

CHAPTER V. TRANSPORT AND COMMUNICATION.

A. SHIPPING.

§ 1. System of Record.

In the system of recording statistics of oversea shipping Australia is considered as a unit, and, therefore, only one entry and one clearance are counted for each voyage, without regard to the number of States visited.

On the arrival at, or departure from, a port in Australia, whether from or for an oversea country or from another port in Australia, the master or agent must "enter" the vessel with the Customs authorities at the port, and supply certain prescribed information in regard to the ship, passengers and cargo. At the end of each month the information so obtained is forwarded to this Bureau. Similar documents furnish information regarding oversea migration and interstate migration by sea. This arrangement has been in operation since 1st July, 1924.

From 1st July, 1914, the Trade and Shipping of Australia have been recorded for the fiscal years ending 30th June.

In the following tables, commencing with 1935-36, a change has been made in the classification of sailing vessels with auxiliary engines. Particulars of these vessels, previously included in the columns headed "Steam", are now included in those headed "Sailing", as this classification is considered more correct, in view of the fact that the main method of propulsion of these vessels is sail.

Owing to the censorship of Statistics particulars later than the years 1938 and 1938-39 are not available for publication.

§ 2. Oversea Shipping.

1. **Total Movement.**—The following table gives the number and net tonnage of oversea steam and sailing vessels entering Australian ports during the years 1928-29 to 1938-39:—

OVERSEA SHIPPING : VESSELS ENTERED, AUSTRALIA.

Year.	Steam.		Sailing.		Total.	
	Vessels.	Net Tons.	Vessels.	Net Tons.	Vessels.	Net Tons.
1928-29	1,564	5,521,725	18	29,858	1,582	5,551,583
1929-30	1,499	5,413,192	23	31,254	1,522	5,444,446
1930-31	1,517	5,562,230	17	19,287	1,534	5,581,517
1931-32	1,497	5,653,731	22	33,167	1,519	5,686,898
1932-33	1,531	5,891,878	23	41,446	1,554	5,933,324
1933-34	1,356	5,308,584	24	43,987	1,380	5,352,571
1934-35	1,559	5,951,226	23	43,024	1,582	5,994,250
1935-36	1,550	6,199,583	(a) 65	(a) 38,093	1,615	6,237,676
1936-37	1,542	6,245,767	99	28,423	1,641	6,274,190
1937-38	1,800	7,096,656	105	31,748	1,905	7,128,404
1938-39	1,725	6,684,031	151	26,968	1,876	6,710,999

(a) See last paragraph, § 1, above.

Later details are not available for publication.

The average tonnage per vessel entered rose from 3,509 tons per vessel in 1928–29 to 3,577 tons in 1938–39.

Particulars regarding the total oversea movement of shipping for each year from 1822 to 1920–21 will be found in Official Year Book No. 15, p. 507.

2. **Total Oversea Shipping by States.**—The following table gives the numbers and net tonnages of vessels which entered and cleared the various States direct from and to oversea countries during 1938–39 :—

**SHIPPING ENTERED FROM AND CLEARED TO OVERSEA COUNTRIES DIRECT,
1938–39.**

State or Territory.	Entered.		Cleared.	
	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.
New South Wales ..	622	2,309,151	590	2,060,010
Victoria	188	686,021	195	756,745
Queensland	292	945,827	291	1,008,882
South Australia ..	133	464,065	163	612,051
Western Australia ..	493	2,097,664	556	2,278,467
Tasmania	27	130,480	10	39,106
Northern Territory ..	121	77,791	133	79,452
Total	1,876	6,710,999	1,938	6,834,713

Later details are not available for publication.

3. **Shipping Communication with various Countries.**—Records of the number and tonnage of vessels arriving from and departing to particular countries, as they are invariably made, may be misleading for the reason that the tonnage of a vessel can be recorded against one country only, notwithstanding that the same vessel on the same voyage may carry cargo or passengers to or from Australia from or to several countries. For instance, a mail steamer on a voyage from the United Kingdom to Australia, through the Suez Canal, may call at Marseilles, Genoa, Port Said, Aden and Colombo, yet can be credited only to the United Kingdom, the country where the voyage commenced, to the exclusion of all of the others from the records. Also a number of vessels touch at New Zealand ports on their voyages to and from the United States of America and Canada, but their tonnages are not included in the records of Australian shipping trade with New Zealand. Similarly, the record of shipping engaged in trade between Australia and the United Kingdom via South African ports does not show tonnage to and from South Africa, the whole of it being included in the figures for United Kingdom. In view of this defect, statistics relating to the direction of the shipping to and from Australia are restricted to the following tables in which countries situated on the main trade routes are grouped together. This grouping into larger geographical divisions to some extent avoids the limitations referred to, except, as already pointed out, in the case of Africa and New Zealand.

DIRECTION OF OVERSEA SHIPPING : AUSTRALIA.

Countries.	Cargo and Ballast.	1935-36.	1936-37.	1937-38.	1938-39.
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NET TONNAGE ENTERED.

United Kingdom and European Countries	Cargo	1,812,263	1,679,282	1,791,963	1,877,700
	Ballast	281,157	232,995	361,870	118,833
New Zealand	Cargo	557,001	732,104	774,280	767,492
	Ballast	134,200	169,170	204,025	242,454
Asiatic Countries and Islands in the Pacific	Cargo	1,721,540	1,832,771	2,051,105	2,205,542
	Ballast	353,102	230,813	280,938	255,851
Africa	Cargo	34,983	59,136	55,213	44,688
	Ballast	172,302	194,360	290,795	124,458
North and Central America	Cargo	1,161,903	1,134,797	1,233,213	1,058,600
	Ballast	6,240	5,941	55,975	37
South America	Cargo	2,895	2,821	5,372	10,017
	Ballast	..	..	23,655	5,327
	Cargo	5,290,675	5,440,911	5,911,146	5,964,039
	Ballast	947,001	833,279	1,217,258	746,960
Total .. ..	..	6,237,676	6,274,190	7,128,404	6,710,999

NET TONNAGE CLEARED.

United Kingdom and European Countries	Cargo	2,719,463	2,735,452	3,003,968	2,777,790
	Ballast	16,709	3,170	27,338	13,440
New Zealand	Cargo	537,359	832,200	918,096	901,142
	Ballast	73,948	39,789	37,522	37,079
Asiatic Countries and Islands in the Pacific	Cargo	1,695,483	1,473,801	1,543,996	1,686,804
	Ballast	526,048	587,925	818,775	742,254
Africa	Cargo	50,108	43,172	112,057	171,881
	Ballast	344	2,880	50,070	6,036
North and Central America	Cargo	591,144	519,017	498,384	439,524
	Ballast	87,944	91,991	80,854	46,383
South America	Cargo	4,719	8,184	1,998	12,380
	Ballast	3,615	..	..	..
	Cargo	5,598,276	5,611,826	6,078,499	5,989,521
	Ballast	708,608	725,755	1,014,559	845,192
Total .. ..	..	6,306,884	6,337,581	7,093,058	6,834,713

Later particulars are not available for publication.

4. Nationality of Oversea Shipping.—The greater part of the shipping visiting Australia is of British nationality. The proportion of British tonnage increased slightly during 1938-39, while the percentage of vessels arriving with cargo increased by nearly 6 per cent.

Particulars of the nationality of oversea shipping for the five years ended 30th June, 1939, are given in the following table :—

OVERSEA SHIPPING : NATIONALITY OF VESSELS ENTERED, AUSTRALIA.

Nationality.	Net Tonnage.				
	1934-35.	1935-36.	1936-37.	1937-38.	1938-39.
BRITISH—					
Australian	310,186	314,439	326,652	363,086	330,590
United Kingdom	3,137,192	3,334,332	3,447,244	4,021,272	3,744,224
Canadian	76,101	95,889	41,694	30,910	19,901
New Zealand	321,481	322,296	523,436	505,976	563,405
Other British	215,597	276,162	242,843	236,907	228,951
Cargo	3,323,552	3,732,921	3,944,272	4,297,122	4,378,589
Ballast	737,005	610,197	637,597	861,029	508,482
Total British	4,060,557	4,343,118	4,581,869	5,158,151	4,887,071
Per cent. on total	67.74	69.63	73.03	72.36	72.82
FOREIGN—					
Danish	48,613	54,689	53,233	55,753	55,441
Dutch	176,424	150,012	173,011	199,913	290,605
French	137,142	102,031	82,636	102,952	108,120
German	134,231	126,500	152,506	180,314	140,954
Italian	62,205	39,465	43,222	70,451	68,256
Japanese	461,400	464,311	344,304	318,499	329,884
Norwegian	426,539	462,884	439,845	482,470	324,649
Swedish	141,265	134,502	104,281	116,036	123,737
American, U.S.	240,474	233,047	199,794	216,083	175,126
Other Foreign	105,400	127,117	99,489	227,782	207,156
Cargo	1,522,508	1,557,754	1,496,639	1,614,024	1,585,450
Ballast	411,185	336,804	195,682	356,229	238,478
Total Foreign	1,933,693	1,894,558	1,692,321	1,970,253	1,823,928
Per cent. on total	32.26	30.37	26.97	27.64	27.18
Cargo	4,846,060	5,290,675	5,440,911	5,911,146	5,964,039
Per cent. on total	80.85	84.82	86.72	82.92	88.87
Ballast	1,148,190	947,001	833,279	1,217,258	746,960
Per cent. on total	19.15	15.18	13.28	17.08	11.13
Grand Total.. ..	5,994,250	6,237,676	6,274,190	7,128,404	6,710,999

Later particulars are not available for publication.

The Australian tonnage which entered Australia from overseas during 1938-39 represented 4.93 per cent. of the total tonnage entered and was mainly confined to the New Zealand and Pacific Island trade.

§ 3. Shipping of Ports.

The total shipping tonnage—oversea, interstate and coastwise—which entered the more important ports of Australia during 1938-39, together with similar information

in regard to some of the ports of New Zealand and of the United Kingdom for 1938, will be found in the following table:—

SHIPPING OF PORTS : AUSTRALIA, NEW ZEALAND AND THE UNITED KINGDOM.

