover per year (Yen)	Aver. visitors per house per day
Public Bath Houses	1933	216	26,311,972	333
	1934	208	20,197,915	256
	1935	167	23,513,340	416
	1936	166	23,107,445	380
	1937	170	19,421,047	310
	1938	177	22,021,429	341

ORGANS FOR CONTROL, DELIBERATION AND ARBITRATION

The Social Affairs Bureau of the Home Office was established in 1920 to attend to all matters relating to social questions. In 1930 a Social Education Bureau was created in the Department of Education. Then at all important offices, central and local, one or two special officers have been appointed to guide the development of sound thought and prevent the spread of "dangerous thoughts." There are also a number of private institutes for investigating social problems. These are as follows:—

The Kyocho-kai (Tokyo).—Organized in 1919 by the Government authorities, university professors, business men, social workers, etc., to effect the "harmonization of capital and labor."
Ohara Social Problems Research Institute (Osaka).—Established in 1919 by Mr. Ohara, a

millionaire in Okayama, it conducts all important researches on social problems in the country, the staff including Dr. Iwasaburo Takano (Chief) and a number of able experts.

Kurashiki Institute for the Research of the Science of Labor (Kurashiki, Okayama prefecture).—Also founded by Mr. Ohara. Investigates the scientific aspects of the labor problem.

Industrial Labor Investigation Office (Tokyo).—Established in 1924, chiefly by representatives of labor organizations and scholars, to investigate political, economic and social affairs of the country.

Arima's Agrarian Research Institute (Tokyo).—Established by Count R. Arima to devote itself to the study of agrarian problems, which are now growing in importance and attracting the serious attention of the public, in consequence of the wide awakening of the peasant class.

PATERNALISM IN LABOR DISPUTES

Small business establishments not covered by the Factory Law have so far retained the semblance of paternal practices obtaining in the pre-Restoration days when employees lived under the same roof with families of their masters and were on the whole treated not much differently from the family members. Those diligent clerks were often made husbands of daughters of the heirless masters to keep up the family trade when the masters had died or retired, and there are found even to-day in Tokyo, Osaka and almost everywhere in Japan a large number of shop-masters of such origin. Then head-clerks of long meritorious service were allowed by their appreciative masters a share of the good-will and some capital and were made to set up their own shops as sub-

sidary establishments or branch stores. On the other hand there were of course cases where the employees were treated as mere tools and turned out under the slightest pretext. Shop-employees now demand that the treatment be standardized and placed above the caprice of employers. That idea was at the root of the trouble when such well-known publishers and booksellers as the Kobundo of Kyoto and the Iwanami and the Ganshodo, both of Tokyo, and especially the Maruzen of Tokyo found their employees either in 1928 or 1929 going on strike demanding better wages, shorter hours, etc. The troubles generally ended in the virtual victory of the strikers. The day of traditional paternalism seems to be doomed in Japan.

(Continued) Of which:	Vacancies (1,000)		Applicants (1,000)		Accepted (1,000)		No. Accepted Against Applicants %
	Total	Of which male	Total	Of which male	Total	Of which male	
Mfg. & Mining Ind.	1,652	1,142	1,085	987	498	372	63.8
Civil Engrg.	206	202	105	102	77	75	71.9
Commerce	301	238	163	91	59	36	31.1
Agriculture & Forestry	50	44	26	23	23	21	81.4
Fishery	136	124	110	102	86	79	95.2
Communications & Transports	80	73	90	81	37	34	27.4
Domestic Workers	288	38	203	65	91	16	54.2
Miscellaneous	218	141	276	170	99	63	39.5
Total	2,931	2,002	2,048	1,509	971	695	51.2

(B) Day Laborer Exchanges

	No. of exchanges	Vacancies		Applicants		Accepted		No. Accepted Against Applicants %
		Total (1,000)	Of which relief works (1,000)	Total (1,000)	Of which register- ed laborers (1,000)	Total Accepted (1,000)	Of which registered Laborers	
1933	292	16,897	13,547	20,124	18,025	16,779	13,344	83.4
1934	286	14,528	11,015	16,893	15,074	14,371	10,888	85.0
1935	235	13,008	8,643	14,464	12,929	12,867	8,531	89.0
1936	220	12,561	7,547	13,667	11,564	12,271	7,363	89.9
1937	197	10,596	5,382	11,103	8,347	10,197	5,162	91.8
1938	170	9,178	..	8,921	..	8,392	..	94.1

The number of the unemployed as enumerated at the census taken on October 1, 1930 was 319,813. Tokyo topped the list of the unemployed with 61,317, followed by Osaka with 36,570, Kanagawa, Fukuoka, Hyogo and Aichi each with more than 10,000.

The total laboring population for the country as estimated by the Social Affairs Bureau in December, 1935, was 7,778,000. Of this number general laborers were 4,174,890 (54% of the whole population), day-laborers 1,816,098

(23%) and salaried men 1,787,012 (23%). The number of the unemployed was given as 351,469. Of this number general laborers accounted for 113,605 (35% of the whole number of the unemployed), day-laborers 169,688 (48%) and salaried men 68,176 (17%). As for the proportion of the unemployed to the total number of population, day-laborers came first with 9%, followed by salaried men with 4% and general laborers with 3%.

WOMEN PROBLEMS

Women in Politics

The 45th session of the Imperial Diet (1921-22) witnessed the repeal of Clause 2 of Article 5 of the Public Peace and Order Police Regulations prohibiting women from promoting or attending political meetings, the renovation making a step towards the political emancipation of the Japanese women. The inclusion of the subject of law in the curriculum of some girls' schools—Nippon Joshi Daigaku or Womens' University (a private institution in Tokyo), for instance,—the departure made by some private universities in Tokyo and elsewhere which have thrown open the lectures on law, political economy, society and other social or political sciences to the attendance of girl students and women—the Meiji University and the Nippon University, for instance,—are all proofs of the

gradual awakening of Japanese women.

Women are, however, still denied the right to vote for any public assembly, the only semblance to it being the decision of the Railway authorities in 1928 to allow women workers voting right in electing the workers' representatives to the Workers' Council created in 1920 as advisory organs on matters affecting the interest of railway workers.

The spirit of awakening is, however, already in the air and women's activity even in politics is a thing to be treated now seriously. In one of the recent Parliamentary elections women speakers were even in greater demand than the male, owing to scarcity of supply, and it is reported that these women orators altogether made some 276 speeches, the fair speakers being mostly in support of those candidates who had de-

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clared themselves in favor of granting franchise to women. Already these women of progressive views have organized two associations aimed at acquiring suffrage for women. Needless to say, women's organizations for promoting philanthropic, social and similar causes are many and diverse. Of these one of the latest is the Young Women's League created in October 1927 under the encouragement of the Department of Education as a complement to the Young Men's Leagues already in existence. The Department aims to foster sound thought among the young generation.

In respect to the relative length of the roll of memberships the Federation of Ladies Societies in Western Japan created in 1919 under the auspices of the Asahi stands foremost with over 3 million members, and next comes the Ladies Patriotic Society supported by half a million members. Both are social and philanthropic in aim. The National Female Teachers Union joined by over 20,000 out of the total force of approximately 70,000 in the country is showing great energy for promoting the position of those professionals in particular and of women in general.

Women in Labor Problems

The part played by Japanese proletarian women in the sphere of public activity is practically negligible, some three or four leagues created by them being practically ornamental adjuncts to the Right or Left organization, as

the case may be. It is true the proletarian women as also the bourgeois seem sufficiently conscious of their new mission in consequence of the progress of the times, but they have done nothing in the way of giving practical demonstration of their awakening. Strictly speaking the bourgeois women have been active since about 1919 on political questions, as the right of women to take part in political meetings and about suffrage, but their proletarian sisters so far have made no particular achievement to their credit.

Women as Bread Winners

With the recent expansion of their field of activity, the number of women workers in Japan has considerably increased of late. Women are in greater demand than men, mainly because the salaries paid them are less than for men.

As the results of the 1930 official census returns show, the number of women as bread winners throughout Japan proper aggregated 10,589,403 of which figure 354,792 were employers and 9,397,742 employees.

The number of the so-called "professional women" including those working as school teachers, physicians, mid-wives, nurses, pharmacists, clerks in Government or public offices such as the railway department, communications department, post-offices, etc., is rapidly increasing year after year, but any exact figure covering the whole field of their activities is still unavailable.

Table 9. Female Population Classified By Work
(1930 Census)

	Employer	Independent	Employee	Total	% Against	
					Working population	Total female population
Agriculture	192,976	243,732	5,960,334	6,397,042	60.4	19.9
Fishery	755	1,671	43,120	45,546	0.4	0.1
Mining	41	71	40,934	41,046	0.4	0.1
Mfg. Ind.	29,105	172,629	1,228,696	1,430,430	13.5	4.4
Commerce	126,424	355,228	982,725	1,464,195	13.8	4.8
Traffic	806	925	77,248	78,979	0.8	0.2
Civil & free workers	4,772	58,390	289,186	352,348	3.3	1.1
Domestic workers .....	..	..	697,116	697,116	6.6	2.2
Total working population			9,397,742	10,589,403	100.0	36.1
incl. others	354,792	836,869	..	21,470,447	—	66.9
No occupation .....	..	..	..	32,059,850	—	100.0
Total female population						

Table 10. Women's Occupation Classified

	Total	School teachers		Physicians	Dentists	Pharmacists	Midwives	Nurses
		Of which primary school						
1933	101,999	74,741	2,214	1,178	2,278	56,590	96,020	
1934	104,763	77,031	2,639	1,324	2,757	58,270	102,921	
1935	108,015	78,997	3,029	1,440	3,405	59,560	106,857	
1936	113,016	80,732	3,432	1,567	4,133	60,967	113,987	
1937	117,291	82,633	3,779	1,674	4,750	61,732	124,402	
1938 .....	..	77,593	4,264	1,737	5,054	62,209	120,010

	Acupunc- turists	Moxica- urists	Shampoos	Hair dressers	Waitress at cafe & bar	"Geisha"	"Shakufu"	Pro- stitutes
1933	909	1,034	12,955	55,095	99,312	74,200	85,590	49,302
1934	892	1,038	13,018	53,314	107,478	72,538	85,121	45,705
1935	905	1,057	13,009	51,154	109,335	74,855	82,621	45,837
1936	945	1,081	13,144	48,283	111,700	78,699	85,685	47,078
1937	890	1,031	12,897	45,920	111,284	79,868	85,699	47,217
1938	915	1,089	13,325	42,126	98,437	79,565	83,754	46,289

Note: * Mostly consists of unauthorized prostitutes.

ELEEMOSYNARY WORKS

Administrative Organs

Administrative arrangements for dealing with matters relating to relief and reformatory works comprise relief arrangements for the destitute in the case of their illness or death, succor of sufferers from natural calamities, protection of persons afflicted with insanity and tuberculosis, treatment of the helpless and unclaimed travelers, reform of refractory boys, provisions for controlling lepers, aids to private charity work, education of blind, deaf and mute, protection of released prisoners, etc.

Relief Rules for Paupers, etc.

The rules were first enacted in 1874 and revised in 1929. The estimated outlay is ¥8,000,000, of which one-half is to come from the Treasury and the other half from the local and communal treasuries. The law provides for the helpless decrepid persons (over 65 years old), children under 13 years, and maternity women.

It also provides schooling expenses for children of destitute parents.

Table 11. Relief of Paupers, Foundlings and Sick Travelers

Year Ending Mar. 31:	Paupers over 65 of age		Paupers below 13 of age		Expectant Mothers		Sick & Wounded	
	No.	Amount (¥1,000)	No.	Amount (¥1,000)	No.	Amount (¥1,000)	No.	Amount (¥1,000)
1934	41,703	1,120	64,773	1,301	2,959	17	48,814	1,089
1935	50,766	1,424	86,912	1,982	4,169	20	51,271	1,226
1936	51,349	1,615	94,250	2,052	3,073	18	.....	.....
1937	50,563	1,705	97,375	2,223	2,025	10	52,229	1,423
1938	54,073	1,846	100,080	2,232	1,700	11	57,404	1,500

Relief of Sufferers from Natural Calamities

The law of 1899 relating to relief funds for sufferers from extreme calamity provides that each prefecture should lay aside a sum of not less than ¥500,000 as a fund for giving relief

when such calamity overtakes the whole or part of its jurisdiction. When the amount of the relief expenses exceeds 5 per cent. of the funds at the beginning of the year one-third of the sum thus disbursed is supplied by the State Treasury.

Table 12. Disbursement of Disaster Relief Fund (Unit: ¥1,000)

Year Ending Mar. 31:	Balance carried from previous year	Revenue	Disbursed					Total	Balance
			Food	Clothing	House	Others	Total		
1933	91,969	4,300	737	201	371	368	4,633	91,969	
1934	91,634	4,277	123	21	38	221	3,978	91,933	
1935	91,923	4,320	1,438	339	584	1,355	7,200	88,043	
1936	89,043	3,839	753	81	134	596	4,917	87,966	
1937	87,966	3,621	51	26	47	139	2,081	89,505	

Table 13. Number Under Relief By Relief Law

Year Ending Mar. 31:	Living expenses		Medical relief		Child birth		Business encouragement		Total	
	No. (1,000)	Amount (¥1,000)	No. (1,000)	Amount (¥1,000)	No. (1,000)	Amount (¥1,000)	No. (1,000)	Amount (¥1,000)	No. (1,000)	Amount (¥1,000)
1933	140	3,170	29.8	420	2.7	13.4	0.4	4.7	173	3,608
1934	186	5,056	34.7	739	2.4	11.1	0.5	4.7	223	5,810
1937	190	5,414	32.9	757	1.6	7.0	0.4	4.6	225	6,183
1938	199	5,625	35.7	787	1.3	5.8	0.4	5.8	237	6,423

SOCIAL PROBLEMS

Table 14. Military Relief Service

Year Ending Mar. 31:	Sick or wounded soldiers				Bereaved families		Total incl. others	
	Without families		Soldiers and their families		No. of recipient	Amount (¥1,000)	No. of recipient	Amount (¥1,000)
	No. of recipient	Amount (¥1,000)	No. of recipient	Amount (¥1,000)				
1928	54	5.1	38,912	1,130	2,114	89	36,080	1,275
1929	64	5.5	42,836	1,382	2,047	86	44,947	1,474
1930	67	7.2	42,142	1,404	1,934	86	44,143	1,498
1931	55	4.6	50,000	1,504	1,795	77	51,856	1,586
1932	70	5.4	69,679	1,653	1,894	73	71,643	1,731
1933	105	7.6	96,622	2,334	2,296	85	98,905	2,427
1934	135	13.0	96,411	2,595	2,359	94	98,905	2,702
1935	137	12.7	103,436	2,708	2,199	88	105,772	2,809
1936	168	14.5	109,279	2,795	2,086	87	111,533	2,897
1937	199	18.3	115,651	2,857	2,094	97	117,943	2,968
1938	349	42.0	1,329,226	33,161	23,900	522	1,353,475	33,720

SOCIAL WELFARE WORK EXPENDITURE

The expenditure on account of various social welfare works for the fiscal year 1937, borne by prefectures, municipalities, towns and villages, aggregated ¥96,501,892.

Table 15. Sources of Encouragement Subsidies Granted to Various Social Work Organs

Year Ending Mar. 31:	Dept. of Imp. Household		Dept. of Justice		Dept. of Public Welfare		Total	
	No. of Organs	Amount	No. of Organs	Amount	No. of Organs	Amount	No. of Organs	Amount
1936	798	200,000	177	82,000	523	169,600	1,498	451,600
1937	798	195,000	145	102,000	533	169,600	1,567	467,433
1938	795	200,000	187	222,380	562	200,000	1,544	722,380
1939	807	450,000	268	332,000	903	500,000	1,978	1,282,000

References:

- Table Nos.: 1 a, 2-3 b, 4-9 c, 10 d e f, 11-13 c, 14 g, 15 f.
 Key: a—Social Bureau, Department of Welfare.
 b—Central Association of Cooperative Guilds.
 c—Cabinet Statistics Bureau.
 d—Sanitation Bureau, Department of Welfare.
 e—Department of Education.
 f—Department of Home Affairs.
 g—Department of Welfare.

CHAPTER XVIII INDUSTRIAL PROPERTIES

PATENTS, DESIGNS, TRADE MARKS, UTILITY MODELS AND INVENTIONS

GENERAL REMARKS

"Sembai Ryaku Kisoku" or Brief Monopoly Regulations issued in 1871 was the first legislative measure Japan had adopted for the protection of industrial property, but the measure was abolished before it went into force. The actual protection commenced in June 1884 when the Trade Mark Regulations were promulgated and enforced, this being followed by the enactment of the Monopoly Patent Regulations in 1885. Then in 1888, these two regulations were superseded by the newly enacted Patent, Design and Trade Mark Regulations. In those days Japan was still bound by extraterritorial treaties and because foreigners were beyond control of the native laws their industrial property was not covered by the protection of the legislation. With the revision of treaties in 1894-95 the laws on industrial property were subjected to necessary amendment and for the first time the general system of protection understood in Europe and America was put into force in the country. Subsequently the laws were amended twice, i.e. in 1909 and in 1921, when the present Patent, Utility Model Design and Trade Mark Laws and rules appertaining to them came into existence, taking effect on January 11, 1922. Main features common to those four laws are as follows:

Main Features of the Laws

(1) Japan from the first adopted the examination system, that is, when there are applications for patent, or registration of utility models, designs or trade marks, they are first examined by the examiners of the Patent Office, and obtain registration only when they are found conformable to the law. This principle remains unchanged. In the new law has been adopted the system of publication, that is to say, when the examiners are satisfied with applications, they first issue an order that publicity be given them, and if within a period of two months no objection appear against the published applications, then upon the expiration of the said period the examiner gives decision to register, and effects registration on payment of

prescribed fees. The only exception to the above is in connection with applications for the registration of designs for which registration is effected by dispensing with the process of publicity.

The system of re-examination has been abolished in the new laws. If the examiner should decide to reject an application, he has to show to the applicant the reason, if any, for the rejection in order to give him an opportunity to protest. In case the protest is overruled and the applicant is not satisfied with the ruling, he can request a trial-appeal.

A trial can be requested to invalidate a patent or a registration granted contrary to the laws, or to a person not entitled thereto, but this power of request lapses after expiration of five years from the day of registration in the case of patents and with regard to registrations affecting private interests, and three years in the case of utility models. A trial may also be requested to confirm the limits of claims. From a trial an appeal is open to a trial-on-appeal, and from a trial-on-appeal to the Court of Cassation, but this latter is in regard to points of law only.

(2) Formerly patents were granted only to first inventors, but in the new Patent Law they, as well as the registration of utility models, designs and trade-marks, are granted to the first applicants; and in case there are two or more applications on the same day on the same subject a patent or registration is granted according to an agreement among the applicants, but is withheld when no such agreement exists. In case a patent or registration has been granted to a person who is not entitled thereto, such patent or registration may be invalidated through a trial upon application, and shall be granted to a person entitled thereto.

(3) As regards an invention, a utility model or a design effected by an employee of a private firm or public establishment, even when the invention, utility model, or design lies within the scope or business of the employer, and is accomplished by the employee in discharge of his duty and assigned to the employer according to stipu-

lations in a contract or business regulations, the employer has to pay a reasonable compensation to the employee. In case such employee obtains a patent or registration thereof, owing to absence of such stipulations, the employer is entitled to work it.

(4) A patent, utility model or designs, and right to work a patent invention, or registered utility model or designs as well as right of pledge having such patent, utility model, or design or right of working it as its object is transferable with or without limitation, but unless such transfer is registered at the Patent Office, it cannot be set up against a third party.

(5) With regard to patent articles, and registered utility models and designs, an indication that the article is patented or registered must be attained thereto, otherwise no damages can be recovered for infringement. No such requirement is needed for trade marks.

(6) When a patent is granted, letters patent shall be issued, and when a utility model or design is registered, a certificate of registra-

tion; but for the registration of trade mark no certificate shall be issued.

(7) A foreigner who is not domiciled, nor has a residence in Japan, is not entitled to enjoy industrial property, unless he is a subject or citizen of a country with which Japan has a treaty or anything corresponding thereto, pledging mutual protection of industrial properties. Ever a national of such a country is not allowed to make an application or a request or take any other steps with regard to industrial property, unless he is domiciled or has a residence or bona fide place of business in Japan, or when he does so through an agent living in Japan.

(8) For persons residing in foreign countries or in remote districts where communications is difficult, the director of the Patent Office may, by virtue of his official authority or in compliance with request, extend the periods prescribed for procedures to be taken vis-à-vis the Patent Office.

PATENTS

Not Patentable.—The following are not patentable:—

1. Articles of food or drink or taste (Genus-mittel);
2. Medicine or methods of compounding them;
3. Substances manufactured by chemical processes;
4. Articles which are prejudicial to public order, morals or health.

Not New.—The following are not "new":—

1. Inventions which have been publicly known or publicly used in the Empire prior to application for patents therefor;
2. Inventions which have been described in publications distributed in the Empire prior to application for patents therefor to such an extent that the description can easily be put into practice.

Term.—The term of a duration of a patent is fifteen years, counting from the date of publication, a patent for addition expiring with its original.

This term of fifteen years may be extended for not less than three years and not more than ten years, if the invention is a very important one and the inventor has not realized proper profits for his invention through no fault of his own.

UTILITY MODELS

Any person who has conceived a new model of practical utility in regard to shape, construc-

Patent Fee.—The fee is ¥10 annually, 1st-3rd year; ¥15, 4th-5th year; ¥25, 6th-9th year; ¥35, 10th-12th year; and ¥50, 13th-15th year. The fee for an extended patent is:—

1. 1st year to 3rd year, inclusive, annually ¥100. First three years' fee to be paid at once.
2. From 4th year to 6th year, inclusive, annually ¥150.
3. From 7th year to 10th year, inclusive, annually ¥200.

Use of Other's Patent.—When a patented invention can not be worked without a patented invention or a registered utility model belonging to another person being used, a trial may be requested in case the person refuses to grant a license on reasonable terms without proper reasons. This use of a patent invention can not be exacted unless three years have elapsed from the establishment of the patent right.

In case a patent remains unworked in the Empire without any good reason consecutively for three years or more, and if such patent is necessary for public interests, the Director of the Patent Office may upon receiving application cancel the patent or order the patentee to grant a license on terms to be decided by him, or cancel it in virtue of his authority.

tion or combination of articles may obtain the registration of a utility model with regard to

the article. Prohibitive clauses concerning registration are practically identical with those for the registration of designs.

The term of the exclusive use of a utility model is ten years counting from the date of

registration.

The fee is at the rate of ¥7 annually for the first three years, ¥15 annually for the next three years and ¥25 annually for the last four years.

DESIGNS

Subject-Matters.—Any new design consisting of forms, patterns, colouring, or their combinations and applicable to articles of industry may be registered with regard to the articles, excepting those which are the same or similar to the Imperial Chrysanthemum Crest, or those which are prejudicial to public order and so forth.

Secrecy of Design.—A design may be kept secret pending the application and for a period

not exceeding three years from the date of its registration.

Term.—The term allowed for the exclusive use of a design is ten years from the date of registration, similar design expiring with the original.

Fees.—The fee is at the rate of ¥3 yearly for the first three years, ¥5 yearly from the fourth to the tenth year. Regulation fee of a similar design is ¥3.

TRADE-MARKS

Object of Trade-Marks.—A trade-mark may be registered in order to distinguish the goods which are produced, manufactured, worked up, selected, certified, handled or sold by a person as a business. A trade-mark that is registerable must consist of letters, devices or signs, or their combinations and must be distinctive and conspicuous. A designation of colours may be registered.

The following marks are not registerable:

1. Those containing a device similar to the Imperial Chrysanthemum Crest;
2. Those similar to the national flag, the army or navy ensign, decoration, etc., or a foreign national flag;
3. Those similar to a Red Cross, or designation of characters therefor;
4. Those liable to disturb public order or morals;
5. Those containing a likeness, the name or other designation, or the trade-name of another person, unless consent is obtained therefor from the person concerned;
6. Those similar to a mark commonly used with the same, or similar kind, of goods;
7. Those containing a device similar to a prize medal or the like given by an authorized exposition, except in the case when a person uses such medal which he has obtained, as part of the trade-mark;
8. Those similar to a mark of another person well known in trade and to be used with similar kinds of goods;
9. Those similar to registered trade-mark of another person and to be used for similar kinds of goods;
10. Those similar to a mark of another per-

son, before the lapse of one year since the loss of validity of such mark, unless the mark remained unusual for more than one year previous to the loss of its validity;

11. Those apprehended to cause mistake or confusion of merchandise.

Even in cases where the essential part of a trade-mark is not, when separated, unregistrable for its not being special and distinctive, such trade-mark shall be registered if the owner disclaims any right to that part.

A trade-mark similar to another trade-mark owned by the same person and to be used for the same merchandise, or a mark identical with another mark owned by the same person and to be used for a similar kind of merchandise may be registered by the same person as associated trade-marks.

A mark used by a person in business the object of which is not profit, will be considered as a trade-mark and is registerable.

A mark of juridical person to be used by members of the corporation may be registered as a corporation mark.

When Transferable.—A trade-mark right may be transferred only when it is transferred together with the business; it may also be transferred by division according to the goods on which the mark is used.

Cancellation.—A trade-mark right may be cancelled when, without proper reasons, the owner of a trade-mark right has failed to use his trade-mark within the Empire for more than one year from the date of registration, or has discontinued the use thereof for more than three years. Registered trade-mark of foreign countries are exceptions.

Term.—The term of the exclusive use of a registered trade-mark is twenty years. The term for a trade-mark already registered in another State, co-extends with the term allowed in that State, but in no case can it exceed twenty years. Registration of trade-marks can

be renewed.

Fee.—¥30 for registration of a trade-mark and ¥50 for a renewal thereof; same for an associated trade-mark; and ¥100 for registration of a corporation mark and ¥150 for a renewal thereof.

STATISTICS OF PATENTS, UTILITY MODELS, ETC.

The number of applications filed with the Patent Bureau for patents and for the registration of designs and trade-marks and utility

models, number of patents granted and of designs, etc. registered in recent years are as follows:—

Table 1. Registration of Patent Rights

Year	Applications			Registered			% of registered against application	
	Japanese	Foreigners	Total	Japanese	Foreigners	Total	Japanese	Foreigners
1928	10,357	2,702	13,059	3,271	1,433	4,704	31.6	53.0
1933	12,110	1,794	13,904	4,306	1,196	5,502	35.5	66.6
1936	16,132	2,379	18,511	3,994	842	4,836	24.7	35.4
1937	14,772	2,609	17,381	3,725	890	4,615	25.2	34.1
1938	15,792	2,419	18,211	3,902	941	4,843	24.7	38.8
1939	15,954	2,395	18,349	4,741	1,172	5,913	29.7	48.9

Table 2. Registration of Utility Models

Year	Applications			Registered			% of registered against application	
	Japanese	Foreigners	Total	Japanese	Foreigners	Total	Japanese	Foreigners
1928	29,401	178	29,579	12,173	108	12,281	41.4	61.2
1933	32,502	341	32,843	15,680	260	15,940	48.2	76.2
1936	44,210	422	44,632	15,396	274	15,670	34.8	64.9
1937	38,110	473	38,583	13,686	264	13,950	33.3	55.8
1938	35,048	376	35,424	14,267	263	14,530	40.7	70.0
1939	29,681	424	30,105	16,225	310	16,535	54.5	73.1

Table 3. Registration of Designs

Year	Applications			Registered			% of registered against application	
	Japanese	Foreigners	Total	Japanese	Foreigners	Total	Japanese	Foreigners
1928	8,207	14	8,221	4,357	9	4,366	53.1	64.3
1933	9,388	89	9,477	4,044	13	4,057	43.1	33.3
1936	14,568	58	14,626	5,629	33	5,662	38.7	56.9
1937	10,102	50	10,152	4,447	17	4,464	44.0	34.0
1938	7,201	58	7,259	4,277	24	4,301	59.4	41.3
1939	5,151	70	5,221	3,382	38	3,420	65.6	54.3

Table 4. Registration of Trade-Marks

Year	Applications			Registered			% of registered against application	
	Japanese	Foreigners	Total	Japanese	Foreigners	Total	Japanese	Foreigners
1928	19,865	1,426	21,291	8,716	1,076	9,792	43.9	75.4
1933	22,986	1,056	24,042	11,867	763	12,630	51.6	72.3
1936	29,365	748	30,113	14,615	525	15,140	49.9	70.1
1937	26,546	913	27,459	14,345	627	14,972	54.0	68.6
1938	27,572	671	28,243	16,126	684*	16,810	58.4	101.9
1939	25,720	741	26,461	18,596	720	19,298	72.5	97.1

*Note: Numbers registered are inclusive of applications carried from previous year.

ENCOURAGEMENT OF INVENTIONS

Association for Encouragement of Inventions

The Imperial Invention Association was organized in 1905, and in 1919 the Government announced they would grant every year a certain amount of encouragement fund. The same

year gold medals specially designed were awarded to 15 inventors of merit by the Association. In 1925 it received a donation of ¥30,000 from the Imperial Household in aid of the encouragement fund. The following year

(1926) the Association awarded to 106 inventors special medals of merit and letters of praise, eleven of them being granted a monetary gift of ¥300 each out of the Imperial donation. The Association is presided over by Baron Yoshiro Sakatani and has for its honorary president Prince Takamatsu.

For encouragement of useful invention the Government is granting annually small amounts of subsidiary aids.

Among many useful inventions effected in recent years may be mentioned the Stainless Silver invented by Dr. T. Tanabe, Prof. at Kyushu Imperial University, which was patented in England, America, Germany, France and Japan; Super-heat Heavy Oil Diesel Engine (Japan

Diesel) for small vessels, automobiles and aircraft, invented by Yasusaburo Hironaka, of the Urabe Iron Works (Osaka), which secured patent rights from the Japanese, British and French Governments; a special Magnetic Alloy made of nickel and aluminium invented by Dr. T. Mishima, Prof. at Tokyo Imperial University, which secured patent rights in Japan, England and America and three other foreign countries; a special process for the manufacture of synthetic camphor, invented by Prof. Kuwada of Tokyo Imperial University and others; etc. Some of these inventions have secured world-wide fame.

Among the inventors honored recently for their accomplishments by the Association are the following:—

Table 5. List of Inventors Specially Honoured by the Imperial Invention Association in March 1938

Inventors	Invention	Date of Invention	Patent No.
Hitoshi Ishikawa	Manufacture of Graphite	April, 1930	86,470
Kikutaro Honda	Improvement of Spinning Machine	Feb., 1936	114,590
Torajiro Oki	Calculating Machine	Feb., 1935	109,544, etc.
Ryuji Onoe	Fertilizer Mixer	Nov., 1932	98,124, etc.
Ishimatsu Takaoka	Knitting Machine	Nov., 1933	103,935
Yonejiro Tsuda	Silk Weaving Machine	June, 1932	96,463, etc.
Kinjiro Nakanishi	Electric Wave Embroidery	April, 1934	105,825, etc.
Kinsaku Nakanishi			
Koryo Nakayama	Electric Drilling Machine	Jan., 1931	89,910, etc.
Kazuo Kamibayashi	Gas-filled Incandescent Electric Lamp	Mar., 1921	38,199
Magokichi Yamaoka	Improvement of Internal Combustion Machine	May, 1934	106,145, etc.
Kowa Fukushima			
Hatsunosuke Yamamoto	High-pressure Pump	Nov., 1930	88,993
Shigeyoshi Matsumae	High-frequency Telephonic System	Aug., 1935	111,838, etc.
Noboru Shinohara			
Saburo Minorikawa	Reeling Machine	Sept., 1933	102,636, etc.
Kiichiro Toyoda	Automatic Weaving Machine	Aug., 1925	65,156
Masatoshi Okochi	Magnesium Manufacturing	Dec., 1933	103,995, etc.
Shoichiro Imatomi			
Torajiro Tanabashi	Chrome Compound	Aug., 1935	112,035, etc.
Yoshikata Ushio	Valve	May, 1937	120,532, etc.
Ichiro Nozawa	Architectural Frame Construction	Oct., 1936	117,874, etc.
Takeo Mahabe	Concrete Mixer	Nov., 1934	108,468, etc.
Tokushichi Mishima	M K Special Alloy	Dec., 1934	108,890, etc.

The Chemical & Physical Research Institute

Apart from the energetic efforts of private inventors, the establishment in 1907 of the Chemical & Physical Research Institute, a Government laboratory organized as a foundational juridical person at the instance of the late Dr. Jokichi Takamine, has stimulated the development of scientific researches and the growth of useful inventions in recent years. The institute which was established with the object of promoting the fundamental development of industries has rendered very valuable services in past years to the cause it espouses and effected numerous useful inventions which have largely

contributed to the progress and expansion of national industries. Some of the inventions effected by the experts of the Institute who comprise many eminent scientists specializing in different branches of chemical, physical and other scientific studies have won world-wide fame. Not only does the Institute conduct scientific researches but also carries on the industrialization of the results of its researches and inventions, such practical side of manufacture being conducted by the Chemical & Physical Industrial Company and several other concerns established for such purposes as subsidiary enterprises of the Institute.

The Institute is divided into twenty-seven departments according to different branches of scientific studies such as chemistry, physics, engineering, electricity, metallurgy, etc., each department being under supervision of a noted specialist of the particular line. The staff consists of, besides 28 departmental chiefs, 28 experts, 87 assistants, 125 sub-assistants and 122 specialists who are not official members of the Institute. At the factory attached to the Institute about 250 engineers, experts and mechanics are engaged in the manufacture of various products by the method or process invented by the experts of the Institute.

Among the many inventions effected by the Institute those which have fetched wide fame and reputation are Vitamins, other biochemical products, the manufacture of magnesium from sea water, piston rings, sensitized paper, corundum, adsol, ultragin glass, etc. The kinds of machines, electrical and optical apparatuses and appliances invented and manufactured by the Institute number upwards of sixty, while the chemical and biochemical products also invented and prepared by the establishment reach about fifty in kind. About fifty of those inventions have been patented by the Japanese or foreign Governments.

References:

- Table Nos: 1-4 a, 5 b.
Key: a—Patent Bureau, Department of Commerce & Industry.
b—Research of Imperial Invention Association.

CHAPTER XIX TRANSPORTATION

LAND TRANSPORTATION

RAILWAYS

Introductory Remarks

The railway service was started in Japan in the fifth year of Meiji (1872) when the line between Tokyo and Yokohama measuring 26.9 kilometres was opened. Ever since that time the railway system has made such rapid strides that now railways run lengthwise and crosswise throughout the whole country. The total length of the State Railways open to traffic approximates 18,000 kilometres at present. The lengths of the local railways and that of tramways open to business have also increased considerably in the past three decades.

Notable features of Japanese railways are, in the first place, its ownership and management by the State. It was in 1907 that the nationalization of railways was effected. The Government then acquired 4,547 kilometers thus bringing under nationalization all the railway lines in Japan proper with the exception of feeders and lines of local importance. This removed various drawbacks incidental to diverse management and different methods of working. Secondly, the number of goods wagons is smaller than that of passenger cars. This is due to the fact that as the country is surrounded by seas on all sides, no small proportion of goods is carried by water. Thirdly, the number of locomotives is very large for that of other vehicles. This is due to the hilliness of the country and to the fact that each train consists of a comparatively small number of vehicles. Fourthly, the use of the railway service is very popular. This is due chiefly to

a large number of passengers undertaking short journeys. Fifthly, unlike other countries, fare receipts are usually larger than freight receipts. In the sixth place, the Japanese railways together with the German railways are noted for the punctuality of their services. The last feature of the Japanese railways, or their defect is the narrow gauge that marks almost the whole line (3 ft. 6 in. being the adopted gauge).

The private railways now existing are those intended to meet local requirements, and are granted subsidies under the Local Railway Law.

Table 1. Japan's Position in Railways
(Unit: In Kilometers)

Country	Length	Length per 100 sq. kms.	Length per 10,000 population
Japanese Empire ...	34,511	5.1	3.5
Japan Proper	27,294	7.1	3.8
Chosen	5,291	2.4	2.4
Taiwan	1,550	4.3	2.8
Karafuto	376	1.0	11.5
Kwantung Prov.	271	7.8	2.3
U. S. A.	405,279	5.2	31.2
U.S.S.R. (1)	85,200	0.4	5.1
British India (1)....	69,408	1.5	2.0
Canada	68,762	0.7	61.4
Germany	54,556	11.6	8.0
Australia	43,603	0.6	63.5
Argentina (2)	42,698	1.5	33.0
Brazil (1)	42,493	7.7	10.1
England	32,317	14.1	7.0
Italy	22,901	7.4	5.3
China (1)	13,086	0.1	0.3
Manchoukuo (3) ...	10,139	0.8	2.7

Note: (1)—1936. (2)—1938. (3)—1939. Others—1937.

Table 2. General Condition of Railway Lines in Japan
(Year Ending March 31, 1939)

	State Railways	Local Railways	Tramway
Operating Lines (kms.)	18,178.7	6,664.0	2,345.9
Passenger train mileage (kms.)	117,800,036	775,510	406,111,629
Passenger earnings (yen)	402,581,332	84,638,887	120,183,527
Goods train mileage (kms.)	85,092,200	8,989,103	6,636,053
Goods earnings (yen)	328,724,929	25,887,295	1,251,623
Good-Passenger train (kms.)	17,996,827	6,423,807	.....
Capital invested (yen)	4,454,302,327	1,711,849,433	1,872,945,995

TRANSPORTATION

Table 3. Length of Railways
(Kilometers)

Year Ending Mar. 31:	State Railways	Local Railways	Tramways
1928	13,391.2	5,472.42	2,758.84
1929	13,691.6	5,937.53	2,720.03
1930	14,148.9	6,513.10	2,715.66
1931	14,574.9	7,018.14	2,711.47
1932	15,014.0	7,194.79	2,675.63
1933	15,372.1	7,242.11	2,661.76
1934	15,844.5	7,184.55	2,652.65
1935	16,535.1	7,088.22	2,615.20
1936	17,138.2	7,097.56	2,533.55
1937	17,530.1	7,019.67	2,514.75
1938	17,934.0	6,944.20	2,458.81
1939	18,178.7	6,664.00	2,345.90
1940	18,297.5	.....	.....

Table 4. Capital Invested and Percentage of Profits

Year Ending Mar. 31:	State Railways		Local Railways		Tramways	
	Capital	Profit % to cap.	Capital	Profit % to cost of construction	Capital	Profit % to cost of construction
1928	¥2,907,004,129	7.72	¥1,068,118,636	6.4	¥2,286,008,668	9.4
1929	3,109,089,387	7.35	1,071,441,210	6.1	2,257,081,979	9.1
1930	3,285,165,893	6.51	1,169,932,738	5.4	2,205,831,510	8.2
1931	3,382,820,115	5.12	1,282,118,738	4.2	2,212,569,844	6.9
1932	3,462,322,624	4.82	1,313,782,488	3.8	2,145,876,339	5.9
1933	3,563,422,511	4.51	1,360,981,984	3.6	2,157,203,439	5.3
1934	3,682,426,399	5.20	1,311,913,684	4.0	2,017,474,039	5.4
1935	3,813,211,446	5.36	1,283,266,384	4.1	1,468,193,689	5.3
1936	3,938,262,736	5.46	1,284,103,805	4.2	1,509,155,739	5.6
1937	4,089,624,978	5.96	1,313,232,583	..	1,555,809,239	..
1938	4,256,017,282	6.19	1,536,731,133	..	1,780,510,333	..
1939	4,454,302,327	6.71	1,711,849,433	..	1,872,945,995	..

STATE RAILWAYS

ADMINISTRATION AND STAFF

For the convenience of administration the Government Railways are divided into eight sections, i.e., the Tokyo, the Nagoya, the Osaka, the Hiroshima, the Moji, the Sendai, the Sapporo and the Niigata.

The central administration is the Department of Railways which is composed of the Minister's

Secretariat and seven bureaux, namely, Private Railway Administration, Traffic, Construction, Ways and Works, Mechanical Engineering, Electric and Finance. The whole is presided over by the Minister assisted by the Vice-Ministers and a large number of subordinates.

Table 5. Number of Railway Officials and Employees Classified by Ranks

Year	Shin-nin & Choku-nin	So-nin	Han-nin	Koin	Yo-nin	Salaried Advisers	Total
1933	24	905	25,616	78,732	93,567	—	198,848
1934	25	980	26,331	79,872	94,318	—	201,538
1935	25	998	28,146	82,326	97,951	—	209,456
1936	25	1,047	30,309	85,035	101,512	355	218,352
1937	23	1,102	32,217	88,474	105,512	348	227,689
1938	28	1,219	36,139	94,214	121,295	339	253,247
1939	31	1,299	39,262	104,400	126,837	346	272,175

MILEAGE

The mileage of lines worked and length of tracks for the last few fiscal years are given below:—

TRANSPORTATION

(B) HAULED

Year Ending Mar. 31:	Volume of goods carried (m. tons)	Volume of goods carried per day (m. tons)	Ave. kms. per m. ton	Aver. volume of goods carried per day per km. (m. tons)	Aver. volume of goods carried per train km. (m. tons)	Aver. volume of goods carried per wagon (m. tons)
1928	78,621,788	214,814	158.4	2,593	219.3	6.3
1929	79,762,950	218,529	160.1	2,588	224.0	6.3
1930	77,224,824	211,595	162.9	2,479	219.0	6.2
1931	64,087,099	175,581	170.1	2,078	208.1	5.9
1932	60,590,746	165,548	175.0	1,961	207.5	5.8
1933	61,732,756	169,131	171.1	1,911	203.1	5.7
1934	71,970,592	197,180	166.6	2,112	210.6	5.9
1935	77,477,837	212,268	172.3	2,270	212.9	6.0
1936	81,039,134	221,418	172.9	2,279	204.4	6.0
1937	89,342,111	244,773	175.2	2,477	207.9	6.1

Principal items of goods handled are coal, timber, rice, fertilizer, and fuel. Below are given the figures for the most important items handled by the State lines for the last few fiscal years.

Table 10. Important Goods Handled by State Railways

(In 1,000 Metric tons)

Year	Wheat, Barley, etc.		Timber	Charcoal	Coal	Ores	Iron and Iron Ore	Fertilizers	Cotton Yarn & Cotton Fabrics	Cement
	Rice	Wheat, Barley, etc.								
1932	2,868	580	4,831	1,057	21,602	1,624	566	2,680	481	1,044
1933	2,924	526	5,886	1,034	24,862	2,082	704	2,661	528	1,199
1934	3,343	618	6,904	1,154	26,901	2,547	910	2,844	589	1,237
1935	2,995	731	7,214	1,144	28,585	2,969	1,086	3,192	594	1,409
1936	2,927	783	7,428	1,132	32,073	3,446	1,137	3,352	526	1,238
1937	3,032	279	8,439	1,186	35,150	3,930	1,490	3,865	577	1,349
1938	3,169	1,156	9,696	1,257	38,525	4,541	1,768	3,895	518	1,402
1938 Jan.-Aug.	2,157	792	7,632	904	26,362	3,240	1,225	3,317	344	962
1939 "	1,855	737	6,325	810	25,621	2,873	1,152	2,747	351	896
1939	3,602	1,281	11,221	1,346	40,173	4,807	1,816	4,687	516	1,567
1939 Jan.-June	1,543	354	6,332	727	22,174	2,316	123	3,032	279	396
1940 "	1,612	231	5,592	706	19,756	2,354	919	2,821	259	698

Table 11. Statistics of Average Earnings, etc.

Year Ending Mar. 31:	Freights			Passengers		Earning. per K.M. per Capita (Sen)
	Ton- K.M.	Receipts per M.T. (¥)	Receipts per M.T. per K.M. (Sen)	Number per Train per K.M.	Earnings per Capita (Sen)	
1917	166.1	1.77	1.07	159.9	30	0.84
1921	165.1	2.85	1.72	207.3	41	1.30
1931	170.1	2.84	1.67	154.3	27	1.12
1932	175.0	2.87	1.64	142.1	27	1.09
1933	171.1	2.79	1.63	136.8	26	1.07
1934	166.6	2.71	1.63	141.9	26	1.07
1935	172.3	2.78	1.62	141.7	26	1.05
1936	172.9	2.78	1.61	140.3	26	1.05
1937	175.2	2.81	1.60	145.6	26	1.05
1938	185.9	2.88	1.55	155.6	26	1.04
1939	193.7	2.97	1.53		26	1.04

FINANCE

As mentioned elsewhere the railway finance is independent of the other State accounts, and all the disbursements are to be met by the receipts, while the expenses needed in construction or improvement are appropriated out of the profit accruing from the traffic, and also from ¥20,000,000 to be set apart every year on the railway account or from the Government general account.

TRANSPORTATION

Table 6. Mileage of Lines Worked and Length of Tracks
(Kilometers)

Year Ending Mar. 31:	Routes					Tracks		
	Single	Double	Triple	Quadruple	Total incl. others	Main	Side	Total
1928	11,340	1,882	22	121	13,371	15,685	6,283	21,969
1933	13,134	1,919	30	163	15,267	17,840	7,153	24,993
1934	13,608	1,907	30	171	15,737	18,321	7,291	25,612
1935	14,261	1,942	30	173	16,427	19,053	7,467	26,520
1936	14,861	1,944	30	173	17,030	19,658	7,641	27,299
1937	15,293	1,945	18	184	17,422	20,060	7,751	27,801
1938	15,652	1,940	19	195	17,828	20,501	8,005	28,506
1939	15,874	1,959	16	197	18,071	20,779	8,191	28,968
1940	15,987	1,960	16	197	18,185	20,890	8,305	29,194

TRAFFIC RESULTS

The traffic results of the State Railways are given in the following tables:—

Table 7. Passenger Earnings, Etc.

(In Million Yen)

Year Ending Mar. 31:	Passenger	Berth	Express	Baggage	Parcel	Mail	Platform ticket	Miscellaneous	Total
1928	234.2	2.1	7.1	1.0	22.4	2.2	1.3	1.3	271.5
1932	208.9	1.9	7.2	1.1	16.6	2.4	1.7	1.3	240.0
1933	203.5	1.9	6.2	1.1	15.3	2.4	1.7	1.3	233.4
1934	222.2	2.4	6.9	1.2	16.3	2.4	1.7	1.4	254.5
1935	238.7	2.8	7.6	1.3	17.3	2.5	1.8	1.5	274.1
1936	253.0	3.2	8.1	1.5	19.5	2.8	1.9	1.7	291.6
1937	274.4	3.7	8.9	1.6	20.3	3.0	2.0	1.9	316.0
1938	303.0	4.2	10.5	1.9	21.6	3.5	2.9	2.1	349.5
1939	350.2	4.7	12.5	2.3	23.2	4.0	3.2	2.5	402.6

Table 8. Passengers Carried, Etc.

Year Ending Mar. 31:	No. of pass. carried (1,000)	Pass. carried kms. (1,000)	Average kms. of journey per pass.	No. of Passengers			Average per day (1,000)
				Per day per km.	Per train km.	Average per day (1,000)	
1928	795,723	20,125,587	25.3	4,226	191.9	2,174	
1929	847,300	21,582,542	25.5	4,413	192.2	2,321	
1930	862,930	21,345,677	24.7	4,250	177.9	2,364	
1931	824,153	19,875,113	24.1	3,839	154.3	2,258	
1932	787,222	19,122,651	24.3	3,586	142.1	2,151	
1933	781,150	19,001,523	24.3	3,488	136.8	2,140	
1934	841,315	20,822,013	24.7	3,715	141.9	2,305	
1935	913,566	22,573,020	24.7	3,888	141.7	2,503	
1936	985,041	24,173,052	24.5	3,983	140.3	2,691	
1937	1,058,631	26,216,155	24.8	4,200	145.6	2,900	

Table 9. Goods Hauled and Earnings

(In ¥1,000)

(A) EARNINGS

Year Ending Mar. 31:	Ordinary	Miscellaneous	Total	Average	
				Per day	Per km.
1928	210,179	1,571	211,750	579	44
1932	173,738	2,386	176,124	481	33
1933	172,157	2,550	174,706	479	32
1934	195,183	2,855	198,038	543	35
1935	215,615	3,066	218,681	599	37
1936	225,343	2,759	228,102	623	37
1937	250,962	2,702	253,665	695	40
1938	282,784	3,178	285,962	783	44
1939	325,004	3,721	328,725	900	50
1940	363,894	4,182	368,076	1,006	55

Table 12. Working Revenues and Expenses

Year Ending Mar. 31:	Revenues (¥1,000)	Expenses (¥1,000)	Net Profit (¥1,000)	Per kilometre per day worked (Yen)		
				Revenues	Expenses	Gross profit
1928	506,445	368,277	138,168	105.372	58.671	46.701
1929	529,132	393,381	135,751	107.150	60.894	46.256
1930	517,795	399,027	118,990	101.935	59.875	42.060
1931	458,140	382,553	75,587	87.142	54.176	32.966
1932	433,540	365,089	68,452	80.009	49.207	30.802
1933	425,954	364,875	61,080	76.915	47.866	29.049
1934	473,571	385,579	88,675	32.212	49.586	33.626
1935	518,668	417,771	100,897	87.988	53.289	34.699
1936	544,534	435,000	109,986	88.369	53.478	34.891
1937	598,171	452,709	145,462	94.431	55.951	38.480
1938	670,164	504,015	166,149	103.418	62.757	40.658
1939	768,947	568,504	200,443	116.617	71.281	45.337

Table 13. Working Expenses Classified
(Unit: ¥1,000)

Year Ending Mar. 31:	General	Maintenance of				Shipping	Total incl. others.
		Ways & Works	Equip- ments	Transporta- tion	Traffic		
1932	5,364	40,694	26,038	66,606	98,047	5,502	266,634
1933	5,714	40,504	25,615	65,808	96,769	5,203	265,082
1934	5,877	43,778	27,377	71,154	101,085	5,625	282,200
1935	5,996	54,764	30,888	78,994	104,958	6,301	314,126
1936	6,695	57,068	32,150	85,425	109,655	6,473	329,537
1937	7,183	60,118	36,246	92,120	117,316	6,949	354,420
1938	8,280	67,762	41,755	110,341	130,491	8,358	460,692
1939	9,050	81,193	44,495	139,331	141,635	11,059	470,007

Table 14. Other Expenses
(¥1,000)

Year Ending Mar. 31:	Survey and private line inspection	Additional works	Interest charges	Subsidy to local railways	Total incl. others
1928	450.0	5,643.7	74,629.3	5,295.4	86,289.1
1929	474.8	5,357.2	80,542.8	6,298.2	92,673.0
1930	583.8	4,337.8	82,994.0	6,968.5	94,884.2
1931	586.9	3,382.4	86,241.9	7,499.9	97,728.8
1932	615.1	2,433.9	87,885.7	7,498.1	98,454.0
1933	483.8	2,420.6	88,883.4	7,203.3	99,792.6
1934	489.6	2,122.6	93,775.5	6,991.4	103,379.1
1935	509.0	3,936.2	91,788.2	7,052.6	103,645.2
1936	634.4	3,710.6	93,750.9	7,367.1	105,463.0
1937	569.5	7,580.5	83,206.2	6,845.0	98,289.0
1938	826.0	4,559.9	83,793.5	6,646.7	97,323.2
1939	964.7	6,508.4	84,132.6	6,870.3	98,497.0

Table 15. Value of Fixed Property
(Million Yen)

Year Ending Mar. 31:	Brought over from preced- ing year	Increase during the year				Decrease during the year	Total
		Construction expenditure	Improvement expenditure	Additional Works	Total incl. others		
1928	2,647.5	49.2	156.2	5.8	223.2	11.9	2,858.8
1929	2,858.8	51.8	139.6	5.4	217.1	13.3	3,062.0
1930	3,062.6	63.9	125.2	4.3	204.0	19.9	3,246.7
1931	3,246.7	41.7	66.7	3.4	122.8	22.2	3,347.4
1932	3,347.4	37.7	54.7	2.4	99.4	33.0	3,413.8
1933	3,413.8	47.7	52.0	2.4	105.1	14.9	3,503.9
1934	3,503.9	53.1	56.3	2.1	126.1	16.8	3,613.2
1935	3,613.2	47.8	67.7	3.9	134.4	19.0	3,728.8
1936	3,728.8	43.2	83.4	3.7	136.2	14.1	3,850.5
1937	3,850.5	43.9	89.4	7.6	154.7	18.0	3,987.2
1938	3,987.2	42.7	104.2	4.6	171.9	31.9	4,127.2
1939	4,127.2	28.9	144.5	6.5	185.1	28.7	4,288.6

Railway Stores and Materials

Railway materials used on State railways at present are almost wholly of domestic manufacture.

Table 16. Railway Stores Purchased and on Store
(Yen)

Year Ending Mar. 31:	Railway stores purchased			Amount of stores on hand		
	Home purchase	Foreign purchase	Total	Stores in stock	Articles in process of manufacture	Total
1931	107,598,231	3,121,766	110,719,997	22,837,495	571,299	28,408,794
1932	81,378,117	3,085,193	84,463,310	15,544,341	159,953	15,704,294
1933	99,428,262	3,647,413	103,075,675	16,980,187	262,310	17,152,497
1934	114,266,802	3,811,812	118,078,614	22,636,379	252,424	22,888,803
1935	130,474,810	4,506,564	134,981,374	27,516,224	189,642	27,705,866
1936	139,734,414	4,280,212	144,014,626	29,842,400	305,065	30,147,465
1937	155,961,197	4,869,207	160,830,404	24,906,053	344,337	25,250,390

CONSTRUCTION AND OPERATION

The extension of the State Railway lines not yet opened to traffic as at the end of March, 1937 was 2,338.8 kilometres consisting of 862.1 km. under construction and 1,476.8 km. of lines sanctioned for construction but not yet started within the year. As compared with the preceding year the lines under construction increased by 14.1 km. and the lines not yet started by 635.7 km.

The Gauge.—The gauge is of 3 ft. 6 in., it having been adopted when the first railway in Japan was laid. In speed and carrying capacity Japanese railways are much behind those in Europe and America. As yet with the exception of the Tokaido line, most of the lines are still single-tracked. On the San-yo, Tohoku and a few other lines, however, partial doubling has either been effected or is nearing completion.

Gradient.—The maximum gradient is 1 in 40 in ordinary cases with a minimum radius of 15 chains. A notable exception is the case of the Usui pass on the Tokyo-Nagano line for which the Abt system was adopted. The gradient for it is 1 in 15, for the section of 7 miles from Yokogawa to Karuizawa, with a minimum radius of 13 chains. There are on this section 26 tunnels with the aggregate length of 14,645 ft. Altogether this section forms the worst portion in the whole work of railway construction in Japan. The steam locomotives at first used on this section have been replaced with electric locomotives with the double object of increasing the hauling power and of getting rid of the nuisance of smoke. The change has proved highly satisfactory.

Rails.—Rails used are in most cases 68 lbs.

per yard steel rail, but they are being replaced by the 75 lbs. type for trunk lines, in view of the steady expansion of the volume of traffic and the consequent necessity of running heavier trains. The rails were formerly supplied from abroad but of late the rails turned out at the steel works at Wakamatsu, Kyushu, and some other works are used.

Sleepers.—The standard dimensions of sleepers are 8" x 5 1/2" x 66" 0", and 14 to 16 are laid for every 30 ft. of rails. Chestnut wood is predominant, but owing to growing scarcity of this particular lumber, softer varieties as pine, "tamo," cercidiphyllum, "sen," beech, etc., are also made use of, after they are properly creosoted.

Bridges.—The total length of iron and other bridges on the State Railways as at the end of March, 1937 was 585,168 metres. The longest structure is that over the River Agano (1,243 m.) on the Uetsu Line, the second over the Tenryu (1,209 m.), and the third over the Ohii (1,018 m.), the latter two being on the Tokaido Line. The foundation of work for all such bridges is in the shape of cylindrical brick wells with steel girders. In rare cases wrought iron girders used in bridges made in the early days of railway construction in Japan are mixed with them.

Tunnels.—The total extension of tunnels of Japan proper as at the end of March, 1937 was 609,541 metres. Contrasted with the previous year, it shows an increase of 32,394 metres. The length of tunnels specified by the jurisdictions is as follows:—

Table 22. Passenger and Goods Traffic of Local Railways

Year Ending Mar. 31:	Average working kilometres	No. of passengers carried (1,000)	Passenger kms. (1,000)	Receipts from passenger traffic (¥1,000)	Average kms. per passenger	Goods hauled (1,000 m. tons)	Goods kms. (1,000)	Receipts from goods traffic (¥1,000)
1928	5,361.8	307,582	2,631,917	46,354	8.6	23,494	485,147	21,911
1929	5,545.8	366,278	2,975,305	52,094	8.1	25,093	531,827	22,882
1930	6,088.5	415,740	3,528,990	60,552	8.5	26,466	536,839	23,400
1931	6,734.8	428,370	3,623,819	59,390	8.5	22,950	463,458	19,732
1932	7,025.6	420,725	3,646,235	56,998	8.7	21,660	468,819	17,939
1933	7,173.3	427,668	3,727,565	55,430	8.7	22,216	504,266	17,845
1934	7,158.4	462,362	4,050,978	59,068	8.8	24,840	533,382	19,310
1935	7,075.2	499,804	4,306,071	62,263	8.6	26,828	554,375	20,304
1936	6,976.0	532,135	4,594,758	64,172	8.6	28,130	585,800	21,421
1937	7,039.2	575,603	4,993,479	68,930	8.7	30,315	643,036	22,309
1938	6,862.5	633,422	5,455,258	73,543	8.6	32,643	669,889	23,630

Table 23. Financial Position of Local Railways (¥1,000)

Year Ending Mar. 31:	Capital	Construction expenses	Revenues	Working expenses	Profit	% of profit to construction	% of working expenses to revenues
1928	1,068,119	548,884	74,696	42,105	32,592	6.4	56.4
1929	1,071,441	629,654	82,477	46,077	36,400	6.1	55.9
1930	1,169,933	772,763	91,725	52,479	39,246	5.4	57.2
1931	1,282,119	897,507	87,841	52,474	35,368	4.2	59.7
1932	1,313,782	945,513	82,946	47,758	35,189	3.8	57.6
1933	1,360,919	969,582	81,736	47,404	34,333	3.6	58.0
1934	1,311,914	970,449	87,402	48,775	38,628	4.0	55.8
1935	1,283,266	974,076	91,380	51,857	39,523	4.1	56.7
1936	1,284,104	980,981	94,650	53,544	41,106	4.2	56.6
1937	1,502,133	989,394	101,711	57,558	44,153	4.4	56.6
1938	1,496,463	986,715	169,484	62,789	46,699	4.7	57.3
1939	1,711,849	1,037,589	—	—	—	—	—

Table 24. Situation in Leading Local Railways (End of March, 1939)

Name of Railways	Office	Operating lines (kilometres)	Motive Power	Gauge (Metre)	Capital (¥1,000)
Bantan Electric	Kakogawa	90.5	Steam & gasoline	1.067	3,000
Chichibu Electric	Kumagai	73.6	Electricity	1.067	12,000
Chugoku Electric	Okayama	79.2	Steam & gasoline	1.067	5,250
Hanwa Electric	Osaka	62.8	Electricity	1.067	20,000
Hokkaido	Shiraishi	129.8	Steam, electricity & gas	1.067	10,000
Ina Electric	Tokyo	79.8	Electricity	1.067	20,722
Iyo Electric	Matsuyama	40.5	Electricity & steam	1.067	42,000
Keihan Electric	Osaka	56.0	Electricity	1.435	93,850
Mikawa	Kariyamachi	95.8	Electricity, steam & gasoline	1.067	4,688
Nagano Electric	Nagano	70.9	Electricity	1.067	6,000
Nagoya Railway	Nagoya	323.1	Electricity & gasoline	1.067	72,582
Nankai Electric	Osaka	125.1	Electricity	1.067	70,000
Sangu Express Electric	Osaka	224.1	Electricity, steam, gaso-		
Odawara Express Electric	Sendagaya (Tokyo)	112.0	line & diesel	1.067, 1.435	45,770
Osaka	Osaka	54.2	Electricity & steam	1.067	30,000
Saibu	Tokyo	67.5	Steam, electricity & gasoline	1.067	20,600
Tobu	Tokyo	391.6	Electricity, steam & gasoline	1.067	7,800
Tokachi	Obihiro (Hokkaido)	63.3	Steam, gasoline & charcoal-gas	1.067, 0.762	50,500
Yubari	Tokyo	53.3	Steam	1.067	3,000
					6,000

TRAMWAYS

The tramways in Japan date from 1880, when an application was tendered for the construction of the Tokyo Horse Tram Co.'s line which was completed and opened to traffic in 1883. By Imperial Ordinance No. 266 issued in October, 1908, the matters relative to tramways

came under the control of the Minister of Communications and subsequently by Imperial Ordinance No. 307, the jurisdiction was shifted to the State Railways. As provided by the Tramway Law now in force, all the tramways in Japan are constructed as a rule on highways.

The street railways, a certain number of suburban railways and others laid in localities are placed under the control of the Law. Such public bodies as cities, towns, and villages may take the management of tramways without restriction. Steam and electricity are mostly employed as motive power except a few local tramways where gasoline, horse, or human power is used for the purpose.

Table 25. Tramways by Motive Power

Kinds of power	(Year ending Mar. 31, 1938)		
	No. of tramways	Kilometres	Capitals (¥1,000)
Electricity	73	1,937.76	1,843,016
Steam	1	33.90	350
Steam and gasoline combined	9	97.40	3,720
Gasoline	10	148.00	22,610
Horse	12	98.41	3,065
Human	6	32.30	186
Total	111*	2,347.77	1,872,946
Compared with previous year	-5	-119.28	+65,736

Note: * Tramways using more than one kind of motive power are listed in the table under the several heads.

(A) Table 26. Financial Position of Tramways

Year Ending Mar. 31:	No. of tramways	Total length of lines (kms.)	Capital invested (¥1,000)	Cost of construction (¥1,000)	Working revenues (¥1,000)	Working expenses (¥1,000)	Profit (¥1,000)	% of profit to cost of construction
1928	157	2,758.84	2,286,009	645,186	137,064	77,949	59,115	9.4
1932	146	2,675.63	2,145,876	764,651	115,881	71,233	44,648	5.9
1935	135	2,615.20	1,468,194	807,941	113,120	70,698	42,422	5.3
1936	128	2,533.55	1,509,156	822,893	114,919	69,184	45,735	5.6
1937	120	2,520.91	1,715,026	843,125	121,496	72,661	48,834	5.9
1938	116	2,467.06	1,707,210	841,760	129,446	77,306	52,140	6.2
1939	111	2,347.77	1,872,946	—	—	—	—	—

(B)

Year Ending Mar. 31:	No. of Locomotives	Passenger carriages		Goods wagons		No. of passengers carried (1,000)	Goods hauled (M. tons)
		No.	Seats	No.	Tonnage		
1928	262	6,889	414,470	2,287	8,641	1,800,399	1,974,738
1932	145	6,863	443,838	1,900	6,841	1,566,476	1,483,865
1935	118	6,633	433,932	1,760	6,003	1,570,940	1,907,384
1936	97	6,533	433,746	1,683	5,751	1,608,331	1,609,519
1937	90	6,603	439,996	1,646	5,677	1,700,042	1,755,804
1938	77	6,541	441,024	1,520	5,142	1,810,172	1,803,163

(C)

Year Ending Mar. 31:	Receipts from passenger traffic (¥1,000)	Receipts from goods traffic (Yen)	Vehicle kilometres (1,000)		No. of employees	Aver. monthly compensation of employees (¥1,000)
			Passenger carriages	Goods wagons		
1928	124,623	2,642,409	323,388	12,639	57,933	—
1932	105,756	1,368,096	349,314	7,419	55,093	4,790
1935	104,760	1,430,598	367,572	7,218	52,023	4,118
1936	108,135	1,280,456	384,208	6,272	52,313	3,935
1937	113,802	1,269,762	387,850	6,375	51,096	2,607
1938	120,184	1,251,623	399,890	6,032	50,319	2,813

ROAD CONSTRUCTION

The administration of public works (works on roads and bridges, rivers and harbours, water supply and sewage, etc.) is in the hands of the Minister of Home Affairs, Prefectural Governor, etc., according to the kind of works specified in the Ordinance. In the present chapter only those works carried out in Japan proper are covered, those in Taiwan, Chosen, Karafuto, the South Sea Islands and Kwantung Leased Terri-

tory being dealt with in the respective chapters. The expenditure for public works is borne in various proportions by the State, Prefectures, Municipalities, etc., according to the nature and importance of such works, and the localities or parties most benefited thereby. The amount of money expended in 33 years between 1885 and 1917 reached ¥1,126,640,000 (¥34,140,606 a year on an average) of which about 12 per cent.

was borne by the State. The share of the State amounted to 10 per cent. in 1925, 11 per cent. in 1924 and 11 per cent. in 1923 of the total expenditures. The expenditure for the past few fiscal years (April 1—Mar. 31) is shown below:

Table 27. Expenditure Borne for Public Works By State
(In Yen)

Year Ending Mar. 31:	For river work	For sand arresting	For harbour work	Total incl. others
1933	16,848,658	3,926,452	13,513,013	51,390,592
1934	18,629,822	4,867,171	11,864,701	57,491,834
1935	15,642,326	2,776,896	9,157,047	48,272,361
1936	14,883,056	1,826,795	8,290,126	48,593,856
1937	15,816,008	2,583,105	9,471,865	43,518,818
1938	20,302,274	3,236,994	8,992,439	47,830,709
1939	13,619,799	4,021,104	7,482,290	36,878,381

Note: Figures for 1937, 1938 and 1939 are budgets, others being settled accounts.

Table 28. Expenditure Borne for Public Works (¥1,000)

Year Ending Mar. 31:	Prefectures	Cities	Towns & Villages	Total
1933	204,763	47,950	92,190	344,903
1934	205,572	53,122	102,126	360,820
1935	178,965	49,250	73,960	302,175
1936	186,158	53,304	66,033	305,495
1937	194,251	60,410	53,320	307,981
1938	177,077	57,674	46,985	281,736
1939 (estimate)	121,408	91,281	32,943	245,632
1940 (")	105,805	66,604	27,791	200,200

Note: Figures for 1937, 1938 and 1939 are budgets, others being settled accounts.

Under the Road Law promulgated in 1919 the roads are divided into 4 classes, viz., Koku-do, (National roads), Fuken-do (Prefectural roads), Shi-do (Municipal roads), and Choson-do (Town and Village roads).

The first class comprises roads from Tokyo to the Great Shrine of Ise, Headquarters of Army divisions, Naval stations, Prefectural capitals, etc. The prefectural roads are those connecting the Prefectural capitals and other important points within a Prefecture, and so forth. The normal widths of National and Prefectural roads are to be more than 24 ft. and 18 ft. respectively.

Important municipal roads are to be more than 18 ft. in width, and town and village roads, 12 ft. The ruling grade for national roads is 1 in 30, and that of prefectural roads 1 in 25 in the flat country, and 1 in 15 and 1 in 10 in mountain defiles. The bridges on national and prefectural roads should carry a uniform load of 100 lb. per sq. ft., 12 ton steam roller, and 8 ton wagon. At the end of March, 1939 the total length of roads in the country was; national 8,617,000 meters, prefectural 114,466,000, municipal 56,863,000 meters, and others 735,376 meters. The following statistics will serve to show the progress of the construction work in recent years:—

Table 29. Statistics of Road (Unit: In kilometers)

Year	National	Prefectural	Local	Municipal	Towns & villages	Total incl. others	Of which		
							Bridges	Ferries	Tunnels
1932	8,146	99,257	37,063		806,123	956,962	3,627	579	—
1933	8,140	101,302	40,455		812,295	968,560	3,690	631	—
1934	8,227	100,483	43,528		818,407	977,082	3,683	643	—
1935	8,463	109,584	45,018		807,337	971,442	3,687	639	—
1937	8,616	122,477	54,758		728,870	906,105	3,696	604	149
1939 (March)	8,617	114,466	56,863		735,376	916,322	3,798	595	144

Table 30. Statistics of Bridges
(A) Number of Bridges

Year	National	Prefectural	Local	Municipal	Towns & villages	Total incl. others
1932	8,115	89,289	1,896	17,127	269,461	388,113
1933	8,143	90,689	1,890	18,799	274,989	396,716
1934	8,190	89,354	1,810	18,726	278,465	398,729
1935	8,281	90,981	2,110	19,548	278,411	401,490
1936	8,348	93,573	1,991	20,738	279,304	403,954

(B) Classified by Width

Year	Classified by Width				
	2-20 meters	20-60 m.	60-120 m.	120-200 m.	Above 200 m.
1932	363,886	19,772	3,045	897	513
1933	371,878	20,068	3,311	926	533
1934	373,562	20,417	3,222	991	537
1935	475,494	21,163	3,270	991	572

COMMERCIAL AVIATION

In January, 1936, air traffic was inaugurated between Fukuoka and Taihoku, Formosa via Naha 1,610 kilometers) and in the summer of the same year, two other lines were added, one connecting Taihoku with Taichu and Tainan, and the other Taihoku with Giran and Karenko, both lines being in Formosa. In the autumn of the same year, two air routes with Tokyo as a centre were added, viz. the Tokyo-Niigata line and the Tokyo-Toyama-Osaka line. In the meantime two more routes with Osaka as a centre were started, viz. the Osaka-Tottori-Matsuye line and the Osaka-Tokushima-Kochi line. In April, 1937, the aerial line Tokyo-Sendai-Aomori-Sapporo, covering 940 kilometers, was opened to traffic, and on June 1st of the same year, express services between Tokyo-Hsinking and Tokyo-Tientsin were commenced to cover the distances in one day respectively. These express services connect at Fukuoka with the Taiwan, Keijo and Dairen lines, and the latter connects at Dairen with the Keitsu Koku Koshi's Dairen-Tientsin line. There also exists a mail service between Tainan and Mako, covering 95 kilometers. Besides the above routes which cover a distance of 9,871 kilometers, there are the Nippon Koku Yuso Kenkyusho line (540 kilometers), the Tokyo Koku line (150 kilometers), the Nippon Kai Koku line (240 kilometers), and the Ando Hikoki Kenkyusho line (67 kilometers), etc. making a total of approximately 11,000 kilometers.

The Yokohama-Saipan-Palao service, which for the first time connects Japan Proper by regular planes with the Mandated South Sea Islands, was established on April 1, 1939, and for the time being is confined to the transportation of mail. The initiation of the latter service is said to be a preparatory move for the eventual opening of an air travel system between Japan and the American continent.

Period of Expansion

Development of civil aviation lagged behind other countries until about 1934. The greatest expansion has taken place since 1936, and present plans call for an extension of air routes, particularly to the Asiatic countries on a large

scale. In the past, regular services between Japan and China were made impossible by objections from China, but recently routes were opened between Tokyo and Peking via Fukuoka, Tsingtao, Tientsin (2,500 kilometers), and between Fukuoka-Shanghai-Nanking-Hangchow-Shanghai (1,600 kilometers). In the north of China the air service between Dairen and Tientsin, operated by the Keitsu Koku Koshi, was extended as far as Peking from June 1, 1937. These two Sino-Japanese air routes are expected to become the trunk lines for international routes, and are at present subsidized by the Japanese Government. In Central China, an air route may be connected with the Chungghoa Air Company's Shanghai-Hongkong line and may further be extended to America, French Indo-China, Siam, etc. The development of air routes in North and Central China, may be stimulated by Government subsidies included in the budget for the fiscal years of 1937 and 1938. These subsidies are given in view of the five-year plan of aerial extension, and in conjunction with the Aircraft Manufacturing Encouragement Law, which was passed at the 73rd session of the Imperial Diet. Auxiliary equipments such as aviation fields, aircraft radio, aviation beacons, aerial weather bureaus, etc. are still insufficient, but large-scale improvements, including radio beacons, are now under contemplation. As regards research, a central laboratory with a donation of ¥98,000,000 will function from 1939 and continue work for 5 years under the supervision of the Ministry of Communications.

Government Control

As so important a national utility as aviation could not safely be left to the mercy of private enterprise, governmental control was secured by the establishment of the Aviation Council. The members of this Council consist of the Vice-Ministers of the Departments of War, Navy, Education, and Communications; and such other persons as may from time to time be re-operated. All questions referring to the basic theory of flying machines comes within the purview of the Council, which is empowered to make recommendations to the different ministries concerned.

In order to popularize aviation and to extend a better knowledge and understanding of flying, a number of leading enthusiasts founded the Imperial Aeronautical Association. With the interest on the half million yen granted from the Privy Purse and the subscription of two yen contributed monthly by the individual members, the Association not only carries on a very active propaganda by means of lectures, cinemas, exhibitions, etc., but also makes donations in the form of bonuses on excellence or of condolence money in the case of accidents directly due to aviation.

The International Aviation Commission is a permanent body, created in accordance with the terms of the Treaty relative to Aviation, and makes or receives proposals to and from the signatory Powers, and deals with all questions envisaged by the Treaty.

Close connection is maintained between civil aviation in this country and that in other countries by the International Federation, which exchanges with similar federations elsewhere such information as may be of value in the conduct or development of their special department.

All questions relating to the construction of flying machines, metallurgy, chemistry, physics, atmospheric conditions, etc., are assigned to the different individual clinics in the Aeronautical Institute, located in the grounds of the Department of Agriculture of the Tokyo Imperial University.

Five-Year Air Programme

In answer to an interpellation by Baron Ryoitsu Asada at the plenary meeting of the House of Peers on January 28, 1938 Mr. Nagai, Communications Minister, revealed the whole details of the five-year civil aeronautical development plan which has been the object of considerable public attention. The burden of his statement is as follows:

"The three basic principles underlying the present plan for the development of civil aeronautics are, first, the replenishment and development of the productive capacities of the airplane manufacturing industry, second, the training of aeronauts, and third, the extension of both national and international air routes. In order to extend the airplane manufacturing capacities of the civil air industry, it is necessary to build up the industry on a still more rational and scientific foundation and to encourage the civil aeroplane manufacturing industry. To that end, it has been decided, as a first step, to establish a Central Air Industry Research Station, which is scheduled to be brought into full realization in the course of

five years. When completed, it will be an aeronautical research organ superior to any of its kind in the world. As an appurtenant provision, a big factory will be established, which will be capable of breaking up real planes for testing purposes, thus making a final test of real ones instead of models as hitherto. This establishment will be used not only for the civil aeronautical industry alone but for the Army and Navy too.

"As part of the next fiscal year, an expenditure for preparation purposes has been estimated. At the same time, a Bill for airplane manufacturing industry regulations is to be introduced into the present session of the Diet. The object of the regulations is to prevent the reckless establishment of airplane manufacturing companies and thus to insure the uniform control of capital in the line of industry so as to guarantee factories on a big scale and with full equipment. The regulations also provide for the enforcement of a subsidy and a tax remission system for this line, with a view to its encouragement.

"Under the plan, as many aeronauts as possible will be trained for both peace service and emergencies. Airmen thus trained will be recognized as second-class aeronauts and be qualified for entering professional schools by way of insuring them against possible employment difficulties. They will also be allowed to engage in ordinary occupation in ordinary times if they so desire. Those desirous of entering upon the profession of air, will be made to enter the Central Airmen Training Institute, which is to be established under the new plan. Upon finishing the course of that institute, they will be appointed first-class aeronauts. Pending the establishment of that institute, a temporary aeronaut training station will be established at once, and for the next fiscal year, 500 men will be taken into the station.

"Under the plan, it is provided for 28 new aerodromes to be established throughout the country. At the same time, measures will be taken to extend the international air lines and to establish such new ones as are required. As the aeronautical administration, the present Aeronautical Industry Investigation Committee at the Communications Ministry will be enlarged in scope by taking in the services of private persons of sufficient knowledge and with rich experience."

Japan Airways Company Law

In order to achieve a rapid expansion in aeronautical transportation in Japan and to enter into closer relations with the air services of Manchoukuo and China the Japan Airways

Company Law was passed at the 74th session of the Imperial Diet in 1939. The main operations envisaged are management of air traffic and investment in aeronautical transportation. The company must set aside a minimum of 5% of profit to losses and of 2% to equalize dividends. In order to compensate losses caused by traffic accidents, the company must accumulate a fund, the amount of which will be fixed by the Government.

The Government has the right to supervise the company and to appoint the President, Vice-President and directors of the company. Ex-officials who have been supervising the company cannot become executives of the company for five years after their resignation from Government service. The increase of capital, the issue of debentures and the revision of by-laws, the appropriation of profit, conclusion of loans, amalgamation and dissolution, as well as major decisions and modifications in regard to operations are subject to the approval of the Government. The Government may issue orders necessary from the viewpoint of military and other public interests. Any losses caused by such Government orders may be compensated by the Government.

The Government may grant a subsidy to the extent of a sum approved by the Diet for regular services. The Government guarantee a minimum dividend of 6% for ten years after the establishment of the company. Dividends will not be paid on Government-owned shares until private-owned shares have been satisfied to the extent of 6%. The company will be privileged to issue debentures to an amount of twice its paid-capital. The Government will guarantee the payment of the principal and the interest on such debentures. The company will be exempted from State and local taxes on income and profit.

According to its plan, the company will increase its capital from 25 million yen to 100 million yen, the additional ¥74,500,000 to be shared by the Government and private interests on an equal basis.

Recent Accomplishments

Long Distance Record.—A noteworthy achievement in Japanese civil aviation during 1938 was a new world record for distance over a closed circuit and for average speed established by a large long-distance plane designed by the Imperial University Aeronautical Research Institute. This machine, piloted by two of the army's late best fliers, Major Fujita and Sergeant Takahashi, took off from Kisarazu at 4:55 a.m. of May 13 and began its flight over a

quadrangular course of 401.7 kilometers. It completed 29 laps and landed at Kisarazu at 7:18 p.m. of May 15 after remaining in continuous flight for 62 hours, 22 minutes and 49 seconds. The total distance flown was 11,651.11 kilometers, and the average speed was 186.775 kilometers per hour.

Flights to Siam and Iran.—A round trip flight to Siam, over a distance of approximately 5,000 kilometers was successfully conducted by a Heinkel plane of the Japan Airway Company in January, 1939. The plane took off from Tachikawa, near Tokyo, on January 25 at 6:44 a.m. and after refuelling at Taihoku, Taiwan, reached Bangkok the following day at 5:25 p.m. The plane departed from Bangkok at 1 p.m. of February 4th and returned to Tachikawa at 4:52 p.m. of the following day after stopping over at Taihoku for one hour.

The trip to Iran by the "Soyokaze" called for a flight of 12,061 kilometers which was negotiated in 46 hours and 50 minutes. The "Soyokaze" left Tokyo April 9 and arrived at Teheran on April 15. The plane returned to Tokyo on May 28th over the same route.

German Flight to Japan.—A brilliant record was established for the flight from Berlin to Tokyo by the German monoplane Condor, manned by Captain Alfred Henke and five others, in December 1938. The entire distance of 14,180 kilometers was negotiated in 46 hours, 20 minutes and 52 seconds, the time of actual flight being 41 hours, 1 minute and 52 seconds. The plane which left Berlin at 11:50 p.m. on November 28 arrived at Tachikawa, near Tokyo, at 10:52 p.m. November 30.

Round-World Flight.—A flight around the world was projected by the Osaka Mainichi and the Tokyo Nichi Nichi newspaper company in 1939. The bi-motored land plane, of domestic manufacture, took off from the Haneda airport, of Tokyo on August 26 and completed the world flight on October 20th, the total trip taking fifty-five days, three hours and twenty minutes. The bi-motored plane, named the Nippon, actually spent, however, but 195 hours, 24 minutes and 28 seconds in the air on this world-girdling jaunt. The total distance flown was 52,860 kilometers. The points touched were: Sapporo, San Francisco, Los Angeles, Albuquerque, Chicago, New York, Washington D.C., Miami, San Salvador, Cali, Lima, Arica, Santiago, Buenos Aires, Santos, Rio de Janeiro, Natal, Dakar, Agadir, Casablanca, Seville, Rome, Rhodes, Basra, Karachi, Calcutta, Bangkok, Taihoku and Haneda. The longest hops were one of 4,000 kilometers between Sapporo and Nome and 3,030 kilometers between Natal and Dakar.

Table 35. Distance and Fares of Principal Airways
Sapporo-Dairen; Fukuoka-Taihoku Line

Sapporo	¥ 20	¥ 37	¥ 55	¥ 72	¥ 80	¥ 110	¥ 170	¥ 220	¥ 134	¥ 150	¥ 162	¥ 172	¥ 190
280 km.	Aomori	17	35	52	60	90	150	200	114	130	142	152	170
610	330 km.	Sendai	18	35	43	73	133	183	97	113	125	135	153
940	660	330 km.	Tokyo	17	25	55	115	165	79	95	107	117	135
1286	956	626	296 km.	Nagoya	8	38	98	148	62	78	90	100	118
1375	1095	765	435 km.	Osaka	30	90	140	54	70	82	92	110	
1875	1595	1265	935 km.	Fukuoka	60	110	24	40	52	62	80		
2785	2505	2175	1845	1549	1410	910	Naha	50	84	100	112	122	140
3485	3205	2875	2545	2249	2110	1610	700 km.	Taihoku	134	150	162	172	190
2205	1925	1595	1265	969	830	380	1240	1940	16	28	38	55	
2439	2159	1829	1499	1208	1064	564	1474	2174	234	234	Keijo	12	40
2639	2359	2029	1699	1403	1264	764	1674	2374	434	200	Heijo	10	28
2799	2519	2189	1859	1563	1424	924	1834	2534	594	360	160 km.	Shingishu	20
3072	2792	2462	2132	1836	1697	1197	2107	2807	867	633	483	273 km.	Dairen

Tokyo-Saipan-Palau Keijo-Kanko-Seishin

Tokyo	¥ 235	¥ 375	Keijo	¥ 18	¥ 35
2610 km.	Saipan	140	270 km.	Kanko	18
4180	1570 km.	Palau	540	270 km.	Seishin

Taiwan Inland Line

Taihoku-Taichu	8	135
Taichu-Tainan	9	135
Tainan-Byoto	5	40
Byoto-Taito	13	150
Taito-Karenko	10	155
Karenko-Giran	11	110
Giran-Taihoku	6	40
Tainan-Mako	10	90

Tokyo-Hsinking Keijo-Dairen Express Services

Tokyo	¥ 30	¥ 65	¥ 105	¥ 149	¥ 170	¥ 150
425 km.	Osaka	35	75	119	140	120
925	500 km.	Fukuoka	40	84	105	85
1475	1050	550 km.	Keijo	44	65	45
2045	1620	1120	570 km.	Mukden	21	
2820	1895	1395	845	275	Hsinking	
2025	1600	1100	550		Dairen	

Chinese Enterprise

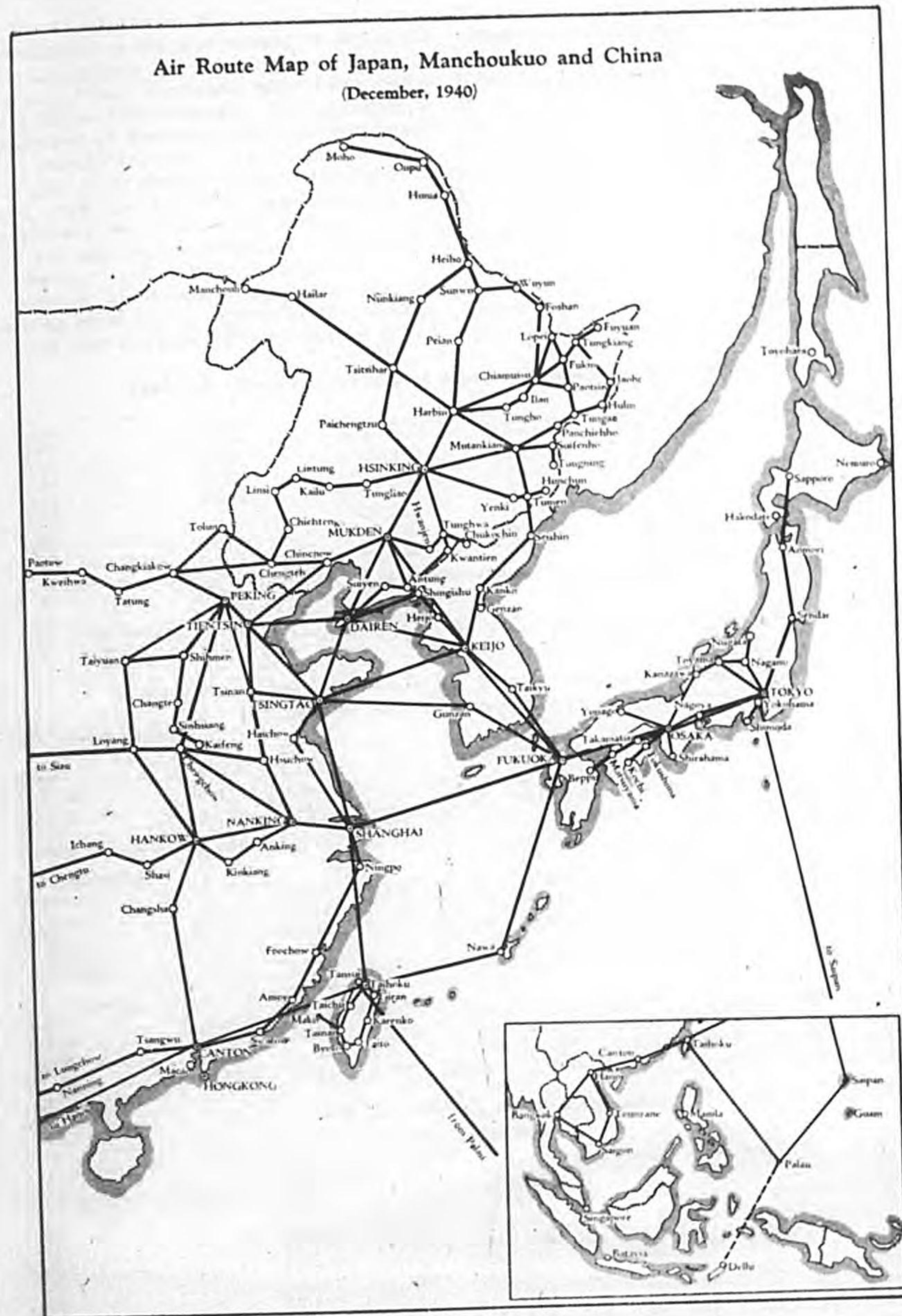
Tatung	¥ 22	¥ 47	¥ 62	¥ 107	¥ 147	¥ 192	¥ 217	¥ 112	¥ 87	¥ 93
Changchiakow	25	40	85	125	170	195	90	65	76	
Peking	15	60	100	145	170	65	40	51		
Tientsin	45	85	130	155	50	25	36			
Tsinan	40	85	110	95	70	81				
Hsuechow	45	70	135	110	121					
Nanking	25	180	155	166						
Shanghai	205	180	191							
Kanzawa	50									
Dairen										
Osaka										
Chinchow										11

Tokyo-Toyama-Osaka

Fukuoka	¥ 85	¥ 110
950 km.	Shanghai	25
1220	270 km.	Nanking

Fukuoka-Tsingtao-Peking

Fukuoka	¥ 85	¥ 135	¥ 150
930 km.	Tsingtao	50	65
1370	440 km.	Tientsin	15
1480	550	110 km.	Peking



The Imperial Aero Association.—Is the first organization of the kind created in Japan and was incorporated in 1914. It is presided over by H.H. Prince Nashimoto, while Baron Sakatani acts as Vice-President. The association is maintained on donations from interested public and subscriptions paid in by the members, but the fund at its disposal is still very small. In June 1919 the Association was formally admitted into the International Aviation Convention and sent its representatives to the general conferences held at Paris, London, etc.