Port.	Net Tonnage Entered.	Port.	Net Tonnage Entered.
AUSTRALIA—		ENGLAND AND WALES—	
Sydney (N.S.W.) ..	11,650,317	London ..	30,776,918
Melbourne (Vic.) ..	8,646,893	Liverpool (including Birkenhead) ..	17,627,805
Adelaide (S.A.) ..	5,524,403	Southampton ..	13,468,875
Newcastle (N.S.W.) ..	5,099,481	Tyne Ports ..	9,130,122
Brisbane (Qld.) ..	4,916,463	Cowes (including coast of Isle of Wight) ..	7,812,746
Fremantle (W.A.) ..	4,012,219	Cardiff ..	7,319,932
Townsville (Qld.) ..	1,473,008	Hull ..	6,279,805
Kembla (N.S.W.) ..	1,225,258	Plymouth ..	6,018,318
Hobart (Tas.) ..	1,153,143	Dover ..	3,983,753
Whyalla (S.A.) ..	1,036,798	Bristol ..	3,931,515
Geelong (Vic.) ..	837,878	Manchester (including Runcorn) ..	3,857,452
Pirie (S.A.) ..	814,862	Swansea ..	3,377,269
Cairns (Qld.) ..	789,636	Sunderland ..	3,038,837
Burnie (Tas.) ..	784,873	Middlebrough ..	2,984,012
Rockhampton (Qld.) ..	596,226	Harwich ..	2,790,985
Mackay (Qld.) ..	545,650	Blyth ..	2,665,141
Gladstone (Qld.) ..	526,492	Portsmouth ..	2,610,865
Albany (W.A.) ..	510,807	Newport ..	2,330,773
Launceston (Tas.) ..	507,531	SCOTLAND—	
Lincoln (S.A.) ..	492,868	Glasgow ..	6,573,762
Devonport (Tas.) ..	476,071	Greenock (including Port Glasgow) ..	3,435,708
Bowen (Qld.) ..	336,175	Leith ..	2,217,628
Thursday Island (Qld.) ..	303,369	NORTHERN IRELAND—	
NEW ZEALAND—		Belfast ..	7,561,260
Wellington ..	3,961,790		
Auckland ..	3,212,383		
Lyttleton ..	2,181,290		
Dunedin ..	1,189,924		

Figures relating to ports of the United Kingdom have been obtained from the British Board of Trade's *Annual Statement of the Navigation and Shipping of the United Kingdom*, 1938, and those relating to New Zealand from the *New Zealand Official Year Book*, 1940.

§ 4. Vessels Built and Registered.

1. **Vessels Built.**—The following table shows the number and tonnage of vessels built in Australia during each of the calendar years 1934 to 1938, so far as such information can be ascertained from the Shipping Registers of the various States. The Merchant Shipping Act, under which vessels are registered in Australia, does not, however, make it compulsory to register vessels under 15 tons burthen if engaged in river or coastal trade. Larger vessels are also exempt from registration if not engaged in trade. Yachts and small trading vessels may be, and frequently are, registered at the request of the owners.

VESSELS BUILT IN AUSTRALIA.

Year.	Steam.				Motor. (a)				Sailing.				Total.			
	No.	Tonnage.		No.	Tonnage.		No.	Tonnage.		No.	Tonnage.		No.	Tonnage.		No.
		Gross.	Net.		Gross.	Net.		Gross.	Net.		Gross.	Net.		Gross.	Net.	
1934	21	642	389	5	92	91	26	734	480				
1935	16	425	302	2	25	23	18	450	325				
1936 ..	2	719	192	16	600	407	2	15	13	20	1,334	612				
1937	9	210	158	1	2	2	10	212	160				
1938	11	721	394	..	..	..	11	721	394				

(a) Including vessels with auxiliary motors.

Later particulars are not available for publication.

2. **Vessels Registered.**—The following table shows the number and net tonnage of steam, sailing and other vessels on the registers of the States and of the Northern Territory on 31st December, 1938:—

VESSELS ON THE STATE REGISTERS, 31st DECEMBER, 1938.

State or Territory.	Steam and Motor.		Sailing.				Barges, Hulks, Dredges, &c., not Self-propelled.		Total.	
			Propelled by Sail Only.		Fitted with Auxiliary Power.					
	No.	Net Tons.	No.	Net Tons.	No.	Net Tons.	No.	Net Tons.	No	Net Tons.
New South Wales	344	57,810	204	6,763	312	15,807	45	11,164	905	91,544
Victoria ..	164	166,852	48	665	60	1,406	55	23,015	327	191,938
Queensland ..	42	6,875	88	1,189	69	2,836	27	3,941	226	14,841
South Australia ..	71	10,556	17	341	47	2,185	42	6,742	177	19,824
Western Australia	37	5,390	257	3,991	36	777	19	4,277	349	14,435
Tasmania ..	43	4,226	63	2,257	64	1,842	1	382	171	8,707
Northern Territory	..	..	15	145	5	88	..	..	20	233
Total ..	701	251,709	692	15,351	593	24,941	189	49,521	2,175	341,522

Later particulars are not available for publication.

3. **World's Shipping Tonnage.**—The table hereunder shows the number and gross tonnage of steam and motor, and of sailing vessels owned by the most important maritime countries, together with the proportion of the grand total owned by each country:—

WORLD'S SHIPPING TONNAGE, 1st JULY, 1939.

Country Where Owned.	Steamers and Motorships.		Sailing Vessels and Barges.		Total.		Percentage on Total.	
	No.	Gross Tonnage.	No.	Gross Tonnage.	No.	Gross Tonnage.	No.	Gross Tonnage.
United Kingdom ..	6,722	'000.	287	'000.	7,009	'000.	%	%
Australia and New Zealand ..	524	670	10	4	534	674	1.7	1.0
Canada (a) ..	792	1,224	79	81	871	1,305	2.8	1.9
Other British ..	939	1,217	135	35	1,074	1,252	3.4	1.8
Total, British Empire ..	8,977	21,002	511	213	9,488	21,215	30.4	30.6
Belgium ..	200	408	..	..	200	408	0.7	0.6
Denmark ..	705	1,175	4	1	709	1,176	2.3	1.7
France ..	1,231	2,934	51	19	1,282	2,953	4.1	4.2
Germany ..	2,459	4,483	7	10	2,466	4,493	7.9	6.5
Greece ..	607	1,781	..	..	607	1,781	1.9	2.5
Holland ..	1,523	2,970	9	3	1,532	2,973	4.9	4.3
Italy ..	1,227	3,425	108	24	1,335	3,449	4.3	4.9
Japan ..	2,337	5,630	..	..	2,337	5,630	7.5	8.1
Norway ..	1,987	4,834	3	1	1,990	4,835	6.4	7.0
Russia ..	699	1,306	17	10	716	1,316	2.3	1.9
Spain ..	777	902	47	12	824	914	2.6	1.3
Sweden ..	1,231	1,577	7	5	1,238	1,582	4.0	2.3
United States of America (b) ..	2,958	11,490	417	513	3,375	12,003	10.8	17.3
Other Foreign Countries ..	2,845	4,592	242	119	3,087	4,711	9.9	6.8
Total, Foreign Countries ..	20,786	47,507	912	717	21,698	48,224	69.6	69.4
Grand Total ..	29,763	68,509	1,423	930	31,186	69,439	100.0	100.0

(a) Including Great Lakes shipping.

(b) Including Philippine Islands and Great Lakes shipping.

The foregoing figures have been compiled from *Lloyd's Register of Shipping*, and only vessels of 100 tons or upwards have been included.

§ 5. Interstate Shipping.

1. **System of Record.**—*Interstate Shipping* comprises two elements: (a) Vessels engaged solely in interstate trade: and (b) Vessels trading between Australia and oversea countries and in the course of their voyage proceeding from one State to another. (It should be mentioned that these vessels, except under special circumstances, do not now engage in interstate carrying.) No complexity enters into the record of those in category (a), but with regard to the method of recording the movements of the oversea vessels (b) some explanation is necessary. Each State desires that its shipping statistics (which are prepared in this Bureau) should show in full its shipping communication with oversea countries, but at the same time it is necessary to avoid any duplication in the statistics for Australia as a whole. In order to meet these dual requirements, a vessel arriving in any State from an oversea country—say United Kingdom—*via* another State, is recorded in the second State as from United Kingdom *via* States, thus distinguishing the movement from a *direct* oversea entry. Continuing the voyage, the vessel is again recorded for the statistics of the third State as from United Kingdom *via* other States. On an inward voyage the *clearance* from the first State to the second State is a *clearance* interstate, and is included with interstate tonnage in conformity with the pre-federation practice of the States, and to preserve the continuity of State statistics. Thus, movements of ships which are, from the standpoint of Australia as a whole, purely coastal movements, must for the individual States be recorded as “Oversea *via* other States” or “Interstate” according to the direction of the movement. The significance of the record of these movements will be more clearly seen from the following tabular presentation of the inward and outward voyages to and from Australia of a mail steamer which, it is presumed, reaches Fremantle (Western Australia) and then proceeds to the terminal port of the voyage—Sydney (New South Wales)—*via* South Australia and Victoria. From the terminal port the vessel will commence the outward voyage, and retrace its inward track.

ITINERARY OF AN OVERSEA VESSEL ON AUSTRALIAN COAST.

Particulars.	Recorded as—	
	For the State and for Australia.	For the States.
Inward Voyage—		
Enters Fremantle from United Kingdom	Oversea direct	
Clears Fremantle for Adelaide	Interstate direct
Enters Adelaide from United Kingdom Oversea <i>via</i> States
via Fremantle	Interstate direct
Clears Adelaide for Melbourne Oversea <i>via</i> States
Enters Melbourne from United Kingdom	Interstate direct
via Adelaide Oversea <i>via</i> States
Clears Melbourne for Sydney	Interstate direct
Enters Sydney from United Kingdom Oversea <i>via</i> States
via Melbourne Oversea <i>via</i> States
Outward Voyage—		
Clears Sydney for United Kingdom via Melbourne Oversea <i>via</i> States
Enters Melbourne from Sydney	Interstate direct
Clears Melbourne for United Kingdom via Adelaide Oversea <i>via</i> States
Enters Adelaide from Melbourne	Interstate direct
Clears Adelaide for United Kingdom via Fremantle Oversea <i>via</i> States
Enters Fremantle from Adelaide	Interstate direct
Clears Fremantle for United Kingdom ..	Oversea direct	

From the method outlined above, the requirements for Australia and for the individual States are ascertained as follows. (a) The aggregate of all ships recorded for each State as “Oversea *direct*” gives the oversea shipping for Australia as a whole; (b) the aggregate

for all ships recorded in any State as "Oversea direct" plus those recorded as "Oversea via States" gives the total *oversea shipping* for that State; and (c) the aggregate for all ships recorded as "Oversea via States" may also be used, together with those recorded as "Interstate direct," to furnish figures showing the total *interstate movement* of shipping.

It should be remembered, however, that all overseas vessels do not follow the same itinerary as the vessel in the table above.

2. **Vessels and Tonnage Entered.**—(*Interstate direct.*) The following table gives the number and tonnage of vessels recorded as having entered each State from any other State during each of the years 1934-35 to 1938-39. The shipping of the Murray River, between the States of New South Wales, Victoria and South Australia, is excluded :—

INTERSTATE SHIPPING : NUMBER AND TONNAGE OF VESSELS ENTERED.