Training of Aviators.—Applicants for the training given at the expense of the Aviation Bureau must be single males of between 17 and

20 years of age, who pass first the physical examination according to the Military standard and next an examination of scholarship, the latter being modelled on the 3rd year course of the middle school. Under the Air Navigation Law in force since June 1927 the licenses for civilian aviators are specified as aerial navigators, aeroplane (hydroplane) pilots, airship pilots, balloon pilots (balloonists), aeroplane mechanics, etc.

Aerodromes.—As in October 1938 there were 25 aerodromes for the use of the public (inclusive of hydro-aerodromes) in Japan, Taiwan, Chosen and Dairen and 15 (inclusive of six for land) for not public use in Japan, totalling 40.

Table 31. Operation Results of Japanese Regular Air Service Cos.

Fiscal Year	No. of flights	Distance of flights (kms.)	No. of passengers	Quantity of goods carried (kgs.)	Quantity of mail-matters carried (kgs.)
1933	6,552	1,933,290	11,779	51,755	221,792
1934	6,928	1,892,722	13,211	60,739	199,247
1935	7,084	2,037,506	11,877	75,643	265,564
1936	.....	3,037,332	20,996	83,947	357,259
1937	.....	5,345,343	50,149	252,572	596,914
1938	.....	6,153,000	68,427	275,840	754,322

Table 32. Excess Baggage & Freight Rates

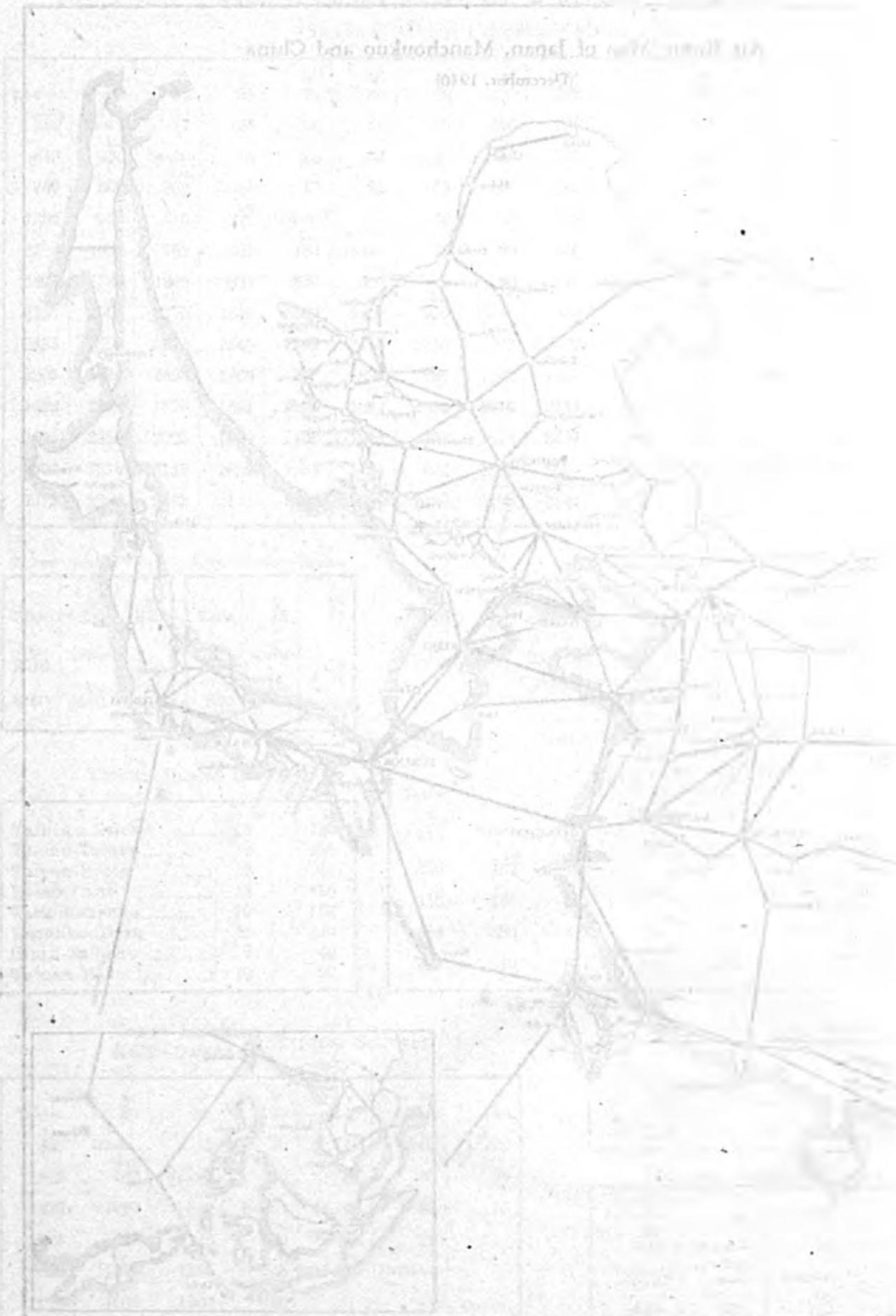
	Per 1 k.g.	Per 1 k.g.
Up to 1,000 kms.	¥1.00	Up to 2,000 kms. ¥2.00
" 1,500 kms.	1.50	" 2,500 kms. 2.50

Table 33. Japan's Position in Air Transport Budgets & Subsidies
(All kinds of currencies converted into ¥1,000)

(A) Total Budgets	1930	1931	1932	1933	1934	1935	1936	1937	1938
Japan	3,738	4,132	4,324	1,857	1,882	1,707	3,108	8,270	14,502
Germany	22,568	20,861	24,569	89,101	152,738	163,979	.....	.....	.....
France	37,215	39,869	43,627	78,755	82,915	84,527	55,366	54,120	46,738
U. S. A.	20,863	23,055	23,684	39,548	21,183	24,225	32,458	52,418	53,443
United Kingdom	5,228	6,663	6,055	10,967	12,090	13,398	15,461	42,818	54,066
(B) Subsidies	1930	1931	1932	1933	1934	1935	1936	1937	1938
Japan	3,399	3,037	2,545	1,539	1,124	1,030	1,863	4,059	5,920
Germany	9,367	9,111	11,760	25,674	25,813	26,379	28,955	35,366	.....
France	17,313	15,995	16,298	35,698	36,165	39,472	27,371	39,199	.....
U. S. A.	.....	.....	.....	.....	.....	.....	.....	.....	.....
United Kingdom	4,258	5,303	4,885	8,976	9,892	8,001	7,373	14,598	21,060
(C) Exchange Rates (In Yen)	1930	1931	1932	1933	1934	1935	1936	1937	1938
Mark	0.493	0.484	0.625	1.142	1.250	1.342	1.365	1.418	1.355
Franc	0.081	0.080	0.104	0.190	0.205	0.224	0.224	0.165	0.111
Dollar	2.036	2.020	2.500	4.733	3.306	3.418	3.455	3.501	3.404
Pound	9.848	9.821	8.707	15.802	17.143	16.916	17.028	17.131	17.104

Table 34. Civilian Aviation Record
(All kinds of flights are included)

	No. of Flights	Hours of flights	Distance (kms.)	Casualty		Machines damaged		Motors damaged	
				No. of killed	No. of injured	Serious	Slight	Serious	Slight
1930	30,018	15,499	2,346,021	1	4	6	16	3	24
1931	51,370	20,600	3,010,260	12	18	24	33	9	20
1932	51,984	19,422	2,807,113	14	10	21	30	16	30
1933	53,521	22,104	3,153,860	11	23	25	22	13	31
1934	57,922	25,887	3,758,043	9	20	20	25	10	23
1935	68,044	28,606	4,201,777	9	30	29	27	17	19



with Government permission. The importation of these ships for operating purposes is practically prohibited. The import duties on ships have steadily risen. At present they are ¥15.00 per ton for vessels of under 20 years of age and ¥20.00 per ton for the others. Besides, there is an additional duty of 35 per cent. The prohibition or restriction of the importation of ageing ships alone is not enough in order to improve the quality of the shipping of the country. Therefore, a few years ago the Government enacted a shipbuilding subsidy law.

Movement of Principal Cargoes.—Principal goods carried by Japanese shipping are coal,

timber, bean-cake, sugar, rice, wheat, raw cotton, salt, ores. Coal is the most important of all the goods, followed by timber. These two items occupy 70 to 80 per cent. of the entire volume of cargoes. So coal and timber freights are the standard rates in the Japanese freight market.

Shipping Receipts in Invisible Trade.—Japanese shipping plays an important role in increasing Japan's invisible trade receipts. The balance of revenue over expenditure classified under this head has increased from ¥100,641,000 in 1931 to ¥193,862,000 in 1936. In the latter year receipts were ¥334,612,000 and expenditure ¥140,750,000.

Table 2. Number and Tonnage of Ships in Japan Proper

(a) Registered Ships
Table with columns for Steamers, Sailing vessels, Other sailing vessels measured in koku*, and Total. Rows show years from 1870 to 1938 with No. and Tonnage.

(b) Unregistered Ships

Table with columns for Steamers, Sailing vessels, Other sailing vessels measured in koku*, and Total. Rows show years from 1914 to 1938 with No. and Tonnage.

Note.—* 10 koku calculated as 1 ton.

Table 3. Increase and Decrease of Registered Ships

(Unit: tonnage in 1,000)
Table with columns for Steamers and Sailing Vessels, each subdivided into Newly Registered, Cancelled, and Net Increase. Rows show years from 1927 to 1938 with No. and Tons.

Note.—The above statistics prepared by the Dept. of Communications were the results of investigation made on vessels of over 20 tons. "Newly registered" include those launched in Japan, purchased from abroad, and those re-conditioned. "Register Cancelled" include those shipwrecked, scrapped, sold abroad and transferred to Japanese colonies.

Table 4. Steamers in Japan Proper by Age, Speed & Tonnage

(Unit: Tonnage in 1,000)

(A) By Age (Vessels Under 1,000 tons excluded)
(B) By Speed (Vessels Under 1,000 tons excluded)
(C) By Gross Tonnage (Capacity tons)
Multiple tables with columns for Age, Speed, and Gross Tonnage categories. Rows show years from 1932 to 1938 with No. and Tons.

LEADING SHIPOWNERS

The Japanese shipowners owning 30,000 or more tons gross, are listed below:—

Table 5. Leading Shipowners (August 1939)

Table with columns for Name, Office, No. of Vessels, Gross Tonnage, Name, Office, No. of Vessels, Gross Tonnage. Lists major shipowners like N.Y.K., O.S.K., Mitsui Bussan, etc.

Note.—Exclusive of vessels under 200 tons. * Merged into N.Y.K. in August, 1939.

The shipping companies given above may be broadly divided into two groups. One represents those engaged chiefly in the regular passenger service and the other those engaged

chiefly in the irregular freight service. To the former belong the two largest shipping companies of Japan, namely, the Nippon Yusen Kaisha and the Osaka Shosen Kaisha and their

Light Houses, Marks and Signals

The first regular light house was erected in Japan at Kannonzaki, in the Bay of Tokyo on January 1st, 1869. The Kannonzaki lighthouse and those at several other places erected before 1880 were all built under the supervision of for-

eign experts. In 1881 Japan could dispense with the service of foreign experts, all the light houses and other signals built since then being the work of Japanese.

The number of light houses, buoys and beacons is as follows:—

Table 14. Number of Lighthouses, Buoys and Beacons

(End of Dec.)	Lights		Day marks	Fog signals	Signal stations	Radio stations	Total
	Light-houses	Others					
1882	136	...	72	3	—	—	211
1902	158	...	70	12	—	—	240
1916	264	...	123	23	7	—	417
1926	374	...	525	39	11	—	949
1932	299	295	130	43	11	14	792
1933	305	306	126	43	11	18	809
1934	327	341	137	43	11	29	888
1935	351	380	142	43	11	31	958
1936	378	395	154	46	11	21	1,005
1937	397	426	159	48	11	21	1,062
1938	414	443	169	49	11	21	1,107
1939 (End of June)	423	449	200	49	11	24	1,157

Table 15. Number of Shipwrecks

	Steamers		Sailing Vessels		Total	
	Total Loss	Serious Damage	Total Loss	Serious Damage	Total Loss	Serious Damage
1927	44	1,716	114	342	158	2,058
1928	37	1,551	115	353	152	2,014
1929	36	260	112	142	148	402
1930	41	243	165	179	206	422
1931	33	252	153	155	186	407
1932	29	218	98	143	127	361
1933	22	194	127	171	149	265
1934	19	178	108	154	127	332
1935	20	200	73	184	93	384
1936	26	160	93	200	119	360
1937	26	131	102	233	128	364
1938	27	159	107	218	134	377

Table 16. Casualties from Shipwrecks

	Steamers			Sailing Vessels			Total		
	Lives lost	Injured	Unknown	Lives lost	Injured	Unknown	Lives lost	Injured	Unknown
1927	69	34	193	47	28	75	116	62	268
1928	71	53	163	51	2	49	122	55	212
1929	49	64	112	19	11	51	68	75	163
1930	94	49	105	19	10	51	113	59	156
1931	61	90	129	49	25	143	110	115	272
1932	75	97	103	38	11	73	113	108	176
1933	159	14	69	35	10	177	184	24	246
1934	26	15	64	37	3	38	63	18	102
1935	116	52	78	13	4	34	129	56	112
1936	36	10	84	24	18	104	60	28	188
1937	122	54	117	18	5	91	140	59	208
1938	58	86	34	37	8	67	95	94	101

Salvage Work

The successful salvaging of £100,000 sterling specie early in August, 1925 achieved by Captain Yumihachi Kataoka from the N.Y.K. Yatsuka Maru sunk by a German submarine on December 21, 1915, at a point about 70 miles off

Port Said and about 40 fathoms deep, has won him a wide fame.

Prior to the remarkable salvage achievement of reclamation described above, the salvage work of Japan had nothing particular to commend itself to public attention. In point of

fact, it was as late as 1917 that the first company in this particular line was established in Osaka. At present there is one salvage company in Japan, the Japan Salvage Company capitalized at ¥225,000,000 paid up. Among its recent accomplishments is the salvaging of the N.Y.K. liner Asama Maru (17,000 tons) off Hongkong in the spring of 1938, in what is claimed to be an outstanding feat of its kind.

Imperial Marine Observatory at Kobe

The Institute was established in April, 1919, at a cost of ¥230,000 by the leading business

men interested in shipping. Its principal aims are to make scientific investigations in meteorology, oceanography, terrestrial magnetism and nautical astronomy, in the interests of the seamen of all nationalities, and also to repair and certify marine chronometers, mariners' compasses, sextants and other measuring instruments of navigation. Daily weather charts, weekly weather reports, bulletins and other scientific memories are being published. This is the fifth of the kind in the world and is provided with a wireless station.

SHIPBUILDING

Introductory Remarks

It was not until the closing days of the Shogunate Government that the country was awakened to the necessity of building foreign style ships. In view of the growing pressure from without, the Government perceived the acute necessity of providing for national defence and so took in hand construction of foreign style vessels. In the 1st year of Ansei (1854) the Shogunate Government erected a shipyard on a western model at Uruga. In the fourth year of the same era another shipyard was established at Nagasaki and in the first year of Genji (1864) another at Yokosuka. Besides, shipyards were erected at Ishikawajima, Tokyo and at Hyogo, respectively. As a result of the restoration of the Imperial regime the management of these shipyards was all taken over by the new Government. As the country had been secluded for over two centuries, it was not to be wondered at that it lagged far behind the western countries in the art of shipbuilding. The authorities of the new Government took every measure available to develop the industry. While good experts were invited from the advanced countries of the West to train the native shipbuilders, many native experts and workmen were sent abroad for study and practice. It is due to these unsparing efforts on the part of the authorities that the country has now attained the position of a first class country in the world of shipbuilding.

In the year following the close of the China-Japan War, or 1895 the Government promulgated the Shipbuilding Encouragement Act for the purpose of protecting the shipbuilders and subsequently promulgated the Navigation Encour-

agement Act, thereby giving the shipowners the opportunity to open new routes and inducing them to improve their ships. The enactment of these two legislations laid a cornerstone for the development of the shipbuilding industry and benefited immensely both shipowners and shipbuilders. On the promulgation of the laws, three big shipowners, viz., the Nippon Yusen Kaisha, the Osaka Shosen Kaisha and the Toyo Kisen Kaisha placed orders with home shipyards instead of foreign yards. This change of attitude on the part of the shipowners caused a revolution to the shipbuilding industry. The period intervening between the Russo-Japanese War and the World War was marked by an extraordinary development of the shipbuilding industry of the country. Ocean leviathans were launched one after another during the period. It was during this period that N.Y.K. built two big steamers for the European run, one being the Kashima Maru and the other the Katori Maru. The former was built at the Kawasaki Shipyard and the latter at the Mitsubishi Shipyard. In referring to this period mention must not be omitted of the fact that the construction of warships, which had been in principle confined to the government yards, began gradually to be entrusted to private yards owing to their development. In 1913 two large battle-cruisers, viz., the Haruna and the Kirishima were built at private yards. The former was launched at the Kawasaki Shipyard and the latter at the Mitsubishi Shipyard. It must also be mentioned that during this period the Shipbuilding Encouragement Act was revised and the Ocean Navigation Subsidy Act was enacted, while a policy of protective tariff for ships was laid down. These measures contributed immensely towards the development of the shipbuilding industry.

ed for the South American run and for the Pacific Coast of North America. The new ships placed on the South American run are the Argentina Maru and the Brazil Maru while a sister ship is nearing completion by the O.S.K. The N.Y.K. has also built the motorship Nitta Maru, while the Yawata Maru and Kasuga Maru, of 17,000 tons and 22 knots each, are soon to be completed. Originally planned for the Suez route to Europe, it has been decided to place them on the Pacific North America route because of the dangers of European waters at the present time.

Of the total orders placed up to the end of May, 1939 cargo vessels accounted for 165 and 808,670 tons. Vessels larger than the 7,000 ton class were 34 in number and comprised 306,600 tons, while those below 6,000 tons were 133 in number and totalled 502,070 tons. Compared with the figures for November 30, 1938 or six months earlier, the former class showed a decline of two in number and 27,930 in tonnage, but the latter class gained 85 in number and 325,420 in tonnage. This trend is expected to become more pronounced. In other words, the shipbuilding industry is directly reflecting the movement of shipping from large sized vessels for deepsea service to small and medium-sized bottoms for coastal trade. It should be noted that accompanying the general movement to restrain prices, demands are being made for lower shipbuilding costs, which probably will be realized eventually in some form. However, the current boom in shipbuilding is expected to go on for a fairly long time.

From the technical viewpoint, there has been a tendency towards replacing diesel engine for steam turbines in association with reduction gearing on account of the progress made in the economic utilization of coal. In medium and small vessels, reciprocating engines combined with exhaust steam turbines have been preferred by most shipowners.

New Liners for Trans-Pacific Service.—Two vessels of 26,000 tons each have been under construction at the Mitsubishi and Kawasaki dockyards for the N.Y.K. and are to be placed on the Trans-Pacific service upon their completion in 1941 and 1942, respectively. The cost per vessel is ¥48,000,000, the government's subsidy per vessel being ¥28,800,000.

Marine Transportation Control Ordinance

The Government supervision over shipping was strengthened with the enforcement of the

Marine Transportation Control Ordinance from February 1, 1940. The essential articles of the ordinance are as follows:

(1) All orders concerning shipbuilding, repair, or use of ships as based on Article 8 of the National General Mobilization, all orders concerning the price of ships, freight and charter rates based on Article 19 of the same law shall be amenable to the present ordinance except where stipulations concerning them exist in the Price Control Ordinance. (2) A person undertaking shipbuilding shall apply for the permission of the Communications Minister in accordance with the provisions of the present ordinance. A similar permission shall be sought for chartering foreign ships. (3) The Communications Minister may issue to shipowners or shipbuilders orders necessary for limiting the extent of repairs or shortening of the period of repairs. This stipulation shall not invalidate Article 6 of the Factory and Workshop Control Ordinance. (4) The Communications Minister may charter ships to or from shipowners or shipping agents or commission the said shipowners or shipping agents with marine transportation. Charter rates and other particulars shall be decided among the shipping interests concerned. If no agreement can be reached or if no consultation is possible, the Communications Minister shall arbitrate. (5) The Communications Minister may designate navigation routes or areas or prohibit designated shipping from navigation or prohibit the transportation of designated persons or cargo or limit the transportation of the said persons or cargo.

National Policy of Shipping.—In view of the fact that under the present international situation, the promotion of shipping is of vital necessity in the way of national defence, a national policy of shipping was laid down in 1936 under the unqualified support of Adm. Nagano, the Minister of Marine, in the Hirota Cabinet. The details of the national policy of shipping are as follows:—

(1) Building capital ships: Discontinuing the system of improving the quality of shipping by subsidizing the construction of new ships by scrapping old ones, and subsidizing the building of 150,000 tons of passenger boats of 6,000 tons and of 20 knots each and of 150,000 tons of cargo boats of the same tonnage and of 18 knots each with a continuing expenditure of ¥6,000,000 spread over four years

(¥840,000 to be appropriated for the initial year).

- (2) Subsidizing ocean navigation: Subsidizing navigation for six months or more in the South Pacific east of Panama and west of Suez at the rate of ¥0.90 a ton per month with a five-year continuing expenditure of ¥11,000,000 (¥1,740,000 being allotted to the initial year).
- (3) Extending marine credit: Assisting the banks concerned in extending credit to shipowners by granting a sum of money corresponding to 1.6% of interest, the interest to be paid by shipowners being about 3.7% with a five-year continuing expenditure of ¥100,000,000 (¥30,000,000 being allotted to the first year).

Shipbuilding Industry Law

The purpose of the Law is to increase the supply of vessels at low costs and the maintenance of adequate shipbuilding capacity from the viewpoint of national defence. The Law as passed by the 74th session of the Diet in 1939 provides measures for Government protection and control of the shipbuilding industry.

By this Law, the shipbuilding industry is brought under strict Government supervision. The establishment of new enterprises, amalgamation, and cessation of work of shipbuilding companies are subject to permission from the Government.

Shipbuilders, however, are given the right of eminent domain and are allowed to issue debentures to an amount twice their paid-up

Establishment of Toa Kaiun K.K. (East Asia Shipping Company)

In order to effectively control shipping in the seas between Japan and China, the East Asia Shipping Company was established on August 5, 1939 at Tokyo with an authorized capital of ¥73,000,000. The principal business of the company will be (1) marine transportation in the seas between Japan and China, along the coast of China and on routes from foreign countries to China, (2) management of piers and warehouses, and (3) management of and investment in related enterprises. The routes to be managed under the new company are (1) Japan Proper-Tientsin, (2) Japan Proper-Tsingtao, (3) Japan Proper-Shanghai, (4) Japan Proper-South China, (5) Taiwan-Shanghai, (6) Taiwan-

capital. The Government may issue instructions as regards the building of hulls, engines, and equipments not yet made in this country, and may grant subsidies in such cases. They may also order shipbuilders to use domestic products in building hulls, engines, and equipment. The Government may set standards for quality and may disqualify products which do not conform to the standard.

The Government may, if necessary for the promotion of the shipbuilding industry, grant subsidies to either shipbuilders or shipowners. The Government may, in the public interest, order shipbuilders to effect changes in prices for vessels, hulls, engines, and equipments, as well as in repair costs, etc. The Government may also, when deemed necessary in the public interest, demand the installation, enlargement, and improvement of equipment, the repair of vessels, hulls, engines, and equipment, and the establishment of facilities for research on specified subjects. The Government may indemnify shipbuilders for any losses incurred by shipbuilders in the execution of these orders.

The Law also contains provision for cooperative associations which may be organized by shipbuilders for collective purchasing, administration of materials, establishment of facilities for common use, control of business activities of members, and research work for the common benefit. The Government may order members of these associations to comply with regulations and may instruct outsiders to join the organization. Finally, the Government may instruct such organization to undertake certain activities for the healthful development of the industry.

Tientsin, (7) Taiwan-South China, (8) Dairen-North China, (9) Tientsin-Shanghai, (10) Tientsin-South China, (11) Dairen-South China.

The new company will embrace the former shipping activities of the Nippon Yusen Kaisha (N.Y.K.), Osaka Shosen Kaisha (O.S.K.), Nishin Kisen, Kinkai Yusen, the shipping department of the Mitsui Bussan Kaisha, Kawasaki Kisen, Yamashita Kisen, Harada Kisen, Daido Kaiun, Okazaki Kisen, and Awa Kyodo Kisen. There will be 59 ships under the management of the company with a combined total of 200,000 tons. Investments by the Nippon Yusen Kaisha and Osaka Shosen Kaisha in cash and kind comprise 79% of the capitalization.

CHAPTER XXI

PUBLIC AND LOCAL FINANCE

THE BUDGETARY SYSTEM

I THE FISCAL YEAR

Japan's budgetary system, in its proper sense, originated in the year 1890 when the first session of the Imperial Diet was convoked. The budget for central finance is framed for one year. No appropriation for any specified year is applicable to any other: in other words, the estimated outgo and income for any one year are not transferable. The fiscal year, as a rule, runs from April 1 to March 31. In case of necessity, however, a special account may be extended over a period of years with the approval of the Imperial Diet. For instance, the Special Account which the Sino-Japanese war of 1894-5 called for was continued for a period of 16 months. The Special Account under which the war with Russia was financed in 1904-5 was carried on for a period of 3 years and 4 months. The Special estimate for extraordinary military expenses provided for in the expeditions sent abroad during and after the World War period, formed a "fiscal year" extending over 11 years.

II THE STRUCTURE OF THE BUDGET

A. The General Account

The budget falls into two parts: (1) General Account and (2) Special Account. In the former, national receipts from taxation and all other sources are presented as annual revenues, and all national disbursements as annual expenditures.

The estimates for the General Account mainly fall into two parts, estimated revenue and estimated expenditure. The estimated revenues are divided into two sections, ordinary and extraordinary. The classified revenues are arranged under titles, paragraphs, items, and sub-items. The estimated expenditures, likewise divided into ordinary and extraordinary sections, are listed according to the respective departments of government, including the Imperial Household (though treated on a separate and independent basis), under titles, paragraphs, items, and sub-items. Appropriations to be made under the respective titles and paragraphs are, by the law of public finance, prohibited from transfer from one to some other

head under which such estimates have been voted. The only exception to this rule is the Reserve Funds, which are provided under a separate title in the ordinary section of the expenditure estimates for the Department of Finance.

The Reserve Funds.—These funds are provided in the budget "in order to supply deficiencies, which are unavoidable, in the Budget," and to meet "requirements unprovided for in the same" From the nature of the objects for which they are provided, they may be used to meet disbursements other than those named in the budget, regardless of the above rule as to nontransferability among titles and paragraphs.

These funds consist of the First Reserve and Second Reserve Fund. The former is drawn upon to meet deficiencies in the Budget, and the latter to meet requirements other than those provided for in the Budget. In either instance, the assent of the Imperial Diet must be subsequently obtained.

The reserve funds are sometimes found insufficient to meet the current requirements. In such event constitutional procedure is either to convoke the Diet and obtain its approval for further expenditure, or to adopt an emergency financial measure with the consent of the Privy Council, as provided in the Constitution. But as a matter of fact most ministries by established usage dispense with such regular processes and make disbursements upon their own administrative authority, subsequently obtaining the approval of the Diet. This administrative procedure in finance is commonly known as "expenditure on the Government's responsibility", meaning that the administrative authority holds itself responsible for the outlay.

B. The Special Account

The management of central finance being complicated and covering a very wide range, it becomes well-nigh impossible to bring all fiscal business within the scope of the General Account alone. Hence it is the rule to approve, as an exceptional procedure, estimates for the Special Account, in addition to the General.

There were 34 Special Accounts in all up to

the outbreak of the China Incident in 1937, which called for the addition of two new Special Accounts. The above 34 accounts are classified into 4 groups according to their nature. The first group is for 5 colonial possessions, viz.: Korea, Formosa, Saghalien, Kwantung Province, and the South Seas Mandated Territory. Since each of these colonies has its own income from and expenditure for its own local measures, individual governments are required to draft their independent budgets for the approval of the Diet. In the event that there is a revenue deficit, the mother country takes steps to make it good, an appropriation being made in the General Account for the same purpose.

To the second group belong accounts for educational and cultural enterprises. They are in 4 kinds: Imperial universities, government colleges, other government schools, and government libraries and cultural work vi-a-vis China. Each of these accounts has its own income to cover its expenditures either wholly or in part.

The third group comprises accounts for government-operated undertakings. They are: the Mint, the Printing Bureau, the Monopoly Bureau, Army Arsenal, the Government Woolen Factory, Naval Arsenal, Naval Fuel Plant, Imperial Government Railways, Communications Services, Rice Control Administration, Deposit Bureau, Postal Life Insurance, Postal Annuity Service, Korean Postal Life Insurance, and Employees' Accident Insurance.

In this group with the exception of the Rice Control Administration which is a heavy loser, all the other undertakings generally strike a balance, at least. The Tobacco Monopoly and the Communications Services are outstanding profit makers, their large surpluses being annually transferred to the General Account, while the Deposit Bureau, whose resources in the main consist of postal savings, pays an important part in the fiscal scheme of the Government by taking up large shares of national loans every year.

The fourth group of Special Accounts is for facilitating the receipt and expenditure of special funds. They are 8 in number: National Debt Service, Public Loan Proceeds, State Property Liquidation Funds, Education Funds, Funds for Improved Education and Agrarian Economic Betterment, Naval Arsenal Funds, Korean Railway Stock and Supply Funds, and Formosan Railway Stock and Supply Funds.

Such being the character of Special Accounts, any deficits occurring therein are listed in the General Account as expenditures and any surplus is either utilized as capital for the special

account originating such surplus, or transferred to the General Account as a revenue item. Consequently, the financial burdens of the population of Japan proper ultimately converge into the General Account.

The estimates for the Special Account take the forms of (1) Single Budgetary System and (2) Plural Budgetary System. The former system is the same as that seen in the estimates for the General Account; that is to say, the estimates are divided first into revenue and expenditure, secondly into ordinary and extraordinary sections, and thirdly, into classified titles and paragraphs, these latter falling into the further divisions of items and sub-items. Transference among titles and paragraphs is likewise prohibited. The plural Budgetary System is adopted in the afore-mentioned cultural and government enterprises. Estimates presented in this system comprise two or three, such as (1) operating account, (2) capital account, and (3) supply service account. Each of these classes is divided into revenue and expenditure, which are shown in further divisions ranging from titles, paragraphs and items to sub-items: the titles and paragraphs, as in the case of the General Account, being non-transferable.

Regular and Additional Estimates

The budgetary requests for appropriations are known as regular and additional or supplementary estimates, according to the time at which they are presented in the legislature. The regular estimates are, as a rule, ready for submission at the beginning of the ordinary session of the House, while supplementary estimates are submitted for legislative approval from time to time as occasion arises, after the regular budget is presented. A supplementary estimate, as a matter of general principle, is to be submitted only when the administration is obliged either to meet an extraordinary expenditure "of an unavoidable nature" or a deficit resulting from contractual obligations or legislative necessity. But as a matter of fact, a fiscal programme is generally presented in the form of an additional estimate when it is not likely to be approved either under the General or the Special Account, thus calling for political considerations.

Relations Between General and Special Accounts

A reference may be made at this stage to some characteristic points in the composition of the national budget as it has been in recent

years. Taking for instance the budgetary programme enacted for the fiscal year 1935-36, the total figures in the General and Special Accounts stood as follows.

1935-36 Revenue Estimates
(In ¥ million)

General Account revenue	2,215
Special Account revenue	8,619
Total revenue	10,834

1935-36 Expenditure Estimates
(In ¥ million)

General Account expenditure	2,215
Special Account expenditure	8,163
Total expenditure	10,378

The above total figures covering the estimates for the General Account and 34 estimates for the Special Account are indicative of duplications resulting from transferences among various accounts. Such duplications amounted in revenue to ¥2,829,000,000 and in expenditure to ¥2,507,000,000. After subtraction of these figures from the above total estimates, there was what was known as the New Budget which stood as follows:—

Revenue	¥8,005,000,000
Expenditure	7,870,000,000

III THE COMPOSITION OF THE BUDGET

Ordinary and Extraordinary Sections.—The budgetary estimates are framed on the basis of one year under the respective heads of revenue and expenditure. The revenues and expenditures are each divided into two sections, ordinary and extraordinary, and each of these sections are further divided into titles and paragraphs.

The Ordinary Section lists income and outgo accounts of a permanent character, though necessarily varying in amounts from year to year. For instance, the Ordinary Section of annual incomes comprises revenues from taxation, stamps, government-operated undertakings, and proceeds from state-owned property, while the Ordinary Section of expenditures takes in current expenses of all government departments, pensions, interest on savings, sinking funds, etc.

The Extraordinary Section, as the name indicates, lists extraordinary revenues and expenditures, although there is no legal regulation for determination of what should be regarded as fiscal operations of an extraordinary character. Decision of the question is entirely left to the discretion of the Minister of Finance. Taking for instance the budget for the year, 1937, this section of annual revenue included

the proceeds from deficit-covering state bonds and book-keeping transfers from the Special to the General Account, while the extraordinary section of expenditure enumerated such items as military and other expenses vis-a-vis Manchoukuo and public road improvements in Japan.

Divisions and Sub-divisions.—The ordinary and extraordinary sections of annual revenue and expenditure, as already mentioned, are divided first into titles and next into paragraphs. According to the detailed budgetary regulations, "deliberations upon annual revenues and expenditures should first be made upon each of the paragraphs and next upon the totals of the respective paragraphs, that it to say, upon the titles." The further divisions under items and sub-items are provided only as a matter of administrative convenience. In the case of estimates for state expenditure, appropriations made under items and sub-items are transferrable within their prescribed scope, with the sanction of the Minister of state concerned, but no transfer is possible among titles and paragraphs.

Book "A" Budget

The Budget consists of (1) a set of regulations and (2) three separate books of estimates. These regulations are 5 in number, for the 1st the second and the 3rd of which are provided in that order the three books of estimates respectively known as Book A (Ko Go), Book B (Otsu Go), and Book C (Hei Go).

Regulation No. 1 and Book A form what is commonly called "Ko Go Yosan"—Book A Budget. The article of regulation sets the estimated amounts of annual revenue and expenditure for the new fiscal year, while the book of estimates enumerates revenues and expenditures under titles and paragraphs. The revenues and expenditures are each divided into the ordinary sections, as above explained.

Expenditures for the departments of the government are given in the order of the Imperial Household, Foreign Affairs, Home Affairs, Finance, Army, Navy, Justice, Education, Agriculture-Forestry, Commerce-Industry, Communications, Overseas, (Colonial) Affairs and Public Welfare. The figures for the Railway Ministry are given in the Special Account.

Books "B" and "C" Budgets.—Regulations No. 2 and Book B, forming what is known as the Book B budget, present a list of estimates for continuing expenditures. While a budgetary estimate is given on an annual basis, expenditures in given cases are often required over a period of years.

Regulation No. 3 and Book C or the Book C budget submits for legislative approval the

transference of expenditure accounts from the old to the new fiscal year. These instances occur when state expenditures have not been completed in the year for which the appropriations were made, as not seldom seen in the cases of delayed construction or manufacture.

Treasury Bills and Loans

Regulations No. 4 relates to the issue of the Treasury Bills and loans from the Bank of Japan. By the Law of Public Finance, the Government may both issue Treasury Bills and obtain loans from the Bank of Japan, if such procedure is required to meet current fiscal needs. But these operations are subject to the rule that such bills and loans should be redeemed from the state revenues for the same fiscal year. The maximum limits for such fiscal procedure are subject to popular approval.

Contracts for Next Year.—Regulation No. 5 relates to contracts to be made for the year after the one for which the budget is submitted. Under the Finance Law, the Government may assume contractual relations with regard to undertakings other than presented in the current budget or otherwise submitted to the legislature. Such financial arrangement is called forth when emergency situations develop or natural catastrophes make special procedure necessary. The maximum limits for these contracts, however, must be set with the approval of the Diet.

IV THE BUDGET AND THE LEGISLATIVE PROCEDURE

Presentation of the Budget.—Under the administrative system of Japan the national budget is prepared annually and authority to do so to apprise the members of the Diet and the legislature. When the budget is compiled for the prospective year, generally in December, it is customary to prepare a summary so as to apprise the members of the Diet and the public of the financial program, in outline, for the next fiscal year. The Diet ordinary meets in late December and at once adjourns for a regular recess which lasts about four weeks.

The Budget First Before the Lower House.—When the budget is presented to the Diet, the estimates, whether for the General or the Special Account or supplementary, are always first laid before the House of Representatives, as provided in the Constitution. When the budget goes before either the Lower or the Upper House, it does so always at a full session, the Finance Minister giving his statement concern-

ing the estimates on the same occasion. This is followed by interchange of questions and answers between members of the Diet and the ministers of state concerned. When this part of the legislative procedure is closed, the bill is turned over to the budget committee for deliberation.

The Budget Committee.—The budget committee comprises the general and the sub-committees: the former takes up the budget as a whole, while the latter are charged with inquiries into the estimates for the respective departments of government.

The General Committee is composed of 63 members in the Lower and 45 in the Upper House. Members from the House of Representatives select from among themselves a chairman and five directors, and those from the House of Peers a chairman and a vice-chairman. In view of the important relation of the Diet to the budget, which is regarded as the most important matter coming to its attention, the committees are composed, as a rule, of the foremost representatives of each party. Discussions by the general committees are considered the most important feature of the parliamentary session.

The sub-committees generally begin to meet in council after interpellations on the budget have been concluded at the session of the general budgetary committee. The sub-committees, as in the case of the general committee, are in each case presided over by a chairman who superintends proceedings at the sub-committee meetings and reports results to the general committee. These reports from the sub-committees are the subject for discussion and decision by the general committee. The deliberations on the bill by the committees of the Lower House are limited to 21 days, including the sessions of the general and sub-committees, with the object of affording adequate time for deliberation in the Upper House. When the general committee has voted, the budget is again presented to the full session of the House, the chairman reporting on the proceedings in committee, and their results. Upon this report the budget is finally put to the vote.

The Budget in the Upper House.—When the House of Representatives has concurred with the budget through procedure described above, the estimates are turned over to the House of Peers, where presentation and deliberations occur just as in the other House, from the Finance Minister's statement to the final vote. The only point of difference is that in the Upper House the committees are under no restriction as to the time taken for their discussion and

Table 12. Outstanding Domestic and Foreign Loans Classified

(A) Domestic

(Unit: In Million Yen)

Table with columns for National Bonds (5%, Special, 5%, 4%, 4%, 4%) and Treasury Debentures (5%, 4.5%, 4%, 3.5%), and Total incl. others. Rows show years from 1929 to 1939.

(B) Foreign

Table with columns for 4 1/2% (1st), 4 1/2%, 4% Fr., 4% (3rd), 6 1/2% U.S., 6%, 5 1/2%, 6 1/2% U.S., SMR, and Total Incl. others. Rows show years from 1931 to 1939.

Table 13. (A) Municipal Bonds Issued Abroad

Table with columns for City (Tokyo, Osaka, Nagoya, Yokohama), Amount, and Purpose. Rows show years from 1906 to 1927.

(B) Municipal Loans Issued Abroad Outstanding

Table with columns for City (Tokyo, Osaka, Nagoya, Yokohama, Total) and Loan details. Rows show years from 1934 to 1939.

Table 14. Company Debentures Issued Abroad Classified

(Unit: 1,000)

Table with columns for Daido Electric, Japan Elec. Power, Japan Elec. Pow. Gen. & Trans., and Taiwan Elec. Power. Rows show years from 1934 to 1939.

Table with columns for Toho Elec., Tokyo Elec., Ujigawa Elec., and Total. Rows show years from 1934 to 1939. Includes sub-tables for Oriental Development and Total Computed.

Table 15. Loans & Debentures Issued By Yield and Terms

Table with columns for Average Rate of Interest (State Bond, Local Bond, Bank debentures, Co. shares, Total Average) and Average Period of Redemption (State, Local, Banks, Co.). Rows show years from 1930 to 1940.

Note: A. Indicates the first half of the year. B. Indicates the second half of the year. Y. M. Indicates years and months.

Table 16. Local Loans (¥1,000)

Table with columns for Prefectures, Cities, Towns and villages, Local associations, Total, and Debts per head (¥). Rows show years from 1928 to 1939.

Revision of Income Tax Law

According to the revision of the Law, simple income tax and compound income tax were newly established instead of the previous three kinds of income tax such as taxes for corporations, on interest of bonds, deposits and shares and on income for individuals.

(1) **Simple income tax** Simple income tax will be levied from the following sources of income:

a) (i) Real estate, (ii) bonds, deposits, and shares, (iii) enterprises, (iv) service, (v) forestry, and (vi) retirement allowances.

b) The basis of assessment will be the income after deduction regulated by Law as follows:—

Simple income tax is generally imposed at the source, with some exception for incomes from real estate, enterprises, and forestry, where the basis is the income earned during the preceding year or the average income during the past three years after deducting expenditure in the corresponding period. Income tax on salaries according is collected from the salary of the corresponding month.

(2) **Compound income tax.** Compound income tax is to be levied on the excess amount of income over ¥5,000 of an individual person gained during the preceding year, subject to the following regulations:—

a) Deduction of 40% will be made on income from bonds, deposits, etc. If the taxpayer prefers to pay simple income tax on this income, a tax of 15% will be levied on this form of income.

b) Deduction of 10% on income from service will be made when the aggregate income does not reach ¥10,000.

c) Income from fishery is the average balance between profits and expenditure, during the past three years.

d) Retirement allowances in the form of lump sums, retirement pensions, etc. are omitted from the aggregate income.

e) Compound income tax will be collected four times during a fiscal year.

f) Compared income tax will be imposed at the following rates:

Excess of over.....	¥ 5,000	10%
"	¥ 8,000	15

Excess of over.....	¥ 12,000	20%
"	¥ 20,000	25
"	¥ 30,000	30
"	¥ 50,000	35
"	¥ 80,000	40
"	¥120,000	45
"	¥200,000	50
"	¥300,000	55
"	¥500,000	60
"	¥800,000	65

Corporation Tax Law

This Law has been enacted in order to simplify taxation by including in one levy the tax on income, capital, and various other kinds of taxes on corporations.

a) Basis of assessment and tax rates

The Corporation tax is to be levied on income during a business year and on the liquidation income at a rate of 18% and on the capital value of the corporation at a rate of 1.5%. Tax on income of corporations headquarters of which are not situated in the country is to be levied at 28%. The corporation tax will not be levied on corporations engaged in manufacturing, mining, and extracting important materials and special public organization duties the first three years as well as during the first year of operation.

b) Characteristic of corporation tax

1) In calculating the net income of corporations, the corporation tax and temporary profit tax paid or to be paid during a business year will be omitted from expenditure in order to equalize the annual revenue in taxes.

2) The basis of assessment, however, will be the net profit after deducting the temporary profit tax levied on any excess profit during the corresponding business year.

3) Simple income tax on interests from bonds, deposits, and on share dividends already paid during the business year will be deducted from the corporation tax.

4) Any losses incurred within the past three years shall be added to expenditure in calculating the net income.

Revision of Temporary Profit Tax

The temporary profit tax law has been revised in order to increase the tax revenue from enterprises which have benefited from the emergency.

a) Basis of assessment

1) Excess profits of corporations under the Law shall be the profits exceeding 10% of the paid-up capital instead of the double basis in the old Law.

2) If profits of an individual exceed the average during the three years before 1936, the excess shall be the basis of the business profit to be taxed. The average profit, as above mentioned, shall be ¥7,000 or a third of the profit in a business year whichever the larger.

The temporary profit tax will not be imposed on business profits below ¥10,000.

b) Tax rates

1) **Corporation:** The temporary profit tax will be imposed on profits at the following increasing scale, being divided into three parts under the Law.

i) Excess profit between the average profit during the three years up to 1936 and 10% of the capital of business year 25%.

ii) Excess profit between 30% of capital and the average profit of three years up to 1936. 45%.

iii) Excess profit over 30% of capital. 65%.
Tax rates on corporation the capital of which is less than ¥100,000 will be decreased to 15%, 35%, and 55% instead of the above mentioned rates.

2) Individuals

i) Business profit 30%.

ii) Profit produced by business negotiations 25%.

Revision of Inheritance Tax Law

According to the revised Law, inheritance tax rates have generally been increased by about 30% compared with the old rates.

The revised Law, however, allows a deduction of ¥1,000 per head of the family (children under 18 years, aged person of more than 60 years, and cripples) from the fortune left, if less than ¥50,000 in case of succession to family estate, and less than ¥30,000 in case of inheritance of other property.

Inheritance taxes shall not be imposed on any fortune, if the fortune becomes less than ¥5,000 in the case of succession to family estate and ¥1,000 in the case of other inheritance after deduction as above mentioned.

The Ministry of Finance has announced that investigations will be made as to methods which

Note: 1—The average profit is the value of the present capital multiplied by the average profit rate during three years up to 1936.

will render it possible to pay the inheritance tax in kind, if necessary.

Local Taxation

Financial compensation will be granted to province for the abolition of local household rates and the withdrawal of the house and business tax from provinces to the national exchequer under the new laws. This compensation will embrace the following taxes:

1) (a) **Restoration tax**, the revenue of which will be restored to prefecture only, and (b) **Distribution tax**, which will be given to prefectures, cities, towns and villages.

2) **The restoration tax** consist of estate tax, house tax, and business tax, which the **distribution tax** will be 17.38% of the revenue from both income and corporation taxes and 50% of the revenue from entrance and restaurant taxes collected in the two preceding years.

3) **The restoration tax revenue** will be returned to the corresponding prefectures where such taxes as estate, house, and business have been collected in the corresponding fiscal year, whilst **distribution tax revenue** will be distributed to provinces under the national financial policy, without any relation to provinces where the tax has been collected, at a ratio of 62% for prefectures and 38% to cities, towns, and villages.

4) **A local distribution tax special account** has been newly established for the purpose of financing compensation. According to the budget for 1940-41, the revenue of this special account amounts to 353 million yen, including 277.4 million yen from income and corporation tax (both 17.38% of revenue collected) and from entrance and restaurant tax (50%) transferred from general account.

Increase of National Revenue Through Tax Revision

The expansion in tax revenue resulting from the revision of the taxation system is estimated at 542 million yen for 1940-41 and 648 million yen for a normal fiscal year, of which, however, about 230 million yen in 1940-41 and 303 million yen in a normal fiscal year will be transferred to local governments, the net expansion of national revenue, accordingly, amounting to 445 million yen for a normal year (312 million yen for 1940-41).

CHAPTER XXII

BANKING

INTRODUCTORY REMARKS

The development of banking in the modern sense of the term in Japan dates back to 1873 when the Dai-ichi Kokuritsu Ginko, or the First National Bank was founded in Tokyo. In the decades since then there has been a remarkable growth in this field of enterprise. The period from the Russo-Japanese War of 1904-1905 to the end of the Great War forms a stage when banking saw its greatest rate of expansion in Japan, briskness in foreign trade and the establishment of modern industries having played no small part in this advance.

Not unlike banking in other foreign countries these Japanese financial organs have undergone several stages of readjustments due to over-expansion in times of brisk economic conditions,

and the general trend of the last two decades shows a distinct movement towards amalgamation of small banking institutions into the large banks of the country. In recent years about one-half of the total deposits and advances made by the ordinary banks of Japan are accounted for by six of the leading banks in that group.

In conjunction with the development of banking other financial organs also made their appearance, and among these the trust and insurance companies are the most prominent. These two latter forms of institutions have expanded in a healthy manner and at present take an important position in Japan's financing circle.

THE BANKING SYSTEM

The Banks and Their Functions

A distinctive feature of the Japanese banking system is a division of the banks into clearly defined classes each with its own function. The Bank of Japan, which is the central bank, has the exclusive right of note issue in Japan proper. In the colonies of Korea (Chosen) and Formosa the general banking business and bank note issuance are in the hands of special colonial banks organized with a view to meeting local requirements. Long term credit on real estate security is handled by special banking institutions dealing almost exclusively in this line. Foreign exchange transactions are likewise centralized in special banks with their branches in many parts of the world. The so-called ordinary banks are charged with ordinary banking operations, but are not authorized to handle the trust business or notebrokering.

The capital resources of the banking institutions of Japan consist of paid-up capital, reserve funds, private deposits, bank debentures, convertible notes, government and other official deposits, etc. The capital structure of the banking institutions, as returned for the 2nd half of 1938, was formed of deposits 68.44%, paid-up capital, and reserve funds 10.73%, and convertible currency and bank notes, debentures and loans combined, 20.83%.

The banks in Japan in their earlier days

operated more as official financial organs, their function being chiefly provision of capital for the Government and investment in national bonds. It was not until after the war with China in 1894-5 that the banks began to assume the character of financial organs for private enterprises. Total circulating capital which is represented by the combined total of advances and securities owned, has reached the amount of 34,458 million yen as at the end of August 1940, which compared with the same period a year before shows an increase of 7,426 million yen. Of this amount 34.9% is accounted for by national bonds. The balance of 65.1% represented loans to private enterprises and purchases of securities. Of this credit extension to private enterprises the current loans made up approximately 52% of the total circulating capital, investment in bonds and securities other than national and local bonds 13%. The current loans consisted in large part in long term arrangements which were availed of to provide capital equipment in diverse branches of industry and other undertakings.

The investment by the banks in securities, as a general rule, forming their reserve funds, consists for the most part of national bonds. Far less amounts are invested in corporate bonds and stocks, which generally mean long term loans to private enterprises.

Table 1. Number & Capitalization of Banks
(In million yen)

	Special banks		Ordinary banks		Savings banks		Total	
	No.	Paid-up capital	No.	Paid-up capital	No.	Paid-up capital	No.	Paid-up capital
1927	32	400	1,283	1,482	113	41	1,428	1,924
1930	26	403	782	1,296	90	41	898	1,741
1931	26	410	683	1,249	88	43	797	1,752
1932	26	411	538	1,217	87	43	651	1,672
1933	26	411	516	1,186	85	47	627	1,645
1934	24	411	484	1,162	79	47	587	1,620
1935	24	411	466	1,134	79	47	569	1,592
1936	23	408	424	1,099	74	42	521	1,549
1937	13	382	377	1,047	72	42	462	1,461
1938	12	382	346	1,019	71	42	429	1,443

The Ordinary Banks.—The ordinary banks of Japan have been developed chiefly upon the model of commercial banks in England. Their liquid capital has in good measure been provided by deposits on demand and short term deposits. The ordinary banks, from the nature of their resources, avoid long term investment, but they have of late years been showing an increasing tendency to provide credit facilities to meet the current capital requirements of industry. Of the different kinds of deposit the amount of time deposits is in the preponderance, the special current deposits, the current account deposits and the other deposits following in that order. The decrease of time deposits, corresponding to approximately 58% of the total in 1939, as compared with 64% in 1933, indicates that the people in general are gradually becoming capable of wise or effective investment.

The deposits at the ordinary banks steadily followed a downward course from the year 1929 to the autumn of 1932 when an upward movement set in. This trend was in part due to the reduced rate of interest on postal savings since the beginning of October as well as to the control of the foreign exchange enforced about that time with the object of preventing overseas investment. The same movement was also indicative to a measurable extent of the increasing surplus incomes as a result of general industrial revival in progress.

An analysis of the bank resources in operation shows, taking the year 1939, that diverse loans make up approximately 59%. Investment in securities 41%. Investment in securities is represented by national bonds, 64%, company debentures 24%, and 9% by shares, this being explained by the comparatively limited field for short term loan operation. National bonds provide the reserve against deposits.

A classification of the loans, as returned for the year 1933, shows that 42% of the total are to the trading community, 22.5% to the industry, 5.8% to the agricultural, and 29.7%

to a group of sundry lines. Accommodations to the industrial circles have been on the increase under the influence of wartime industrial expansion still in progress. Loans to the same direction are also visible in a considerable volume of debenture issued by industrial corporations. Another outstanding feature is that loans below ¥1000 make up 68% of the total in number but only 4.9% in value.

The Savings Banks.—The savings banks have been developed less as commercial enterprises than as educational and public service institutions, stressing the educational and moral phases of savings. These banks at present deal more in bond and security investment than in small scale credit transactions.

The capital resources of savings banks consist of small scale paid-up capitals, internal reserves and deposits. Savings fall into three classes, namely, ordinary savings, fixed savings, and long term savings. The last two named systems provide long term accumulation of liquid capital through collection of comparatively small amounts of money. These savings also serve as a sort of insurance for the community of moderate incomes.

The capital resources of savings banks mainly consist in money on deposit. Fixed savings and long term savings combined make up approximately 98% of the total at the end of 1939. Long term savings are made during contracted periods of time. When half the contracted amount has been saved, a loan may be made to the depositor to the total amount of savings under contract.

Investment of the savings banks is under strict restrictions by law. For the protection of the depositors, the banks are required to deposit at the Savings Bureau of the Finance Ministry an amount in securities or cash not less than one-third of the savings held by them on deposit. Resources are for the most part invested in securities. Loans have since 1936 been visibly increasing in both volume and value. Sub-

the pronounced progress of economic activity during the past decade and particularly after the outbreak of hostilities, the limit was raised to 1,700 million yen in 1938 by Law No. 64 of March 31, 1938. During the previous year, however, the actual note issue of the Bank of Japan showed a sharp increase with the resultant appearance of an excess issue over the legal limit. This excess issue has been caused partly by the remarkable increase of business transactions and partly by the removal of 300 million yen of gold from the reserve of the Bank of Japan to the Gold Fund Special Account in July, 1938. As a further increase of the note issue is considered unavoidable, the limit has been again raised to 2,200 million yen by the new Law which was promulgated on March 31, 1939. As a result of this revision, notes of the Bank of Japan may be issued to the limit of 2,701 million yen without taxation, including notes issued on the basis of the gold reserve amounting to 501 million yen at present. The new Law was enforced from April 1, 1939.

The limit of fiduciary note issue of the Bank of Chosen and the Bank of Taiwan was also raised to 160 million yen and 80 million yen, respectively.

Linkage of Yen to U.S. Dollar

The Japanese Government decided on October 24, 1939 to unhitch its currency from the pound sterling and to link it to the United States dollar at the telegraphic transfer rate on New York of \$23 7/16 to ¥100. Excerpts from the Government's statement in this regard issued on the same day read as follows: "The exchange rate of the yen hitherto has been linked with the pound sterling, with a fixed value of 1 shilling 2 pence. In view of trends indicating that Great Britain will strengthen foreign exchange control in order to cope with the protracted war in Europe, the Government has decided to change the base for determining the external value of the yen from the pound sterling to the American dollar, the change being for the convenience of operating funds held abroad by the Government."

Revision of Temporary Funds Adjustment Law

In order to meet the need for Government control over the utilization of the financial resources of the nation under the emergency caused by the Sino-Japanese conflict, the Temporary Funds Adjustment Law has been enforced from September 15, 1937.

In view of the increasing necessity of concentrating funds as well as materials on special

purposes for the expansion of defence as well as economic forces, a revision in the Law was effected which was put into force from April 21, 1939. The principal points of the revision are as follows:—

(1) The provision for Government permission in case of new establishments, expansion and improvement of equipment has been extended to personnel and to juridical persons besides companies to which it formerly exclusively applied (by a revision of Article 4).

(2) The limit of bond issue of the Industrial Bank of Japan according to Article 6 of this Law has been raised from 500 million yen to 1,000 million yen. (Besides, the Industrial Bank of Japan was enabled since early 1939 to issue bonds to the limit of 2,000 million yen by the increase of capital from 50 million yen to 200 million yen). The purpose is to increase the flow of funds into industries for the expansion of productive capacity.

(3) The issue limit of savings bonds of the Hypothec Bank of Japan has been raised from 200 million yen to 500 million yen, in order to accelerate the absorption of funds disbursed by the Government.

Bankers' Clearing Houses

At the end of Nov., 1940 there were throughout Japan proper 48 members of the Bankers' Clearing House Union with member banks of 363. They are located in all of the principal cities of Japan. Besides, there are four in the colonies. These are Keijo, Taihoku, Fusan and Dairen.

Bill-Brokering Business

As most of our banks regard note discounting as part of the proper share of their business, they are not so willing to furnish call money to bill brokers. They generally do so only when they have surplus funds remaining idle on their hands. The bill-brokering business therefore does not yet possess in Japan a sufficiently congenial atmosphere for its sound development.

The first bill-brokering house made its appearance in Japan in September, 1899, in Tokyo, and the second in May, 1912, in Osaka. At present the houses that are undertaking it either exclusively or in combination with other businesses number over thirty. Of these three in Tokyo, four in Osaka, and one each in Kobe and Nagoya, are relatively more important than the others.

BANKING

Table 24. Bills Cleared at the Clearing-Houses
(Amount in Million Yen)

Year	Tokyo		Osaka		All Japan		Average Amount per Bill (Yen)
	Number of bills (1,000)	Amount	Number of bills (1,000)	Amount	Number of bills (1,000)	Amount	
1924	11,463	30,739	9,298	26,880	31,499	73,957	2,348
1929	13,525	25,071	10,390	22,374	38,338	63,343	1,652
1930	12,722	21,667	9,725	17,889	36,146	51,376	1,421
1931	12,408	21,593	9,280	14,432	34,867	46,111	1,322
1932	12,646	26,563	9,472	15,625	34,415	52,761	1,533
1933	13,577	31,550	10,412	22,175	37,286	66,870	1,793
1934	14,254	25,339	9,548	24,439	37,789	64,376	1,704
1935	15,154	25,512	10,472	22,668	40,726	63,858	1,568
1936	15,887	27,400	11,090	24,979	42,961	69,863	1,626
1937	17,308	34,126	11,984	30,154	45,846	85,270	1,860
1938	18,326	37,387	12,058	28,536	47,126	86,096	1,826
1939	20,437	46,867	13,097	33,819	51,810	107,152	2,068
1938 (Jan.—July)	10,408	21,643	6,873	16,665	26,802	49,599	1,851
1939 (Jan.—July)	11,388	24,003	7,297	17,343	28,859	54,913	1,902
1940 (Jan.—July)	12,162	32,252	7,561	24,974	30,141	75,842	2,516

THE TRUST BUSINESS

The Origins

The trust business in Japan is of comparatively recent origin. Up to that time the business had been carried on only to a limited extent by some banks as a subsidiary line under the Law of Secured Debenture Trust enacted in 1905. But even before the business was placed on its new and consolidated basis under the above legislation there were a number of corporations operating under the title of trust companies, although they were only financial enterprises engaged in special lines of loan business.

The first trust company in the true sense of the term, the Mitsui Trust Company, was brought into existence in April, 1924, which was followed by the Yasuda Trust Company in May, 1925, the Sumitomo and the Kawasaki Trust Companies in August of the same year, and the Mitsubishi and the Kyodo around 1927. On the other hand, the Kokusai, the Kwansai, and the Nippon (later renamed Chiyoda), which had been operating as loan and investing organizations were newly chartered as trust enterprises. Through successive amalgamations and absorptions as well as new organizations, the trust companies numbered 37 around the year 1932, which decreased to 28 in 1938 as a result of a merger and a number of lesser organizations going out of business.

The aggregate total assets, making rapid growth in recent years, exceeded 3,201 million yen for the end of the year 1939, an increase of 96% in comparison with the same period of 1933. A distinct feature of these assets is that the great bulk of property in

trust consists in agency funds. The increase in the value of these funds has been even more rapid than in other categories of assets.

The Structure of Assets

The preponderance of money in trust mentioned above, may be explained by social and historical conditions somewhat peculiar to the country.

National Property Mostly in Money.—The above condition of property in trust is above all due to the fact that the property of the country is still for the most part held in the form of money. This condition persists despite the fact that property has been converted into securities to an increasing extent with the development of industrial enterprises under the growing capitalism of the country. As a matter of fact, investment in corporate stocks and bonds is centralized in the hands of banks and insurance companies, the amount distributed through the general community being still comparatively small. In this circumstance, the property given in trust is mostly seen in the form of money and operated as liquid capital.

Long Term Deposits.—The industrial development in the post-war period, on one hand, gave rise to demands for long time capital and, on the other, added materially to the wealth of the nation. The latter development led to the increasing volume of long term deposits yielding returns at a higher rate than on ordinary bank accounts. In order to meet these financial requirements in this direction there sprang up a large number of the so-called trust companies which, as already mentioned, were prototypes of the present trust companies. These anomalous institutions, as many as 488 at a time,

Conflict Between Banks and Trust Companies

The position of the trust companies is in conflict with that of the commercial banks, as already mentioned. This issue has been the subject of discussion and controversy since almost the earliest days of the trust business, and still remains to be settled. Both legally and theoretically distinguished from the banking institutions, the trust companies come into conflict with them in the field of short term capital

operations. Their money in trust and operated by the trust companies on their own account, making up 80% of the total assets, is dealt with in no way different from the money held on time deposit at the banks. The trust companies also encroach on the province of the commercial banks in (1) accepting in trust secured corporate bonds, (2) taking stocks and bonds for safe custody, (3) loans on bonds and transactions.

References:

Table Nos.: 1-2 a, 3 c, 4-7 a, 8 b, 9 a, 10 k, 11 c, 12 d, 13 a, 14 e, 15 c, 16 a, 17 d, 18 f, 19-20 d, 21 c, 22 h, 23 i, 24 e, 25-26 j.

Key: a—Department of Finance.

b—Department of Public Welfare.

c—Bank of Japan.

d—League of Nations.

e—Tokyo Bill Exchange.

f—Department of Overseas Affairs.

g—Federal Reserve Bank.

h—Bankers' Association.

i—Yokohama Specie Bank.

j—Japan Trust Companies Association.

k—Japan Manchoukuo Year Book.

CHAPTER XXIII

INSURANCE

INTRODUCTORY REMARKS

The life insurance business in Japan originated in the year 1882. The amount of life insurance in force by the domestic companies exceeded 17,978 million yen at the end 1938. In the amount of insurance sold Japan ranks high in the world. The comparative positions of leading countries in life insurance are shown below.

Table 1. Japan's Position in Insurance

Business
(Unit in Million Yen)

	Life Insurance		Fire Insurance		Marine Insurance	
	Policies in Force	Per Capita (¥)	Premiums Received	Claims paid	Premiums Received	Claims paid
Japan ..	31,630*	434	102	30	38	20
U.S.A. . .	124,019	959	1,402	614	..	..
U.K. . . .	32,373	682	478	198	102	74
Canada .	13,126	1,180	85	30	..	..
Germany.	11,432	168	90	24	24	21
France .	4,655	111	89	33	..	..

Note: * Represents 1939; others as in 1938.

The Development of Life Insurance.—The sales of life insurance by the domestic companies, as shown by selected years in an accompanying table, have generally grown at a steady and rapid pace, well reflecting the development of economic and cultural life in the country. Above all, this development of the business must be attributed to the vigorous campaign conducted by the companies to make the idea of insurance familiar to the people in general. It is noteworthy that life insurance transactions increased to a striking extent in the post-war period, again immediately after the great earthquake disaster of 1923, and lastly in the past few years. For instance, the sales for March 1938 exceeded the 3,300 million yen mark, the net increase in value being a record high of 2,252 million yen. The above amount of new insurance was equal to thrice the annual sales around the years 1929-30 and the above

net increase in value was over four fold that netted for the year 1933.

These increases in business have been accompanied by a growing volume and value of contracts lapsing or being cancelled. The losses of business through these causes in recent years have been reaching the 1,000 million yen mark each year, or approximately 35% of the total new issues, which is a marked improvement compared with the losses of 60 to 70% in earlier years. But it should be noted in contrast that 70 to 90% of the cancellations and lapses take place within a year or two of the contracted terms, a situation with which the companies are not yet able to cope successfully. The conclusion to be drawn is that contracts in not a few instances are made under fairly strained circumstances.

Premium Incomes and Benefit Payments.—

Annual premium incomes exceeded 590 million yen for the year ending March 1938 as against an amount of some 190 million yen paid against claims.

With the increase of business the volume of legal reserve life insurance has also grown, an average gain in recent years being something like 280 million yen each year. This means that the assets of the life insurance companies have correspondingly grown in value. Equipped with such expanding financial resources, the life insurance companies have developed into financial institutions of increasing importance.

The Investment of Savings.—The growth of assets for the life insurance companies is shown in an accompanying table. Gaining by something over 300 million yen in recent years, the present gross assets of the companies are estimated to be approximately 3,000 million yen. An outstanding fact in the business is that 90 to even 95% of the assets are profitably operated by investment in securities, loans, bank deposits and real estate. In investment of accumulated funds the life insurance companies, as may be expected, take into consideration good margins of safety as well as prospective yields of profit. The investment in securities represents more than 60% of the total assets, next in the order of amount being the loans which make up less than 40% of the investment in securities. Bank

deposits and investment in real estate are in inconsequential amounts.

Of the securities held corporation debentures and stocks form a major proportion, next in point of amount being national bonds and local issues in that order. For years following the drastic fall of the security market in the years 1929-30 there was a marked tendency to direct investment in the channels of short term loans, but this movement later again shifted in favour of security holdings. Of the investment in securities a more recent change is noted in substantial gains in corporate stocks. This situation is attributable to the increasing accumulations of fund, new capitalization and redemption of bonds and loans on the part of corporations benefited by the general improvement of business in consequence of the second embargo on gold in 1931. Furthermore, there was an abundant supply of cheap money to make investment in any lines save corporation stocks unattractive or impracticable.

The financial conditions of the insurance companies with heavy security holdings are naturally affected by the fluctuation of the security market. In October 1930 the Life Insurance Security Company was organized with the object of relieving the strain of a falling stock market. This organization was reorganized in February 1933 under the title of the Joint Investment Group, which proved hardly efficient enough to meet the current requirements. When the stock market heavily slumped in the autumn of 1934, the question of reviving the life insurance security company was taken up, the same enterprise being realized in August of the following year. With a progressive gain in influence as long term investment machinery, the life insurance companies have come to occupy a position of increasing importance. Through their market operations the companies have in the past played important parts in checking abnormal downturns of the security market.

Declining Yields of Profit.—The rate of investment yields has of late years been declining, reflecting the prevailing condition of the cheap money market. Yields in recent years have followed a downward course.

The variations noted in the downward movement of yields are attributable to changes in the rates of profit distribution and in the appraisal of capital assets. In face of this situation as regards declining yields the insurance companies find themselves rather in a difficult position with regard to the matter of reducing the rate of profit dividend. The comparatively high rates

of dividend have always been a chief inducement for the sale of life insurance, and any reduction in dividend must directly rebound to the disadvantage of the business.

Table 2. Rates of Investment Yields of Life Insurance Companies*

Year Ending Mar. 31:	(A) Average earning capital (¥1,000)	(B) Aggregated interest (¥1,000)	(C) Rate of yield (%)
1927.....	1,070,494	70,668	6.83
1928.....	1,206,972	77,244	6.61
1929.....	1,346,511	82,317	6.31
1930.....	1,465,763	87,290	6.14
1931.....	1,586,512	92,211	5.99
1932.....	1,731,306	105,014	6.26
1933.....	1,900,711	111,031	6.02
1934.....	3,103,340	115,075	5.62
1935.....	2,344,355	125,005	5.48
1936.....	2,637,628	136,659	5.32
1937.....	2,967,033	154,582	5.35
1938.....	2,980,369	154,586	5.32
1939.....	3,364,234	174,412	5.32

Note: (A) is in each instance the sum of the profit earning capital returned for each specified year and that returned for the end of the preceding year divided by two. (C) is obtained by dividing (B) by (A) less half (B).

* Including conscription insurance cos.

Concentration in Major Companies.—An outstanding fact in the life insurance business is that there is a conspicuously growing tendency to concentrate insurance in the major companies. Exclusive of two organizations operating under special plans, there are 31 insurance companies in the country, of which five are known as major companies. They are the Nippon, the Daiichi, the Chiyoda, the Meiji, the Teikoku. The Sumitomo and the Mitsui Life Insurance Companies come next in importance, thanks to the financial houses with which they are affiliated, as their names indicate. These seven companies dominate the entire field of life insurance. While these companies continue to grow, the other organizations of lesser importance show but little development if not actually receding. They meet with a considerable difficulty in the sales of insurance and perhaps no less trouble in preventing contracts from lapsing. Of the total value of insurance in force in the whole of the country 60% is accounted for by the big five. Of the annual sales of insurance a major proportion is likewise credited to these five. In the net increase in insurance sales these major companies represent no less than 70% of the total but for the year ending March 1938 it fell to 59.2% as a consequence of the Sino-Japanese Hostilities which increased the importance of conscription insurance. Needless to say, the major companies have a number of advantages over the lesser ones; that is,

their sound policy and financial conditions are effective, and their systems of canvassing are well known, their publicity campaigns are more extensive and better organized.

Table 3. The Position of the Big Five Companies in Life Insurance (In Million Yen)

Year ending Mar. 31:	New contracts			Net Increase			Contracts at the year end		
	All cos.	Big five	%	All cos.	Big five	%	All cos.	Big five	%
1931.....	1,558	886	56.8	562	489	87.1	8,256	4,404	53.3
1932.....	1,628	838	51.5	502	371	74.0	8,743	4,775	54.6
1933.....	1,980	1,052	53.1	870	628	72.2	9,613	5,403	56.2
1934.....	2,394	1,257	52.5	1,371	894	65.2	10,984	6,297	57.3
1935.....	2,677	1,486	55.5	1,552	1,052	67.8	12,536	7,348	58.6
1936.....	3,063	1,717	56.1	1,919	1,319	68.7	14,455	8,667	59.9
1937.....	3,470	1,869	53.8	2,252	1,335	59.2	16,707	10,001	59.8
1938.....	4,320	2,211	51.2	2,954	1,671	56.6	19,661	11,672	59.2
1939.....	5,874	2,937	50.0	4,577	2,448	53.5	24,238	14,120	58.2

Note: The "Big Five" are the Nippon, Dai-ichi, Meiji, Chiyoda and Teikoku Life Insurance Cos. Figures of "All Companies" include conscription insurance.

Competition and Heavy Expenses.—The sales of life insurance are always accompanied by keen competition on the part of the companies. This situation is reflected in the relatively heavy expenses they are obliged to make for the development of their business. Current expenses mount to especially high proportions in the case of minor organizations. Even the Daiichi Insurance Company whose current expenditure is the lowest among all companies spends no less than 13 to 14% of the premium income on the current expense account. In some cases no less than

40% of the premium income is expended currently. For the year 1939 the insurance companies of the country, combined, expended 200 million yen as against the total premium income of 956 million yen, that is, 21.0%, and a decline of 2.8% in comparison with that of 1935. It will be seen that current expenses, although still high enough, are on the downward grade. This situation as regards heavy current expenses is explained by the difficulties involved in the new sales of insurance as a result of a keen competition persisting among the companies.

Table 4. Percentage of Business Expenses to Premiums Received (In ¥1,000)

Year ending Mar. 31:	Business expenses	Premiums received	%
1926.....	58,681	238,615	28.8
1929.....	77,065	318,658	24.2
1930.....	74,881	317,882	23.6
1931.....	78,877	331,540	23.8
1932.....	85,893	346,761	24.7
1933.....	92,441	371,411	24.9

Year ending Mar. 31:	Business expenses	Premiums received	%
1934.....	108,686	447,131	24.3
1935.....	115,496	484,221	23.8
1936.....	123,405	561,223	21.9
1937.....	135,861	644,185	20.5
1938.....	157,426	767,750	20.2
1939.....	200,854	956,341	21.0

Notice: Inclusive of conscription insurance. Figures for 1927-30 represents year ending March 31st of following year.

Adjustments in the Business.—The abnormally high rate of expenditure is naturally a serious handicap which all companies must equally face. But despite such heavy outlays the lesser organizations have no small difficulty in obtaining new contracts. In the past ten years no less than 13 companies have either gone out of business or been fused with other organizations. This movement of adjustment began in the year 1932 when the Kokko Life Insurance Company had to return a deficit of

4.8 million yen. In June 1933 the Government introduced a new legal system encouraging and facilitating fusions and amalgamations among insurance companies for the consolidation of the whole business.

Life Insurance and State Control

State Management and Investment Control.—The state management of life insurance is a problem that has been taken up from time to time since many years ago. It was first dis-

Table 12. Condition of Leading Insurance Companies (Year Ending March 31, 1939) (Unit: Amount in Million Yen)

Table with 10 columns: Company Name, Contract at end of March 31 (No., Amount), Premiums Received, Claims Paid, Current Reserves, Liability Reserves, Business Expenses, and % to Premiums Received. Categorized into Life, Fire, and Transport.

Table with 10 columns: Category, No., Amount, Premiums received, Claims Paid, Current reserves, Liability reserves, Business expenses, and % to Premiums Received. Categorized into Transport, Accident, Fidelity, Boiler, Automobile, Burglary, and Glass.

INSURANCE BUSINESS LAW

As the present Insurance Law was enacted in 1900, a revision has long been overdue in order to adapt legislation to the enormous growth of industry and commerce. The new Law passed by the 74th Diet in 1939 is an outcome of investigation made by a special committee organized in 1937 under the chairmanship of the Minister of Commerce and Industry. The new Law confers upon the Government vastly increased supervisory powers.

The Law provides that the Government may at any time give supervisory orders for a change in business methods, deposit funds, when deemed necessary on account of the financial situation of a company. Under the previous Law, the authorities could only accept or reject fundamental documents such as constitutions, insurance contracts, mortality tables and formulas for the calculation of premiums and reserves. The new Law authorizes the Government to intervene directly by ordering a revision of these

documents, when deemed necessary for the protection of the insured. The revision can be extended to previous contracts.

Agreements between two or more insurance companies as well as revision or termination of such agreements must be reported to the competent Minister. The competent Minister may order the cancellation of such agreements if they are deemed harmful to the public welfare or the healthy development of insurance business. He may also order insurance companies to conclude agreements or to join existing ones.

The new Law provides that executive directors, auditors and manager must obtain official permission when holding an executive position in another company. The Minister may order the discharge of a director or auditor as well as suspension of business and cancellation of the charter.

The new Law provides for the establishment

Table 13. Statistics of Foreign Insurance Companies in Japan
(Unit: in ¥1,000)

Year ending Mar. 31:	Contracts in Force		Premiums Received	Claims Paid	Business Expenses	Current Reserves	Liability Reserves
	No.	Amount					
1934	34,822	189,614	10,630	4,995	1,205	534	50,590
1935	31,253	162,849	9,367	4,864	1,071	247	48,843
1936	28,371	145,743	8,175	3,935	972	374	48,309
1937	25,840	129,688	7,431	5,591	811	369	45,834
1938	23,748	117,318	6,492	4,541	808	487	44,049
1939	20,093	93,229	4,856	5,939	577	329	38,546
Of which:							
Sun Life Assurance Co. of Canada	12,238	64,448	3,479	3,307	445	204	24,652
Manufacturers' Life Ins. Co.	5,941	27,812	1,137	1,876	113	77	16,129
N.Y. Life Ins. Co.	1,914	5,969	239	757	20	48	3,775
(B) Fire Insurance (26 Cos.)							
1934	197,786	1,009,489	5,164	1,944	2,024	85	2,753
1935	237,731	1,271,407	6,167	6,879	2,355	59	3,224
1936	325,706	1,434,902	7,194	3,331	2,600	165	3,744
1937	305,216	1,307,478	7,081	4,104	2,489	149	3,634
1938	310,035	1,372,823	7,450	2,869	2,728	127	3,876
1939	348,170	1,407,645	7,777	3,566	2,913	346	3,848
(C) Marine Insurance (17 Cos.)							
1934	20,883	76,146	1,475	807	319	2	702
1935	22,549	92,191	1,833	2,155	400	25	682
1936	17,105	90,711	1,887	1,206	369	5	1,067
1937	22,346	61,183	1,761	1,028	333	46	957
1938	15,610	51,038	2,341	1,179	464	85	1,293
1939	10,610	36,645	1,866	1,583	496	85	979
(D) Automobile Insurance (3 Cos.)							
1934	497	19,352	56	20	12	...	28
1935	571	19,926	64	20	13	...	34
1936	580	21,461	81	30	15	...	40
1937	572	19,206	76	18	16	0	40
1938	561	18,936	75	21	15	0	50
1939	496	19,214	67	16	13	0	

of an actuary system and for details in the valuation of securities. The Commercial Code regulates the valuation of securities at current market prices, but the new insurance law allows insurance companies to value securities by the amortization method at a constant yield rate from purchase to maturity. The Law requires the reservation of all revaluation profits or profits from the sale of assets. These profits cannot be used other than for balancing losses sustained from the same sources.

The Government may recommend to insurance companies amalgamation or transfer of contracts. When a company becomes unable to

carry on business, the Government may order suspension of business and transfer of assets and contracts to another company.

Foreign Insurance Business

Foreign insurance companies doing business in Japan numbered 31 on January 31st, 1940, 28 for property and 3 for life.

Commencement of business is allowed only after depositing with the authorities concerned the sum of ¥150,000 for life insurance and ¥100,000 for property insurance. These deposits are subject to increase under specified circumstances.

References:

Table Nos.: 1-5 a, 6 b, 7-13 a.

Key: a—Life Insurance Association of Japan.

b—Department of Commerce and Industry.

AGRICULTURE & STOCKBREEDING

Year	Oat	Millet	Barnyard Millet	Proso Millet	Maize	Buck Wheat	Soya Bean	Red Bean	Sweet Potato	Irish Potatoes (1,000 Kwan)
1933	2,039	989	554	310	585	919	2,803	948	936	367
1934	2,537	630	294	186	505	670	2,164	625	810	339
1935	1,949	745	372	158	439	607	2,261	533	955	333
1936	2,139	867	537	254	600	744	2,634	692	1,000	447
1937	1,939	839	568	287	657	795	2,843	692	1,030	551
1938	2,605	814	524	241	639	695	2,700	677	1,009	493
1939	1,948	715	551	174	660	665	2,747	701	933	502
(B) Value (Million Yen)										
1927	14.2	13.0	4.1	3.3	6.6	10.2	50.0	16.3	92.7	31.4
1932	5.6	8.0	2.6	1.6	3.5	6.0	31.7	9.8	69.9	23.2
1933	8.1	8.2	2.7	2.8	4.7	6.7	34.6	13.6	70.5	29.5
1934	12.4	6.0	1.6	1.9	4.5	5.8	29.2	10.4	65.0	26.3
1935	9.7	7.8	2.3	1.9	4.3	5.9	34.3	10.6	76.6	31.6
1936	12.6	9.8	3.4	3.1	6.1	7.8	44.4	14.9	88.0	41.9
1937	17.2	9.9	4.1	3.9	8.2	8.2	50.8	17.3	91.2	48.6
1938	22.5	10.2	3.9	3.3	8.1	8.1	51.1	16.8	100.0	50.9
1939	19.8	13.9	6.6	3.6	13.7	12.4	87.6	29.8	142.0	87.6

Table 20. Other Minor Crops
(A) Volume (Unit: 1,000 Kwan: 1 Kwan=3.75 kgms.)

Year	Cucumber	Watermelon	Tomato	Carrot	Eggplant	Turnip	Onion	Cabbage
1928	58,952	69,912	5,023	29,756	106,985	38,862	27,402	70,500
1933	74,334	138,930	29,197	32,923	124,862	40,842	40,609	47,445
1934	68,283	132,928	36,499	33,578	114,406	41,302	52,593	48,537
1935	72,574	130,114	37,447	36,471	115,959	41,039	50,171	51,895
1936	78,059	123,963	40,800	39,210	120,228	40,919	51,052	54,574
1937	78,863	121,729	43,663	39,529	123,655	41,324	56,392	56,748
1938	74,666	106,416	38,208	38,916	116,623	39,851	62,331	56,656
1939	74,529	110,425	40,534	....	113,771	....	48,810	....

(B) Value (Million Yen)								
1928	12.1	15.9	1.2	6.7	21.2	4.6	4.0	5.3
1933	9.7	18.1	4.7	4.8	13.9	3.4	5.3	4.7
1934	9.7	18.5	5.3	4.7	13.8	3.5	4.8	4.5
1935	10.8	19.0	6.0	5.3	15.2	3.4	5.6	5.0
1936	11.5	19.4	6.6	5.8	16.1	3.7	7.7	5.7
1937	12.7	20.9	7.4	6.9	17.7	4.3	7.8	6.9
1938	13.9	21.7	7.4	7.9	19.9	4.6	9.9	7.7
1939	17.0	27.3	10.1	..	24.8	..	..	..

HORTICULTURE

Formerly, pears, oranges, persimmons, and peaches were principal fruits in Japan. With the introduction of meat-eating custom from abroad, however, fruits of foreign species including apples, oranges, peaches, pears, grapes strawberries, cherries, etc. began to be extensively cultivated. Generally speaking, apples are grown in the Hokkaido and Aomori, peaches in the neighbourhood of Tokyo, Kanagawa, Okayama and other prefectures, pears in Shizuoka, Okayama, Niigata, Akita, etc., grapes in Yamanashi, Ibaraki, Nagano, etc., oranges in Wakayama,

Shizuoka and in southern Japan, apricots, almonds, walnuts and some other fruits in Nagano and a few other prefectures and foreign cherries in Yamagata and Fukushima. Japanese cherry trees are chiefly prized for flowers. Persimmons may be said to grow everywhere, though seldom in orchards. Plums are more generally used as pickle, in which shape they are preserved in almost every Japanese household and plum trees are highly valued both for flowers and fruits.