State or Territory.	1934-35.	1935-36.	1936-37.	1937-38.	1938-39.
NUMBER.					
New South Wales	1,945	1,862	2,076	2,179	2,183
Victoria	1,908	1,966	2,146	2,255	2,243
Queensland	587	567	599	652	639
South Australia	842	865	924	988	1,036
Western Australia	347	358	366	383	382
Tasmania	1,035	1,065	1,216	1,261	1,301
Northern Territory	27	22	29	25	39
Total	6,691	6,705	7,356	7,743	7,823

NET TONNAGE.

New South Wales	5,334,778	5,105,740	5,693,751	5,977,315	6,204,907
Victoria	4,062,750	4,361,171	4,640,688	4,743,317	4,751,032
Queensland	1,410,487	1,495,200	1,616,188	1,674,662	1,730,478
South Australia	2,761,195	2,898,358	3,043,302	3,176,924	3,322,512
Western Australia	1,855,563	1,916,546	1,869,071	1,978,260	2,019,125
Tasmania	1,101,544	1,335,725	1,559,603	1,562,790	1,769,829
Northern Territory	59,011	66,710	71,057	72,996	102,910
Total	16,585,328	17,179,450	18,493,660	19,186,264	19,900,793

Later particulars are not available for publication.

3. **Oversea Vessels Moving Interstate.**—(*Oversea via States.*) To ascertain the aggregate movement of shipping between the States during 1938-39 including the total interstate movements of overseas vessels, the figures in the following table which give

the number and tonnage of vessels entered from or cleared for oversea countries via other Australian States, must be added to those in the preceding table :—

SHIPPING ENTERED AND CLEARED FROM AND TO OVERSEA COUNTRIES VIA OTHER AUSTRALIAN STATES, 1938-39.

State or Territory.	Entered.		Cleared.		Total.	
	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.
New South Wales ..	514	2,727,784	522	2,869,826	1,036	5,597,610
Victoria ..	548	3,100,032	495	2,885,923	1,043	5,985,955
Queensland ..	287	1,807,393	279	1,651,147	566	3,458,540
South Australia ..	333	1,974,741	316	1,934,301	649	3,909,042
Western Australia ..	41	134,579	11	38,226	52	172,805
Tasmania ..	56	330,278	133	831,284	189	1,161,562
Northern Territory ..	1	1,260	..	..	1	1,260
Total ..	1,780	10,076,067	1,756	10,210,707	3,536	20,286,774

Later particulars for these tables are not available for publication.

Oversea vessels moving interstate are with few exceptions not engaged in the active interstate trade of Australia, but are merely proceeding to the several States in continuation of their oversea voyages.

4. **Total Interstate Movement of Shipping.**—(i) *Australia.* The appended table shows the total interstate movement of shipping including oversea vessels moving interstate for each of the years 1934-35 to 1938-39 :—

TOTAL INTERSTATE MOVEMENT OF SHIPPING : AUSTRALIA.

Year.	Entered.		Cleared.	
	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.
1934-35	8,279	25,369,207	8,288	25,460,522
1935-36	8,502	26,857,399	8,508	26,860,842
1936-37	9,061	27,773,851	9,106	27,792,951
1937-38	9,523	29,185,209	9,540	29,136,482
1938-39	9,603	29,976,860	9,669	30,000,369

(ii) *States.* The following table shows the number and tonnage of vessels which entered and cleared each State from and for other States during 1938-39, including the interstate movements of oversea vessels :—

INTERSTATE SHIPPING OF EACH STATE, 1938-39.

State or Territory.	Entered.		Cleared.	
	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.
New South Wales	2,697	8,932,691	2,744	9,172,226
Victoria	2,791	7,851,064	2,794	7,723,250
Queensland	926	3,537,871	936	3,454,685
South Australia	1,369	5,297,253	1,393	5,264,516
Western Australia	423	2,153,704	374	2,048,062
Tasmania	1,357	2,100,107	1,389	2,237,660
Northern Territory	40	104,170	39	99,970
Total	9,603	29,976,860	9,669	30,000,369

5. Vessels engaged solely in Interstate Trade.—The following table gives the number and net tonnage of vessels engaged solely in interstate trade which entered the ports of each State direct from other States during 1938-39 —

VESSELS SOLELY IN INTERSTATE TRADE : NUMBER AND TONNAGE OF VESSELS ENTERED, 1938-39.

State or Territory.	Vessels Entered.	
	No.	Net Tonnage.
New South Wales	1,716	3,746,563
Victoria	1,887	2,801,494
Queensland	471	1,065,840
South Australia	784	1,831,039
Western Australia	118	430,062
Tasmania	1,183	1,072,697
Northern Territory	17	35,114
Total	6,176	10,982,809

Later particulars for these tables are not available for publication.

The figures in the table above have been compiled direct from the shipping returns, and are comparable with those published since 1936-37. Previous to that year, however, the figures were derived from calculations based on an assumption which did not hold in all cases.

6. Interstate and Coastal Services.—The following table gives particulars, so far as they are available, of all steamships engaged in regular interstate or coastal services at the end of each of the years 1934 to 1938 —

INTERSTATE AND COASTAL STEAMSHIP SERVICES IN AUSTRALIA.

Particulars.	1934.	1935.	1936.	1937.	1938.
Number of companies operating ..	31	30	29	30	30
“ „ steamships	155	156	160	162	167
Tonnage { Gross	302,897	324,891	352,661	353,280	366,182
Net	168,056	180,468	197,256	197,130	200,131
Horse-power (Nominal)	33,510	36,037	37,188	37,887	39,598
Number of { 1st class	3,914	4,311	4,450	4,410	3,909
passengers for which { 2nd class and steer- licensed(a) { age	1,755	1,920	1,695	1,801	1,719
Complement { Masters and officers	505	513	547	545	557
of Crew { Engineers	419	548	579	585	606
Crew	4,045	4,264	4,458	4,515	4,663

(a) Excluding purely day passenger accommodation.

§ 6. Tonnage of Cargo.

1. Oversea and Interstate Cargo.—(i) *Australia.* The table hereunder shows the aggregate tonnage of oversea cargo discharged and shipped and the tonnage of interstate cargo shipped in all ports for the years 1934-35 to 1938-39. Cargo which was stated in cubic feet has been converted to tons measurement on the basis of 40 cubic feet to the ton.

CARGO MOVEMENT.

Year.	Oversea Cargo.				Interstate Cargo.	
	Discharged Tons—		Shipped Tons—		Shipped Tons—	
	Weight.	Meas.	Weight.	Meas.	Weight.	Meas.
1934-35 ..	2,969,914	1,722,485	5,220,757	857,976	5,244,386	1,346,422
1935-36 ..	3,531,839	1,948,508	5,214,194	893,509	5,540,938	1,502,813
1936-37 ..	3,655,623	2,024,051	5,027,746	933,416	6,501,393	1,596,869
1937-38 ..	4,365,946	2,279,653	5,730,665	1,088,575	7,032,080	1,876,938
1938-39 ..	4,208,109	2,191,351	5,138,471	1,092,687	7,221,040	1,730,647

Later particulars are not available for publication.

(ii) *Principal Ports.* The following table shows the tonnage of oversea and interstate cargo discharged and shipped at principal ports, 1938-39:—

TONNAGE OF CARGO DISCHARGED AND SHIPPED AT PRINCIPAL PORTS, 1938-39.

Port.	Discharged.			Shipped.		
	Oversea.	Interstate.	Total.	Oversea.	Interstate.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Sydney	2,020,945	1,169,400	3,190,345	1,345,609	870,397	2,216,006
Newcastle	205,770	1,744,625	1,950,395	482,113	2,255,620	2,737,733
Kembla	64,780	928,397	993,177	180,775	269,258	450,033
Other .. ..	..	..	..	29,118	13,106	42,224
Total, New South Wales	2,291,495	3,842,422	6,133,917	2,037,615	3,408,381	5,445,996
Melbourne	1,835,592	2,365,227	4,200,819	754,876	1,044,425	1,799,301
Geelong	221,705	162,509	384,214	95,771	75,723	171,494
Other	17,046	6,443	23,489	8,139	3,283	11,422
Total, Victoria	2,074,343	2,534,179	4,608,522	858,786	1,123,431	1,982,217
Brisbane	411,000	520,075	931,075	315,681	208,868	524,549
Cairns	15,538	47,656	63,194	139,806	100,489	240,295
Townsville	64,699	75,852	140,551	202,073	58,546	260,619
Other	24,085	77,291	101,376	270,496	101,514	372,010
Total, Queensland	515,322	720,874	1,236,196	928,056	469,417	1,397,473
Adelaide	532,134	823,321	1,355,455	395,607	371,416	767,023
Pirie	85,437	244,724	330,161	407,958	157,019	564,977
Walleroo	36,038	1,708	37,746	127,167	17,739	144,906
Whyalla .. ..	..	..	..	125,079	2,325,442	2,450,521
Other	26,999	6,476	33,475	206,487	17,634	224,121
Total, South Australia	680,608	1,076,229	1,756,837	1,262,298	2,889,250	4,151,548
Fremantle	593,618	314,304	907,922	555,852	78,902	634,754
Bunbury	47,944	945	48,889	190,648	26,023	216,671
Geraldton	69,169	3,833	73,002	101,997	30	102,027
Other	29,979	13,765	43,744	94,939	14,567	109,506
Total, Western Australia	740,710	332,847	1,073,557	943,436	119,522	1,062,958
Hobart	86,818	308,076	394,894	160,528	228,861	389,389
Launceston	2,191	123,734	125,925	22,094	114,521	136,615
Devonport	537	31,273	31,810	..	385,391	385,391
Other	2,472	80,815	83,287	18,163	209,429	227,592
Total, Tasmania	92,018	543,898	635,916	200,785	938,202	1,138,987
Darwin (Northern Territory)	4,964	26,424	31,388	182	3,484	3,666
Total, AUSTRALIA	6,399,460	9,076,873	15,476,333	6,231,158	8,951,687	15,182,845

Later particulars are not available for publication.

2. *Nationality.*—The following table shows the total tonnage of oversea cargo discharged and shipped according to the nationality of the vessels carrying during the years 1934-35 to 1938-39:—

TONNAGE(a) OF OVERSEA CARGO DISCHARGED AND SHIPPED.

Vessels Registered at Ports in—	1934-35.	1935-36.	1936-37.	1937-38.	1938-39.
British—	Tons.	Tons.	Tons.	Tons.	Tons.
Australia	307,440	329,208	329,990	437,346	416,335
United Kingdom	5,813,352	6,181,120	6,831,581	8,033,271	7,730,546
Canada	127,379	154,914	81,313	65,146	52,472
New Zealand	323,630	398,238	390,892	456,505	503,166
Other British	392,606	534,585	451,409	488,828	445,977
Total British	6,964,407	7,598,065	8,085,185	9,481,096	9,148,496
Per cent. on Total	64.66	65.57	69.46	70.41	72.43
Foreign—					
Denmark	154,172	160,285	159,640	209,716	184,404
France	169,802	140,435	113,584	150,424	188,692
Germany	297,020	346,544	392,269	462,246	370,014
Italy	66,319	33,520	58,491	109,570	83,779
Japan	913,552	914,856	542,761	378,065	260,174
Netherlands(b)	308,187	228,726	315,640	350,136	572,776
Norway	1,023,612	1,207,673	1,164,105	1,218,807	833,981
Sweden	408,462	390,080	310,934	316,300	354,368
United States of America	240,271	300,974	261,746	258,969	158,530
Other Foreign	225,328	266,892	236,481	529,510	475,404
Total Foreign	3,806,725	3,989,985	3,555,651	3,983,743	3,482,122
Per cent. on Total	35.34	34.43	30.54	29.59	27.57
Grand Total	10,771,132	11,588,050	11,640,836	13,464,839	12,630,618

(a) Tons weight and tons measurement combined.