Table 21. Output of Fruits
(A) Volume (Unit: 1,000 Kwan: 1 Kwan=3.75 Kgms)

Year Ending Jan. 31:	Plums (1,000 koku)	Peaches	Apples	Japanese Pears	Persimmons	Grapes	Mandarin Oranges
1927	428	13,750	19,017	38,570	58,094	10,980	72,018
1933	353	13,840	24,630	44,907	63,014	17,731	90,972
1934	377	13,615	35,105	39,907	62,826	16,223	71,381
1935	348	12,962	42,406	43,744	61,607	18,487	117,844
1936	385	13,248	32,180	43,656	71,750	17,735	75,743
1937	343	12,354	41,572	42,743	61,528	18,412	117,019
1938	429	12,412	49,226	43,269	66,297	16,049	98,239
1939	422	12,382	55,925	44,203	70,906	16,860	....

AGRICULTURE & STOCKBREEDING

(B) Value (Unit: Million Yen)

Year Ending Jan. 31	Plums	Peaches	Apples	Japanese Pears	Persimmons	Grapes	Mandarin Oranges
1927	5.5	5.2	6.4	12.1	13.3	5.5	18.6
1933	4.3	3.6	8.0	10.5	11.6	5.9	21.5
1934	4.4	3.6	8.5	9.3	10.8	5.2	18.2
1935	4.7	3.7	10.2	10.5	12.5	5.7	20.2
1936	5.0	3.9	11.1	11.3	13.8	6.0	21.9
1937	5.3	4.0	14.9	11.8	13.1	6.5	25.4
1938	6.7	4.5	22.4	14.7	15.2	6.6	32.9
1939	8.3	6.7	32.2	19.8	20.2	9.2	...

INDUSTRIAL CROPS

Despite the importance of the so-called industrial crops the area under their cultivation is only about 4 per cent of the total cultivated area and whatever insufficiency in production is imported. The output of industrial crops is on the increase lately.

Table 22. Industrial Crops
(Unit: 1,000 Kwan: 1 Kwan=3.75 Kgms)

Year	Rape Seed	Hemp	Flax	Leaf Indigo	Pyrethrum	Cotton Seed	Leaf Tobacco	Peppermint	Sugar Cane (Million kwan)
1927	597	2,256	2,338	585	1,283	254	18,183	10,555	1,463
1933	733	2,098	6,242	208	1,616	188	17,744	17,013	1,805
1934	901	2,066	7,891	188	2,080	125	17,594	10,812	1,625
1935	1,012	1,885	7,240	181	3,399	134	17,209	11,301	1,738
1936	1,010	2,112	7,097	191	2,947	164	16,131	26,184	1,872
1937	1,103	2,053	6,109	185	2,550	176	17,050	16,792	1,693
1938	971	2,383	13,680	130	2,527	211	16,690	16,131	1,781
1939	1,002	3,023	14,112	72	2,553	310	....	12,897	....

Note: — Year beginning April.
* Year ending September.

TOBACCO

Among industrial crops the more important are leaf tobacco, hemp, rapeseed, cotton, sugar cane, pyrethrum, and peppermint. Only pyrethrum, peppermint and rush are exported in small quantities. Japan's requirements of sugar cane is now fully met by Taiwan. Cotton output shows a tendency to decline due to strong foreign competition and its place as a supplier of the country's needs is negligible. The cultivation of leaf tobacco is permitted to private individuals by the Government which has a monopoly over the industry. Leaf tobacco output in 1938 amounted to 16,690,000 kwan.

Table 23. Domestic Production of Manufactured Tobacco

Year Ending Mar. 31:	Cigarette		Cigar		Cut		Total (Mill. Yen)	Inclusive of Imported (Mill. Yen)
	(Mill. Pieces)	(Mill. Yen)	(Mill. Pieces)	(Mill. Yen)	(M. tons)	(Mill. Yen)		
1930	32,772	211.6	1.9	0.19	23,760	67.0	278.8	282.3
1935	37,642	232.2	2.4	0.19	22,400	56.9	289.3	291.6
1936	39,167	241.6	2.1	0.17	22,900	55.1	296.9	298.7
1937	39,796	260.5	1.6	0.15	21,200	54.0	314.6	316.3
1938	40,593	296.7	1.2	0.11	21,600	55.5	352.3	353.9
1939	41,953	309.1	0.7	0.09	20,200	52.1	361.3	362.3

Table 24. Import and Export of Leaf Tobacco
(Unit: Metric Tons)

Year Ending Mar. 31:	Foreign				Colonial		Total	
	Egypt	China	Manchou-kuo	Total incl. Others	Chosen	Taiwan	Volume	Value (¥1,000)
1913	..	242	..	245	793	..	1,038	305
1933	647	629	..	1,284	135	..	1,419	798
1934	906	87	37	1,105	75	..	1,180	850
1935	1,378	108	319	2,135	1,835	..	3,770	2,087
1936	907	714	753	3,345	2,476	86	6,021	3,694
1937	1,944	1,625	1,591	6,837	2,441	45	12,144	5,709
1938	1,825	300	274	3,654	201	35	3,904	2,654
1939	1,930	1,300	1,160	5,800	66	..	5,890	4,627

(B) Import

Year							Total	
	U.S.A.	China	Philippines	Brit. India	Chosen	Turkey	Volume	Value (¥1,000)
1913	659					12	726	698
1933	1,549	1,139	987	969	803	10	5,459	7,425
1934	2,388	826	982	1,438	375	6	6,025	7,030
1935	24,01	1,673	1,320	916	273	3	6,589	11,122
1936	2,339	1,173	1,092	817	..	4	5,435	10,018
1937	911	1,233	1,053	778	..	5	3,988	6,100
1938	465	—	1,034	—	—	—	1,499	2,311
1939	—	559	802	—	—	—	1,362	1,639

CAMPHOR

The growing and manufacture of camphor has shown a steady development. In 1939 the sale of manufactured camphor amounted to ¥9,525,000 representing an increase of approximately 200 per cent over 1933. The industry is under the monopoly system of the Government.

Table 25. Area Under Camphor and Its Output in Japan Proper

Year Ending Mar. 31:	Area of plantations (hectares)				No. of manufacturers	No. of refineries	Manufacture (1,000 kin)	
	State	Public	Private	Total			Crude	Oil
1928	63	149	813	525	1,723	2,167	1,610	1,262
1933	35	162	304	501	1,398	1,627	2,291	1,995
1934	50	490	431	971	1,318	1,539	3,077	2,657
1935	139	432	836	1,407	1,325	1,499	4,085	3,486
1936	119	525	792	1,436	1,336	1,469	4,909	4,280
1937	103	393	814	1,309	1,345	1,428	5,226	4,427
1938	156	818	941	1,915	1,312	1,382	4,480	3,686
1939	127	360	121	1,608	1,220	1,281	3,264	2,711

Table 26. Sales of Manufactured Camphor
(Quantity: Metric tons; Value: ¥1,000)

Year Ending March 31:	Camphor		Camphor Oil		Total Value	Year Ending March 31:	Camphor		Camphor Oil		Total Value
	Qty.	Value	Qty.	Value			Qty.	Value	Qty.	Value	
1928	1,620	2,617	1,299	1,008	3,625	1936	3,698	6,967	2,615	2,299	9,266
1933	2,812	4,083	1,223	759	4,841	1937	3,808	7,179	2,729	2,426	9,606
1934	3,356	4,874	1,620	1,048	5,922	1938	3,958	7,646	2,272	2,171	9,817
1935	3,446	6,085	2,132	1,599	7,684	1939	3,734	7,805	1,673	1,729	9,525

TEA

Tea, the national beverage of Japan, seems to have been introduced into this country from China in the eighth century. In the early years of the Meiji era it was the largest export product of Japan. In recent years Japan has been the world's third largest producer of tea, being preceded only by British India and the Netherlands East Indies.

Production.—The output in recent years has been steadily increasing, rising from 9,858,000 kwan in 1927 to 15,325,000 kwan valued at ¥46,665,000 in 1939. The leading producing center of green tea is Shizuoka prefecture where more than 50% of Japan's tea is produced annually. Taiwan is also a potential grower of tea, its output amounting in 1938 to ¥9,179,000 representing 13,102 metric tons.

Export.—Roughly one-half of tea production in Japan proper is exported. In 1939 foreign sales of tea amounted to 39 million kin valued at 23 million yen. Leading markets for Japanese tea are the United States, Canada, British India and Kwantung Province.

Tea Control Organ.—The Central Council in Tokyo maintains inspection houses in Yokohama, Kobe, Shizuoka, Yokkaichi and endeavours to prevent the export of adulterated or coloured tea which might be rejected by tea inspectors abroad, and also is running its experimental plantations and laboratory in Shizuoka. Formerly, Yokohama was the center of export, but some two decades ago it was replaced by the port of Shimizu in Shizuoka prefecture.

Table 27. Japan's Position in Tea Production
(Unit: 1,000 Metric tons)

Year	Japan Proper	Taiwan	Ceylon*	British India	Indo-China	U.S.S.R. (Transcaucasia)	China*	Total incl. others
1931	38.3	9.6	110.7	178.8	4.1	0.3	42.5	425.0
1932	40.4	8.6	114.7	196.7	8.0	0.4	39.5	453.0
1933	43.5	9.3	98.0	174.0	8.2	0.8	41.0	412.0
1934	44.2	11.0	99.2	181.1	8.3	1.7	47.0	421.0
1935	45.6	10.7	96.2	178.9	11.1	3.2	38.1	423.0
1936	47.9	10.8	99.0	179.2	10.0	4.9	37.3	435.0
1937	53.9	..	96.7	195.2	11.0	6.3	40.7	460.0
1938	54.7	..	106.9	..	..	..	41.6	..

Note.—* As there are no annual statistics of production available, figures for export have been inserted which are excluded from the total.

Table 28. Area, Production, Export, etc. of Tea

(Cho=0.992 hectare; Kan=3.75 kilograms; Kin=0.6 kilogram)

Year	Area* (cho)	No. of Mfrs. (1,000)	Output		Exports		Imports	
			Quantity (1,000 Kwan)	Value (¥1,000)	Quantity (1,000 kin)	Value (¥1,000)	Quantity (1,000 kin)	Value (¥1,000)
1931	38,109	1,126	10,215	18,871	19,209	8,232	927	788
1932	38,352	1,132	10,776	18,506	22,327	8,172	663	767
1933	38,486	1,136	11,597	21,209	22,288	8,370	564	859
1934	38,880	1,138	11,788	22,859	24,018	9,557	658	948
1935	39,320	1,111	12,168	23,263	28,135	11,419	553	816
1936	39,707	1,129	12,785	28,280	27,765	13,130	725	1,160
1937	40,126	1,124	14,377	34,357	40,970	23,181	809	1,310
1938	40,134	1,110	14,591	29,219	28,000	12,063	68	207
1939	40,384	1,094	15,325	46,665	39,124	23,463	201	322

* End of June.

Table 29. Tea Production Classified by Kinds and Districts

(Unit: Quantity in 1,000 Kwan: Kwan=3.75 kilogrammes; Value in ¥1,000)

Year	2nd kind (Gyokuro)		3rd kind (Sencha)		4th kind (Hancha)		Black Tea		Total incl. others	
	Qty.	Val.	Qty.	Val.	Qty.	Val.	Qty.	Val.	Qty.	Val.
1928	71.2	843	8,284	29,110	2,014	2,291	6	24	10,423	32,633
1934	78.8	738	9,213	19,370	2,159	1,582	280	715	11,738	23,859
1935	87.5	754	9,472	19,823	2,210	1,728	335	554	12,108	23,268
1936	79.8	735	9,389	23,078	2,464	2,305	796	1,795	12,785	28,280
1937	82.9	759	10,238	27,247	2,713	2,747	1,236	3,069	14,377	34,357
1938	74.2	649	10,665	23,999	2,821	2,613	774	1,243	14,591	29,219
1939	77.7	993	11,123	37,978	3,028	4,051	514	1,689	15,325	46,665

STOCK BREEDING

Stock breeding had not thrived in Japan due to climatic difficulties, absence of good pastures and partly to the fact that fish has from time immemorial taken the place of meat in the daily fare of the people. Cattle and horses were reared by farmers, the former as help in tillage and beasts of burden, while the latter were kept both for riding and also for farming purposes. The rearing of swine dates from the Restoration and sheep began to receive serious attention after the World War. The number of cattle in Japan is about 4 to every 100 persons as compared with 75 to every 100 persons in the United States.

Horned Cattle.—Strictly speaking, only one original breed of cattle formerly existed in Japan, being primarily intended for the sole purpose of serving as beasts of burden. They are sufficiently hardy and strong, but owing to neglect in breeding, are somewhat deformed in

appearance, especially in the hind quarters. Just as in the case of horses and dogs, the native breed of cattle is gradually disappearing to be replaced by imported cattle and cross. This disappearance of the native breed is regarded with extreme regret by consumers of beef, for the flesh of native cattle tastes far better than that of foreign cattle. As to the breed of imported cattle, formerly it consisted mostly of Shorthorn, Devon and Ayrshire, Brown-Swiss and Shimmethal. But lately Holstein and Ayrshire are generally judged more suitable for Japan. Three cattle depots are kept by the Department of Agriculture and Forestry, at Nanatsukahara, Oita, and at Tsukisappo, near Sapporo and various measures are adopted for improving the cattle.

The number of cattle has been gradually increasing and in 1936 was 1,771,000.

PROTECTION AND ENCOURAGEMENT OF STOCK FARMING INDUSTRY

To encourage the improvement of cattle and horses the Government in 1925 promulgated the regulations pertaining thereto, and annually disbursed from the treasury 25% of the expenditure involved in the purchase of foreign bred cattle and horses for each prefecture and for the Live Stock Associations. Also since the same year, the Government has been lending free of charge the breeds kept at the Government Live Stock Experimental Station.

Realizing the urgent necessity of self-supply

of wool to be used for uniform of soldiers, sailors, policemen and others, in 1918 the Government established sheep breeding stations at Takigawa, Tomobe and Tsukisappu, with a view to bringing the number of sheep up to 1,000,000 heads. In 1928 these stations were transformed into one station called "The Tsukisappu Sheep Breeding Station." The Government encourages the industry by granting bounties, subsidies, etc.

Table 30. Japan's Position in Number of Domestic Animals (Unit: 1,000 heads)

Country	1931				1937			
	Cattle	Horses	Swine	Sheep	Cattle	Horses	Swine	Sheep
Japan†	3,240	1,545	4,039	27	3,905	....	4,568	110
Germany	19,124	3,451	23,808	....	20,504	3,434	23,847	4,692
France	15,434	2,920	6,398	....	15,805	2,742 (b)	7,117	9,994
U.S.S.R.	47,916	26,247	14,443	77,692*	57,000	16,700	22,800	81,300
U.S.A.	65,770	12,664	59,301	53,946	66,083 (a)	11,128 (a)	44,218 (a)	52,682
Australia	12,261	....	....	110,620	13,078	....	....	110,243
New Zealand	4,031	....	....	29,793	....	....	....	31,306
Canada	....	3,129	....	....	8,841	2,883	3,963	3,340
Poland	....	4,124	7,321	....	10,573	3,889 (b)	7,696	3,188

Table 31. Japan's Position in Meat Consumption (Unit: 1,000 metric tons) (1938)

Country	Production	Import	Export	Consumed	Consumption per capita (kilogram)
Japanese Empire	138	7	1	144	2.0
U. S. A.	7,387	41	39	7,389	56.9
England (Wales only)	1,360	1,059	8	2,411	61.5
Germany (1937)	3,800	81	5	3,876	51.7
Argentina (1937)	2,074	0	588	....	....

Note: The above statistics are inclusive of beef, pork and mutton. Import and export include ham and bacon.

Table 32. Slaughter House Returns (Unit: Heads in 1,000; Meat in 1,000 Kwan; Value in ¥1,000)

Year	No. of Slaughter Houses	Total			Cattle			Calves		
		Heads	Meat	Value	Heads	Meat	Value	Heads	Meat	Value
1926	594	985	24,507	86,454	279	13,362	53,286	22	279	896
1933	679	1,468	31,064	75,446	326	14,800	44,252	30	285	872
1934	696	1,434	30,223	75,884	297	13,588	42,272	29	367	871
1935	701	1,514	31,914	81,966	300	14,105	45,721	31	417	1,034
1936	734	1,721	35,676	88,834	301	14,843	45,825	34	484	1,238
1937	783	1,789	37,839	118,199	349	17,484	61,942	40	599	1,587
1938	716	1,708	36,933	130,544	366	18,520	74,434	35	454	1,412
1939	....	1,806	39,965	160,568	374	19,538	89,607	34	345	1,114

Year	Horses			Swine			Sheep			Goats		
	Heads	Meat	Value	Heads	Meat	Value	Heads	Meat	Value	Heads	Meat	Value
1926	74	2,505	6,360	597	8,335	25,744	0	3	11	11	24	57
1933	92	3,191	4,961	983	12,595	25,198	1	7	22	35	84	143
1934	90	3,261	5,318	974	12,903	27,252	1	7	24	43	91	148
1935	89	3,337	5,571	1,044	13,940	29,437	1	8	28	48	106	117
1936	95	3,759	6,718	1,240	16,473	34,844	1	7	26	50	110	184
1937	72	2,767	6,447	1,273	16,857	42,995	3	13	32	53	118	197
1938	41	1,536	4,429	1,218	16,368	50,045	3	11	31	46	103	194
1939	45	1,724	5,825	1,312	18,246	63,750	3	17	48	39	92	224

Table 33. Statistics of Stock-farming (Unit: 1,000)

Year	Cattle			Total	Horses			Total
	Raising Families	Cows	Bulls		Raising Families	Mares	Stallions	
1926	1,182	1,051	414	1,465	1,142	848	639	1,486
1933	1,250	1,158	402	1,560	1,134	853	648	1,501
1934	1,283	1,207	408	1,615	1,112	833	632	1,464
1935	1,324	1,259	425	1,684	1,094	825	623	1,448
1936	1,378	1,328	443	1,771	1,074	817	615	1,432
1937	1,421	1,381	440	1,826	..	..	..	..
1938	1,474	1,435	459	1,894	..	..	..	..

Year	Swine		Goats		Raising Families	Ewes	Rams	Total
	Raising Families	Heads	Raising Families	Heads				
1926	353	621	71	179	3.4	13.4	4.5	17.9
1933	499	914	108	236	10.0	22.0	8.5	30.5
1934	532	981	119	254	12.9	26.2	9.8	36.0
1935	573	1,063	133	278	16.4	35.5	11.8	47.3
1936	600	1,110	149	292	21.0	46.4	14.7	61.0
1937	589	1,088	158	293	28.2	71.6	18.2	89.8
1938	604	1,140	163	282	36.6	94.5	19.5	114.0

Note: Statistics for cattle, horses and swine are not officially released since 1937.

DAIRY AND MEAT PRESERVING

Dairy farming is a comparatively new industry but is making rapid headway. Milk output has multiplied by three folds in the past twenty years and about half of the production is used for butter and other dairy products. The increase in consumption of dairy products is due chiefly to the growing influence of western delicacies. The chief butter producing district is the Hokkaido. Condensed milk production has been extremely rapid and shows an expansion of 30% between 1931 and 1934. The output in 1937 was 39,700,000 kin valued at ¥14,355,000 and some exports are being carried on.

fluctuated in recent years in a narrow margin of 80,000 heads and in 1936 numbered 1,431,920.

In line with the increase in meat consumption Japan annually imports beef from Tsingtau and Manchoukuo. Ham and sausage manufacture is managed on a lucrative scale in Kanagawa prefecture. managed on a lucrative scale in Kanagawa prefecture.

Sheep.—Large scale plans for Japan's wool self-sufficiency were drafted in 1936 by the Ministry of Agriculture and Forestry. According to the project the goal of 7,000,000 sheep is to be reached at the end of 20 or 30 years. The plan would be divided into 10-year periods during each of which 2,000,000 or 3,000,000 sheep would be added. Details of execution of the plan would be turned over to a Sheep Breeding Investigation Commission comprising officials of the Japanese, Korean and Manchoukuo governments, sheep raisers and wool users. The number of sheep is increasing markedly, that in 1937 being 89,800 as compared with 47,300 in 1935.

Horses.—Principal breeding centers are found in the northern districts of the Main Island and in the Hokkaido, in both of which comparatively wide plains are found. In the former, Nambu, Sendai, Miharu and Akita are famous for horse-breeding, as is the province of Hidaka in the Hokkaido where the Imperial Household's Niicup Depot is situated. In southern Japan, Kagoshima ranks first in horse-breeding. Among the native breeds the Nambu horses are the best. The total number of horses in Japan has

Production of wool to demand is only about one-tenth of one per cent; the rest of the requirements are imported, Australia, Federation of S. Africa and Argentine supplying over 90 per cent of the imports.

Swine.—Though swine is reared in every prefecture of Japan the enterprise is particularly strong in Kagoshima, Kanagawa and Ibaragi. Because of the increasing demand for pork among the populace the business has expanded satisfactorily in late years. The number of swine in 1936 was 1,110,000.

WARTIME AGRICULTURAL REORGANIZATION

Agriculture in Japan has been reorganized into a wartime footing since the outbreak in 1937 of the China Affair but solely through counter-measures which have been enforced with some success along three lines: (1) maintenance and expansion of farming productivity (e.g. policies for coping with the shortage of labor in villages and of fertilizer, the promulgation of the Farming Land Adjustment Law and of the Agricultural Insurance Law, etc.), (2) repletion of material resources necessary for military purposes (e.g. facilities for greater production of potatoes and sweet potatoes for alcohol extraction, encouragement of barley and rye cultivation and rabbit raising, control over distribution of rice, strengthened administration relating to horses, etc.), and (3) promotion of agricultural and forest products for export purpose (e.g. industrial crops for the textile industry, oil seeds, etc.)

Almost all of the major crops in 1939 increased in output over the pre-Incident levels, although barley and cocoons in 1938 dropped to some extent. Particularly remarkable is the increase of wheat production. Statistics show that the nation's farming productivity has so far been maintained, if not expanded, through the above-mentioned reorganization of agriculture, and this in spite of all sorts of difficulties, such as the shortage of labor and the short supply of fertilizer and other necessary materials.

Cause of Rice Shortage.—To be mentioned here is the fact that the current scarcity of rice comes not so much from factors directly relating to the China Affair itself as from short crops in the fall of 1939 along the seaboard of the Inland Sea and in Chosen. In such a lean year as 1939 a serious shortage like the present one is nothing strange even in time of peace, if the Government fails, as it has done under the current situation, to take effective

and appropriate measures.

Farmers' Living Conditions.—Turning to the living conditions of the farming populace, a marked improvement has been witnessed since the start of the Sino-Japanese hostilities. Although the Agriculture and Forestry Ministry has not made public any authentic figures covering the country since 1937, some perfunctory statistics as compiled by local governments and private institutions are sufficient to show that the pockets of all the farming classes—including even the poor peasantry—have been warmed greatly due to the higher prices of agricultural products as compared with the days previous to the China Incident. Needless to say, the rapid increase in the prices of rice, wheat and cocoons played an important role in this connection. Such poor peasants as have nothing to sell are earning greater wage incomes under the current wartime boom. This improvement in farmers' economy is reflected clearly in the remarkable increase of deposits in the vaults of local credit cooperative societies and in the skyrocketing of land prices.

Fertilizer Situation.—As to the distribution of so-called Spring manure to be consumed in the first seven months in 1940, the Agriculture and Forestry Ministry decided to adopt a quota system so that greater amounts of fertilizers may be allotted for rice, wheat and barley than for other minor crops. In the case of ammonia sulphate, for instance, quotas are set at 80 per cent of the consumption in the January-July period of 1938 for the key food crops and at 60 per cent for other crops; and in the case of calcium superphosphate, at 94 per cent for the food crops, and at 75 per cent for others. Calcium cyanamide and potassium compounds are to be distributed pro rate on the basis of the consumption in the corresponding period of 1939.

Table 39. Economic Status of Farming Households

(1) Number of Workers and Working Hours per Household

	No. of Households Investigated	No. of Members per Household			Working Hours per Year		
		Male	Female	Total	Of which Employees	By Other than Family Members	
						By Family Members	
Free Holders	84	3.10	3.46	6.56	3.92	10,782	348
Semi-Tenants	104	3.14	3.20	6.34	3.75	10,916	270
Tenants	91	3.15	3.31	6.46	3.87	10,782	159
Average or Total	279	3.13	3.32	6.45	3.85	10,827	259

(2) Area per Household

(Unit: "Se"; 1 "Se"—0.0245 Acre)

	Paddy		Upland		Homestead		Woodland		Others	
	Total	Of which leased	Total	Of which leased	Total	Of which leased	Total	Of which leased	Total	Of which leased
Free Holders	87.13	3.16	44.17	1.23	3.27	...	43.11	...	9.17	...
Semi-Tenants	88.07	48.23	39.20	16.07	2.25	0.08	11.21	2.22	3.09	1.15
Tenants	91.27	87.16	30.03	24.21	2.03	0.22	7.15	1.01	0.11	0.07
Average	89.06	46.18	38.03	14.07	2.28	0.10	20.26	1.08	4.12	0.17

(3) Property and Debts per Household

(Unit: ¥)

	Properties						Debts				
	Land	Building	Implements	Plants & Animals	Raw materials for farming	Cash	Total incl. others	Farming	Household	Total incl. others	Net property
Free Holders	5,844	644	201	443	567	1,235	10,502	175	192	377	10,125
Semi-Tenants	3,010	465	178	313	381	840	6,016	365	280	653	5,363
Tenants	554	331	147	229	295	583	2,816	218	214	445	2,372
Average	3,126	480	175	328	415	886	6,445	253	229	492	5,953

(4) Gross Revenue and Expenditure per Household

(Unit: ¥)

	Income from agriculture			Income other than agriculture			Household income	Total net income	Total household expenses	Net balance
	Total income	Expenses	Net income	Total income	Expenses	Net income				
Free Holders	1,438.4	431.5	1,006.8	143.5	13.7	129.7	57.8	1,194.4	892.7	301.6
Semi-Tenants	1,389.2	563.6	825.6	166.2	14.1	152.1	46.0	1,023.8	770.9	252.8
Tenants	1,286.6	625.8	660.7	178.1	19.9	158.1	46.1	865.0	695.0	170.0
Average	1,371.4	540.3	831.0	162.6	15.9	146.6	50.0	1,027.7	786.2	241.5

(5) Agricultural Income and Expense Classified

(Unit: ¥)

	Income					Total gross income incl. others	Expense					
	Rice	Wheat, Barley, etc.	Horticulture	Cocoons	Stock-breeding		Farming implements	Fertilizer	Stock-breeding	Tenant fee	Various burdens	Total expenses
Free Holders	741.1	122.4	144.4	160.1	121.1	1,060.2	23.9	133.6	99.4	15.1	66.8	431.5
Semi-Tenants	755.1	132.4	132.7	143.4	69.9	1,077.4	22.9	144.1	62.5	208.6	35.4	563.6
Tenants	749.8	116.2	158.1	95.1	41.4	1,084.7	18.6	127.9	40.8	351.2	12.7	625.8
Average	748.6	123.7	145.1	132.9	77.4	1,371.4	21.8	135.2	67.4	191.6	38.3	540.3

FERTILIZERS

The demand for commercial fertilizers has risen steadily since 1932, and in 1936 the total value of consumption was given as ¥276,701,000 as contrasted with ¥185,318,000 in 1932. The consumption of self-supplied manure, including compost, green manure and night soil has also expanded and in 1938 its total value was ¥441,530,000.

Table 40. Consumption of Self-supplied Manure

	Compost		Green manure		Night soil		Total incl. others	
	(1,000 M. tons)	(¥1,000)	(1,000 M. tons)	(¥1,000)	(1,000 M. tons)	(¥1,000)	(1,000 M. tons)	(¥1,000)
1929	22,820	143,390	6,219	34,230	16,308	77,240	53,730	334,250
1930	23,506	122,690	6,133	29,130	16,236	61,830	54,817	282,470
1931	25,312	113,510	6,391	25,810	16,164	51,510	59,407	251,280
1932	26,931	121,780	6,514	25,720	16,012	51,500	58,930	260,270
1933	29,631	144,200	6,854	26,630	15,673	53,680	61,759	297,900
1934	31,719	148,040	6,287	24,320	16,196	56,020	63,806	299,920
1935	34,115	166,490	7,257	28,090	16,602	56,850	67,454	328,560
1936	35,167	186,130	5,766	24,850	15,812	56,280	66,515	354,200
1937	37,697	212,790	6,671	28,760	15,420	50,110	69,522	387,740
1938	39,109	242,220	6,043	37,500	16,056	59,900	70,968	441,530

Note:—See Chapter Chemical Industry for Commercial Fertilizer.

References:

- Table Nos.: 1-9 a, 10-11 a, 12 b, 13-22 a, 23-26 c, 27 e, 28-29 d, 30-31 e, 32-40 a.
- Key: a—Department of Agriculture & Forestry.
- b—Imperial Agricultural Association.
- c—Monopoly Bureau, Department of Finance.
- d—Tea Producers Guild of Japan.
- e—International Year Book of Agricultural Statistics.

CHAPTER XXV

SERICULTURE

INTRODUCTORY REMARKS

COCOONS

Japan is the largest silk producing country in the world accounting for about 80% of total world output. The value of cocoons made up 8.9% of the total value of Japanese agricultural products in 1938, and 33% of the agrarian households is connected with the industry either fully or partially during the year.

Raw silk has long been Japan's greatest export product. Until 1929 it accounted for over 36% in the value of the entire exports of Japan. While this percentage has rapidly fallen, declining to 14% in 1939, the absolute quantity of exports has shown only a small contraction. Since 1934 cotton tissues have supplanted raw silk as the largest item of export.

The phenomenal growth of the sericultural industry in the last 50 years has been due chiefly to the existence of a strong foreign demand. From 75 to 85 per cent of the total output of raw silk is annually exported abroad. In 1938 this ratio was 66%. The export of silk manufactures, which is not included here, amounts in value to about one-fifth that of raw silk sales abroad.

Sericulture may be conveniently divided into two main branches, that of cocooning, or the rearing of silkworms, and reeling, or the drawing of silk from the cocoons. Other branches include the growing of mulberry trees, the breeding of silkworms as distinguished from its rearing, and the transacting of cocoons and the exporting of raw silk.

Table 1. Japan's Position in Raw Silk Output

	Japan Proper %	Chosen (Korea) %	Bulgaria %	Italy %	U.S.S.R. %	China (export) %	World's Total	
							%	(Metric Tons)
1929	70.00	1.73	0.33	8.00	1.02	17.10	100.00	67,768
1930	72.60	2.25	0.35	8.30	1.30	13.43	100.00	58,803
1931	76.80	2.50	0.17	5.74	1.42	19.50	100.00	57,219
1932	79.50	2.43	0.21	7.22	1.60	7.95	100.00	52,651
1933	76.30	2.89	0.18	6.19	1.40	11.20	100.00	55,203
1934	80.00	3.65	0.20	5.00	1.60	7.85	100.00	56,707
1935	78.00	3.50	0.24	3.05	2.07	10.02	100.00	54,792
1936	78.80	3.50	0.21	5.90	2.95	8.25	100.00	53,895
1937	77.55	3.50	0.25	5.70	3.10	9.10	100.00	54,100*
1938	80.00	4.00	0.34	3.70*	....	5.39	100.00	54,100*

Note: * Estimates.

Climatic Characteristics

The cultivation of the mulberry trees and the rearing of silk worms are technically possible in all parts of the world. Economically and practically, however, the industry is limited to the land with high temperature and humidity and with cheap skilled labour. It cannot be profitably carried on unless a large crop of mulberry leaves is obtainable more than once a year. This can be expected only of the places marked by a long spell of humid and warm weather.

The eastern and southern parts of Asia are, therefore, most suited for the industry. On the other hand, sericulture involves various complicated forms of work and so requires no small amount of labor. Here again, the districts of East and South Asia are best suited for the industry, because they are not only characterized by the thick density of population but by

small-scale farming. These conditions necessary for the production of raw silk makes an interesting contrast to the aridity of climate and large-scale farming which are necessary for the production of wool.

The major silk producing countries are Japan, China, French Indo-China and British India, which belong to the monsoon zone in East and South Asia. They are followed by the Po basin of Italy and the Rhone tributaries of France. But, in these two countries the industry can be carried on only once a year owing to climatic conditions.

Characteristics of Japanese Raw Silk.—Japanese raw silk is characterized by its lustre and little wear in glossing. The filament from the best cocoons measures from 2,000 to 2,500 "shaku" in length and weighs from 0.07 to 0.08 "momme" (1 'shaku, is about 1 foot and 1 'momme' 3.75 grammes). Much improvement

has of late been effected in fineness and uniformity.

COCOONING

Area.—The area under mulberry trees shows a gradual decline in recent years. In 1930, the peak year, the area under its cultivation exceeded 714,000 cho which represented 9 per cent of the cultivated area for the entire agricultural industry for that year. By 1933 it was down to 640,000 cho and in 1939 to 533,000 cho.

Cocooneries.—The number of cocoon-raising households in Japan, which stood at 1,670,000 in 1915, gradually increased until it exceeded 2,217,000 in 1929, which bore a percentage of

40 to the whole number of agricultural families. In the ensuing depression, which caused a slump in the price of cocoons the number of cocooneries also fell and in 1939 it was down to 1,655,000.

The average yield of cocoons per cocoonery (for spring, summer and autumn cocoons) in 1939 was 54,872 momme as compared with 11,933 momme in 1905.

Cocoon Production.—The output of cocoons has multiplied eight and one-half folds in the last 50 years. The index number for cocoon production (based on the average production for the 5 years 1885-1889) rose for the quinquennial period 1930-34 to 866, representing 96,277,934 kwan.

Table 2. Output of Cocoons, Etc. in Japan Proper (Kwan=3.75 kilogrammes)

Crops by Seasons	No. of cocoon raising families (1,000)	Egg-cards hatched (k. g.)	Output (1,000 kwan)				Total (¥1,000)
			Normal	Dupion	Waste	Total	
Spring Crops	1932... 1,901	77,898	42,352	2,192	1,848	46,391	111,898
	1933... 1,918	81,198	46,072	2,048	1,899	50,019	298,404
	1934... 1,867	77,463	44,625	1,957	1,809	48,390	117,346
	1935... 1,750	69,389	40,596	1,842	1,737	44,176	161,352
	1936... 1,694	65,053	37,684	1,908	1,801	41,392	199,966
Summer-Autumn Crops	1937... 1,678	66,296	41,589	1,990	1,927	45,504	252,566
	1938... 1,533	58,654	36,985	2,009	1,870	40,863	177,472
	1939... 1,492	58,654	40,153	2,325	2,263	44,741	407,643
	1932... 1,922	88,913	36,922	4,027	2,210	43,159	184,896
	1933... 1,982	100,002	44,416	4,246	2,482	51,145	201,722
Combined Total Crops	1934... 1,811	83,366	33,477	3,115	2,158	38,749	86,531
	1935... 1,770	81,788	32,772	2,885	2,234	37,891	188,908
	1936... 1,754	80,599	36,309	2,877	2,313	41,500	186,673
	1937... 1,696	77,142	35,526	2,652	2,290	40,468	167,046
	1938... 1,576	69,448	30,226	2,192	1,976	34,393	168,557
	1939... 1,568	74,014	39,771	3,212	3,089	46,072	475,274
	1932... 2,065	166,812	79,274	6,219	4,058	89,550	296,791
	1933... 2,092	181,201	90,489	6,294	4,381	101,164	500,129
	1934... 1,995	160,829	78,101	5,071	3,967	87,140	203,871
	1935... 1,895	151,177	73,368	4,727	3,972	82,066	350,869
	1936... 1,857	145,652	73,993	4,785	4,115	82,892	386,641
	1937... 1,815	143,437	77,112	4,643	4,217	85,972	419,606
	1938... 1,697	128,102	67,210	4,200	3,846	75,256	346,035
	1939... 1,655	132,668	79,924	5,537	5,352	90,813	882,719

Table 3. Mulberry Plantations (Cho=0.9917 hectare)

	No. of farming families	Area (1,000 cho)	Mulberry Saplings	
			No. (1,000)	Value (¥1,000)
1927.....	231,195	595	823,759	10,130
1932.....	104,370	653	244,757	1,446
1933.....	101,549	640	227,799	3,165
1934.....	107,839	623	255,610	2,903
1935.....	97,579	582	238,179	1,625
1936.....	91,487	566	222,877	3,001
1937.....	120,484	560	257,643	4,300
1938.....	101,764	550	253,846	3,380
1939.....	95,671	533	269,887	3,971

Cocoon Production Cost.—The cost of cocoon production was down in 1935 to one-third of what it was ten year previous. Mulberry leaves account for 50 per cent of total production

expenditures, that for labour 30 per cent. About 40 per cent of the cost of the mulberry leaves is represented by fertilizer expenditures and as a result production cost as a whole is greatly influenced by the fluctuations of this item. Between 1925 and 1934 the cocooning business proved profitable to the farming households for only four years, i.e. in 1923, 1925, 1929 and 1933, but of late a favorable change has taken place.

Cross Breed.—The Imperial Sericultural Experimental Station has come to the conclusion after many years of experiments that the crossed silk worm eggs between Japanese, Chinese and European breeds of the first generation are the best for the purpose for which they are intended. The Station now prepares and dis-

tributes them free to local institutions either prefectural or otherwise, which in turn carry on reproduction and distribution for the benefit of private reproducers.

The Imperial Sericultural Experimental Station.—This is a Government institute for conducting scientific researches and investigations on all problems relative to the sericultural industry and also holding lectures and classes to train experts and filature hands. The Station is situated at Nakano, Tokyo, with branches at Ayabe, Mayebashi, Fukushima, Matsumoto, Ichinomiya and Kumamoto, all local centres of the industry.

REELING

Filatures.—In contrast to an almost steady increase in production of raw silk in the last thirty years the number of filatures has been on the decline. Filatures may be divided into three categories, namely, machine-reeling, hand-reeling and dupions. The smaller filatures in each of these categories or those with less than 10 boiling basins are rapidly disappearing. On the other hand the larger filatures are holding their own, and this is particularly so among the machine-reeling and dupion plants.

Table 4. Number of Basins and Filatures

	Machine reeling		Hand reeling		Dupions		Total	
	Filatures	Basins	Filatures	Basins	Filatures	Basins	Filatures	Basins
1931.....	3,687	319,448	53,760	71,925	8,953	27,029	66,400	418,402
1932.....	3,356	277,800	49,454	64,803	7,651	22,814	60,461	365,417
1933.....	3,218	267,836	44,736	57,692	6,443	18,051	54,397	343,579
1934.....	3,013	249,724	42,553	54,834	5,602	16,482	51,168	321,040
1935.....	2,738	235,488	38,456	48,304	4,509	13,865	45,703	297,657
1936.....	2,468	222,247	34,445	45,564*	4,978	12,781	41,891	280,682
1937.....	1,892	196,547	37,418	47,681	4,112	11,887	43,422	256,115
1938.....	1,837	191,821	36,055	45,594	3,363	10,546	41,255	247,961

Raw Silk Production

The production of raw silk has increased five folds between 1905 and 1934. Total output exceeded the 12 million kan mark in the latter year, but fell off to 11,507,000 kwan in 1938. The machine reeling filatures account for over 90 per cent of total production in recent years as compared to 70 per cent three decades ago. Output from both dupion and hand-reeling filatures has been contracting for some time. The reason for the increase in production by the machine-reeling plants over the other two categories is due to the fact that the product of the former is mainly exported while the latter is primarily intended for the domestic market.

Raw Silk Production Cost.—Production cost of raw silk is divided 70 per cent for the purchasing of cocoons and 30 per cent for the various processing of the cocoons. Of the processing expenditures 30 per cent is represented

by labour and the rest by such items as interest on capital, fuel, etc. With the spread of modern processing methods it is believed that the percentage of expenditure for labour can be narrowed further.

Raw Silk Financing.—In view of the fact that roughly 70 per cent of production cost is taken over by the purchase of cocoons the enterprise calls for a proportionately large amount of liquid capital to that of fixed capital. With the growth in the scale of production, calling for greater capital requirements, the enterprise has come to rely increasingly on banking institutions for financing in place of the traditional brokers. In recent years from 65 to 75% of raw silk financing has been taken care of by the banks and between 20 and 27% by brokers. Because of the fluctuations in the price of cocoons between the time they are purchased and sold as raw silk the enterprise continues to have a highly speculative aspect.

Table 5. Raw Silk Output

(Volume in 1,000 kwan; Value in ¥1,000)

	Machine-reeling		Hand-reeling		Dupions		Total (excluding waste)		Waste	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1927.....	8,801	745,718	458	30,079	621	23,001	9,880	798,798	3,733	19,644
1932.....	10,070	427,211	337	11,678	684	15,570	11,901	454,458	3,616	17,867
1933.....	10,296	471,960	310	10,864	637	14,917	11,243	547,741	3,730	19,313
1934.....	11,180	377,873	355	9,448	529	11,049	12,065	398,369	4,014	19,046
1935.....	10,904	477,383	297	10,952	442	11,432	11,643	499,767	3,971	22,498
1936.....	10,523	493,839	313	11,921	451	11,485	11,287	517,244	3,430	21,312
1937.....	10,332	501,455	372	13,729	462	12,136	11,167	527,321	3,234	21,484
1938.....	10,731	505,929	405	15,399	371	12,863	11,597	534,191	3,524	27,902

DEMAND

The demand for raw silk has expanded steadily over the past five decades, thanks to the heavy foreign orders. As noted elsewhere roughly 70 per cent of the total raw silk output is exported and as a result the demand for this staple commodity is influenced vitally by foreign business conditions. The world-wide economic depression breaking out in 1929 has

not been without its repercussions on the raw silk industry, and production for the first time in many years fell in 1932 as compared to the previous year. The value of production in 1938 was ¥534,191,000 as compared with ¥398,000,000 in 1934.