(b) Including Netherlands East Indies.

Later particulars are not available for publication.

§ 7. Miscellaneous.

1. *Lighthouses.*—*Transport and Communication Bulletin* No. 14, published by this Bureau, contains a list of the principal lighthouses on the coast of Australia, giving details of the location, number, colour, character, period, candle-power and visibility of each light so far as particulars were available.

2. *Distances by Sea.*—A statement giving the distances by sea between the ports of the capital cities of Australia and the most important ports in other countries which trade with Australia is also included in *Transport and Communication Bulletin* No. 14.

3. *Shipping Freight Rates.*—The *Quarterly Summary of Australian Statistics* gives a list of the ruling freight rates for general merchandise both in respect of oversea and interstate shipments. The latest figures available, which give the rates current at 31st December, 1941, show that the rate for general merchandise from Australia to United Kingdom and Continent was 107s. per ton measurement, while the rates for wheat (parcels) and wool (greasy) were respectively 135s. 6d. per ton weight and 1 11/16d. per lb. The rates for general merchandise and wool are subject to a "war-time risk" surcharge of 15 per cent.

4. **Depth of Water at Main Ports.**—A table, compiled from information supplied by the Director of Navigation, showing the depth of water at the main ports of Australia at 1st January, 1941, is included in *Transport and Communication Bulletin* No. 31.

5. **Shipping Casualties.**—Courts of Marine Inquiry are constituted by a Magistrate assisted by skilled assessors, and when necessary are held at the principal port in each State and at Launceston (Tasmania). Such courts have power to deal with the certificates of officers who are found at fault. Particulars of shipping casualties reported on or near the coast during 1939 are shown in *Transport and Communication Bulletin* No. 31. This information also was furnished by the Director of Navigation.

6. **Commonwealth Navigation and Shipping Legislation.**—(i) *General.* An account in some detail of the Commonwealth navigation and shipping legislation is contained in Official Year Book No. 17 (pp. 1053-5).

(ii) *Recent legislation.* Under the provisions of the Navigation Act the coasting trade of Australia in passengers and cargo is reserved by Section 288 to ships licensed to engage in that trade. Licences are granted to ships complying with Australian conditions respecting wages, manning, crew accommodation, and so on, stipulations which have confined the trade to Australian-owned vessels.

Provision was made in the Act for permits to be granted to unlicensed British Ships to carry cargo and passengers on the coast when it was shown that the licensed service was inadequate. The permit system, however, was not entirely satisfactory and in 1926 the Act was amended to allow the Governor-General, by notice in the *Gazette*, to permit unlicensed British ships of a specified size and speed to engage in the passenger trade between particular ports. Such a permit, however, could only be granted when it was shown that the tourist traffic was being injured or retarded. By a further amendment in 1935, this concession was revised to permit unlicensed British ships of not less than 10,000 tons and a sea speed of not less than 14 knots to carry passengers between any two ports in Australia not connected by rail. In every case the voyage must be made in one ship without break of journey, transshipment, or second call at any intermediate port. On arriving at the port of destination the passenger may be taken on to the next port of call of the ship, which may be his first port of embarkation, or a further port not connected by rail.

In the Navigation Act of 1935 also the carriage of wireless equipment was extended to all ships engaged in interstate trade. A similar provision for intra-state vessels has been made by some of the States.

The Navigation (Maritime Conventions) Act of 1934 was an amendment of the Navigation Act to enable the Commonwealth to give effect to the provisions of a number of maritime conferences of recent years, of which the most important were those dealing with the safety of life at sea and load lines.

(iii). *War-time Shipping Control.* In January, 1941, the National Security (Shipping Control) Regulations were issued, creating a Board for the purpose of more effectively using Australian shipping in connexion with the war, and to require that ships shall be subject to direction, requisition and governmental control. Requisitioning of the interstate fleet (with a few exceptions) was approved on 14th July, 1941, and practically all such ships are now under government control.

7. **Ports and Harbours.**—A report in two volumes on "Transport in Australia," with special reference to Ports and Harbours facilities, was submitted to the Commonwealth Government by Sir George Buchanan, and published as two Parliamentary Papers (No. 86 printed 14th March, 1927, and No. 108 printed 9th May, 1927).

B. RAILWAYS.

§ 1. General.

1. **Introduction.**—The policy of Government ownership and control of railways has been adopted in each State and at 30th June, 1940, only 722 route miles of the 27,973 open for general traffic in Australia were privately owned. Those owned by the State Governments amounted to 25,050 miles, and those owned by the Commonwealth, 2,201 miles. In the following tables details of the four lines owned by the Commonwealth

are grouped and shown with the totals for the various State-owned systems. Separate particulars for each Commonwealth line are given in *Transport and Communication Bulletin* No. 31, issued by this Bureau, and also in *Official Year Book* No. 31, p. 125 *et seq.*

2. *Improvement of Railway Statistics.*—Earlier issues of the *Official Year Book* contain a summary of the report issued in 1909 by the Commonwealth Statistician to the Minister for Home Affairs on the subject of "The Desirability of Improved Statistics of Government Railways in Australia" (see *Official Year Book* No. 7, p. 598).

Considerable improvement, both as regards the volume of information and the mode of presentation thereof in the statistical tables appearing in the reports of the several Railways Commissioners, has been made during recent years.

In an endeavour to adhere more closely to the figures used by the Railways Commissioners and to obtain greater uniformity, certain changes were made in the compilation of railway statistics from and including the year 1935-36; consequently the figures for the last five years are not entirely comparable with those for previous years. The differences, however, are relatively unimportant.

3. *Railway Communication in Australia.*—An account of the progress of railway construction in Australia since the opening of the first line in 1854 will be found in *Official Year Book* No. 6, p. 681. Further information regarding railway communication in Australia and proposals for unification of gauge in the various systems are given in *Official Year Book* No. 22, pp. 259-61.

4. Government Railways. Lines under Construction and Lines Authorized, 1940.—

(i) *Lines under Construction.* In spite of the great extensions of State railways since 1875 and also the construction of various railways by the Commonwealth Government, there are still, in some States, immense areas of country which are as yet practically undeveloped, and in which little in the nature of permanent settlement has been accomplished. The general policy of the States is to extend the existing lines inland in the form of light railways as settlement increases, and while it is true that lines which were not likely to be commercially successful in the immediate future have been constructed from time to time for the purpose of encouraging settlement, the general principle that the railways should be self-supporting is kept in view.

(a) *New South Wales.* In addition to that shown under (b) below, construction work continued during 1940 on the Sandy Hollow to Maryvale line (approximately 147 miles) and on the Circular Quay section of the underground railway of Sydney.

(b) *Victoria.* In this State 35.50 miles of 5 ft. 3 in. gauge lines have been partially constructed, from Nowingi to Millewa South, work thereon being temporarily suspended. Under the provisions of the Border Railways Act 1922 (Vic. 3194) the Euston to Lette (30.25 miles) railway in New South Wales territory is under construction. Traffic is being conducted as far as Kaorkee (14.25 miles), but beyond this point construction has been suspended.

(c) *Queensland.* In previous issues of the *Official Year Book* details are given of the scheme of railway construction under the provisions of the North Coast Railway Act 1910 (see *Official Year Book* No. 15, p. 551). At 30th June, 1940, no railway construction work was in progress. The following lines are partially constructed, but work thereon is temporarily suspended:—Morganville to Kalliwa Creek (12 miles); Yaraka to Powell's Creek (27 miles); Dajarra to Moonah Creek (41 miles); Lawgi to Monto (54 miles); and Winton to 37-Mile (37 miles): a total of 171 miles.

(d) *Other.* At 30th June, 1940, no railway construction work was in progress in South Australia, Western Australia, Tasmania, nor for the Commonwealth Government.

(ii) *Lines Authorized for Construction.* (a) *New South Wales.* At 30th June, 1940, the following lines had been authorized for construction but not commenced:—Gilgandra to Collie (21.54 miles); Jerilderie towards Deniliquin (25 miles); Rand to Bull Plain (27.55 miles); Canowindra to Gregra (33.87 miles); St. Leonards to

Eastwood (9.07 miles); Inverell to Ashford (32 miles); Gwabegar to Burren Junction (36.25 miles); Gwabegar to Pilliga (18.50 miles); Eastern Suburbs to Bondi (7.75 miles); and Western Suburbs to Western Road (5.55 miles); a total distance of 217.08 miles.

(b) *Victoria*. The following lines were authorized, but construction had not been commenced up to the end of June, 1940 :—5 ft. 3 in. gauge : La La Siding to Big Pat's Creek (2.50 miles); Casterton to Nangeela (9 miles); and Orbost to Brodribb (6 miles). Under the Border Railways Act 1922, the Mildura to Gol Gol (22 miles) line has been authorized for construction in New South Wales.

(c) *Queensland*. In addition to the new lines upon which work has been commenced, Parliament has authorized the construction of the following parts of the Great Western Railway : Section A, from Quilpie to Eromanga (120 miles); Section B, from Powell's Creek (224 miles); Section C, from 37-Mile to Springvale (324 miles); and Section D, from Moonah Creek (216 miles). The following lines were also authorized for construction : Texas to Silverspur (9 miles); Mount Edwards to Maryvale (28 miles); Lanefield to Rosevale (17 miles); Gatton to Mount Sylvia (11 miles); Wandoan to Taroom (42 miles); Dirranbandi extension (52 miles); Yarraman to Nanango (16 miles); Brooloo to Kenilworth (10 miles), Dobbryn to Myally Creek (50 miles); and Perramon towards Boongee (11 miles).

(d) *South Australia*. Parliament has authorized the construction of a line on the 3 ft. 6 in. gauge from Kielpa to Mangalo Hall (26.25 miles). The survey has been completed, but the work cannot be started without a special resolution of both Houses of Parliament.

(e) *Western Australia*. The following lines were authorized for construction up to 30th June, 1940 :—Yarramony to Merredin (85 miles); Brookton to Dale River (28 miles); Boyup Brook to Cranbrook (95.23 miles); Manjimup to Mount Barker (10 miles); Leighton to Robb's Jetty (4.62 miles); Southern Cross—Southwards (27.38 miles); Yuna to Dartmoor (52 miles); a total distance of 399.23 miles. The surveys have been completed in respect of all the above lines, except the Boyup Brook to Cranbrook, the Manjimup to Mount Barker, and the Leighton to Robb's Jetty lines.

(f) *Other*. There were no new railways authorized in Tasmania nor for the Commonwealth Government at 30th June, 1940.

5. *Grafton-South Brisbane (Uniform Gauge) Line*.—The line from Grafton (New South Wales) to Brisbane (Queensland) which was opened for traffic on 27th September, 1930, was constructed to overcome the break of gauge between Sydney and Brisbane; and was the first step towards uniform gauge railway communication between the capitals of the mainland States. To 30th June, 1940, the capital cost of construction and equipment was £4,362,500, the interest charge for the year 1939-40 being £218,125. During the same period, the working of the line, which is the responsibility of the New South Wales and Queensland Railway Commissioners, resulted in a loss of £20,304 being shown on the New South Wales section while a profit of £34,367 was shown on the Queensland section. In addition, the following amounts were paid as interest—New South Wales, £72,179, and Queensland, £27,029, the remainder, £118,917, being borne by the Commonwealth. Figures relating to the operations, etc., of the line are incorporated as far as possible with those for New South Wales and Queensland in the tables which follow. Further particulars of the construction of the line will be found in Official Year Book, No. 31, p. 122.

6. *Mileage Open for Traffic, all Lines*.—(i) *General*. Almost all the railways open for general traffic in Australia are owned and controlled by the State or Commonwealth Governments. Private lines have been laid down for the purpose of opening up forest lands, mining districts or sugar areas. These lines are not generally used for the conveyance of passenger or the public conveyance of goods, and it should be understood that the private lines included in the tables below form only a small part of all private railways in Australia.

The following table shows the route mileage of Commonwealth, State and private lines open for general traffic (exclusive of sidings and cross-overs) in each State for each of the years 1935-36 to 1939-40 :—

GOVERNMENT AND PRIVATE RAILWAYS : MILEAGE OPEN.

State or Territory.	1935-36.	1936-37.	1937-38.	1938-39.	1939-40.
	Miles.	Miles.	Miles.	Miles.	Miles.
New South Wales ..	6,204.64	6,214.42	6,204.02	6,210.72	6,210.30
Victoria ..	4,745.71	4,745.71	4,745.71	4,783.91	4,783.83
Queensland ..	6,812.80	6,795.17	6,779.04	6,750.04	6,750.04
South Australia ..	3,775.90	3,776.29	3,860.67	3,860.67	3,860.67
Western Australia ..	5,089.33	5,088.04	5,106.82	5,108.73	5,112.29
Tasmania ..	776.46	782.57	782.55	789.55	760.76
Northern Territory ..	489.73	489.73	489.73	489.73	489.73
Aust. Cap. Territory ..	4.94	4.94	4.94	4.94	4.94
Australia ..	27,899.51	27,896.87	27,973.48	27,998.29	27,972.56

In previous issues of the Official Year Book particulars of mileage open are given for different periods from 1855 onwards. (See No. 15, p. 537.)

(ii) *Government and Private Lines Separately.* The next table shows for each State (a) the length of lines open for traffic owned by the State Government, and by the Commonwealth Government in that State and (b) the length of private lines available for general use by the public :—

GOVERNMENT AND PRIVATE RAILWAYS : MILEAGE CLASSIFIED, 1939-40.

State or Territory.	Government Lines—		Private Lines available for General Traffic.	Total Open for General Traffic.
	State.	Commonwealth.		
	Miles.	Miles.	Miles.	Miles.
New South Wales ..	6,141.20	..	69.10	6,210.30
Victoria ..	4,758.89	..	24.94	4,783.83
Queensland ..	6,566.65	..	183.39	6,750.04
South Australia ..	2,557.38	1,252.39	50.90	3,860.67
Western Australia ..	4,381.30	453.99	277.00	5,112.29
Tasmania ..	644.42	..	116.34	760.76
Northern Territory ..	..	489.73	..	489.73
Aust. Cap. Territory ..	..	4.94	..	4.94
Australia ..	25,049.84	2,201.05	721.67	27,972.56

7. *Comparative Railway Facilities.*—The mileage of line open to the public for general traffic (including both Government and private lines) is shown in the following statement in relation to both population and area at 30th June, 1940 :—

GOVERNMENT AND PRIVATE RAILWAYS : COMPARISON OF FACILITIES, 1939-40.

Particulars.	N.S.W.	Vic.	Q'ld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Mileage of Railway—									
Per 1,000 of population ..	2.24	2.51	6.58	6.45	10.93	3.18	61.95	0.39	3.98
Per 1,000 sq. miles of Territory ..	20.07	54.43	10.07	10.16	5.24	29.02	0.94	5.26	9.40

8. Classification of Lines according to Gauge, 1939-40.—The next table gives a classification according to gauge of the route mileage open of (i) Commonwealth railways, given in the State or Territory in which situated; (ii) State railways; and (iii) Private railways open to the public for general traffic. Particulars of Government railways are up to 30th June, 1940, and of private railways open for general traffic to 31st December, 1940, as nearly as possible.

GOVERNMENT AND PRIVATE RAILWAYS : GAUGES, 1939-40.

State or Territory in which situated.	Route mileage having a gauge of—					Total.
	5 ft. 3 in.	4 ft. 8½ in.	3 ft. 6 in.	2 ft. 6 in.	2 ft. 0 in.	

COMMONWEALTH RAILWAYS.

	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
South Australia	654.21	598.18	..	..	1,252.39
Western Australia	453.99	..	..	..	453.99
Northern Territory	489.73	..	..	489.73
Aust. Cap. Territory	..	4.94	..	..	..	4.94
Total	1,113.14	1,087.91	..	..	2,201.05

STATE RAILWAYS.

New South Wales ..	..	6,141.20	..	..	..	6,141.20
Victoria ..	4,637.12	..	..	121.77	..	4,758.89
Queensland ..	..	68.82	6,467.57	..	30.26	6,566.65
South Australia ..	1,480.49	..	1,076.89	..	..	2,557.38
Western Australia ..	..	..	4,381.30	..	..	4,381.30
Tasmania ..	..	..	644.42	..	..	644.42
Total ..	6,117.61	6,210.02	12,570.18	121.77	30.26	25,049.84

PRIVATE RAILWAYS OPEN FOR GENERAL TRAFFIC.

New South Wales ..	..	32.37	36.73	..	..	69.10
Victoria ..	13.94	..	(a) 11.00	..	..	24.94
Queensland ..	..	..	80.87	..	102.52	183.39
South Australia ..	..	..	50.90	..	..	50.90
Western Australia ..	..	..	277.00	..	..	277.00
Tasmania ..	..	..	109.84	..	6.50	116.34
Total ..	13.94	32.37	566.34	..	109.02	721.67

ALL RAILWAYS OPEN FOR GENERAL TRAFFIC.

New South Wales ..	..	6,173.57	36.73	..	..	6,210.30
Victoria ..	4,651.06	..	(a) 11.00	121.77	..	4,783.83
Queensland ..	..	68.82	6,548.44	..	132.78	6,750.04
South Australia ..	1,480.49	654.21	1,725.97	..	..	3,860.67
Western Australia ..	..	453.99	4,658.30	..	..	5,112.29
Tasmania ..	..	..	754.26	..	6.50	760.76
Northern Territory ..	..	..	489.73	..	..	489.73
Aust. Cap. Territory	..	4.94	..	..	..	4.94
GRAND TOTAL	6,131.55	7,355.53	14,224.43	121.77	139.28	27,972.56

(a) 3 ft. 0 in. gauge.

9. Summary of Operations, 1939-40.—In the following table a summary is given of the working of all railways open for general traffic in Australia during the year ended 30th June, 1940 :—

GOVERNMENT AND PRIVATE RAILWAYS : SUMMARY OF OPERATIONS, 1939-40.

Particulars.	Common-wealth Railways.	State Railways.	Private Railways. (a)	Total for Australia.
Mileage open (route) 30th June, 1940 miles	2,201.05	25,049.84	721.67	27,972.56
Capital cost £	17,191.356	302,425,497	4,725 547	324,342,400
Cost per mile £	7,811	12,073	6,548	11,595
Gross revenue £	621 805	45,966,331	691,182	47,279,318
" " per train-mile d.	155.84	147.49	139.44	147.47
Working expenses £	841,630	35,526,459	449,333	36,817,422
" " per train-mile d.	210.93	114.00	90.65	114.84
Net revenue £	-219,825	10,439,872	241,849	10,461,896
" " per train-mile d.	-55.09	33.49	48.79	32 63
Train-miles run miles	957,605	74,795,384	1,189,604	76,942,593
Passenger-journeys No.	129,685	379,200,448	1,038,226	380,368,359
Tons of goods, etc., carried tons	199,087	32,491,745	3,875,595	36,566,427
Average number of employees No. (b)	2,138	(b) 101,887	(c) 1,048	105,073
" " wage £	254	263	272	263

(a) Approximate. Complete particulars not available for all items.
 Staff. (c) Employees at 31st December, 1940.

(b) Excluding Construction

§ 2. Government Railways.

1. Cost of Construction and Equipment.—The following table gives particulars of the mileage open and the capital cost of Government railways in Australia. The cost shown for Australia (£319,616,853) does not represent the total expenditure on construction and equipment, as in three States, namely, Victoria, Queensland and Tasmania, legislation has been introduced for the purpose of reducing the capital indebtedness of the railways. Figures relating to capital cost do not include charges for works in the course of construction, surveys, discounts and flotation charges on loans allocated to the railways.

GOVERNMENT RAILWAYS : MILEAGE AND COST TO 30TH JUNE, 1940.

System.	Mileage Open.		Total Cost of Construction and Equipment.	Average Cost per Route-Mile Open.	Cost per Head of Population.	Route Mileage per 1,000 of Population.
	Route.	Track.				
	Miles.	Miles.	£	£	£	Miles.
New South Wales	6,141.20	8,199.39	149,203,908	24,296	53.76	2.21
Victoria (a) ..	4,758.89	6,141.99	52,037,722	10,935	27.34	2.50
Queensland (a) ..	6,566.65	7,421.00	38,369,254	5,843	37.39	6.40
South Australia ..	2,557.38	3,092.65	30,109,220	11,773	50.32	4.27
Western Australia	4,381.30	4,928.05	26,187 632	5,977	55.97	9.36
Tasmania (a) ..	644.42	(b)	2,155,261	3,344	9.01	2.69
Commonwealth ..	2,201.05	2,317.56	17,191,356	7,811	..	..
Australia (a) ..	27,250.89	632,100.64	£319,616,853	11,729	45.46	3.88

(a) See below. (b) Not available. (c) Excluding Tasmania. (d) Including Grafton-South Brisbane line, £4,362,500.