Raw Silk Price.—The average spot quotation at Yokohama in 1925 which was ¥1,957 per bale fell to ¥583 in 1931. It recovered to ¥750 in 1938 and soared to ¥1,345 in 1939.

EXPORT

Among countries buying Japanese raw silk the United States ranks first by a wide margin. Of the total exports she alone purchased 96.4% in 1931. In that year Europe accounted for 3.5%. As business conditions turned to the worse in the United States the ratio of her purchases of raw silk fell from 93.7% in 1932 to 77% in 1938 but rose to 84% for the year ending June, 1939. Total exports for the year ending June, 1939 were valued at ¥379,900,000, an increase of 2.2% in value but a decrease in volume of 6.6% compared with the same period a year before.

Conditioned Weight in Raw Silk.—The long standing custom of handling raw silk in non-conditioned weight, containing a slight moisture,

has been superseded by an improved practice obtaining in Europe and America where transaction is made on the non-moisture weight system plus 11 per cent of moisture. The defective state of the conditioning machinery in Japan stood in the way of adopting the system as suggested by American silk people. On the completion of the newly equipped Silk Conditioning House in Yokohama the Government enacted the Law for Conditioning Raw Silk for Export. It provides that raw silk should not be shipped abroad without passing the examination of the Conditioning House, and that transactions should be done only in conditioned-weight. The law came into operation in 1927, the two conditioning houses in Yokohama and Kobe being placed under it.

Table 6. Movement of Raw Silk on Yokohama Spot Market (Unit: Yen) (Standard quality: per bale of 100 kin, 132.3 lbs.)

	March			June			September			December			Yearly avc.
	High	Low	Average	High	Low	Average	High	Low	Average	High	Low	Average	
1925.....	2,040	1,780	1,898	1,980	1,850	1,888	2,100	2,030	2,069	2,000	1,920	1,950	1,957
1930.....	1,180	1,120	1,165	820	750	795	720	560	648	660	570	625	775
1931.....	690	630	666	600	500	527	630	535	573	640	525	567	583
1935.....	610	575	597	605	575	592	895	685	830	905	830	874	713
1936.....	815	705	749	725	625	681	755	705	734	910	847	871	778
1937.....	955	860	908	860	790	800	855	790	828	710	663	685	828
1938.....	730	673	713	755	665	702	795	755	778	843	805	817	750
1939.....	1,080	970	1,020	1,240	1,140	1,187	1,700	1,305	1,584	2,410	1,865	2,097	1,345
1940.....	.....	.....	1,638	.....	.....	1,471	.....	.....	1,376	.....	.....	.....	.....

Table 7. Raw Silk Export (Quality in 1,000 bales; Value in million yen)

Year ending June 30:	U.S.A.		Great Britain		France		Others		Total	
	Qty.	Val.	Qty.	Val.	Qty.	Val.	Qty.	Val.	Qty.	Val.
1917.....	197.6	249.6	2.0	2.4	32.9	40.2	7.9	9.3	240.4	301.5
1922.....	274.6	474.9	1.4	2.5	28.9	49.0	0.3	0.6	305.2	527.0
1927.....	483.6	739.7	1.7	2.7	19.4	29.4	2.7	4.2	507.5	776.0
1932.....	521.9	318.5	12.5	8.0	8.2	4.7	8.3	5.3	550.9	336.5
1935.....	443.8	254.8	23.7	14.8	41.7	24.4	16.8	8.3	526.0	302.4
1936.....	410.0	319.1	31.1	26.0	24.8	19.2	21.4	13.8	487.3	378.1
1937.....	454.1	371.2	26.7	22.8	25.5	21.3	18.7	14.6	525.0	429.8
1938.....	361.3	285.1	40.9	34.1	33.0	26.6	32.0	25.8	467.1	371.6
1939.....	368.8	320.5	24.8	22.0	27.0	28.7	15.9	13.6	436.1	379.9

References:

Table Nos.: 1-5 a, 6 b, 7 c.

Key: a—Dept. of Agriculture and Forestry. b—Central Sericultural Association. c—Dept. of Finance

CHAPTER XXVI
FORESTRY

INTRODUCTORY REMARKS

More than half of the area of Japan proper is occupied by forests. Although the country abounds in forests, its mountainous character so much impedes the felling of trees that it is often found convenient and economical to import lumber from America and Canada. Chosen and Taiwan also are rich in trees, in the former forests occupying 13% of the entire area and in the latter 70%. As in the case of Japan proper, however, forests of both territories lie in such places as to throw considerable difficulties in the way of cutting down trees and marketing timber. Contrary to these two territories, the Japanese section of Saghalien, (Karafuto) supplies a considerable amount of timber. Forests in Japan may be broadly divided into four zones.

Tropical Zones.—This zone covers the plains of Taiwan, the Ogasawara (Bonin) islands and the southern half of Okinawa (Luchu) with a mean temperature of about 21° C. The representative trees of this zone are "ako" (Ficus Wightiana, var. japonica), "takonoki" (a species of Pandanus), etc. Bamboos attain a perfect growth in this zone.

Sub-tropical Zone.—Forests in this zone are found in the northern half of Okinawa, the high lands of Taiwan, Shikoku, Kyushu, and the southern half of Honshu as far as latitude 35° N., the mean temperature ranging from 13° to 21° C. The representative trees in the zone may be divided into broad-leaved deciduous trees. In the first group there are "kusu" or camphor trees (Cinnamomum camphora), "kashi"

(Quercus acuta) and "shi-i" (Passania cuspidata), in the second group several species of pines, and in the last group "kunugi" (Quercus serrata), "konara" (Q. glandulifera Bl.) etc.

Temperate Zone.—The forests in this zone extend over the northern part of Honshu and as far as the south-western section of the Hokkaido corresponding to 43½° N., the mean temperature ranging from 6 to 13° C. The forests in this zone are economically the most important in Japan and are generally found in the mountain ranges that divide the Main Island, the Inner Japan section on the Japan Sea and the Outer Japan section on the Pacific. Valuable among the conifers are "sugi" (Cryptomeria japonica), "hinoki" (Chamaecyparis obtusa), "sawara" (Chamaecyparis pisifera), "hibi" (Thujaopsis dolabrata), "tsuga" (Tsuga Sieboldi Carr), "momii" (Abies firma), several species of pine, etc. As deciduous trees of value there are "keyaki" (Zelkova), "huna" (Fagus sylvatica var. Sieboldi), "katsura" (Cercidiphyllum japonicum), several species of Quercus, chestnut trees, maples, fig-trees, magnolia, etc.

Frigid Zone.—Forests found at an elevation of 4,000 or 5,000 feet (above sea level) in Honshu, the north-eastern part of the Hokkaido, Karafuto and Chishima (Kuriles) form the frigid forests. The principal trees are "shirabe" (Abies Veitchii), "todomatsu" (Abies Sachalinensis), "ezomatsu" (Picea ajaensis), "shikotanmatsu" (Larix Kurilensis, chiefly in Karafuto), and lastly "hai-matsu" (Pinus pumila) or creeping-pines that grow on the summits of high mountains in Honshu.

Table 1. Forestry Output in the Japanese Empire (1938)

	Timber		Charcoal		Bamboo Val. (¥1,000)	Total incl. others Val. (¥1,000)	
	Qty. (1,000 cubic meters)	Val. (¥1,000)	Qty. (1,000 metric tons)	Val. (¥1,000)			
Japan Proper.....	24,818	279,359	73,698	2,285	161,478	3,172	567,034
Chosen.....	2,849	32,928	34,227	101	5,692	360	166,750
Taiwan.....	327	9,756	2,719	53	1,927	1,614	19,331
Karafuto.....	4,752	32,740	300	7	383	.....	33,429
Nanyo.....	10	16	13	2	99	.....	4,018
Total.....	32,556	353,799	110,957	2,448	169,579	5,146	790,562

AREA OF FORESTS

The area of woodlands in Japan proper has, on the whole, yearly increased.

The area of forests in Japan proper in re-

cent years specified by ownership is given in the following table:—

Table 2. Area of Forests

(Unit: in 1,000 Cho; 1 Cho=0.9917 Hectare or 2.45 Acres)

	Under Needle- leafed trees	Under broad-leafed trees	Under mixed trees	Under Bamboo	Under mis- cellaneous trees	Total	Without trees
1918	4,050	6,940	7,326	130	335	18,783	3,509
1921	4,354	7,472	6,267	121	391	18,605	3,437
1924	4,793	7,899	6,332	127	401	19,553	3,662
1927	4,728	8,129	6,186	133	502	19,680	3,223
1930	4,671	8,540	6,199	137	496	20,045	3,158
1933	5,466	9,162	5,500	150	470	20,747	3,095
1936	5,659	9,008	5,759	153	458	21,036	3,151

Table 3. Area of Forests by Ownership

(Unit: in 1,000 Cho; 1 Cho=0.9917 Hectare or 2.45 Acres)

	Crown forests	State forests	Communal forests	Temple & Shrine forests	Private forests	Total
1918	1,392	7,681	4,278	126	8,817	22,293
1921	1,421	7,277	4,118	130	9,096	22,043
1924	1,376	7,755	4,329	132	9,623	28,215
1927	1,361	7,764	4,283	131	9,363	22,903
1930	1,445	7,702	4,221	143	9,693	23,203
1933	1,426	7,721	4,323	145	10,227	23,843
1936	1,380	7,713	4,445	153	10,496	24,186

Table 4. Protection Forests by Purposes

(Unit: in 1,000 Cho; 1 Cho=0.9917 Hectare or 2.45 Acres)

	Against denudation of soil	Protection of head waters	Against over floods	Against winds	Against tide	For fishes	For Scenery	Total incl. others
1926	836	899	2.5	32.8	8.7	42.5	31.1	1,874
1933	913	989	11.9	66.5	9.1	48.4	34.6	2,096
1934	919	991	11.0	70.7	9.1	48.4	34.8	2,107
1935	925	995	6.5	77.2	9.1	51.3	36.7	2,123
1936	933	998	6.5	77.3	9.3	51.2	37.2	2,135
1937	934	999	6.5	77.9	9.2	51.7	37.0	2,144
1938	948	999	6.6	76.3	9.2	51.9	38.6	2,144

Percentage Forests.—These are state forests left under the care of adjoining villages or towns which are allowed in return a certain percentage of the produce. They are being gradually converted into communal forests. Their number and area in the last few years were as follows.

Table 5. Number and Area of Percentage Forests*

	No.	Area	
		(Hectares)	(Cho)
1931	15,046	45,468	45,847
1932	14,344	45,280	45,658
1933	13,638	44,558	44,929
1934	13,034	43,864	44,229
1935	12,232	42,336	42,689

Note: * Percentage Forests: These are State forests left under the care of adjoining villages or towns which are allowed in return a certain percentage of the produce. They are being gradually converted into communal forests.

Important Forests

Of important forests in Japan proper those of natural or artificial origin are as follows, to

mention only a few that are specially valuable.

Forests Artificially Planted.—Forests in Yoshino covering an area of about 82,000 cho or 200,900 acres are well known for their splendid stock of "sugi" (*Cryptomeria japonica*) and "hinoki" (*Chamaecyparis obtusa*) yielding annually about ¥6,500,000 worth of timber valued for building and making casks of sake. Forests next in importance are the planted area along the river Tenryu, covering an area of 543,000 cho, timber trees grown being chiefly "sugi" and "hinoki." The annual yield is estimated at ¥1,500,000. Bamboo groves near Kyoto are known as the most valuable in Japan, yielding yearly about two million yen worth of products of diverse utilities.

Forests Naturally Grown.—The Crown forests of Kiso covering over 100,000 cho or 245,000 acres and with the growing stock of 6.6 million koku or about 66,000,000 cubic ft. (1 koku is about 10 cubic ft.) stand first on the list of valuable natural forests in Japan. It belonged to the quondam Lord of Owari Province before the Restoration and the five species "hiba"

(*Thuja dolabrata*), "sawara" (*Chamaecyparis obtusa*), "nezuko" (*Thuja japonica*), and "koyamaki" (*Schiadopityx verticillata*) were jealously preserved as protected trees. Of those five species "hinoki" is the most important in volume and value.

The State forests of "hiba" in Aomori cover some 190,000 cho and in sylvan grandeur are only equalled by the other well known pure forests of "sugi" in Akita also belonging to the State. The "sugi" zone extends along the banks of the rivers Noshiro and Omono and measures 43,000 cho in area. The aforementioned are regarded as the most valuable natural forests in Japan. Others that are worthy of notice are the State "sugi" forests in Tosa about 30,000 cho, deciduous-leafed forests around Lake Towada famous for their splendid scenery, mixed forests in the Japanese Alps region and in the southern part of Kyushu, the "sugi" forests on Yakushima Island of the Osumi archipelago, Kyushu. The Hokkaido supplies about 30 million koku or about 300 million cubic ft. of timber from its coniferous, deciduous and mixed forests.

Adjustment of State Forests

The programme for adjusting State forests aims at, as ordained by law in 1899, determining out of the forests and plains belonging to the State, those that are to be preserved for the benefit of public order and for conducting economic plan. The Forests Fund Special Account System that was in force from 1899 to 1921 laid the adjustment plan on firm basis. Thanks to that system the Government could complete with the fund realized on the sale of unnecessary State forests and plains the work of surveying, delimitation, afforestation of blank spaces. Experiment and working expenses have been met out of the regular budget.

Table 6. Natural Afforestation Area By Ownership

(Unit: in 1,000 Cho; 1 Cho=0.9917 Hectare or 2.45 Acres)

	Crown	States	Communal	Temple & Shrine	Private	Total
1932	12,236	57,480	39,870	1,108	129,222	239,916
1933	9,611	59,841	41,126	1,109	130,970	242,657
1934	5,719	81,153	37,882	970	148,103	273,827
1935	6,494	67,489	37,495	1,132	127,448	240,058
1936	8,434	73,322	40,448	932	129,773	252,909
1937	.....	71,685	37,696	922	130,517	.....
1938	.....	87,126	42,877	1,113	137,638	.....

According to the working plan adopted for adjustment and utilization, 416,000 cho of State forests and plains of Japan proper is to be set apart as necessary and 170,000 cho for disposal as superfluous area. The definite plan of utilization has been arranged for over four million cho consisting of 3,690,000 cho of wooded forests and plains and 390,000 cho to be reserved from various considerations. The wooded surface is estimated to hold growing stock amounting to 28% and deciduous trees 72%. The stock per cho or 25 acres works out at 344 koku. At present the annual cutting area is about 40,900 cho with the conversion volume of 19,340,000 koku. With the exploitation of the area left unutilized and the growth of the artificially regenerated space representing 653,000 cho, the conversion volume is expected to make a far better showing.

River Control and Afforestation

Of the communal forests those belonging to villages are generally left in utter neglect. With the object of renovating and utilizing the barren area, the Government elaborated in 1912 for the communal forests and plains the river control work spread over 23 years, it being intended to plant bare spaces of 350,000 cho and to adjust the communal land for best economic purposes. Small aid is granted for encouraging the work. Then the Government is also promoting the planting work of about 330,000 cho of blank area belonging to the communal bodies, the work to be completed in 19 years beginning 1920. The contract arranged between the Government and the communities concerned is that the latter is to offer the land and undertake some slight work of control and protection, while the Government attends to planting, cutting and other necessary business at its own expense. The profit realized is to be shared equally by the contracting parties.

Table 7. Number of Seedlings Planted for Afforestation

(Unit: in 1,000)

	Crown	Communal*	State	Communal	Shrine & Temple	Private	Total
1934.....	16,173	30,409	37,885	58,658	1,538	195,903	340,567
1935.....	15,456	19,617	35,829	55,664	1,864	200,091	328,021
1936.....	14,858	31,530	44,998	54,648	1,689	208,628	356,351
1937.....	11,425	29,776	34,040	53,843	1,408	210,066	340,558
1938.....	13,478	21,064	33,005	56,050	1,826	242,060	367,486

Note: * Public forests where afforestation was carried out by the State.

Table 8. Forestry Output

	Timber			Value (¥1,000)	Fagot		Bamboo		Total value (¥)
	Needle-leafed (1,000 koku)	Broad-leafed (1,000 koku)	Total (1,000 koku)		(1,000 "Tana")	(¥1,000)	(1,000 Bundles)	(¥1,000)	
1932.....	41,041	10,182	51,223	67,388	18,397	43,474	5,192	2,697	113,559
1933.....	45,821	10,476	56,296	88,687	19,031	47,394	5,173	2,598	138,677
1934.....	53,566	10,806	64,362	112,749	19,929	51,789	5,419	2,581	167,119
1935.....	54,755	10,896	65,650	113,869	20,270	52,366	5,399	2,527	168,761
1936.....	59,864	12,273	72,138	136,932	19,740	55,635	5,663	2,754	195,321
1937.....	67,069	12,358	79,427	189,089	21,894	63,219	5,392	2,684	254,992
1938.....	72,945	12,803	86,248	274,358	21,672	73,698	5,607.8	3,172.0	550,503.8
Of which:									
Crown ..	3,105	1,970	5,075	18,553	217	651	0.5	0.9	29,572.4
State ..	11,423	4,468	15,891	33,145	1,977	5,106	23.3	5.3	72,038.6
Communal	1,590	1,582	3,172	18,441	1,960	5,967	161.2	51.5	32,931.7
Shrine & Temple	258	8	267	986	77	336	37.6	26.8	1,996.4
Private ..	56,569	4,775	61,343	203,233	17,441	61,638	5,385.2	3,087.5	413,462.7

Note: "Tana"=2.7926 cubic metres.
"Koku"=0.27926 cubic metre.

Table 9. Number of Trees Newly Planted

(Unit: in 1,000)

	Newly Planted			Replenishment			Bamboo Newly Planted
	Needle-leafed	Broad-leafed	Total incl. others	Needle-leafed	Broad-leafed	Total incl. others	
1931.....	265,887	39,418	311,048	30,132	4,537	58,263	1,008
1932.....	293,079	39,493	338,338	29,228	5,480	57,440	890
1933.....	297,690	43,022	346,812	28,244	5,805	62,605	924
1934.....	283,670	49,982	340,567	29,232	6,045	64,756	972
1935.....	273,598	54,423	328,021	29,437	5,935	61,784	749
1936.....	303,197	53,153	356,350	29,616	6,128	60,215	1,409
1937.....	.....	.....	340,557	.....	.....	55,993	1,059
1938.....	.....	.....	367,486	.....	.....	58,486	593
Of which:							
Crown ..	.....	.....	13,478	.....	.....	6,118	.....
State ..	30,560	2,445	33,005	.....	.....	.....	.....
*Communal	20,214	850	21,064	.....	.....	5,867	.....
Communal	46,690	9,356	56,050	6,431	1,243	7,674	.....
Shrine & Temple.....	1,594	233	1,827	230	26	256	.....
Private ..	207,149	34,913	242,062	23,859	4,535	28,394	.....

Note: * Public forests where afforestation was carried out by the State.

Table 10. Principal Forestry By-Products

(Unit: in ¥1,000)

	Seeds	Fruits	Barks	Bamboo sheaths	Undergrowth	Vines & ferns	Galls
1927.....	89	3,104	2,968	418	16,281	156	85
1933.....	44	3,624	1,798	227	15,576	101	47
1934.....	46	3,277	2,225	256	15,617	109	53
1935.....	47	3,638	2,317	227	17,051	116	66
1936.....	48	4,298	2,513	280	18,433	116	60
1937.....	56	4,306	2,901	293	21,424	105	65
1938.....	88	4,419	3,889	320	23,827	137	77

(Continued)

	Raw Mushroom	Dried Cortinellus Shitake	Bamboo shoots	Wood tar & Rosin	Acetic acid-lime	Charcoal	Total incl. Others
1927.....	3,901	2,588	4,194	31	110	102,580	138,050
1933.....	3,519	2,898	3,824	83	170	76,155	109,438
1934.....	4,207	3,602	4,040	47	300	89,020	124,289
1935.....	4,547	4,282	4,143	45	223	90,815	129,084
1936.....	4,394	5,505	4,889	63	209	101,797	144,347
1937.....	4,892	4,823	5,202	104	153	131,460	177,444
1938.....	4,250	4,684	5,657	233	146	161,478	210,806

Forestry Finance

When the disbursements are taken into account, the proceeds from forestry must be much less, but this can hardly be known in case of private forests, as many of their owners do not generally keep an exact account of labor spent and expenses incurred. Much more precise calculation is shown for State forests in which the account is necessarily kept with greater strictness.

DEMAND AND SUPPLY OF TIMBER

Use of Principal Timber Trees.—Of the coniferous trees mentioned above, "ezo-matsu," "todo-matsu," and "momi" are pulpwood, while all the rest are valuable building timbers. The broad-leafed trees are used for industrial purposes, though the *Castanea* is also extensively consumed for railway sleepers. The position of "kiri" or paulownia, one of the lightest and softest woods, is specially important. It is used extensively in cabinet-work, making clogs, etc.

Camphor.—Of the world's consumption of this article put at about 9,000,000 kilograms per annum, the bulk is supplied by Japan proper and Taiwan. Sales of manufactured camphor in the year ending March 31, 1939 amounted to ¥9,524,925 or 5,406,000 kilograms including 1,032,000 kilograms of camphor oil, in Japan proper. Camphor trees growing in State and Crown forests in Japan are estimated at 12 million yielding about 210,000 "shakujime" or about 2,520,000 cubic ft. (shakujime is about 12 cubic ft.) of ripe timber, but as these trees are not always found in easily accessible places and their conversion will not pay at the ordinary market rate, the Government has recently been earnestly encouraging the planting of young trees in more convenient places and to convert them after several years' growth. Eight provinces in southern Japan are granted a small aid for planting. The area under camphor trees in Japan proper in 1938 was 1,704 hectares.

Inflow of Foreign Timber.—Up to 1920 Japan's exports of timber exceeded imports but in the following year the trade balance in this item was reversed, and for a few years after the earthquake disaster of 1923 the inflow amounted to over 100 million yen every year. As a measure for the protection of the native produce the customs duties on imports were raised in March, 1929. The bulk of the imports consist of American products including Canadian. The pines occupy the largest proportion, and up to the Sino-Japanese hostilities of 1937 were displacing the native growth as building material, being cheaper by 30 to 70% than the Japanese produce according to the length, though they are regarded as being inferior to the native pines as building timber and less valued by carpenters and architects.

Table 11. Imports and Exports of Timber

(Unit: in ¥1,000)

	Pure Timber		Special		Total		Excess of Imports
	Exports	Imports	Exports	Imports	Exports	Imports	
1934.....	11,259	30,463	12,655	9,719	23,915	40,183	16,268
1935.....	12,713	37,128	10,468	12,646	23,181	49,775	26,594
1936.....	12,517	37,644	12,185	17,903	29,703	55,547	30,844
1937.....	17,882	41,640	17,529	23,177	35,411	64,817	29,406
1938.....	32,183	13,181	14,704	14,997	46,887	28,178	-18,709
1939	101,887	18,669	26,764	18,658	128,647	32,326	96,321

Note: Pure Timber (as exports) consists mainly of log, board, etc.
Pure Timber (as imports) consists mainly of cedar, fir, etc.
Special Timber (as exports) consists mainly of sleeper, veneer, boards for box and barrel making, match-sticks, etc.
Special Timber (as imports) consists mainly of ebony, kwarin, teak, etc.

Table 12. Imports of Timber by Countries of Origin
(¥1,000)

	U.S.A.	Canada	D.E.I.	Brit. Borneo	Thai	Philippines	China	Kwantung & Manchoukuo	Total incl. others
1929.....	67,316	5,110	1,150	.....	1,851	.....	539	276	88,838
1934.....	20,967	9,470	2,152	1,375	1,013	4,301	66	172	40,183
1935.....	28,227	8,258	2,120	2,542	1,624	5,095	92	208	49,775
1936.....	32,184	6,217	2,012	4,306	1,773	7,330	677	312	55,548
1937.....	30,077	11,517	2,477	3,198	3,102	11,260	826	660	64,817
1938.....	9,770	3,803	2,282	1,980	1,236	6,695	289	1,301	28,178
1939.....	9,448	5,171	1,793	2,159	1,088	10,366	598	783	32,326

SAWING AND LUMBER INDUSTRIES

The Government some years ago started on its own account wood-conversion enterprise, whereas formerly, it confined itself to selling trees growing in State forests as they stood. At one time the Government conversion works numbered 10 but they have all been discontinued.

Principal Wood Industry

Since the World War, investment in forestry and forest products has made a credible growth, especially in the sawing, match sticks and forest planting business on the whole. However, the financial results in this particular line can by no means be regarded as satisfactory, considering the high percentage which wood-areas occupies in the country.

Match-sticks.—The export of match-sticks, which was formerly as much as three million yen, gradually decreased until it fell to ¥87,910 in 1935 but rose in 1939 to 4,022 metric tons valued at ¥793,570, while exports of match box materials amounted to ¥793,570. The stock of poplar used for this industry is now scarce.

Other smaller items are the pencil industry, chess-board making, toy-making, cork and acetic manufacturing, to mention those of recent origin.

Table 13. Japan's Position in Lumber Consumption
(Unit: million cubic meters)
(1938)

	Production	Import	Export	Balance		Production	Import	Export	Balance
Japan	24.9	1.8	0.6	26.1	England	1.1	9.9	..	11.0
U. S. A.	340.2	1.9	2.7	339.4	Poland	13.5	0	1.6	11.1
Canada	26.0	0.3	5.6	20.7	Finland	30.7	0.3	4.0	27.0
U.S.S.R.	108.8	..	3.5	105.3	Sweden	23.5	0.2	3.6	20.1
Germany	22.6	4.0	0.7	25.0	British India ..	3.0	..	0.3	2.7
France	4.6	4.0	0.4	8.2					

References:

Table Nos.: 1-10 a, 11-13 b.

Key: a—Department of Agriculture and Forestry.

b—Monthly Returns of Foreign Trade of Japan.

Amendment to the Forestry Law

The present emergency has greatly stimulated the demand for timber, which in view of decreased imports and increased exports especially to North and Central China, must be entirely satisfied from inland production. There have, moreover, been marked changes as regards kinds of timber most in demand. The demand for mining, pulp-manufacturing and railroads has sharply increased, whilst that for building and other purposes shows a substantial decrease. The increased production of inland timber fostered by these causes must cause grave apprehension as regards a possible depletion of forests and consequent difficulties in flood control. The enactment of the present amendment to the Forestry Law has the express purposes to mitigate the consequences of the present situation.

The most important points of the amendment are as follows:

(1) Prohibition of the felling of young trees and encouragement for the development of forests, through stricter control of forestry, (2) to unify the various associations and (3) to unify administration between the main island of Japan and Hokkaido.

CHAPTER XXVII FISHERIES

INTRODUCTORY REMARKS

Surrounded by seas and favoured with highly productive fishing grounds and a strong domestic demand for aquatic products, Japan ranks first as a fishery country in the world. In the volume as well as in the value of catches she stands far ahead of her nearest rivals. Aquatic products command a dominant role in the fare of the Japanese people and take a similar position as that of pastoral products in certain

western countries. With the adoption of modern fishery implements and crafts the Japanese fishing industry has greatly increased its area of operation and for many years passed her vessels have been actively engaged not only in the near-seas but in the eastern Pacific as well as in the sub-arctic the South Seas and in the Antarctic.

Table 1. Japan's Position in Fishery Crops
(Unit: Quantity in 1,000 metric tons, Value in Million Yen)

	Year	Quantity	Value		Year	Quantity	Value
Japan	1938	5,559	535	Canada	1937	495	80
U.S.S.R.	1933	1,300	296	France	1934	333	178
U.S.A.	1936	2,196	319	Italy	1931	322	88
China	1936	1,271	207	Holland	1935	271	41
England	1936	1,086	283	P. I.	1933	11	4
Norway	1937	781	70	Belgium	1936	35	29

Note: Kwan=3.75 kilograms.

The value of catches in recent years is only second to that of agricultural output. In the year ending March 1939 the total catches in Japan Proper were valued at approximately ¥402,800,000. Of this amount over 61 per cent.

was represented by coastwise fishery. Roughly estimated, the total value of annual catches has increased three times in the last sixteen years, while volume has nearly doubled.

Table 2. Statistics of Fishery Results in Japanese Empire
(A) Value of Catch
(Unit: Million Yen)

Year Ending Mar. 31:	Japan Proper						Colonies				Total
	Coast- wise	Fish culture	Deep- sea	Trawling	Near-sea whaling	Colonial water	Chosen	Taiwan	Karafuto	Nanyo	
1934.....	171	19	66	6.3	1.5	4.2	51	11	6.9	1.8	338
1935.....	173	22	69	6.7	2.5	4.1	58	11	6.8	2.6	361
1936.....	182	26	74	7.0	3.1	5.0	66	14	8.0	1.6	382
1937.....	213	26	87	6.8	3.3	5.9	80	15	8.3	3.6	549
1938.....	220	29	90	8.0	4.3	7.2	90	15	9.7	6.9	480
1939.....	249	30	111	7.7	4.0	1.1	87	16	13.2	4.0	523
1939:											
Fish	180	13.0	72.0	7.7	—	—	77.0	14.2	9.8	1.5	375
Shell	11	5.5	—	—	—	—	2.2	0.2	0.1	2.4	21
Weed	14	9.4	—	—	—	—	2.8	0.2	2.2	—	29
Others	44	2.2	38.5	—	—	—	5.1	1.1	1.0	0.1	92
Total	249	30.1	110.5	7.7	4.0	1.1	87.1	15.6	13.2	4.0	523

(B) Value of Manufactures
(Unit: Million Yen)

(Continued)	Japan Proper		Kamchatka waters		Soviet waters	Antarctic sea whaling	Chosen	Taiwan	Karafuto	Nanyo	Total
	Fish & shell	Isinglass	Salmon & Trout	Crab							
1934.....	156	4.7	5.2	7.5	23.7	..	35.6	1.9	12.6	1.7	249
1935.....	167	5.3	10.3	7.7	40.9	0.5	45.5	2.3	15.0	1.8	296
1936.....	176	6.4	10.2	8.4	29.1	2.3	65.0	2.3	16.9	2.2	319
1937.....	216	9.7	9.7	9.5	35.5	8.7	79.4	2.5	17.3	2.8	388
1938.....	215	10.1	14.6	11.2	37.6	14.5	93.4	2.3	15.8	5.5	432
1939.....	241	11.1	14.2	13.9	44.0	21.8	96.8	2.4	14.9	2.6	462.7
1939:											
Food.....	199	11.1	14.2	13.9	44.0	4.0	44.7	2.1	10.4	2.6	346.0
Fertilizer...	29	—	—	—	—	0.9	28.9	0.0	3.6	—	62.4
Oil.....	13	—	—	—	—	19.0	22.0	0.0	0.7	—	53.7
Total.....	241	11.1	14.2	13.9	44.0	21.8	96.8	2.4	14.9	2.6	346.0

Kinds of Fish

The principal kinds of fish and shell-fish that are used as articles of food are, in the central and southern districts of Japan proper, pagrus, bonito, sardine, horse mackerel, tunny, oyster, clam, prawn, lobster, etc.; in the northern districts, herring, cod, salmonidae, crab, laminaria, etc. For the whole country there are tunny, flat-fish, yellow-tail, etc. For industrial use, there are coral, isinglass and starch weed, etc. Marine products for export have good customers in China where dried cuttlefish, sea cucumber, earshell, shark's fins, laminaria, isinglass, etc., are much in demand. Products going to other markets are canned salmon, trout, sardine, tunny, crab, prawns, preserved cod and mackerel, fish oil, potassium iodine from seaweed, coral shell-buttons, etc.

In pelagic fishing, the most important since the prohibition of sealing is line-fishing for cod. The seine fishing for bonito and tunny also promises to grow in importance. Then there is whaling which has made marked developments since the introduction of the Norwegian method. Of late ground net fishing by motor boats has come to be in vogue, while the use of more effective steam-tractors in place of simple boats has become a notable feature recently.

Besides marine products for home consumption there are several items that figure on the export list. Those going to China are chiefly articles for table use, while fish oil, iodine taken from sea-weeds, isinglass, corals, etc., are exported to Europe and America. Salt refining as extracted from brine has been from ancient

times an important industry along the shores bordering on the Inland Sea and elsewhere. With the enforcement of the Salt Monopoly Law the districts open to the business have been restricted. Aquatic culture has been known from olden times in Japan, especially in the form of pond-culture of gold fish and carp and fagot-culture of oysters and the edible sea-weed laver. Coming to more recent years the artificial rearing of snapping-turtles, eels, salmonidae and some shell-fish has made great development. Oyster culture on the French plan is becoming popular in some parts of the country. Salmon culture is especially noticeable in the rivers of the Hokkaido and northern Japan, trout in the mountain lakes of northern Japan, carp, eels, and snapping turtles in southern Japan.

Aquatic Administration

The administrative side of the industry is fairly complete. Under the Fishery Law, which provided for protection of fishermen, the prefectural governors are empowered to give orders regarding restriction or prohibition in the catching of fish, sale of manufactures, fishing tools, and boats, the number of fishermen, etc. For the promotion of the industry legislation has lately been made in regard to aquatic products association (Suisan-kai). These are of two kinds, namely, the Municipal and the Prefectural, which come under the control of one central institution, the National Aquatic Products Association. Besides, there are a number of fishery guilds. The number and the membership of these associations and guilds for the last few years are tabulated as follows:—

Table 3. Number and Membership of Associations

	Aquatic Products Associations (Suisan-kai)		Fishery Guilds		Aquatic Products Guilds	
	No.	Membership	No.	Membership	No.	Membership
1927.....	338	578,974	.....	.....	47	54,192
1931.....	380	431,179	3,928	546,622	60	53,946
1932.....	380	451,560	3,957	555,736	66	49,548
1933.....	349	450,622	3,980	570,057	67	49,901
1934.....	346	451,034	3,994	574,328	68	42,553
1935.....	344	444,472	4,000	580,103	67	45,967
1936.....	344	447,838	3,998	594,710	65	41,301
1937.....	343	448,793	4,016	605,010	81	40,900

FISHING POPULATION AND CRAFTS

Fishing Population.—Nowhere in the world is such a large proportion of the people engaged in fishery as in this country. This is due to the recent growth of the enterprise into a modern industry, and to the fact that from olden times there have been quite a large number of fishermen each engaging in the industry on a small scale. Over 20 per cent. of the population are engaged in fishery.

Table 4. Number of People Engaged in Aquatic Industry
(Unit: 1,000)

	Fishery		Aquatic culture		Aquatic Mfg.		Total No.	
	A	B	A	B	A	B	A & B	Of which female
1933.....	484.1	613.2	88.8	55.9	62.9	194.3	1,499.2	282.7
1934.....	481.7	621.6	94.1	56.9	64.9	202.6	1,521.9	290.9
1935.....	477.1	621.9	91.7	63.5	64.7	202.6	1,521.5	296.9
1936.....	477.5	624.9	94.3	60.3	65.2	212.1	1,534.4	305.5
1937.....	464.7	613.4	93.2	59.2	61.3	210.0	1,501.9	301.7
1938.....	451.3	684.6	85.9	58.3	61.3	201.4	1,442.7	299.1
1939.....	1,014.5		139.5		267.5		1,411.5	293.8

Note: The above figures are inclusive of seasonal fishermen which occupy approximately 12% of the total.

A Represents permanent or independent workers.
B " employees.

Fishing Craft.—Since fishery is operated largely with the help of boats, the state of fishing craft in commission directly reflects the state of the industry. Small fishing boats have been very extensively used in Japan from olden times owing to the nation-wide spread of coastwise fishing on a small scale. But, the number of these small fishing craft has been on the decrease in sympathy with the increase in the number of larger-size vessels of an advanced style accompanying the development of the in-

dustry. Due to the growth of this situation, the industry has gradually expanded in efficiency and fisheries operated have greatly expanded in area. As deep-sea fishery is necessary for the maintenance of the sources of finny tribe along the coast, if for no others, it is recognized by the nation at large that the number of small fishing crafts should decrease to a certain extent due to the increase in that of vessels for deep-sea fishery. The number of fishing crafts for the last few years is appended:—

Table 5. Number of Fishing Crafts

	Without Engine			With Engine		
	Newly-built	Scrapped	Total	Newly-built	Scrapped	Total
1927.....	17,662	18,463	333,757	3,364	922	20,797
1932.....	15,746	18,201	315,217	4,871	2,568	45,469
1933.....	22,040	24,320	314,434	5,244	3,106	49,039
1934.....	17,880	21,683	311,553	6,275	3,799	53,029
1935.....	17,247	18,699	308,541	6,413	3,571	57,478
1936.....	14,358	17,645	304,098	6,691	3,631	62,169
1937.....	11,385	14,959	297,961	5,530	3,326	66,299
1938.....	8,691	13,509	288,327	4,624	3,180	68,155
1939.....	8,524	12,144	283,090	4,200	3,023	71,639

As may be noted from the above table, the increase in the number of ships with engines is noticeable. The fact that these boats with en-

gines include a considerable number of large modern vessels speaks all the more clearly of a steady development of the industry.

COASTWISE FISHING AND MARINE PRODUCTS

It is feared whether coastwise fishing will maintain the present productive capacity for long. Although statistical figures have so far shown an increase in the crop of fish supplied by coastwise fishing, individual fishermen have not

a good run of business owing to the ever growing number of the fishing population and the cost of living. The following are the results of coastwise fishing for the last few years.

Table 6. Coastwise Fishing Crops

(Unit: Quantity in Million Kwan; Value in Million Yen)

Year Ending Mar. 31:	Fish		Shell-Fish		Other Aquatic Living Products		Weed		Total Value
	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value	
1927	502.9	107.8	33.4	7.0	47.7	23.0	127.2	8.0	145.7
1934	762.8	128.2	36.2	8.0	54.5	26.3	175.9	8.2	170.6
1935	593.9	128.1	48.0	10.1	50.8	25.6	175.2	8.3	173.1
1936	514.5	134.7	54.5	11.7	36.3	25.3	132.1	10.2	181.8
1937	571.6	159.8	40.6	11.2	42.1	29.4	128.7	12.3	212.6
1938	494.5	162.8	37.6	10.4	40.9	31.4	153.7	14.9	219.6
1939	449.4	179.9	31.2	10.7	56.4	43.9	109.8	14.3	248.9
1940	465.2	262.0	30.2	16.1	60.9	73.0	103.7	27.3	378.4

Table 7. Principal Coastwise Fishing Crops Classified

(Unit: Quantity in Million Kwan; Value in Million Yen)

Year Ending Mar. 31:	Herring		Sardine		Bonito		Mackerel		Tunny		Yellow Tail	
	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value
1927	146.8	17.1	126.3	27.1	3.9	4.6	14.4	8.6	4.5	6.3	7.7	12.9
1934	268.7	13.4	350.6	26.1	3.2	2.3	18.6	5.7	5.7	4.7	9.8	10.9
1935	102.2	7.2	340.8	26.3	4.3	2.7	18.1	5.8	5.9	5.0	8.6	9.7
1936	71.2	5.1	292.2	28.3	2.9	1.9	19.5	6.6	9.1	6.2	8.3	9.7
1937	38.1	4.4	347.3	41.0	4.1	2.4	22.6	8.4	9.0	7.2	9.9	11.5
1938	30.9	5.6	268.2	37.9	3.4	2.0	26.2	8.9	6.7	6.4	8.3	10.4
1939	11.6	2.7	250.2	42.4	4.4	3.0	27.4	10.9	4.6	6.2	7.9	10.9
	Cod Fish		Pagrus "Tai"		Flat Fish		Horse Mackerel		Salmon		Trout	
	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value
1927	38.5	8.3	4.6	16.8	6.8	5.4	6.2	5.8	4.0	5.2	4.6	3.0
1934	25.0	3.3	3.3	10.4	5.2	3.7	7.8	4.4	4.9	3.6	5.6	2.0
1935	26.7	3.8	3.2	9.7	5.4	4.1	7.1	4.5	7.0	4.7	9.6	5.3
1936	27.7	4.8	3.1	9.8	5.2	4.3	7.3	4.9	7.9	5.0	11.8	5.2
1937	29.0	5.7	3.2	10.2	5.7	4.8	8.2	5.8	17.7	9.2	15.4	4.0
1938	25.6	4.6	3.1	10.6	5.1	4.8	7.6	5.6	17.2	11.8	29.7	6.3
1939	21.6	7.0	3.0	11.6	5.0	5.9	7.9	6.7	19.4	13.0	20.4	7.0
	Abalone		Cuttle Fish		Devil Fish		Shrimp		Kelp		Isinglass	
	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value
1927	1.7	3.5	30.8	15.0	4.8	3.9	4.9	6.6	45.6	3.9	2.1	2.0
1934	1.3	1.8	30.6	11.8	5.6	3.1	6.3	5.2	125.1	2.3	2.9	1.8
1935	1.6	2.8	26.2	10.3	5.6	3.4	4.8	6.3	126.8	3.9	2.9	1.5
1936	1.9	3.8	11.0	7.7	6.1	3.7	5.7	7.0	88.9	4.2	3.2	2.0
1937	1.7	3.3	19.0	12.0	5.4	3.7	4.7	5.9	78.2	4.4	3.2	2.9
1938	1.5	2.5	14.3	11.5	6.2	4.6	4.6	7.2	105.7	6.2	3.9	3.3
1939	1.2	2.4	28.2	19.8	6.3	5.5	4.7	8.7	64.9	5.4	3.1	3.3

DEEP-SEA FISHERY AND WHALING

With a view to encouraging deep-sea fishery a small amount of bounty is granted by the Government to owners of fishing craft of approved standard type, etc., under the provi-

sions of the Deep-sea Fishery Encouragement Law. The rate of bounty is ¥60 or less per ton of iron or steel bottom and ¥45 or less per ton of wooden bottom, ¥22 or less per horse

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power of steam engine and ¥40 per horse power of motor engine, etc. For vessels exceeding 60 tons a bounty corresponding to 2/10 or less of the estimated cost of the hull, engines, equip-

ments, etc., may be granted irrespective of the above specifications. State aid is granted to bonito using drag-net and drift-line and on bonito fishing.