The reductions made in the capital indebtedness referred to above were :—Victoria, £25,684,423; Queensland, £28,000,000; and Tasmania, £4,378,000. After adding these figures to the capital costs of the respective States and adjusting the route-mileage

for New South Wales and Queensland to exclude portions of the Grafton-South Brisbane line, the cost per route-mile open in each State and for the Commonwealth railways is as follows:—New South Wales, £24,399; Victoria, £16,332; Queensland, £10,214; South Australia, £11,773; Western Australia, £5,977; Tasmania, £10,138; Commonwealth, £7,811; and for all Government railways in Australia, £13,610. The lowest average cost is in Western Australia, and the highest is in New South Wales. Very few engineering difficulties were encountered in Western Australia, and the fact that contractors were permitted to carry traffic during the term of their contract considerably reduced expenditure.

Adjusted figures for the cost per head of population for each State and for Australia are as follows:—New South Wales, £53.76; Victoria, £40.83; Queensland, £64.67; South Australia, £50.32; Western Australia, £55.97; Tasmania, £27.30; all Government railways in Australia, £53.72.

2. **Expenditure on Construction and Equipment from Revenue and from Loans:—** The following table gives particulars of the expenditure on construction and equipment from revenue and from loans:—

GOVERNMENT RAILWAYS: CAPITAL EXPENDITURE FROM REVENUE AND FROM LOANS.

System.	Expenditure from Revenue to 30th June, 1940.	Net Loan Expenditure.			
		1937-38.	1938-39.	1939-40.	Total to 30th June, 1940.
	£	£	£	£	£
New South Wales ..	666,864	2,343,455	2,002,287	1,546,461	152,622,716
Victoria ..	5,786,729	(a) 492,208	(a) 354,259	(a) 865,500	a 76,853,937
Queensland ..	..	630,053	489,603	500,995	65,597,851
South Australia ..	..	112,537	261,006	176,084	34,934,811
Western Australia ..	633,338	(b) 346,373	(b) 195,111	(b) 99,180	b 25,583,298
Tasmania ..	18,121	59,660	34,558	29,866	(c) 7,336,865
Commonwealth ..	2,475,859	Cr. 938	Cr. 339	Cr. 286	11,432,919
Australia ..	9,580,911	3,983,348	3,336,485	3,217,800	d 376,808,402

(a) Gross Loan Expenditure. (b) Includes expenditure on railways provided in Unemployment Relief Work programmes. (c) Includes Losses funded. (d) Includes £2,446,005 Commonwealth Loan Expenditure on Grafton-South Brisbane line.

3. **Gross Revenue.**—(i) *General.* The total revenue from all sources, the revenue per average mile worked and the revenue per train-mile run during the last five years were as follows:—

GOVERNMENT RAILWAYS: GROSS REVENUE.

Year.	N.S.W.(a)	Vic.(b)	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.	Australia.
TOTAL GROSS REVENUE.								
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
1935-36 ..	17,754	9,690	6,697	2,878	3,446	449	388	41,302
1936-37 ..	18,616	10,135	7,092	3,008	3,462	479	442	43,234
1937-38 ..	20,286	9,735	7,383	3,285	3,678	464	443	45,274
1938-39 ..	19,946	9,284	7,798	3,119	3,599	487	547	44,780
1939-40 ..	20,755	9,861	8,090	3,168	3,556	536	622	46,588

(a) Includes £800,000 per annum contribution from consolidated revenue towards losses on working of country development lines. (b) Includes contributions from consolidated revenue in respect of losses on non-paying lines, 1935-36, £163,859; 1936-37, £230,574 (includes £19,113 guarantees in respect of losses); in 1937-38 and 1938-39, £10,000 guarantees in respect of losses on certain lines; and in 1939-40, £42,000 recoup of loss resulting from reduction in suburban fares.

GOVERNMENT RAILWAYS: GROSS REVENUE—*continued*.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.	Australia.
GROSS REVENUE PER AVERAGE MILE WORKED.								
	£	£	£	£	£	£	£	£
1935-36 ..	2,899	2,053	1,020	1,138	791	696	181	1,525
1936-37 ..	3,040	2,147	1,080	1,189	795	735	206	1,596
1937-38 ..	3,318	2,062	1,124	1,285	841	714	202	1,666
1938-39 ..	3,263	1,953	1,188	1,220	822	740	248	1,645
1939-40 ..	3,392	2,072	1,232	1,239	812	832	283	1,711

GROSS REVENUE PER TRAIN-MILE RUN.

	d.	d.	d.	d.	d.	d.	d.	d.
1935-36 ..	153.82	141.88	129.78	126.46	135.70	64.90	159.86	141.05
1936-37 ..	156.51	141.33	131.30	128.76	136.77	61.63	147.31	142.16
1937-38 ..	161.20	130.40	129.83	129.00	138.52	57.70	140.19	141.22
1938-39 ..	159.01	124.54	134.38	121.19	131.38	61.30	145.42	138.70
1939-40 ..	169.02	139.16	136.83	128.24	139.13	62.33	155.84	147.60

(ii) *Coaching, Goods and Miscellaneous Receipts.* (a) *Totals.* The gross revenue is composed of (a) receipts from coaching traffic, including the carriage of mails, horses, parcels, etc., by passenger trains; (b) receipts from the carriage of goods and live stock; and (c) rents and miscellaneous items. The following table shows the gross revenue from 1935-36 to 1939-40, classified according to the three chief sources of receipts. The total of the three items specified has already been given in the preceding paragraph.

GOVERNMENT RAILWAYS: COACHING, GOODS AND MISCELLANEOUS RECEIPTS.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.	Australia.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.

COACHING TRAFFIC RECEIPTS.

1935-36 ..	6,187	4,130	1,974	686	742	141	141	14,001
1936-37 ..	6,394	4,232	1,934	737	742	141	158	14,338
1937-38 ..	6,844	4,119	1,995	728	717	138	167	14,708
1938-39 ..	6,877	4,286	2,057	754	704	152	194	15,024
1939-40 ..	7,175	4,450	2,098	784	725	156	229	15,617

GOODS AND LIVE STOCK TRAFFIC RECEIPTS.

1935-36 ..	9,155	4,768	4,482	2,027	2,527	294	173	23,426
1936-37 ..	9,661	5,029	4,903	2,098	2,541	324	195	24,751
1937-38 ..	10,831	4,945	5,121	2,353	2,769	311	190	26,520
1938-39 ..	10,356	4,276	5,474	2,144	2,807	318	224	25,599
1939-40 ..	10,851	4,637	5,716	2,167	2,745	362	247	26,725

MISCELLANEOUS RECEIPTS.

	(a)	(b)						
1935-36 ..	2,412	792	241	164	178	13	74	3,874
1936-37 ..	2,561	875	255	172	179	14	89	4,145
1937-38 ..	2,611	671	267	203	192	16	86	4,046
1938-39 ..	2,713	722	266	222	(c) 88	17	129	4,157
1939-40 ..	2,729	775	276	217	86	18	145	4,246

(a) See note (a) to Gross Revenue table above. (b) See note (b) to Gross Revenue table above.
(c) Several items previously included in "Miscellaneous" now included in "Coaching" and "Goods."

(b) *Percentages.* The following table shows for each of the past two years the percentage which each class of receipts bears to the total gross revenue :—

GOVERNMENT RAILWAYS : PERCENTAGES OF RECEIPTS.

System.	1938-39.			1939-40.		
	Coaching.	Goods and Live Stock.	Miscellaneous.	Coaching.	Goods and Live Stock.	Miscellaneous.
	%	%	%	%	%	%
New South Wales ..	34.48	51.92	13.60	34.55	52.29	13.15
Victoria ..	46.17	46.06	7.77	45.13	47.02	7.85
Queensland ..	26.38	70.20	3.42	25.94	70.65	3.47
South Australia ..	24.17	68.73	7.10	24.76	68.39	6.85
Western Australia ..	19.57	78.00	2.43	20.40	77.19	2.41
Tasmania ..	31.11	65.35	3.54	29.03	67.58	3.39
Commonwealth ..	35.43	40.90	23.67	36.91	39.78	23.31
 Australia ..	 33.55	 57.17	 9.28	 33.52	 57.36	 9.12

4. *Working Expenses.*—(i) *General.* In order to make an adequate comparison of the working expenses, allowance should be made for the variation of gauges and of physical and traffic conditions, not only on the different systems of the State and Commonwealth railways, but also on different portions of the same systems. When traffic is light, the percentage of working expenses is naturally greater than when traffic is heavy ; and this is especially true in Australia, where ton-mile rates are in many cases based on a tapering principle—i.e., a lower rate per ton-mile is charged upon merchandise from remote interior districts—and where on many of the lines there is but little back loading.

The following table shows the total annual expenditure, the percentage thereof on gross revenue, and the expenditure per average mile worked and per train-mile run for the years 1935-36 to 1939-40 :—

GOVERNMENT RAILWAYS : WORKING EXPENSES.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	C'wealth.	Australia.
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TOTAL WORKING EXPENSES.

	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
1935-36 ..	11,848	6,857	5,213	2,414	2,488	561	387	29,768
1936-37 ..	12,355	7,259	5,465	2,557	2,620	620	411	31,287
1937-38 ..	13,760	7,830	5,887	2,867	2,710	676	512	34,242
1938-39 ..	14,543	8,060	6,193	2,931	2,911	678	642	35,958
1939-40 ..	14,647	8,058	6,368	2,937	2,828	688	842	36,368

PERCENTAGE ON GROSS REVENUE.

	%	%	%	%	%	%	%	%
1935-36 ..	66.74	70.76	77.84	83.87	72.20	125.05	99.84	72.07
1936-37 ..	66.37	71.62	77.07	85.00	75.68	129.54	92.89	72.37
1937-38 ..	67.83	80.43	79.74	87.28	73.68	145.60	115.48	75.63
1938-39 ..	72.91	86.82	79.42	93.97	80.90	139.18	117.43	80.30
1939-40 ..	70.57	81.72	78.72	92.72	79.54	128.22	135.35	78.06

GOVERNMENT RAILWAYS: WORKING EXPENSES—*continued*.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	C'wealth.	Australia.
PER AVERAGE MILE WORKED.								
1935-36 ..	£ 1,935	£ 1,452	£ 794	£ 954	£ 571	£ 870	£ 181	£ 1,099
1936-37 ..	2,017	1,538	832	1,011	601	953	192	1,155
1937-38 ..	2,251	1,659	897	1,122	620	1,039	233	1,260
1938-39 ..	2,378	1,695	943	1,146	665	1,030	292	1,321
1939-40 ..	2,394	1,693	970	1,148	646	1,067	382	1,336

PER TRAIN-MILE RUN.