Table 8. Boats Engaged in Deep Sea Fishery

	Open boats			Motor boats			Total No.	Total No. of crews
	No.	Tons	Crews	No.	Tons	Crews		
1932	408	3,013	2,914	8,282	169,608	108,849	8,690	172,621
1933	282	1,916	1,482	7,943	180,041	111,437	8,225	181,957
1934	297	2,038	1,686	8,408	192,369	109,297	8,705	194,407
1935	171	1,312	1,133	8,813	197,757	114,556	8,984	199,069
1936	240	1,940	1,391	9,645	213,086	124,384	9,885	215,026
1937	215	1,679	1,134	9,568	220,246	121,758	9,783	222,892
1938	167	1,370	1,297	8,669	210,598	111,851	8,836	213,148
1938:								
Circle net	18	111	369	898	15,077	13,957	916	14,326
Deep-sea net	10	550	115	1,722	51,477	15,926	1,732	16,041
Drift	11	44	49	1,174	20,236	11,253	1,185	11,302
Long line	15	73	60	2,765	63,581	30,543	2,780	30,603
Hand	112	582	695	506	9,606	7,059	618	7,754
Bonito angling	1	10	9	890	37,182	24,812	891	24,821
Others	—	—	—	714	13,439	8,301	714	8,301
Total	167	1,370	1,297	8,669	210,598	111,851	8,836	213,148

Table 9. Results of Deep Sea Fishing

(Unit: in 1,000 Kwan)

Year Ending March 31:	Sardine	Bonito	Mackerel	Tunny	Cod	Shark	Tai	Total incl. Others (¥1,000)
1927	14,500	14,408	4,402	7,291	4,605	10,012	9,282	85,435
1934	56,046	17,374	10,635	11,116	13,759	10,819	2,738	65,987
1935	50,409	18,385	10,234	9,603	18,468	10,520	3,061	69,428
1936	75,167	16,525	10,948	9,125	20,315	10,588	2,446	74,261
1937	86,922	22,881	10,967	11,247	29,331	17,192	2,915	87,483
1938	53,958	24,820	10,211	9,866	29,009	14,979	2,220	89,887
1939	38,889	27,857	8,078	10,654	25,647	13,627	3,298	110,542
1939:								
Circle net	33,233	16	1,128	102	81	71	—	6,875
Deep-sea net	71	21	336	14	11,201	5,762	2,656	43,623
Drift	4,646	—	163	900	193	5,079	—	6,621
Long line	—	503	743	8,409	14,146	2,559	626	26,012
Hand	—	2,085	3,036	87	27	46	15	5,738
Bonito angling	—	25,230	492	829	—	420	—	17,984
Others	949	9	2,179	312	—	109	—	3,688
Total	38,889	27,857	8,078	10,654	25,647	13,627	3,298	110,542

Deep-sea fishing crops consist of sardines, bonitos, mackerels, tunny, cod, shark, pagrus, turbot, halibuts, cybinum nipponium, mackerel pikes, coral, etc.

Trawling.—This method of fishing is under the control of the Government. The principal fishing grounds are the Eastern China Sea and Yellow Sea, the ports of Shimonoseki, Hakata and Nagasaki being the bases for trawling. Sea breams, sciaena schlegeli, holocephali, turbot, etc. are principal fish caught.

Whaling.—The noted whaling grounds along the coast of Japan are the sea off Kinkazan Island (in summer) as far as the mouth of Tokyo Bay, also the sea off Kishu, Tosa, Nagato and Kyushu (in winter). Russian whalers in the Korean field have been completely superseded by their Japanese rivals since the war of

1904-05. The Kuriles also supply a good ground. The catches are protected by the Government Ordinance enforced in 1919 which allows whaling only to licensed persons, the permit being effective for five years.

For some years past Japan has been directing her attention in whaling in Antarctic waters and much progress has been witnessed annually. In the whaling season of 1937-38 the Japanese vessels caught 5,582 whales, representing about 12% of total catches. For the season 1938-39 six Japanese whalers, aggregating 100,000 tons, carried on operations in Antarctic waters and caught 7,540 whales and its manufacture valued at ¥21,786,000.

The whaling catches in recent years are listed below:—

Table 10. Japan's Position in Whaling in the Antarctic Sea

Year Ending	(A) No. of Catch											
	Japan		Norway		England		Panama		Argentina		Total incl. others	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1935-36...	639	2.0	14,421	46.5	12,538	40.4	2,499	7.9	944	3.2	30,991	100
1936-37...	1,965	5.7	15,039	43.5	12,361	35.7	2,389	6.9	1,014	2.9	34,579	100
1937-38...	5,565	12.1	14,960	32.5	16,111	35.0	1,527	3.3	1,062	2.3	46,039	100

(B) Train Oil Output

(In 1,000 Metric Tons)

Year Ending	(B) Train Oil Output											
	Japan		Norway		England		Panama		Argentina		Total incl. others	
	Qty.	%	Qty.	%	Qty.	%	Qty.	%	Qty.	%	Qty.	%
1935-36...	7.4	1.8	186.0	45.8	165.9	40.9	34.3	8.4	12.5	3.1	406.1	100
1936-37...	26.1	5.9	193.1	43.6	163.5	36.8	30.3	6.8	7.9	1.8	443.0	100
1937-38...	64.8	11.6	193.0	34.7	192.2	34.5	19.6	3.5	8.6	1.5	556.7	100

Table 11. Results of Whaling in Japanese Waters and Antarctic Ocean

Year Ending	Japan proper		Colonial water		Antarctic Ocean					
	No. of catches	Value (¥1,000)	No. of catches	Value (¥1,000)	Mother	Tender ships	Crews	No. of catches	Value of manufactures (¥1,000)	
	Mar. 31:	1,177	1,308	369	781	—	—	—	—	—
1928.....	1,124	850	206	347	—	—	—	—	—	
1933.....	1,156	1,142	202	434	—	—	—	—	—	
1934.....	1,356	1,991	123	430	1	3	213	213	487*	
1935.....	1,598	2,467	173	647	1	5	343	639	2,263*	
1936.....	1,641	2,578	173	754	2	13	766	1,965	8,727*	
1937.....	1,814	3,397	236	895	4	31	1,796	5,565	14,456*	
1938.....	1,790	3,873	189	1,118	6	49	2,794	7,540	21,786	

Note: * Estimate.

Coral Fishery.—Formerly, corals were mostly collected in the seas around Kyushu, but recently good coral beds have been discovered in the sea near the Bonin Islands and northern Formosa. The amount of collection in recent years is as follows:—

Table 12. Coral Collection

Year Ending	(Kilogrammes)	(Yen)	Year Ending	(Kilogrammes)	(Yen)
Mar. 31:	2,284	67,815	1936.....	2,524	440,198
1928.....	2,265	82,454	1937.....	728	132,974
1933.....	2,355	187,472	1938.....	3,066	75,895
1934.....	5,063	292,504			

Aquatic Manufactures.—Aquatic manufactures in Japan consist of food, manure, fodder, fish oil, glue, isinglass, iodine, etc.

Table 13. Aquatic Manufactures

(Unit: Quantity in 1,000 Kwan: Kwan=3.75 Kilogrammes: Value in ¥1,000)

Year Ending	Food		Manure		Fish Oil		Glue		Total Val.
	Qty.	Val.	Qty.	Val.	Qty.	Val.	Qty.	Val.	
Mar. 31:	88,958	148,835	65,386	29,448	8,175	3,698	218	869	183,084
1928.....	109,883	119,927	116,831	28,844	18,836	6,947	181	576	156,294
1934.....	118,115	128,804	113,071	28,913	22,037	8,703	210	628	167,048
1935.....	119,240	137,472	99,866	28,552	16,596	8,793	190	728	175,540
1936.....	132,637	156,144	120,298	37,474	30,079	21,527	190	716	215,861
1937.....	142,957	163,024	88,986	33,115	24,437	18,002	173	730	214,871
1938.....	164,363	199,097	64,050	28,990	20,429	13,139	139	650	241,884
1939.....	140,065	309,811	79,169	55,744	19,854	24,378	174	1,115	391,048

All the varieties have been on the increase. Below are given the volume and value of aquatic manufactures for the past few years.

Isinglass has been produced from olden times. The output of this article has been on the increase of late.

Table 14. Statistics of Kantan or Japanese Isinglass

Year Ending	No. of factories	Production value (¥1,000)	Export value (¥1,000)	Year Ending	No. of factories	Production value (¥1,000)	Export value (¥1,000)
Mar. 31:				Mar. 31:			
1933.....	435	3,883	3,166	1936.....	463	6,390	4,262
1934.....	429	4,719	3,199	1937.....	512	9,712	5,574
1935.....	449	5,257	3,215	1938.....	520	10,123	6,761
				1939.....	528	11,143	6,201

Aquiculture.—The culture of oyster, carp and eel has been steadily developed. In 1938 the total value of catches from aquiculture amounted to ¥28,974,000.

Table 15. Statistics of Fish-culture

Year Ending	No. of Grounds (1,000)	Area (1,000 sq. meters)	Carp (¥1,000)	Eel (¥1,000)	Oyster (¥1,000)	Mussels (¥1,000)	Amanori (Porphyra) (¥1,000)	Gold fish (¥1,000)	Total incl. Pearl Shell & Others (¥1,000)
Mar. 31:									
1931.....	145	485,235	3,598	2,914	989	734	7,435	520	18,509
1932.....	152	499,771	3,409	2,902	1,103	715	8,426	565	19,129
1933.....	157	523,984	3,561	2,913	1,127	653	7,199	567	18,470
1934.....	159	536,966	3,923	3,586	1,198	634	6,481	648	19,283
1935.....	164	522,208	4,186	3,825	1,437	692	7,521	594	22,318
1936.....	162	521,525	4,251	4,758	1,998	801	8,942	571	25,535
1937.....	162	512,166	4,515	5,013	1,858	890	8,566	581	25,555
1938.....	159	493,272	5,024	5,092	2,023	1,274	9,988	667	28,974
1939.....	159	499,199	5,055	6,637	1,961	1,083	9,365	531	30,110
1940.....	141	465,284	7,413	9,230	3,290	.....	.....	.....	43,026

Pearl Culture.—Mikimoto's artificial hatching at Toba of pearl-oysters according to a patent process deserves mention, this being one of the most important hatcheries in Japan and elsewhere. In principle, it is identical with that in natural pearl-formation, consisting as it does of putting into the oyster-shell when it is three years old a foreign substance which it incapacitates with the beautiful secretion. After keeping it for four years the shells are taken out. Mikimoto's oyster bed is in the Bay of Ago near Toba (Shima Province) and extends 20 nautical miles.

Table 16. Pearl Culture

Year Ending	No. of culture grounds	Area of culture grounds (1,000 sq. meters)	Pearl-oyster		Pearl	
			Output (1,000)	(Yen)	Output (1,000)	(Yen)
Mar. 31:						
1928.....	126	72,202	3,329	88,144	589	484,826
1933.....	135	66,282	23,903	207,201	3,655	988,931
1934.....	177	65,281	13,933	286,653	2,493	909,355
1935.....	222	54,921	50,515	637,196	4,510	1,472,487
1936.....	257	54,668	37,267	828,613	7,750	1,395,297
1937.....	285	52,290	36,216	905,124	7,072	983,504
1938.....	302	50,480	29,790	869,751	10,858	1,543,837
1939.....	306	54,031	24,936	407,000	10,884	1,376,000

FISHERIES IN THE HOKKAIDO

The Hokkaido is widely reputed as one of the three important fishing grounds in the world both on account of deep-sea and coastwise fisheries. Principal catches are herring, salmonidae, cod, sardines, flat-fish, etc.

Table 17. State of Coastwise Fisheries in Hokkaido

Year Ending	No. of Fishermen				No. of Fishing Crafts		
	Fishing	Aquiculture	Manufacture	Total	Without engine	With engine	Total
Mar. 31:							
1933.....	153,483	812	34,501	188,796	56,852	3,254	60,107
1934.....	152,271	913	37,145	190,329	56,978	3,515	60,493
1935.....	155,420	583	40,993	196,996	55,610	3,915	59,525
1936.....	157,953	550	39,982	198,485	54,680	4,295	58,975
1937.....	160,391	749	41,216	202,346	54,004	4,746	58,750
1938.....	162,818	738	42,383	205,939	53,269	5,137	58,406
1939.....	159,957	689	33,735	194,381	53,035	5,383	58,418

Table 18. Classification of Catches in Hokkaido
(Unit: Quantity in 1,000 Kwan; Value in ¥1,000)

Year Ending Mar. 31:	Herring		Sardine		Cod		Salmon		Trout		Total incl. Others Value
	Qty.	Val.	Qty.	Val.	Qty.	Val.	Qty.	Val.	Qty.	Val.	
1934	368,681	13,378	134,863	6,497	19,538	2,251	4,420	2,960	5,192	1,288	
1935	102,181	7,157	127,715	6,743	21,271	2,715	6,141	3,699	9,018	4,407	
1936	61,169	5,077	56,964	4,507	22,254	3,529	6,891	3,855	10,673	4,063	
1937	38,121	4,381	89,309	8,735	23,582	4,146	16,878	8,105	14,883	3,079	
1938	30,952	5,506	83,861	10,191	20,668	2,899	16,540	10,859	29,261	5,438	
1939	11,576	2,673	70,900	9,115	21,004	4,858	18,871	12,087	20,041	6,333	
Year Ending Mar. 31:	Shell Fish		Cuttle Fish		Crab		Sea Weed		Total incl. Others Value		
	Qty.	Val.	Qty.	Val.	Qty.	Val.	Qty.	Val.			
1934	12,427	2,371	12,785	3,678	3,986	984	127,555	2,679	39,357		
1935	22,823	3,748	10,401	2,736	4,522	1,157	129,059	4,327	40,595		
1936	20,533	3,894	2,658	1,697	4,604	1,772	92,727	4,613	36,896		
1937	14,164	3,562	4,197	2,516	3,847	1,401	79,914	4,862	45,188		
1938	13,120	3,397	4,865	3,463	4,816	1,828	110,239	7,258	56,618		
1939	8,540	3,024	17,242	8,743	5,965	2,356	70,060	6,313	62,693		

EXPORT OF FISH AND MARINE MANUFACTURES

Exports of marine products for the last few years are tabulated below:—

Table 19. Exports and Imports of Fish and Marine Manufactures
(Quantity in 1,000 Kin; Kin=0.6 Kilogram; Value ¥1,000)

Year	Exports									
	Tangles		Fish & Shell (Fresh)		Dried Fish		Dried Cuttle		Dried Shrimp	
	Qty.	Val.	Qty.	Val.	Qty.	Val.	Qty.	Val.	Qty.	Val.
1935	56,719	3,297	14,137	3,128	14,407	2,595	7,741	3,540	551	332
1936	57,208	3,650	14,905	3,450	13,759	2,752	5,464	2,872	400	223
1937	51,918	2,698	23,083	5,034	13,507	2,903	4,151	2,202	280	154
1938	39,987	2,638	22,827	6,672	6,864	2,418	1,239	977	189	151
1939	59,150	7,342	38,580	9,482	6,140	3,518	5,056	4,728	365	366
Year	Exports									
	Dried Trepang		Dried Shell Fish		Salted Fish		Boiled Fish		Laver	
	Qty.	Val.	Qty.	Val.	Qty.	Val.	Qty.	Val.	Qty.	Val.
1935	1,108	1,313	4,034	3,682	16,190	1,689	2,484	770	273	384
1936	1,988	1,679	3,633	3,805	25,121	2,573	2,141	710	363	499
1937	1,587	1,578	2,066	2,549	35,928	3,175	2,817	894	391	567
1938	3,045	2,350	3,965	3,779	32,076	3,329	1,978	811	...	...
1939	2,967	6,668	3,198	6,726	65,780	13,150	2,012	1,153	4,160	6,047
Year	Exports									
	Table Salt		Tinned Fish		Tinned Shell Fish		Bottled Fish		Bottled Shell Fish	
	Qty.	Val.	Qty.	Val.	Qty.	Val.	Qty.	Val.	Qty.	Val.
1935	41	3	112,231	47,589	3,583	1,221	283	98	175	55
1936	44	3	135,811	58,188	3,097	1,073	410	96	220	54
1937	87	6	180,333	69,983	3,788	1,467	213	59	12	5
1938	943	42	161,479	68,668	4,300	1,836	825	242	10	6
1939	214	15	160,502	90,436	4,724	2,731	363	117	1	1
Year	Exports					Imports				
	Fish Oil		Whale Oil		Salted Fish		Other Fish	Shell of Mollusca		Porcupine Shell
	Qty.	Val.	Qty.	Val.	Qty.	Val.	Qty.	Val.	Val.	
1935	54,934	6,265	5,278	629	16,253	1,627	2,133	20,800	3,418	257
1936	61,110	9,301	4,739	874	13,628	1,449	1,411	24,649	4,400	255
1937	90,716	14,548	3,855	751	14,573	1,437	2,180	14,514	3,795	179
1938	42,936	6,817	172	35	...	...	...	6,340	1,587	40
1939	15,889	5,687	1,061	216	...	...	...	...	...	...

JAPANESE FISHERY IN SOVIET WATERS

Japanese fishermen are allowed by virtue of the Portsmouth Treaty of Peace to carry on fishing along the coasts of the Maritime Province, Kamchatka and Saghalien. The Soviet fishing grounds give employment to some 20,000 Japanese workers and yield Japan an annual

production valued at 40 to 55 million yen. By leasing the fishing grounds to Japan the Soviet Union in recent years realizes from such rentals a sum in excess of ¥7,000,000, as compared with ¥100,000 for the year after the fishery treaty was concluded in 1908. Recent rentals paid amount to about 18% of the Japanese earnings from the enterprise, which is by no means a low rate of charge. Production in the Soviet operated fishing grounds was at first only 10.5% of the total output, but it increased to 51.5% for 1938, while the number of Soviet operated grounds has multiplied by 30 times.

Historically, Japanese fishing rights in the Sea of Okhotsk and in the waters of Kamchatka were recognized before the Portsmouth Treaty and date back to the treaty of 1875 between Japan and Russia providing for the exchange of Saghalien for the Kurile islands which stipulated in section 2 that Japanese fishing vessels were to enjoy "the same rights as enjoyed by Russians." This right was reaffirmed in Article 11 of the Portsmouth Treaty of 1905 as follows: "Russia agrees to cede to Japanese subjects the right of fishing along the coasts of Russian possessions in the Japan, Okhotsk and Behring Seas." In 1907 a special Fishery Convention was signed between Russia and Japan.

The Japanese-Russian fishery treaty of 1907 is frequently cited to support Japan's right, but as this was concluded with Czarist Russia the U.S.S.R. might refuse to recognize it, and any emphasis by Japan that the rights were acquired by a heavy sacrifice of blood and treasure might be countered with a similar assertion from the Soviet Union. Japan's fishing rights, however, were established beyond dispute by the Peking Treaty of January 20, 1925, which bears the signatures of the representatives of the Soviet Union and the Japanese Empire. By this treaty the Soviet Union recognizes the validity of the Portsmouth treaty and the sole proviso made (Article 3), is that the fishery agreement of 1907 should be revised by mutual agreement in consideration of any changes in conditions that might have occurred since its conclusion.

This fundamental principle was further established by the agreements of 1928 and 1932.

Agreement

In recent years Soviet-Japanese arrangements for fishing in Soviet waters have been the cause of heated disputes, and as yet no fixed agreement has been concluded for fishery operations over any length of time. On April 2, 1939 a modus vivendi was signed at Moscow providing for operations during the rest of the year. According to a statement issued by the Japanese Foreign Office on April 4, 1939, the results of the agreement may be summarized as follows: The Fishery Convention of 1928 remains in force until the end of 1939. The contract for special fishery lots is extended for another year with the exception of four exempted lots, concerning which mention will be made later. Stabilized fishery lots are placed at auction with the exception of the exempted lots, of which mention will be made later, but the definite prospect is that Japanese fishing interests will acquire these stabilized lots. Acquired lots will be under lease for five years. The rent will not be raised more than 10 per cent. The four lots which were successfully bidden for by Soviet interests on March 15, 1939 will be returned to Japanese interests. Thirty-seven fishery lots, consisting of 32 stabilized lots, four special lots and one lot under lease are exempted from auction, as exceptions to Article 8 of the Protocol A of the Fishery Convention. Against these lots, 10 substitute lots are offered, nine of which will be leased for five years by auction. The nine Japanese fishery lots which have been placed up at auction because their lease had expired will be successfully bidden by Japanese interests for the term of another five years. The 52 fishery lots which are still under lease will be retained by Japanese interests. The rate of rouble exchange remains unchanged.

Agreement for 1941.—A provisional fishery agreement to extend the previous contract for another year, i.e. to the end of 1941 was signed at Moscow on January 21, 1941.

Table 20. Ratio in No. of Fishing Grounds in Soviet Waters

Year	Salmon & Trout		Crab		Total	
	Japanese	Soviet	Japanese	Soviet	Japanese	Soviet
1931	52%	48%	40%	60%	51%	49%
1932	58%	42%	38%	62%	57%	43%
1933	52%	48%	35%	65%	50%	50%
1934	53%	47%	35%	65%	51%	49%
1935	52%	48%	35%	65%	51%	49%
1936	50%	50%	35%	65%	49%	51%
1937	49%	51%	35%	65%	48%	52%
1938	50%	50%	39%	61%	49%	51%
1939	48%	52%	43%	57%	48%	52%

Table 21. Statistics of Soviet Water Fishery

(A) Japanese Side

Year	Salmon & Trout			Crab			Total	
	No. of Grounds	Rental (1,000 Rubles)	Quota (1,000 Centner)	No. of Grounds	Rental (1,000 Rubles)	Quota (1,000 Cases)	No. of Grounds	Rental (1,000 Rubles)
1931.....	288	5,640	1,227	21	545	126	309	6,185
1932.....	371	6,245	1,374	21	545	126	392	6,790
1933.....	340	6,387	1,315	17	440	105	357	6,681
1934.....	369	6,627	1,367	17	440	105	386	7,067
1935.....	378	6,804	1,380	17	440	105	395	7,244
1936.....	382	6,840	1,386	17	440	105	399	7,280
1937.....	372	6,742	1,351	17	439	105	389	7,181
1938.....	369	6,771	1,346	17	440	105	386	7,210
1939.....	339	6,592	1,197	17	464	105	356	7,056

(B) Soviet Side

Year	No. of Grounds	Rental (1,000 Rubles)	Quota (1,000 Centner)	No. of Grounds	Rental (1,000 Rubles)	Quota (1,000 Cases)	No. of Grounds	Rental (1,000 Rubles)
1931.....	269	3,089	901	32	723	130	301	3,832
1932.....	267	2,977	832	34	401	140	301	3,679
1933.....	320	1,175	928	32	708	130	353	1,883
1934.....	333	1,576	957	32	723	130	365	2,479
1935.....	343	2,189	983	32	711	130	375	2,900
1936.....	387	2,285	1,019	32	711	130	419	2,997
1937.....	388	2,378	1,017	31	694	127	419	3,072
1938.....	375	2,342	988	27	647	117	402	2,990
1939.....	361	2,160	950	23	584	106	384	2,744

Note: The term "Quota" indicates the maximum amount of catch permitted under the Soviet-Japanese Agreement. The quota of catch has been reached invariably each year.

Table 22. Japanese Fishing Activities in Soviet Waters
Excluding Floating Canneries
(Quantity in 1,000 Koku; One Koku=10 Kan or 37.5 Kg.)

(A) Catches

Year	No. of Grounds		Vessels Employed		Quantity of Catch (1,000 koku)							Crab (1,000 peices)
	Leased	Operat-ed	No.	Tonnage (1,000)	Fisher-man (1,000)	Chum Salmon	Trout	Red Salmon	King Salmon	Herr- ing	Total Quantity	
1921.....	227	227	282	148	14	145	345	79	2.0	10.0	581	187
1928.....	260	257	178	332	21	88	460	85	2.0	5.0	639	4,645
1931.....	309	287	203	302	17	154	71	76	1.9	1.3	305	4,292
1932.....	292	323	214	368	18	169	264	77	1.9	0.8	512	3,101
1933.....	357	350	175	331	18	154	109	53	0.9	0.4	318	2,546
1934.....	386	370	172	361	20	234	381	104	1.7	0.3	721	3,583
1935.....	395	376	198	423	19	179	280	40	2.6	0.1	501	5,040
1936.....	399	376	153	362	21	338	165	67	1.9	0.0	571	6,565
1937.....	389	355	142	332	20	177	299	71	3.1	0.0	550	7,759
1938.....	386	328	132	310	19	170	222	87	1.3	0.1	480	8,428

(B) Manufactured Goods

Year	Canned Goods (Quantity in 1,000 cases; Value in Million yen)										
	Salt Cured		Red Salmons		Other Salmons		Trouts		Crabs		Total incl. Others Val.
	Qty. (1,000 koku)	Val.	Qty.	Val.	Qty.	Val.	Qty.	Val.	Qty.	Val.	
1921.....	451	11.2	426	11.9	225	2.7	83	0.9	6	0.2	28.4
1926.....	495	14.2	537	13.3	93	1.1	282	3.2	63	2.4	35.6
1931.....	193	5.0	511	12.6	55	0.5	184	1.3	64	1.9	22.4
1932.....	315	8.3	416	13.8	40	0.7	713	5.5	47	1.7	31.9
1933.....	308	7.6	283	9.3	28	0.5	357	3.6	25	1.2	23.7
1934.....	377	10.6	515	17.7	48	0.7	837	8.1	29	1.4	40.9
1935.....	343	11.1	189	6.1	50	1.2	681	6.7	36	1.7	29.1
1936.....	376	13.1	343	8.8	117	2.4	637	6.3	50	2.6	35.5
1937.....	555	11.7	342	11.8	1	0	733	7.1	79	4.3	37.6
1938.....	258	11.7	445	15.9	31	0.7	723	7.9	80	4.4	44.0

Note: One case contains four dozens of 1 lb. cans.

Table 23. Output and Export by the Nichiro Fishery Co.

Year Ending	Canned (in 1,000 Cases)			Salted Fish			Refrigerated (1,000 Boxes)	Export Value (¥1,000)
	Salmon	Crab	Total incl. others	Boxes (1,000)	Bulk (1,000)	Barrels (1,000)		
Nov. 30.			1,146	1,198	2,575	803	58	22,590
1936.....	339	47	1,156	1,002	10,886	820	62	22,370
1937.....	337	79	1,283	686	10,963	797	68	24,840
1938.....	440	79	1,206	341	16,737	641	70	....
1939.....	3	76						

Table 24. Japanese Floating Crab Canneries*

Year Ending	Cannery boats Number	Total tonnage	Workers	Crabs caught (million)	Canned products	
					Quantity (1,000 cases)	Value (¥1,000)
Mar. 31:		40,922	5,651	22.6	331	13,206
1928.....	17	24,275	2,445	10.4	174	5,468
1933.....	7	40,724	2,955	9.5	154	7,476
1934.....	9	37,235	3,120	9.9	162	7,733
1935.....	9	34,112	3,124	11.3	171	8,429
1936.....	9	36,737	3,243	13.9	184	9,490
1937.....	9	36,749	3,420	14.9	204	11,194
1938.....	9	28,750	2,824	18.5	254	13,886
1939.....	8					

Note: * Operating off the Eastern and Western coasts of Kamchatka and in the Behring Sea.

Table 25. Japanese Floating Salmon Canneries*

Year	Mother ships		Tender ships		Catches (1,000 pieces)	Manufactured			Total value (incl. re-frig-erated & fish-eggs) (¥1,000)	
	No.	Total tonnage	With Engine	With-out Engine		Quantity (1,000 cases)	Value (¥1,000)	Quantity (1,000 kwan)		Value (¥1,000)
1930.....	1	999	7	36	7.7	15.3	339	82	57	501
1931.....	6	12,517	15	58	1,172.2	66.8	1,145	71	55	1,225
1932.....	10	20,486	39	72	3,281.5	70.2	2,078	360	278	2,695
1933.....	13	15,365	153	32	5,625.8	150.7	3,426	928	934	5,175
1934.....	19	28,978	256	49	8,943.5	272.8	8,050	1,373	1,119	10,239
1935.....	16	32,655								
1936.....	8	29,456		250	11,544.1	313.0	7,785	1,798	1,651	10,129
1937.....	6	20,467		170	8,796.5	286.2	7,409	1,895	1,760	9,691
1938.....	7	22,002		170	10,115.0	370.3	12,051	1,817	1,750	14,615
1939.....	7	21,826		170	9,829.9	323.4	10,449	2,689	3,632	14,249

Note: * Operating off the Eastern and Western coasts and in the Behring Sea.
† One case weighs 22.32 kilograms.

Table 26. Fishing Vessel Disasters

(A) Vessels

Year Ending	Sunk		Damaged		Grounded		Lost		Total incl. others	
	No.	Value (¥1,000)	No.	Value (¥1,000)	No.	Value (¥1,000)	No.	Value (¥1,000)	No.	Value (¥1,000)
Mar. 31:										
1928.....	145	364	1,273	528	108	79	156	193	2,120	1,328
1934.....	391	696	8,734	2,618	805	191	3,670	1,095	13,527	4,798
1935.....	534	480	11,202	2,511	328	192	1,109	364	15,496	4,786
1936.....	237	558	2,661	622	116	81	364	289	4,006	1,775
1937.....	161	422	2,788	513	74	339	281	279	3,801	1,744
1938.....	122	475	1,200	320	55	193	75	88	1,828	1,148
1939.....	108	462	1,348	623	78	539	258	847	2,217	2,649
1940.....	71	455	925	766	73	265	175	192	1,532	1,768

(B) Crews

Year	Lost		Saved		Lost		Saved		Total	
	No.	Value (¥1,000)	No.	Value (¥1,000)	No.	Value (¥1,000)	No.	Value (¥1,000)	No.	Value (¥1,000)
1928.....	90	444	131	1,292	3	422	214	91	520	3,723
1934.....	123	277	217	2,535	8	314	291	1,120	714	5,115
1935.....	137	567	153	2,281	24	412	222	56	596	3,852
1936.....	126	377	121	886	3	227	77	38	377	1,942
1937.....	154	556	98	1,059	21	276	164	23	517	2,292
1938.....	129	288	172	488	13	289	98	19	484	1,619
1939.....	72	238	136	859	49	439	180	51	476	1,918
1940.....	48	103	80	610	5	233	92	24	301	1,253

SALT INDUSTRY

Salt produced in Japan proper is extracted almost entirely from the brine and refined by means of artificial heating, though in Taiwan and Kwantung the natural heating system prevails. The districts bordering on the Inland Sea are the center of production.

Japan is barely self-sufficient in foodstuff salt at present. Her demand for industrial salt is

about twice that of foodstuff salt and this requirement is met by imports, the principal supplier being East Africa. Projects are on foot to increase salt production in Manchukuo and North China to meet the demand in Japan. The production of salt in this country is a government monopoly.

Table 27. Japan's Position in Salt Output
(Prepared by the League of Nations)
(In 1,000 metric tons)

	Japan	U.S.A.	U.S.S.R.	Germany	France	U. K.	World Total
1928.....	638	7,325	2,337	3,726	2,115	1,978	28,190
1929.....	644	7,751	2,670	3,835	2,190	2,006	30,880
1930.....	729	7,307	3,158	3,604	1,999	2,101	30,140
1931.....	521	6,675	3,182	3,107	1,908	1,928	28,800
1932.....	573	5,813	2,636	3,238	1,651	2,252	27,240
1933.....	688	6,899	2,734	2,771	2,130	2,402	28,630
1934.....	604	6,906	3,555	3,252	2,071	2,560	30,230
1935.....	570	7,191	4,350	3,392	1,962	2,743	32,010
1936.....	482	8,009	.....	3,875	1,917	2,878	34,000
1937.....	.....	8,384	.....	4,561	2,337	3,133	37,000
1938.....	.....	7,281	.....	.....	.....	.....	.....

Table 28. Demand and Supply of Salt in Japan Proper
(In metric tons)

Year Ending Mar. 31:	Production	Imports	Colonial imports from Taiwan	Total Supply	Sales amount	Stock at fiscal year end
1921.....	543,706	365,465	13,051	922,222	734,599	309,152
1926.....	668,458	148,906	68,282	885,646	827,829	411,216
1931.....	628,534	290,809	82,353	1,001,696	943,480	442,011
1935.....	676,175	1,144,620	84,740	1,905,535	1,829,093	448,986
1936.....	604,321	1,083,778	99,811	1,787,910	1,789,080	437,839
1937.....	518,582	1,182,167	87,975	1,788,824	1,914,108	310,070
1938.....	535,640	1,575,675	106,018	2,227,333	2,389,862	125,421
1939.....	483,694	1,770,801	172,999	2,427,494	2,395,800	192,449

Table 29. Consumption of Salt by Purposes
(In metric tons)

Year Ending Mar. 31:	Foodstuffs, & others	Industry				Exports	Grand total
		Chemical drugs	Artificial pigment	Soap	Total incl. others		
1921.....	718,294	46,596	1,067	1,607	49,652	853	768,799
1926.....	725,379	90,188	2,412	2,412	94,672	14,235	834,288
1931.....	740,000	199,836	5,074	2,745	208,604	2,586	951,190
1935.....	776,114	821,515	26,892	4,180	854,823	7,868	1,638,805
1936.....	778,211	1,039,817	20,558	4,529	1,067,783	10,558	1,856,552
1937.....	811,336	1,129,462	21,377	6,679	1,159,923	9,881	1,981,143
1938.....	811,549	1,408,030	32,027	6,381	1,449,447	9,776	2,270,772

References:

Table Nos.: 1 a, 2 b & c, 3-9 b, 10 e & d, 11-18 b, 19 e, 20-22 b, 23 f, 24-26 b, 27 e, 28-29 e.

Key: a—U.S.A. Dept. of Commerce.
b—Department of Agriculture & Forestry.
c—Governments of Chosen, Taiwan, Karafuto and Nanyo.
d—International Whaling Statistics.
e—Department of Finance.
f—Nichiro Fishery Co.
g—League of Nations.

CHAPTER XXVIII

LABOR

INTRODUCTORY REMARKS

Japan has been spared from comparatively serious labor disturbances throughout her long history. The traditional subserviency observed by employees to their masters still retains a strong hold on the populace at large in spite of the rapid industrialization of the Empire. The employers, on the other hand, have won this faithfulness by showing a greater degree of cooperation and sympathy with their laborers in all important matters of daily life. The guild system of developing employees to become masters of their own trade is still prevalent in small professions, while in factory employment it is not unusual for the company to furnish part of the dowry of female workers when they leave work to marry.

However, the labour movement is gradually growing in power in line with the creation of giant organizations and the expanding interdivisions within industries which tend to establish a barrier against the development of a close relationship between the employing and laboring classes.

In recent decades the labor situation in Japan has been characterized by an impressive increase in female workers, which no doubt has contributed to the rapid expansion of the manufacturing industries and in reducing the costs of production.

Peasant Movements

Peasants as organized power is still incoherent, for the rivalry between those favouring advanced views and those inclined to be

more moderate prevent their coming together into any influential league. They are growing sufficiently conscious of their power, thanks to the inauguration of the universal suffrage system, but at the same time they find their position rendered gradually precarious owing to the strong attitude taken by landowners, who till a few years ago were practically at the mercy of their aggressive tenants. Both landowners and tenants are now hard hit by the economic reverses caused by the Sino-Japanese hostilities, the lot of the latter being naturally more desperate.

What deserves notice in this connection is that while tenants are decreasing in number, tenants combining peasant-holders are showing the opposite tendency, and the figures for the yeomen class that were going down formerly remain on the whole constant. It seems the measures taken by the Government for encouraging the yeomanship have not been wholly ineffectual.

The peasants see the advisability of detaching their movements from politics and to devote themselves to such economic matters as cooperative societies, productive guilds, etc.

Number of Laborers

The number of laborers has been increasing steadily as the accompanying statistics will show. While organized laborers in 1938 accounted for only 5.5 per cent. of the total number of laborers the absolute increase of such workers in the 7 years from 1932 to 1938 was 40 per cent.

Table 1. Statistics of Private Factory Workers

Industries	Factories Investigated	Operatives (1,000)	Daily Working hours		Working days per month	Daily Wages	
			Total	of which Recess		Male (¥)	Female (¥)
Ceramic & Earthenware	1936 Dec.	419	10.10	1.05	27.8	1.65	0.70
	1939 Dec.	347	10.18	1.06	28.0	2.50	1.06
	1940 July	348	10.22	1.08	27.4	2.70	1.18
Metallic	1936 Dec.	566	9.59	0.50	26.8	2.37	0.86
	1939 Dec.	892	10.35	0.56	27.5	3.08	1.17
	1940 July	897	10.30	0.56	27.2	3.11	1.23
Machinery & Tools ..	1936 Dec.	591	9.53	0.46	26.8	2.12	0.91
	1939 Dec.	878	11.03	0.52	27.8	2.69	1.32
	1940 July	887	10.28	0.52	27.4	2.71	1.41

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Shipbldg. & Rolling-stock	1936 Dec.	171	214.8	9.39	0.47	26.1	2.39	0.87
	1939 Dec.	311	459.7	10.39	0.52	27.7	2.92	1.13
	1940 July	315	484.4	10.29	0.54	27.4	3.01	1.23
Precision	1936 Dec.	112	29.5	9.44	0.53	26.2	2.11	0.82
	1939 Dec.	163	58.9	10.22	0.54	27.8	2.78	1.21
	1940 July	163	56.6	10.03	0.53	27.4	2.74	1.31
Chemical	1936 Dec.	554	119.2	10.13	1.02	27.2	1.65	0.78
	1939 Dec.	506	130.6	10.55	1.03	27.7	2.24	1.05
	1940 July	512	133.6	10.51	1.04	27.5	2.44	1.15
Spinning & Weaving	1936 Dec.	3,127	788.6	10.40	0.59	27.0	1.19	0.58
	1939 Dec.	1,575	429.8	9.49	0.57	27.4	1.71	0.84
	1940 July	1,591	416.0	9.51	0.58	27.4	1.82	0.89
Clothings & Personal Ornaments	1936 Dec.	166	33.9	10.20	1.08	26.6	1.51	0.81
	1939 Dec.	178	35.1	10.33	1.07	27.7	2.26	1.14
	1940 July	178	30.1	10.19	1.06	27.5	2.30	1.20
Paper & Printing	1936 Dec.	420	64.4	10.24	0.55	27.1	1.82	0.78
	1939 Dec.	491	61.8	11.16	0.53	28.0	2.44	1.08
	1940 July	497	62.0	10.56	0.53	27.4	2.48	1.12
Food & Drink	1936 Dec.	329	58.3	10.07	1.05	27.3	1.76	0.84
	1939 Dec.	567	51.8	10.17	1.16	28.4	2.13	1.03
	1940 July	556	49.3	10.20	1.18	28.0	2.26	1.06
Gas & Electric	1936 Dec.	41	6.3	9.58	1.00	29.6	2.50	1.09
	1939 Dec.	65	8.2	10.36	1.08	29.1	2.70	1.07
	1940 July	65	8.1	10.58	1.10	29.5	2.87	1.14
Total incl. Others	1936 Dec.	7,363	1,810.4	10.22	0.59	27.0	1.93	0.63
	1939 Dec.	6,458	1,022.5	10.32	0.59	27.0	2.69	0.98
	1940 July	6,498	2,078.8	10.22	1.00	27.5	2.77	1.05

Labor Unions.—The number of labor unions in the various industries have fluctuated somewhat in the past few years. In 1938 there were 731 unions as compared with 837 in the previous year. Union membership has been largest in the transportation enterprise in recent years, followed by the machine and tool industry.

Table 2. Indices of Number of Laborers By Countries

	Japan	U.S.A.	Germany	France	Italy	U.K.	Japan	U.S.A.	Germany	France	Italy	U.K.
1929	100.0	100.0	100.0	—	100.0	100.0	1934	109.2	80.8	83.5	76.9	82.9
1930	86.1	87.2	87.0	100.0	97.3	95.8	1935	115.6	86.1	91.9	73.5	94.0
1931	84.2	73.7	72.0	92.5	88.8	92.2	1936	126.3	92.3	100.5	74.1	94.9
1932	87.7	62.5	59.5	80.9	78.5	91.4	1937	140.0	99.8	110.8	78.6	104.5
1933	95.9	69.2	65.9	79.4	79.4	94.7	1938	154.1	81.9	117.4	81.2	111.1

Table 3. Number of Laborers*

	Organized			Non-Organized		Total	Combined Total
	Male	Female	Total	Male	Female		
1932	360,598	17,027	377,625	4,482,651	4,482,651	4,860,276	
1933	363,090	21,523	384,613	4,742,106	4,742,106	5,126,719	
1934	366,918	21,046	387,964	5,376,313	5,376,313	5,764,277	
1935	384,735	23,027	408,662	3,762,225	1,785,702	4,497,927	
1936	395,904	24,685	420,589	3,884,110	1,785,408	5,569,527	
1937	373,576	21,714	395,290	4,160,766	1,866,277	6,027,043	
	351,768	22,423	375,191	6,390,208	6,390,208	6,765,399	

Note:—See Chapter Population for classification of working population.

Table 4. Number and Membership of Labor Unions By Kinds of Trade

	Machine & Tool			Chemical			Dyeing & Weaving			Food & Drink		
	No. of Unions	Operatives	Of which female	No. of Unions	Operatives	Of which female	No. of Unions	Operatives	Of which female	No. of Unions	Operatives	Of which female
1935	86	100,446	1,828	113	27,822	4,261	41	15,159	7,902	33	5,190	609
1936	78	95,939	1,948	107	26,346	3,206	47	18,321	9,095	34	5,262	639
1937	76	98,829	1,844	94	21,747	3,764	31	10,075	5,039	29	4,526	502
1938	75	118,894	2,498	87	16,935	2,648	29	11,272	5,348	24	3,753	372

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	Miscellaneous			Mining			Gas & Electricity			Transportation		
	No. of Unions	Operatives	Of which female	No. of Unions	Operatives	Of which female	No. of Unions	Operatives	Of which female	No. of Unions	Operatives	Of which female
1935	109	18,754	2,660	16	5,799	115	22	9,106	58	115	168,892	3,806
1936	115	19,250	2,231	16	5,948	28	16	9,693	57	125	179,244	4,268
1937	115	19,567	2,721	14	5,068	..	13	10,470	45	117	171,445	5,262
1938	103	19,984	2,829	11	4,052	9	10	10,007	40	108	145,325	6,261
	Communications			Civil Engineering			Others			Total		
	No. of Unions	Operatives	Of which female	No. of Unions	Operatives	Of which female	No. of Unions	Operatives	Of which female	No. of Unions	Operatives	Of which female
1935	37	7,864	118	34	8,009	2	377	41,621	2,568	993	408,662	23,927
1936	37	7,486	86	38	6,740	108	360	46,360	3,020	973	420,589	24,685
1937	41	8,748	91	31	6,676	42	276	38,139	2,442	837	395,290	21,714
1938	30	8,208	60	29	5,938	34	225	35,823	3,424	731	375,191	23,428

MAY DAY

Inaugurated in 1920 this grand review of proletarians steadily gained in importance and what was once a local demonstration of only three principal cities in 1923 spread to 72 in 1928. The most popular slogans of the processions were "Eight hours," "Minimum wage" and "Right of combination." The processions usually contain a goodly number of women and Korean laborers and are of course to be conducted under strict police supervisions.