1935-36 ..	d. 102.65	d. 100.39	d. 101.01	d. 106.06	d. 97.97	d. 81.15	d. 159.76	d. 101.66
1936-37 ..	103.87	101.22	101.18	109.44	103.51	79.83	136.84	102.88
1937-38 ..	109.34	104.89	103.53	112.60	102.06	84.01	161.90	106.81
1938-39 ..	115.93	108.13	106.72	113.88	106.28	85.31	170.77	111.38
1939-40 ..	119.28	113.71	107.71	118.90	110.66	79.92	210.93	115.22

(ii) *Distribution.* The following table shows the distribution of working expenses under four chief heads of expenditure for the years 1935-36 to 1939-40:

GOVERNMENT RAILWAYS: DISTRIBUTION OF WORKING EXPENSES.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	C'wealth.	Australia.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
MAINTENANCE OF WAY AND WORKS.								
1935-36 ..	2,161	1,517	1,344	445	569	122	145	6,303
1936-37 ..	2,320	1,627	1,451	471	610	130	139	6,748
1937-38 ..	2,614	1,777	1,537	528	644	135	179	7,414
1938-39 ..	2,972	1,514	1,602	503	667	129	245	7,632
1939-40 ..	2,835	1,724	1,610	501	635	120	386	7,811

ROLLING STOCK.

1935-36 ..	4,843	2,333	2,205	1,150	1,140	214	149	12,034
1936-37 ..	4,982	2,492	2,295	1,205	1,181	246	169	12,570
1937-38 ..	5,562	2,888	2,544	1,340	1,214	281	208	14,037
1938-39 ..	5,622	2,801	2,695	1,389	1,321	279	251	14,358
1939-40 ..	5,744	2,879	2,799	1,382	1,306	289	275	14,674

TRANSPORTATION AND TRAFFIC.

1935-36 ..	2,925	1,798	1,350	531	648	112	59	7,423
1936-37 ..	3,006	1,874	1,394	576	693	128	64	7,735
1937-38 ..	3,324	2,121	1,460	648	715	143	83	8,494
1938-39 ..	3,502	2,254	1,533	682	779	151	101	9,002
1939-40 ..	3,484	2,222	1,580	690	736	149	129	8,990

GOVERNMENT RAILWAYS: DISTRIBUTION OF WORKING EXPENSES
—continued.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	C'wealth.	Australia.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.

OTHER CHARGES.

						(a)		
1935-36 ..	1,919	1,208	314	289	131	112	34	4,007
1936-37 ..	2,048	1,265	326	304	136	115	40	4,234
1937-38 ..	2,259	1,044	348	351	137	117	42	4,298
1938-39 ..	2,448	1,491	363	357	144	118	45	4,966
1939-40 ..	2,584	1,234	379	365	150	129	52	4,893

(a) Includes £94,000 in 1935-36 to 1938-39, and £100,000, in 1939-40, to replacement and depreciation fund.

5. Net Revenue.—The following table shows the net earnings, i.e., the excess of gross earnings over working expenses, and the amount of such net earnings per average mile worked and per train-mile run for the last five years :

GOVERNMENT RAILWAYS: NET REVENUE.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	C'wealth.	Australia.
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NET REVENUE.

	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
1935-36 ..	5,906	2,833	1,485	464	958	— 112	..	11,534
1936-37 ..	6,261	2,877	1,626	451	842	— 141	31	11,947
1937-38 ..	6,526	1,905	1,496	418	968	— 212	— 69	11,032
1938-39 ..	5,403	1,224	1,605	188	688	— 191	— 95	8,822
1939-40 ..	6,108	1,803	1,722	231	727	— 151	— 220	10,220

NET REVENUE PER AVERAGE MILE WORKED.

	£	£	£	£	£	£	£	£
1935-36 ..	964	601	226	184	220	— 174	..	426
1936-37 ..	1,023	609	248	178	193	— 218	14	441
1937-38 ..	1,067	403	228	163	221	— 325	— 31	406
1938-39 ..	884	257	244	74	157	— 290	— 43	324
1939-40 ..	998	379	262	90	166	— 235	— 100	375

NET REVENUE PER TRAIN-MILE RUN.

	d.	d.	d.	d.	d.	d.	d.	d.
1935-36 ..	51.17	41.49	28.77	20.40	37.73	—16.25	0.10	39.39
1936-37 ..	52.64	40.11	30.12	19.32	33.26	—18.21	10.47	39.28
1937-38 ..	51.86	25.52	26.30	16.40	36.46	—26.31	—21.71	34.41
1938-39 ..	43.08	16.42	27.66	7.31	25.10	—24.01	—25.35	27.33
1939-40 ..	49.74	25.44	29.12	9.34	28.47	—17.59	—55.09	32.38

† In the graphs accompanying this Chapter the gross and net revenue and working expenses are shown from 1870 to 1940.

6. **Interest.**—The amount of interest payable on expenditure from loans for the construction and equipment of the Government railways in Australia during the five years ended 30th June, 1940, was as follows :—

GOVERNMENT RAILWAYS : INTEREST ON RAILWAY LOAN EXPENDITURE.

AMOUNT OF INTEREST PAYABLE.

Year.	N.S.W. (a)	Victoria. (b)	Q'land. (a) (b)	S. Aust.	W. Aust.	Tasmania. (b)	C'wealth.	Australia. (a)
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
1935-36 ..	5,700	3,033	1,592	1,061	1,016	248	414	13,190
1936-37 ..	5,444	3,005	1,613	1,061	1,009	88	412	12,758
1937-38 ..	5,340	1,841	1,633	1,071	988	90	377	11,459
1938-39 ..	5,300	1,860	1,642	1,074	1,001	94	395	11,545
1939-40 ..	5,350	1,880	1,659	1,092	1,028	94	387	11,609

(a) Including interest charges on the Grafton-South Brisbane line, which for 1939-40 amounted to £218,125 and was contributed by New South Wales, £72,179; Queensland, £27,029; and the Commonwealth, £118,917. See par. 5, p. 95. (b) Capital indebtedness reduced by legislation in these three States. See par. 1, p. 98.

The interest payable on the cost of construction and equipment, after the expenditure from Consolidated Revenue (£9,580,911) for that purpose had been deducted, was at the rate of 3.76 per cent. in 1939-40.

Exchange on interest payments abroad and loan management and flotation expenses are not included in the table above. These items are not charged against the railways in Queensland, Western Australia and Tasmania and the figures for these States are not available. In the remaining States the amounts payable in 1939-40 were :—New South Wales, £690,000; Victoria, £196,792; and South Australia, £123,611.

7. **Profit or Loss.**—The following table shows, for the last five years, the actual profit or loss after deducting working expenses, and interest, but excluding exchange, from the gross revenue :—

GOVERNMENT RAILWAYS : PROFIT OR LOSS.

PROFIT OR LOSS AFTER PAYMENT OF WORKING EXPENSES AND INTEREST.

Year.	N.S.W. (a)	Victoria.	Q'land. (a)	S. Aust.	W. Aust.	Tasmania.	C'wealth.	Australia. (a)
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
1935-36 ..	206	— 199	— 107	— 597	— 57	— 360	— 414	— 1,656
1936-37 ..	817	— 129	— 14	— 609	— 167	— 230	— 381	— 811
1937-38 ..	1,186	64	— 138	— 653	— 20	— 302	— 445	— 427
1938-39 ..	43	— 636	— 37	— 886	— 313	— 285	— 490	— 2,723
1939-40 ..	758	— 77	63	— 862	— 300	— 245	— 607	— 1,389

(a) See note (a), par. 6, above.

8. **Traffic.**—(i) *General.* Reference has already been made to the difference in the traffic conditions on many of the lines. These conditions differ not only in the several State and Commonwealth systems, but also on different lines in the same system, and apply to both passenger and goods traffic. By far the greater part of the population of Australia is confined to a fringe of country near the coast, more especially in the eastern

and southern districts. A large proportion of the railway traffic between the chief centres of population is therefore carried over lines in the neighbourhood of the coast, and is thus, in some cases, open to seaborne competition. In more recent years competition from the air has become an important factor.

The following table gives particulars for the years 1935-36 to 1939-40 :—

GOVERNMENT RAILWAYS : TRAFFIC.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	C'wealth.	Australia.
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NUMBER OF PASSENGER-JOURNEYS.

	'000.	'000.	'000.	'000.	'000.	'000.	'000.	'000.
1935-36 ..	171,143	139,539	25,244	17,431	12,421	2,322	96	368,196
1936-37 ..	177,837	141,343	25,527	17,777	12,710	2,331	109	377,634
1937-38 ..	189,349	137,895	25,688	17,632	12,011	2,267	100	384,942
1938-39 ..	186,720	142,123	24,639	17,529	11,416	2,297	117	384,841
1939-40 ..	179,066	144,649	24,638	17,642	10,793	2,412	130	379,330

PER AVERAGE MILE OF LINE WORKED.

	No.	No.	No.	No.	No.	No.	No.	No.
1935-36 ..	27,945	29,559	3,844	6,891	2,850	3,600	45	13,592
1936-37 ..	29,038	29,941	3,887	7,028	2,917	3,581	51	13,938
1937-38 ..	30,970	29,209	3,912	6,901	2,746	3,482	45	14,163
1938-39 ..	30,541	29,896	3,752	6,854	2,608	3,490	53	14,134
1939-40 ..	29,269	30,395	3,752	6,899	2,464	3,746	59	13,928

TONNAGE OF GOODS AND LIVE STOCK CARRIED.

	'000.	'000.	'000.	'000.	'000.	'000.	'000.	'000.
1935-36 ..	13,839	6,424	4,663	2,465	2,887	770	101	31,149
1936-37 ..	14,685	6,813	4,975	2,383	2,798	824	127	32,605
1937-38 ..	16,480	7,258	5,061	2,879	3,062	857	132	35,729
1938-39 ..	15,417	5,976	5,234	2,640	2,859	844	186	33,156
1939-40 ..	14,620	6,187	5,472	2,675	2,659	879	199	32,691

PER AVERAGE MILE OF LINE WORKED.

	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1935-36 ..	2,260	1,361	710	974	662	1,194	47	1,150
1936-37 ..	2,398	1,443	758	942	642	1,265	59	1,203
1937-38 ..	2,696	1,537	771	1,127	700	1,316	60	1,315
1938-39 ..	2,522	1,257	797	1,032	653	1,282	84	1,218
1939-40 ..	2,390	1,300	833	1,046	607	1,365	90	1,193

(ii) *Metropolitan and Country Passenger Traffic and Revenue 1939-40.* A further indication of the difference in passenger traffic conditions is obtained from the comparison of the volume of metropolitan and suburban and country traffic shown below.