May Day has been suspended since 1938 because of the Sino-Japanese hostilities.

As a general rule, the number of female operatives exceeds that of male operatives. But recent statistics show a reverse tendency. This may be attributed to the growing predominance in recent years of the machine and tool and the chemical industries, which have to depend chiefly on male workers. It is noteworthy in this connection that almost 65 per cent. of factory girls in Japan are employed in the spinning and weaving industries.

Table 5. May Day Demonstrations

	Number of Places	Number of Participants
1927	48	42,100
1928	38	24,400
1929	23	23,000
1930	51	37,500
1931	51	39,300
1932	70	41,000
1933	37	25,490
1934	30	21,600
1935	29	21,650
1936	40	Not held

Factory Labor

According to the Dept. of Commerce and Industry, the number of factories increased from 31,717 in 1914 to 137,422. The number of laborers also has increased by about 3.7 folds in the intervening years. Of a total of 3,215,421 factory laborers in 1938, male laborers accounted for 62,190 or an increase of 17.0% over the previous year.

WAGES

According to the investigation made by the male and ¥0.610 for female workers in October 1933. Similar figures in December 1939 showed wages of factory workers stood at ¥1.980 for ¥2.689 and ¥0.979 respectively.

Table 6. Average Daily Wages of Laborers Classified in 13 Principal Cities of Japan (Prepared by the Dept. of Commerce & Industry) (Unit: ¥)

Ave.	Silk* Reeling	Cotton* Spinning	Silk* Throwing	Rayon Yarn	Casting	Steel Plate	Blacksmith	Lathing	Shaping	Grinding	Welding
1934	0.62	0.67	0.63	1.42	2.49	3.35	2.45	2.56	2.77	3.02	2.52
1937	0.68	0.74	0.69	1.33	2.63	2.99	2.72	2.65	2.60	2.95	2.65
1938	0.71	0.77	0.75	1.48	2.72	3.28	2.88	2.75	2.58	2.89	2.57
1939 June	0.77	0.85	0.81	2.15	3.01	3.62	3.17	2.79	3.04	3.13	2.81
1939 Dec.	0.87	0.87	0.85	2.21	3.29	4.29	3.35	3.03	3.20	3.41	3.09
1940 June	0.89	0.95	0.93	2.37	3.42	4.46	3.50	2.91	3.12	3.63	3.17

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Continued

Ave.	Finisher	Cement	Glass	Brick	Sulphuric acid	Japanese paper	Western paper	Wheat flour	Beer	Confectionery	Tailoring
1934	2.46	2.05	1.68	1.27	2.11	1.48	1.71	1.88	2.23	1.46	1.83
1937	2.57	2.19	1.72	1.32	2.18	1.55	1.87	1.89	2.48	1.54	1.87
1938	2.61	2.31	1.82	1.41	2.36	1.69	1.92	2.01	1.57	1.65	1.96
1939 June	2.78	2.56	2.03	1.78	2.49	1.80	2.09	2.26	2.81	1.79	2.19
Dec.	3.23	2.56	2.20	2.00	2.62	2.04	2.22	2.34	2.61	1.98	2.45
1940 June	3.02	2.76	2.30	2.19	3.03	2.26	2.20	2.46	2.78	1.92	2.37

Ave.	Shoe	Furniture	Lacquer ware	Type composing	Book-binding	Car-penter	Plastering	Stone mason	Painting	Day laborer	General Average
1934	1.77	1.72	1.62	2.17	1.61	1.92	2.13	2.33	2.10	1.31	1.74
1937	1.91	1.97	1.66	2.24	1.78	2.20	2.41	2.70	2.27	1.43	1.84
1938	2.05	2.11	1.74	2.21	1.89	2.35	2.55	2.82	2.41	1.58	1.94
1939 June	2.11	2.52	1.89	2.33	1.95	2.71	2.88	3.22	2.71	1.95	—
Dec.	2.46	2.78	2.03	2.60	2.20	2.91	3.08	3.45	2.88	2.20	—
1940 June	2.59	2.99	2.25	2.46	2.16	3.12	3.28	3.70	3.02	2.32	—

* female workers.
Note:—Based on the reports from the Chamber of Commerce & Industries of 13 principal cities in Japan viz. Tokyo, Osaka, Kobe, Kyoto, Nagoya, Yokohama, Hiroshima, Kanazawa, Otaru, Fukuoka, Niigata, Kochi and Sendai. Income other than fixed wages is also calculated as wages.

Table 7. Daily Wages of Transport & Mining Workers.
(In Yen)

June	Transport*				Mining			
	No. of Depots	Average	Male	Female	No. of Mines	Average	Male	Female
1927	421	1.716	1.790	0.995	80	1.780	1.883	1.254
1930	448	1.898	1.992	1.050	81	1.706	1.801	1.032
1931	424	1.917	2.010	1.065	81	1.527	1.605	0.785
1932	435	1.920	2.015	1.074	91	1.455	1.525	0.690
1933	438	1.943	2.048	1.053	89	1.547	1.615	0.686
1934	447	1.928	2.034	1.039	86	1.637	1.706	0.711
1935	444	1.899	2.006	1.044	91	1.678	1.749	0.722
1936	447	1.900	2.012	1.034	92	1.745	1.815	0.745
1937	469	1.995	2.114	1.126	92	1.932	2.007	0.804
1938	468	1.960	2.073	1.147	91	2.238	2.327	0.964
1939	507	2.288	2.391	1.423	219	2.581	2.722	1.086
1940 July	568	2.103	2.341	1.425	268	2.928	3.078	1.330

Note:—* Transport consists of workers in the Communications, Railways, Trams, Bus, Shipping and Express Enterprises.

Table 8. Productivity of Labor
(In Yen)

Industry	Year	Yearly Output per worker	Output per working hour	Output per one yen of wage	Average wages per hour (Sen)	Cost Ratio to Production		
						Raw materials %	Fuel %	Wages %
Textiles	1929	3,180	1.06	10.77	—	—	—	—
	1931	2,144	0.76	9.63	8	68.62	1.59	10.38
	1933	3,211	1.12	15.28	7	72.21	1.21	6.54
	1936	3,556	1.20	15.55	8	76.69	1.24	6.42
	1937	4,785	1.37	16.50	8	78.16	1.32	6.06
1938	4,079	1.28	15.52	9	67.38	1.84	6.64	
Metals	1929	7,684	2.48	10.54	—	—	—	—
	1931	5,120	1.65	8.28	20	81.34	3.15	11.71
	1933	6,993	2.36	12.29	19	60.85	2.88	7.95
	1936	9,024	2.91	14.60	20	64.43	2.90	6.84
	1937	9,966	3.79	18.54	20	67.69	5.75	5.39
1938	12,419	4.10	18.63	22	68.38	5.36	5.36	
Machines and Tools	1929	3,867	1.26	5.23	—	—	—	—
	1931	3,145	1.00	5.01	20	35.92	1.24	20.76
	1933	3,562	1.18	5.79	20	41.37	1.36	17.82
	1936	3,756	1.20	6.41	19	42.26	1.16	15.60
	1937	3,695	1.87	7.63	18	50.17	1.17	13.10
1938	4,432	1.51	7.65	20	48.46	1.27	13.06	

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Industry	Year	Yearly Output per worker	Output per working hour	Output per one yen of wage	Average wages per hour (Sen)	Cost Ratio to Production		
						Raw materials %	Fuel %	Wages %
Ceramic	1929	3,185	1.18	6.80	15	25.22	11.33	14.99
	1931	2,551	0.98	6.69	14	27.53	10.53	13.00
	1933	3,101	1.12	7.83	14	31.39	13.10	12.94
	1936	3,237	1.12	7.71	15	37.50	14.56	11.81
	1937	3,242	1.24	8.43	16	33.01	19.46	12.42
1938	3,835	1.30	8.05	—	—	—	—	
Chemicals	1929	8,835	2.81	17.44	15	46.72	2.40	6.79
	1931	6,668	2.28	14.72	14	52.11	2.09	5.09
	1933	7,868	2.68	19.39	13	58.15	2.89	5.01
	1936	7,718	2.59	19.85	13	59.29	2.99	4.46
	1937	7,800	2.94	22.43	13	58.03	9.39	4.31
1938	10,740	3.33	23.16	14	—	—	—	
Lumbering and Wood-working	1929	3,496	1.18	5.69	13	69.28	0.30	14.68
	1931	2,593	0.88	6.72	13	69.45	0.47	12.56
	1933	2,853	1.00	7.90	13	74.42	0.31	12.46
	1936	3,003	1.03	8.03	13	68.13	0.37	11.01
	1937	3,110	1.18	9.02	13	74.18	0.50	10.91
1938	4,018	1.36	9.16	15	—	—	—	
Printing and Book-binding	1929	3,725	1.17	5.72	18	52.93	0.58	17.40
	1931	3,440	0.94	5.83	21	48.56	0.37	19.01
	1933	3,383	1.10	5.35	17	50.98	0.33	14.12
	1936	3,994	1.16	7.07	17	52.44	0.44	12.71
	1937	3,535	1.27	7.59	18	47.37	0.44	13.38
1938	4,423	1.35	7.47	—	—	—	—	
Provisions	1929	8,054	3.88	24.02	14	51.45	14.04	4.79
	1931	6,275	2.98	20.99	13	54.25	13.43	3.94
	1933	7,150	3.36	25.32	13	61.99	15.03	3.74
	1936	7,619	3.38	26.73	13	58.88	15.20	3.46
	1937	7,125	3.63	29.15	13	62.22	19.13	3.47
1938	9,367	3.88	28.75	—	—	—	—	

Table 9. Japan's Position in Industrial Working Hours
(Unit: Hour)

Year	Japan	U.S.A.	Germany	France	Poland
1929	9.27	8.06	7.67	—	7.45
1930	9.13	7.32	7.37	7.95	7.30
1931	9.08	6.74	7.08	7.60	7.20
1932	9.10	5.80	6.91	7.20	6.89
1933	9.22	6.06	7.16	7.48	6.92

Year	Japan	U.S.A.	Germany	France	Poland
1934	9.25	5.78	7.43	7.45	7.02
1935	9.28	6.20	7.41	7.40	7.10
1936	9.28	6.64	7.59	7.63	7.12
1937	9.32	6.04	7.68	6.72	7.21
1938	9.33	5.74	7.75	6.50	7.29

Note:—Working hours per day including recess.

THE FACTORY LAW

The Factory Law, put in force on September 1, 1916, was revised in March, 1922 and carried into effect on July 1, 1926. The main feature of the revision is the wider scope of application, and the inclusion of smaller factories each employing 10 workers as against the minimum limit of 15 in the old system and also more kinds of factories engaged in dangerous or unhealthy work.

Working hours.—The Maximum working hours are fixed at 11, this however, being applicable only to factories employing the protected workers, i.e. male operatives under 16 years of age (formerly 15) and female operatives, there being no restrictions as regards those employing adult males. Factories enforcing the 11 hour day or less must allow their workers at least 2 off-days every month, and when a day's work exceeds 6 hours over half an hour's recess must be given, and when 10 hours over 1 hour's.

Table 10. Net Working Hours (per day) and Days (per month) by Industries

	Textile & Dyeing		Machinery & Tools		Chemical		Food		Miscellaneous		General	
	Hours	Days	Hours	Days	Hours	Days	Hours	Days	Hours	Days	Hours	Days
1930 Oct.	9.52	27.6	9.13	26.3	9.34	26.8	9.22	27.9	9.23	26.8	9.35	27.0
1933 "	9.50	27.6	9.58	27.1	9.44	27.4	9.26	27.7	9.36	27.0	9.47	27.4
1936 "	9.50	27.6	10.08	27.3	9.50	27.6	9.37	27.8	9.47	27.3	9.53	27.5
1937 "	9.50	27.6	10.20	27.5	9.51	27.6	9.43	28.1	9.52	27.5	9.57	27.6
1938 Dec.	9.47	27.6	10.34	27.6	9.57	27.8	9.46	28.5	10.06	27.8	10.04	27.7
1939 June	9.49	27.2	10.08	27.7	10.03	27.9	9.55	28.3	9.56	27.6	9.58	27.7
Dec.	9.49	27.4	11.03	27.8	10.55	27.7	10.17	28.4	—	—	10.32	27.7
1940 July	9.51	27.4	10.28	27.4	10.51	27.5	10.20	28.0	—	—	10.22	27.7

Night Work.—The protected worker must not be employed in night work, from 10 p.m. to 5 a.m. (formerly to 4 a.m.), but the factories such as filatures where work is divided into two shifts or more were exempted from this provision till the end of June, 1929. In case these factories employ the protected worker by dividing work into day and night shifts, the worker must be given at least 4 off-days a month, and the shifts must be changed in less than ten days.

Women in Maternity.—Women must not be employed 4 weeks before and after child-birth. But 4 weeks after child-birth they may be employed, when so desired by them in work judged harmless by physicians. Women with children not over one year old must be allowed to suckle them twice a workday, for periods not exceeding half an hour.

Workmen's Compensation.—Workers injured by accidents, falling ill or killed while attending to their duties are entitled to compensation by the employers as follows:—

1. Allowances for medical treatment till cured.
2. Allowances for temporary disablement:—not less than 60 per cent. wage-rate daily

from the first day till cured, not less than 40 per cent. from the 181st day.

3. Allowances for permanent disablement:—
 - a. Invalidism for life—not less than 540 times the daily wage rate.
 - b. Disablement for life—not less than 360 times the daily wage-rate.
 - c. Damaged working capacity, health permanently injured, or in case of women facial disfigurement—180 times the daily wage-rate.
 - d. Permanently though slight disablement without damaging working capacity—not less than 40 times the daily wage-rate
4. Allowances for bereaved family—not less than 360 times the daily wage-rate of the deceased operative.
5. Funeral expenses—20 times the daily wage-rate, but 20 yen when the sum does not come up to 20 yen.

The investigation made by the Social Affairs Bureau, Home Department, puts the number of factories under the control of the old law at the end of 1924 at 27,073 with 1,493,811 workers, but the revision added 19,294 factories with 142,724 employees including 38,000 females and 2,800 males of "protected age."

Table 15. Indices of Cost of Living and Retail Price

	Food & drink		Dwelling		Fuel & light		Clothing		Cultural		Average incl. other		Retail price
1914 (July)	100	58	100	43	100	55	100	66	100	55	100.0	54	100.0
1932	138	80	241	103	160	88	121	80	179	98	164.0	89	136.8
1933	142	82	236	101	170	93	139	92	180	99	168.3	91	145.6
1934	152	88	234	100	181	99	147	97	180	99	174.1	94	148.7
1935	166	96	233	100	178	97	146	97	182	100	180.5	98	151.6
1936*	173	100	233	100	183	100	151	100	183	100	184.9	100	159.2
1937	181	105	233	100	199	109	168	112	189	104	192.8	102	174.3
1938	194	112	233	100	235	128	204	135	199	109	207.0	112	199.7
1939	211	122	235	101	246	135	232	154	202	110	221.0	119	223.6
1940 (Oct.)	248	144	237	102	278	152	285	189	210	115	249.0	135	262.0

Note:—Cost of living is the average for 13 principal cities in Japan Proper, compiled by the "Asahi Shimbun"; *The year previous to the China Incident. Retail price by the Bank of Japan.

Table 12. Cost of Living of Salaried Men

Year Ending Aug. Average	Members per family	Food		Dwelling		Light & Fuel		Clothing		Others	
		¥	%	¥	%	¥	%	¥	%	¥	%
1934	3.90	26.90	31.19	15.94	18.48	4.33	5.02	10.87	12.60	28.21	32.71
1935	3.86	28.41	32.99	15.54	18.04	4.36	5.06	10.47	12.16	27.34	31.75
1936	3.91	29.89	34.40	15.54	17.89	4.74	5.14	10.10	11.62	26.89	30.95
1937	3.89	30.66	34.69	15.25	16.59	4.41	4.99	10.18	11.51	27.87	31.34
1938	3.88	31.96	35.84	15.27	17.12	4.75	5.33	10.11	11.34	27.08	30.37
Of which:											
Wage Below											
¥60	2.71	21.25	35.86	9.49	16.01	3.61	6.09	2.87	4.84	22.05	37.20
70	3.73	25.73	41.48	10.24	16.51	4.53	7.30	5.52	8.90	16.01	25.81
80	3.53	27.04	39.48	12.24	17.87	4.17	6.09	7.56	11.04	17.48	25.52
90	3.64	28.37	37.14	13.80	18.07	4.60	6.02	8.10	10.61	21.51	28.16
100	3.90	31.18	37.09	14.75	17.54	4.76	5.66	9.11	10.84	24.27	28.87
Above 100	4.04	34.83	34.44	16.88	16.69	4.94	4.89	11.96	11.83	32.51	32.15

Table 13. Cost of Living of Laborers

Ave.	Members per family	Food		Dwelling		Light & Fuel		Clothing		Others	
		¥	%	¥	%	¥	%	¥	%	¥	%
1934	4.20	26.94	35.90	12.60	16.79	3.59	4.78	9.15	12.19	22.77	30.34
1935	4.24	29.30	38.19	12.43	16.20	3.67	4.78	9.15	11.92	22.18	28.91
1936	4.23	30.30	39.53	12.43	16.22	3.74	4.88	8.58	11.19	21.60	28.18
1937	4.23	30.99	39.14	12.33	15.57	3.72	4.69	8.85	11.19	23.28	29.43
1938	4.26	32.76	40.40	12.66	15.62	4.07	5.02	8.43	10.39	23.17	28.57
Of which:											
Salary Below*											
¥50	4.61	24.33	49.49	6.66	13.54	3.48	7.08	3.66	7.45	11.03	22.44
60	3.44	25.15	47.26	8.86	16.65	3.72	6.99	3.95	7.42	11.54	21.68
70	4.11	27.94	46.42	9.97	16.56	3.64	6.05	5.49	9.12	13.15	21.85
80	4.12	30.10	44.76	11.13	16.55	3.75	5.58	6.07	9.02	16.20	24.09
90	4.20	31.04	42.24	11.98	16.30	4.00	5.44	7.18	9.77	19.29	26.25
100	4.25	32.82	40.46	13.03	16.06	4.15	5.12	8.47	10.44	22.65	27.92
Above 100	4.40	36.03	37.58	14.22	14.83	4.30	4.49	10.75	11.21	30.58	31.89

Note:—* Indicating fixed monthly income and excluding revenue other than fixed income.

Table 14. Indices of Cost of Living by Countries

	Japan	U.K.	U.S.A.	France	Germany	Italy
1929	100.0	100.0	100.0	100.0	100.0	100.0
1932	75.4	87.8	77.8	94.6	78.3	83.1
1933	80.3	85.4	74.8	93.5	76.6	79.6
1934	82.0	86.0	79.3	92.8	78.6	75.5
1935	83.6	87.2	82.5	86.9	80.0	76.6
1936	87.8	89.6	84.7	91.1	80.8	82.6
1937	96.1	93.5	88.4	111.3	81.2	90.7
1938	110.1	95.1	86.3	125.5	81.6	98.0
1939	123.8	97.0	85.1	—	82.0	—

Labour Disputes in 1939

Since the outbreak of hostilities in China, both workers and employers recognizing the necessity of cooperation in increasing the industrial output, have refrained from ascerbatating labour problems. As a result the numbers of labour disputes declined sharply. In the first half of 1937, because of the rapid advance in the cost of living, the number of labour disputes

increased to a new record of 1,455 cases involving 181,531 workers. In the second half of the same year, the total declined to 671 disputes and 28,713 workers or a total of 2,106 cases involving 211,611 workers. In 1939, the figures continued to be low, the total number of disputes for the whole year being 358 cases involving 72,835 workers. These statistics are inclusive of strikes, sabotages and lockouts.

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Table 22. Statistics of Mine Workers
(Wages unit in yen)

Year	No. of mines	No. of Workers		Daily Wages				Working	
		Male	Female	Fixed		Actual		Hours	Days
				Male	Female	Male	Female		
1932 Nov.	43	27,253	2,607	1,490	0.582	1,574	0.591	8.36	27.0
1933 Feb.	43	27,727	2,599	1,529	0.604	1,631	0.619	8.37	25.5
1937 Dec.	51	43,878	3,742	1,712	0.691	1,784	0.658	8.20	28.1
1938 Dec.	53	48,410	4,439	1,861	0.744	2,084	0.780	8.42	28.1
(B) Coal Mines									
1932 Nov.	91	87,844	8,422	1,426	0.699	1,464	0.712	8.54	25.0
1933 Feb.	91	90,231	8,238	1,448	0.702	1,493	0.718	8.54	24.0
1937 Dec.	93	153,915	9,463	2,097	0.884	2,233	0.927	9.07	26.7
1938 Dec.	95	173,766	10,707	2,489	1.040	2,672	1.105	9.16	26.5
1939 Dec.	98	66,715	6,946	2,087	0.839	2,377	0.892	9.46	28.1
1940 July	97	64,701	7,294	2,253	0.917	2,642	0.991	9.57	28.2
1939 Dec.	136	229,432	18,798	2,856	1.281	3,014	1.376	10.45	26.6
1940 July	136	225,515	19,916	3,044	1.361	3,235	1.475	10.53	26.7
(C) Petroleum Mines									
1932 Nov.	18	2,836	165	1,582	0.834	1,724	0.848	10.01	29.1
1933 Feb.	18	2,793	162	1,606	0.834	1,779	0.861	10.02	28.4
1937 Dec.	21	3,249	148	1,524	0.807	1,674	0.835	9.31	28.2
1938 Dec.	21	3,378	150	1,559	0.847	1,714	0.879	9.32	28.2
1939 Dec.	24	5,485	646	1,717	0.973	1,894	1.025	10.24	28.1
1940 July	24	4,083	253	1,279	0.997	2,093	1.017	10.02	28.2
(D) General Averages									
1932 Nov.	152	117,938	11,194	1,448	0.671	1,500	0.682	8.53	26.3
1933 Feb.	152	120,751	10,999	1,474	0.678	1,537	0.694	8.53	25.0
1937 Dec.	165	201,042	13,353	1,995	0.826	2,140	0.862	8.55	27.4
1938 Dec.	169	225,554	15,206	2,324	0.946	2,521	1.000	9.10	27.6
1939 Dec.	269	305,507	26,521	2,642	1.147	2,842	1.228	10.24	27.4
1940 July	268	299,387	27,810	2,825	1.230	3,078	1.330	10.08	27.5

Note:—The above statistics compiled by the Bank of Japan are only for coal mines employing over 200 workers and for petroleum and metal mines employing over 100 workers.

Table 23. Accidents at Mines

Year Ending June 30:	No. of cases	Killed			Injured			Grand Total
		Male	Female	Total	Male	Female	Total	
1927	163,108	905	97	1,002	139,842	23,751	163,593	164,595
1933	66,929	803	30	833	63,321	3,019	66,340	67,173
1934	73,239	859	21	880	69,576	3,231	72,807	73,687
1935	72,348	1,104	16	1,120	68,801	2,945	71,746	72,866
1936	72,510	1,213	21	1,234	69,633	2,679	72,312	73,546
1937	78,605	1,000	31	1,031	75,247	2,616	77,863	78,894
1938	83,991	1,347	18	1,365	80,313	3,122	83,435	84,800

Laborers in Munitions Industry

The structural changes in Japanese industry are equally reflected in the field of labor. According to official statistics, the number of workers increased remarkably in armament and related industry (machinery, metal and chemical industries), the number at the end of 1939 increasing 76.8 per cent. over a year previous. During the same period workers in peace-time industries increased only very slightly. The percentage of workers in armament industries in privately owned factories reached 52 per cent., which compares with 22.0 per cent in 1931.

Japan and International Labor Organization

The relations between Japan and the International Labor Organization set up by Part XIII of the Treaty of Versailles, has become closer year by year. From the beginning, Japan has actively participated in the International Labor Conference, despite considerable expenses involved in view of the great distance which separates Japan from Geneva. Moreover, a Japanese Government representative has regularly attended each session of the Governing Body of the International Labor Office. Japan is also the first country which established in Geneva a permanent delegation to the Inter-

national Labor Organization, presided by the Japanese Government representative on the Governing Body. The present chief is Mr. Juitsu Kitaoka who succeeded Mr. Shuzo Yoshisaka.

In view of the great industrial importance of Japan, the International Labor Office created in 1923 a Correspondence Office in Tokyo and appointed Mr. I. Ayuzawa as Director.

The active participation of Japan in the work of the International Labor Organization has considerably influenced and naturally gave an impetus to the workers of Japan. The great progress which has been achieved in the trade union movement since 1919 proves eloquently how large was the repercussion of the International Labor Organization upon the Japanese workers. The necessity of continuing such participation is at present the more keenly felt as the toiling masses of the world at large are with greater eagerness looking to Geneva for the solution of their problems.

Japan and the Labor Conventions

Up to the present, Japan has ratified the following twelve Draft Conventions adopted by the International Labor Conference:

- (1) Draft Convention concerning unemployment (First Session, Washington, 1919).
- (2) Draft Convention fixing the minimum age for admission of children to industrial employment (First Session, 1919).
- (3) Draft Convention fixing the minimum age for admission of children to employment at sea (Second Session, Genoa, 1920).
- (4) Draft Convention for establishment of facilities for finding employment for seamen (Second Session, Genoa, 1920).
- (5) Draft Convention concerning the age of admission of children to employment in agriculture (Third Session, Genoa, 1921).
- (6) Draft Convention concerning the compulsory medical examination of children and young persons employed at sea (Third Session, Geneva, 1921).
- (7) Draft Convention concerning the workmen's compensation for occupational diseases. (Seventh Session, Geneva, 1925).
- (8) Draft Convention regarding the equality of treatment of national and foreign workers as regards workmen's compensation for accidents. (Seventh Session, Geneva, 1925).
- (9) Draft Convention regarding the simplification of the inspection of emigrants on board ship. (Eighth Session, Geneva, 1926).
- (10) Draft Convention regarding the fixa-

tion of minimum age for admission of children to employment as coal heavers or firemen (Third Session, Geneva, 1921).

(11) Draft Convention in regard to marking the weight of heavy package carried by ship. (Twelfth Session, Geneva, 1919).

(12) Draft Convention regarding forced and obligatory labor. Fourteenth Session, Geneva, 1930).

In addition to the above, the principles set forth in various Draft Convention which still remain unratified have been incorporated as far as possible into her national legislation. Untiring efforts have been and are being made by the authorities to this end.

Wartime Labor Policies

With the progress of Sino-Japanese hostilities, the demand for labor in the armament industries is growing apace, whilst peace-time industries suffer from the official restriction of domestic consumption and raw materials. In view of this situation, the Welfare Ministry decided on June 2, 1938 on two fundamental labor policies as follows:

- (A) Measures to assure an adequate supply of workers for the armament industries.
 1. Adoption of a two-shift system in the armament industries and mines.
 2. Increased activity of employment exchanges under Government control.
 3. Subsidy grants to private institutes which educate technicians and skilled workers, and expansion of occupational guidance facilities in national employment exchanges.
 4. Restriction of competition for obtaining skilled labor (by application of Article 6 of the National General Mobilization Law).
 5. A registration system for ascertaining the occupation and vocational skill of workmen (by application of Article 21 of the National General Mobilization Law).
 6. Regulation of employment of new graduates of engineering and mining schools and colleges under a licence system.
- (B) Wartime unemployment policies.
 1. To transfer unemployed workers in the non-urgent industries to the armaments industries.
 2. Increased activity of national employment exchanges to assist discharged workers in changing and finding occupations.
 3. Inducement to women and girls discharged from the cotton and woollen industries to return to rural districts.
 4. Occupational guidance and re-education, by the Government of unemployed other than the above mentioned workers.
 5. Unemployment relief works and work-providing facilities.

WARTIME EMPLOYMENT CONTROL

A scarcity of workers was felt in many industries already before the China Incident. The subsequent expansion of industrial activity in manufacturing and mining together with the calling up of large number of young men to military service intensified the scarcity both in industry and agriculture, the shortage being greatest in skilled workers. The Government, however, did not take any effective measures to relieve this condition partly because of the lack of a legal basis to undertake such control.

With the enforcement of the National General Mobilization Law in April, 1938, however, the Government was empowered to (1) requisition persons for employment (Article IV), (2) to regulate the employment, placement, and dismissal of workers, wages, and other working conditions (Article VI), (3) to collect reports on the professional ability of people, (Article XXI), and (4) to order the training of persons of technical skill (Article XXII). According to these provisions of the Law, the Government took various measures such as registration of persons of special professional or technical ability, the restrictions on employment of engineers and the restriction on wages and working hours.

As regards employment restriction, the first measure was taken in August, 1938, when employment of school graduates with engineering training was subjected to government permission. In April, 1939, the employment of skilled workers was put under control to prevent the movement of these workers from factory to factory, in search of better pay, and inducement to workers on the part of employers. In February, 1939, the employment of young workers (between 12 and 30 for male and 12 and 20 for female) was restricted by order. Young male workers could be employed only with the permission of the prefectural governors or directors of labour exchanges. The employment of female youth was restricted only in the amusement industries.

By orders issued on March 31, 1939, working hours in factories and workshops were restricted to 12 hours a day, and holidays of at least 2 days a month and one rest hour per day of more than ten working hours were required. As regards wage restrictions, because of the difficulty in fixing standard wages for all workers, only initial wages for inexperienced workers were fixed, and the Government was empowered to revise wage rates and payment conditions

which must be reported by individual employers.

In order to relieve the scarcity of skilled workers, two orders requiring the compulsory training of persons with particular occupational abilities were issued on March 31, 1939. By these orders, schools, factories, and mines were required to train a certain number of technicians, the Government granting subsidies or indemnifying losses sustained by such training.

The registration of nationals as a preparation for the better distribution of man power was undertaken only with a limited scope, the registration of persons in the medical profession being ordered in August, 1938, that of seamen in January, 1939, and that for veterinarians in February, 1939. A National Professional Ability Registration Order, which may cover any occupation, was issued in January, 1939, and by a ministerial order basing on it various kinds of skilled workers, mechanics, and engineers were required to register.

Finally, in July, 1939 a National Requisition Order was issued. By this order, the government was empowered to requisit any person registered under the National Professional Ability Registration Order for employment in essential industries. Persons thus requisitioned were to be paid during the period of service according to ability, kind and place of service, and previous earnings. Employment control was thus developed to safeguard the supply of labour in important industries and to increase the number of skilled workers. No positive measures have, however, yet been taken to shift workers from one industry to another and for a complete plan for the distribution of labour. In the future employment control may proceed in this direction to establish and realize a complete plan for the best utilization of man power.

Labor Efficiency

The enforcement of the National General Mobilization Law in April, 1938, has spread its influence over the chief industries in Japan, regulating employment of labor, wages and working hours. This move was in answer to a demand for a speedy change and amplification of the existing labor laws and regulations. Also, the measure was adopted to insure a steady supply of workers to the munition plants and to industries engaged in increasing production capacity and for the purpose of improving the efficiency of labor.

The sudden enforcement of this law has created certain setbacks in labor efficiency which will need time for their rectification. At an instance, the labor turnover has not increased as compared with the pre-control period. The wage-control measures, which vary with the different plants and industries, have in no small degree contributed to the above situation. One of the major reasons contributing to low labor efficiency has been the violent transformation of the industrial structure of Japan in the last three years. In the industries producing war goods, the volume of migratory labor, including inexperienced newly recruited workers, has increased, and this existence of transient and non-transient workers has complicated the task of administering these labor laws. The pay of the casual laborer has been comparatively higher than the other, an element which has served to accelerate labor migration. The wage scale had advanced continuously since the China Affair up to the middle of 1940, which in turn has pushed up the price level of commodities and contributed to the lower efficiency of labor.

It is believed, however, that when the present transformations are completely effected the aggregate labor efficiency of the country will rise markedly. One of the latest trends is the movement towards the pooling of skilled technicians and laborers and costly patents.

Position of Small Tradesmen

The profit margin of certain small retail trades shrunk as a result of advances in the prices of raw materials and labor due to the Sino-Japanese war. To overcome these difficulties there is an increasing indication among certain groups of trades to pool their interests and to take advantage of volume purchases, and to take advantage of volume purchases, rationalization in delivery of goods, and economy in production through the elimination of duplicate equipments, etc. This trend is visible in such diversified branches of household professions as the manufacture of bean curds (tofu), the marketing of vegetables and sales of bicycles. As a stricter government surveillance in the mobilization of materials proceeds, the above-mentioned trend is expected to take a firmer foothold. Official circles believe that such pooling methods will release a vast amount of labor which can be utilized more usefully in other spheres of enterprise.

References:

- Table Nos: 1 a, 2 b, 3 c, 4 a, 5 c, 6 d, 7 e, 8 f, 9 g, 10 a, 11 a & h, 12-13 e, 14 a & h, 15-16 c, 17 e, 18 c, 19-20 i, 21 j, 22 a, 23 d, 24 a.
- Key: a—Bank of Japan.
b—Statistical Year Book of League of Nations.
d—Department of Commerce & Industry.
c—Social Bureau, Department of Welfare.
e—Cabinet Statistics Bureau.
f—Mitsubishi Economic Research Bureau.
g—Department of Home Affairs.
h—The Asahi Shimbun-sha.
i—Department of Agriculture & Forestry.
j—Ohara Social Science Research Institute.

CHAPTER XXIX

MINING

INTRODUCTORY

The mineral resources of Japan are uncommonly extensive in variety, although outputs, except in a few lines, are hardly adequate to fill the requirements. The country therefore is normally a net importer with regard to minerals. The minerals in which the country, exclusive of the colonies, may be regarded as self-sustaining are sulphur, iron pyrites and other iron ores, and steel products. For petroleum, pig iron, copper, lead, zinc, nickel, aluminium and tin the internal requirements must be met in most part from external sources. In these circumstances, the net imports of minerals have since 1931 grown to a considerable extent, the net imports for 1936 being ¥660 million, a gain of ¥440 million in comparison with 1931.

Between 1931 and 1934 the proportion of internal supply fell from 60 to 51% of the total, while the ratio of external supply rose from 40 to 49%. This adverse ratio is accounted for wholly by the prodigious increase in the demand for minerals. Between 1932 and 1936, for instance, the domestic production of coal rose from 28 million metric tons to 41.8 million tons. But this expansion still proved inadequate to meet the total demand and imports for the corresponding years increased from 2.7 million tons to 4.2 million tons.

To suffice the growing demand for minerals the Japanese Government has been directing its attention to Manchoukuo, especially since 1933, to supply a large proportion of such requirements. Progress in this direction has been going on at a remarkable pace since 1937, the first year of the so-called Five Year Plan, and a goodly per cent of the heavy Japanese capital investments in Manchoukuo of the past few years, which aggregate from 300 million to 400

million yen annually, are being spent for the expansion and processing of mineral production. According to an announcement by the Japanese Government in the spring of 1939, Japan and Manchoukuo will attain a point of self-sufficiency in iron, steel, coal and several light metals by the end of 1941. These feats in production in the mining industry no doubt form one of the most impressive accomplishments of Japan, and fears entertained that the Sino-Japanese conflict would greatly retard the developments in this direction are thus being dispelled.

Production Indices.—The index of production of the principal minerals of Japan, namely, gold, silver, copper, coal and petroleum has been rising steadily in recent years. Taking the year 1928 as 100 the average index for these minerals was up to 126 in 1936. Largest gains were seen in the production of gold and silver, as the following table indicates:

Table 1. Indices of Mineral Production

	Gold (3)	Silver (1)	Copper (10)	Sulphur (1)	Oil crude (2)	Coal (37)	Average
1930...	89	93	109	72	118	107	106
1931...	97	98	105	70	117	94	67
1932...	97	95	99	98	98	96	96
1933...	107	108	96	132	85	110	107
1934...	115	124	95	160	91	121	115
1935...	141	148	98	193	115	128	124
1936...	167	174	109	226	149	140	139
1937...	...	...	...	...	...	...	151
1938...	...	...	...	...	...	...	159
1939...	...	...	...	...	...	...	165

Notes: ()—Weight.

Production Value.—The value of mineral production in the Japanese Empire aggregated 746 million yen in 1936, representing an almost three-fold increase over that for 1931. The trend is shown as follows:

Table 2. Value of Mineral Production in Japanese Empire
(In ¥1,000)

	Japan Proper	Chosen	Taiwan	Karafuto (Coal only)	South Sea Islands	Total
1913	146,849	8,204	4,133	...	...	159,186
1919	641,282	25,415	11,167	...	...	677,864
1929	384,558	26,488	14,847	5,748	1,415	433,051
1930	307,673	24,654	15,141	5,622	1,153	354,243
1931	241,826	21,742	13,338	5,250	1,126	283,282
1932	254,782	33,747	13,951	5,201	1,205	308,886
1933	358,241	48,301	15,196	6,704	1,309	429,751
1934	432,308	69,173	18,948	9,119	1,779	531,327
1935	504,419	88,039	22,839	11,328	1,762	628,387
1936	589,400	110,430	28,727	15,375	2,157	746,089

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Position in World Mineral Production.—The position of Japan as a producer of certain of the more important minerals is given as follows:

Table 3. Japan's Position in Output of Certain Basic Minerals in 1937
(Prepared by the League of Nations)

	Gold (Kilograms)	Silver (M. tons)	Copper (1,000 M. tons)	Lead (1,000 M. tons)	Zinc (1,000 M. tons)	Iron Ore (1,000 M. tons)	Coal (1,000 M. tons)	Petroleum (1,000 M. tons)
Japan	22,500	310.0	87.6	8.9*	42.0	322	41,803*	355
U.S.A.	126,215	2,183.8	830.0	423.9	505.2	37,000	447,580	172,960
U.K. ....	...	2.4*	5.2	13.8	66.0	4,200	245,053	1,360
British India ...	10,286	193.0	6.9	78.9	...	1,666*	22,570	374
Canada	127,296	765.5	210.5	181.7	143.8	...	10,971	...
Australia	42,500	382.2*	13.5*	228.8	71.6*	1,267*	11,553*	...
France	2,605*	14.8*	1.0*	15.1*	30.2*	11,600	44,319	71
Germany	236*	203.5*	65.0	166.1*	163.2	2,600	184,513	453

Note: * Represents output in 1936.

Table 4. Principal Mineral Output in Japan Proper
(Value in Million yen)

	Gold		Silver		Copper		Lead		Tin		Zinc	
	(M. tons)	Value	(M. tons)	Value	(1,000 M. tons)	Value	(1,000 M. tons)	Value	(1,000 M. tons)	Value	(1,000 M. tons)	Value
1916	7.9	10.4	181	7.1	101	110	11.3	3.8	0.25	0.47	39	27.2
1926	9.1	12.8	139	6.0	67	51	3.6	1.2	0.55	1.67	17	7.2
1932	12.5	26.0	164	5.4	72	39	6.4	1.1	1.00	1.70	27	6.0
1933	13.7	33.8	187	8.0	69	51	6.8	1.4	0.97	2.76	31	9.7
1934	15.1	45.0	217	11.0	67	47	7.0	1.4	1.22	4.10	32	9.5
1935	18.3	56.3	256	17.9	71	53	7.4	1.9	2.07	7.87	31	10.6
1936	22.2	74.8	304	15.2	78	67	8.9	2.7	1.87	6.38	39	12.4

	Pig Iron		Steel		Iron Sulphide		Coal		Petroleum		Sulphur		Total Value
	(1,000 M. tons)	Value	(1,000 M. tons)	Value	(1,000 M. tons)	Value	(Mill. M. tons)	Value	(1,000 Kilolitres)	Value	(1,000 M. tons)	Value	
1916 ..	77	4.1	24	3.4	91	0.8	23	81	4.7	15.0	106	4.3	281
1926 ..	58	3.6	47	4.1	418	5.9	31	231	2.7	15.0	48	2.6	347
1932 ..	165	5.1	72	7.3	726	7.5	28	142	2.5	7.5	85	4.6	255
1933 ..	244	11.0	129	7.7	903	10.0	33	195	2.3	9.0	114	7.5	354
1934 ..	352	15.0	186	13.2	1,090	10.7	36	246	2.8	9.4	135	9.0	432
1935 ..	371	17.5	239	17.5	1,339	13.4	38	270	3.5	12.0	165	10.2	504
1936 ..	343	16.3	291	21.2	1,751	19.7	42	306	3.9	15.5	198	11.9	589

Mining Lots.—The number as well as area of the trough of the economic depression. The mining lots under operation show a steady trend for the past few years is tabulated in the following table:

Table 5. Statistics of Mining Lots

	Total Metal & Non-metal Mining Lots			Lots under Work		
	No.	Area (sq. kilometers)	Area per lot (hectares)	No.	Area (sq. kilometers)	Area per lot (hectares)
1924	5,448	53,025	97.33	1,336	21,829	163.39
1927	4,993	50,805	101.75	1,183	22,150	187.24
1928	4,913	50,859	103.52	1,176	22,103	187.95
1929	4,780	49,752	104.08	1,265	22,341	176.61
1930	4,620	48,383	104.73	1,186	22,325	188.24
1931	4,400	45,053	102.39	1,099	21,037	191.43
1932	4,318	44,709	103.54	1,113	20,806	177.95
1933	4,308	44,783	103.95	1,241	22,175	178.69
1934	4,310	45,401	105.34	1,395	23,723	170.06
1935	4,336	46,141	106.42	1,448	23,874	164.88
1936	4,377	48,256	110.32	1,613	25,669	159.14
1937	4,407	48,217	109.41	1,863	28,384	152.30
1938	4,473	50,465	112.82	2,091	31,592	151.05