**GOVERNMENT RAILWAYS : METROPOLITAN AND SUBURBAN, AND COUNTRY
PASSENGER TRAFFIC AND RECEIPTS, 1939-40.**

System.	Passenger-Journeys.			Revenue.		
	Metropolitan and Suburban.	Country.	Total.	Metropolitan and Suburban.	Country.	Total.
	No.	No.	No.	£	£	£
N.S.W. ..	167,596,675	11,469,630	179,066,305	3,152,001	3,195,203	6,347,204
Victoria ..	137,691,735	6,957,340	144,649,075	2,353,557	1,678,334	4,031,891
Queensland ..	19,828,753	4,808,846	24,637,599	328,363	1,304,307	1,632,670
S. Australia ..	16,278,455	1,363,311	17,641,766	230,857	398,883	629,740
W. Australia ..	9,551,502	1,241,894	10,793,396	117,818	422,499	540,317
Tasmania ..	(a)	(a)	2,412,307	(a)	(a)	133,413
Common-wealth ..	..	129,685	129,685	..	180,416	180,416
Australia	350,947,120 (b)	25,970,706 (b)	379,330,133	6,182,596 (b)	7,179,642 (b)	13,495,651

(a) Not available.

(b) Incomplete, exclusive of Tasmania.

(iii) *Goods Traffic.* (a) *Classification.* Some indication of the differing conditions of the traffic in each system is also given by an examination of the tonnage of the various classes of commodities carried, and of the revenue derived therefrom. The following table shows the number of tons of various representative commodities carried during 1939-40 :—

GOVERNMENT RAILWAYS : CLASSIFICATION OF COMMODITIES CARRIED, 1939-40.

'000 TONS CARRIED.

System.	Coal, Coke and Shale.	Other Minerals.	Grain and Flour.	Hay, Straw and Chaff.	Wool.	Live Stock.	All other Com- modities.	Total.
N.S.W. ..	(a)6,888	1,351	2,026	(b)	207	808	3,340	14,620
Victoria ..	190	159	1,191	125	96	640	3,786	6,187
Q'land ..	706	481	332	(b)	93	512	3,348	5,472
S. Aust. ..	126	595	722	12	45	189	986	2,675
W. Aust. ..	267	252	831	39	32	110	1,128	2,659
Tas. ..	454	(c)	(d) 51	16	6	31	321	879
C'wealth ..	7	7	(b)	(b)	6	65	114	199
Australia	8,638	2,845	5,153	192	485	2,355	13,023	32,691

(a) Including 127,494 tons of coal on which way leave charges only were collected.
with "All Other Commodities."

(c) Included with "Coal, Coke and Shale."

(b) Included
(d) Includes
other agricultural produce.

(b) *Revenue.* The following table shows the revenue derived from goods and live stock traffic during 1939-40 :—

GOVERNMENT RAILWAYS : REVENUE FROM GOODS AND LIVE STOCK, 1939-40.

Class.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.	Australia.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
General mer- chandise ..	6,786	3,774	3,748	1,395	2,283	232	144	18,362
Wool ..	843	206	499	89	86	8	14	1,745
Live-stock ..	1,421	540	770	207	131	26	83	3,178
Minerals— Coal and coke ..	1,458	61	352	31	158	(a)	1	2,061
Other ..	343	56	347	445	87	96	5	1,379
Total ..	10,851	4,637	5,716	2,167	2,745	362	247	26,725

(a) Included with "Other."

(iv) *Passenger-Mileage.* The following table gives particulars of passenger-mileage in respect of the Government railways in Australia for the years 1937-38 to 1939-40.

GOVERNMENT RAILWAYS : SUMMARY OF "PASSENGER-MILES."

Year ended 30th June—	Passenger Train-Mileage.	Total Passenger-Miles.	Average Passengers per Train-Mile.	Average Mileage per Passenger-Journey.	Passenger Earnings.				Density of Traffic per Average Mile Worked.
					Gross.	Per Average Mile Worked.	Per Passenger-Mile.	Per Passenger Train-Mile.	
	'000.	'000.	No.	Miles.	£'000.	£	d.	d.	No.
NEW SOUTH WALES.									
1938	18,742	2,132,966	114	11.26	5,995	980	0.67	76.76	348,878
1939	19,173	2,149,154	112	11.51	6,024	985	0.67	75.41	351,526
1940	18,388	2,199,564	120	12.28	6,347	1,038	0.69	82.84	359,523
VICTORIA.									
1938	12,088	1,203,812	100	8.73	3,684	780	0.73	73.15	255,003
1939	12,434	1,292,843	104	9.10	3,855	811	0.72	74.40	271,948
1940	11,843	1,367,596	115	9.45	4,032	847	0.71	81.71	287,375
QUEENSLAND.(a)									
1938	5,696	(b)	(b)	(b)	1,494	228	(b)	62.97	(b)
1939	5,750	(b)	(b)	(b)	1,523	232	(b)	63.55	(b)
1940	5,916	(b)	(b)	(b)	1,574	240	(b)	63.84	(b)
SOUTH AUSTRALIA.									
1938	3,679	200,144	54	11.35	571	223	0.68	37.23	78,319
1939	3,747	212,982	57	12.15	600	235	0.68	38.45	83,281
1940	3,615	220,037	61	12.47	630	246	0.69	41.81	86,040
WESTERN AUSTRALIA.									
1938	2,544	(b)	(b)	(b)	533	122	(b)	50.25	(b)
1939	2,795	(b)	(b)	(b)	514	117	(b)	44.12	(b)
1940	2,678	(b)	(b)	(b)	540	123	(b)	48.42	(b)
TASMANIA.									
1938	1,045	32,917	32	14.52	116	179	0.85	26.72	50,563
1939	1,027	35,193	34	15.32	129	196	0.88	30.15	53,485
1940	1,161	37,269	32	15.45	133	207	0.86	26.72	57,871
COMMONWEALTH.(c)									
1938	385	25,965	67	257.92	121	55	1.12	75.30	11,817
1939	388	34,085	88	290.98	146	66	1.03	90.21	15,486
1940	423	41,245	98	318.04	180	82	1.05	102.37	18,739

(a) Exclusive of Queensland portion of Grafton-South Brisbane (uniform gauge) line.
 available.

(c) Railways controlled by Commonwealth Government.

(b) Not

(v) *Ton-Mileage.* Particulars regarding total "ton-miles" are given in the following table for each of the years 1937-38 to 1939-40 :—

GOVERNMENT RAILWAYS : SUMMARY OF "TON-MILES."

Year ended 30th June—	Goods-Train-Mileage.	Total "Ton-miles."	Average Freight Paying Load per Ton.	Average Haul per Ton.	Goods and Live Stock Earnings.				Density of Traffic per Average Mile worked.
					Gross.	Per Average Mile Worked.	Per "Ton-Mile."	Per Goods-Train-Mile.	
	'000.	'000.	Tons.	Miles.	£'000.	£	d.	d.	Tons.
NEW SOUTH WALES.									
1938	11,461	1,854,936	162	114.05	10,831	1,772	1.40	226.80	303,402
1939	10,933	1,760,534	161	115.95	10,356	1,694	1.41	227.34	287,961
1940	11,082	1,827,662	165	126.11	10,851	1,774	1.42	225.98	298,735
VICTORIA.									
1938	5,829	927,444	159	127.78	4,945	1,047	1.28	203.61	196,460
1939	5,455	760,485	139	127.26	4,276	899	1.35	188.11	159,967
1940	5,165	818,637	159	132.32	4,637	974	1.36	218.48	172,021
QUEENSLAND.(a)									
		(b)	(c)	(b)			(b)	(b)	
1938	7,847	715,917	91	146.98	5,056	770	1.68	154.63	113,579
1939	8,073	745,351	92	147.57	5,404	823	1.73	160.67	118,248
1940	8,175	766,635	94	144.72	5,646	860	1.76	165.76	121,625
SOUTH AUSTRALIA.									
1938	2,432	365,012	150	126.80	2,353	921	1.55	232.20	142,834
1939	2,430	348,553	143	132.01	2,144	838	1.48	211.72	136,293
1940	2,313	336,885	146	125.93	2,167	847	1.54	220.48	131,730
WESTERN AUSTRALIA.									
1938	(d)3,828	390,913	102	127.67	2,769	633	1.70	173.62	89,372
1939	(d)3,779	378,089	100	132.24	2,807	641	1.78	178.26	86,393
1940	(d)3,456	361,690	105	136.03	2,745	626	1.82	190.61	82,570
TASMANIA.(e)									
1938	(d) 887	37,916	43	45.76	289	443	1.83	78.07	58,243
1939	(d) 880	38,088	43	46.80	296	450	1.87	80.76	57,885
1940	(d) 904	42,265	47	49.83	336	522	1.91	89.20	65,630
COMMONWEALTH.(f)									
1938	374	28,526	76	216.02	190	86	1.60	121.90	12,983
1939	514	34,801	68	187.28	224	102	1.54	104.38	15,811
1940	535	37,904	71	190.39	248	112	1.57	111.18	17,221

(a) Exclusive of Queensland portion of Grafton-South Brisbane (uniform gauge) line.
 (b) Exclusive of Cooktown and Normanton Railways and Innisfail and Mourilyan Tramways.
 (c) Approximate. (d) Estimated. (e) Exclusive of particulars of live stock carried.
 (f) Railways controlled by the Commonwealth Government.

9. **Rolling Stock.**—The following table shows the number of rolling stock in use at 30th June for each of the years 1938 to 1940. Further details may be found in *Transport and Communication Bulletin* No. 31.

GOVERNMENT RAILWAYS : ROLLING STOCK.

System.	1937-38.			1938-39.			1939-40.		
	Locos.	Coach- ing Stock.	Other Stock.	Locos.	Coach- ing Stock.	Other Stock.	Locos.	Coach- ing Stock.	Other Stock.
New South Wales ..	1,310	2,790	23,704	1,284	2,808	24,257	1,254	2,836	24,165
Victoria ..	574	2,458	21,029	581	2,439	20,993	582	2,420	20,802
Queensland ..	748	1,398	18,704	752	1,413	18,733	758	1,438	18,840
South Australia ..	329	606	8,013	335	594	7,966	330	593	7,866
Western Australia ..	420	477	11,097	427	475	11,110	421	445	11,249
Tasmania ..	94	233	2,073	95	225	2,120	95	234	2,161
Commonwealth ..	113	89	1,383	113	89	1,359	113	90	1,378
Australia ..	3,588	8,051	86,003	3,587	8,043	86,538	3,553	8,056	86,461

10. **Accidents.**—The following table gives particulars of the number of persons killed and injured through train accidents and the movement of rolling stock on the Government railways of Australia for each of the years 1937-38, 1938-39 and 1939-40:—

GOVERNMENT RAILWAYS : ACCIDENTS.

System.	1937-38.		1938-39.		1939-40.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
New South Wales ..	66	593	57	625	56	501
Victoria ..	48	442	48	466	36	373.
Queensland ..	25	166	23	132	25	162
South Australia ..	21	182	9	187	16	159
Western Australia ..	14	190	14	142	17	148
Tasmania ..	6	66	7	62	8	50
Commonwealth ..	..	38	1	20	2	42
Australia ..	180	1,677	159	1,634	160	1,435

Further details relating to the number of passengers, employees and other persons affected by railway accidents are published on page 25 of *Transport and Communication Bulletin* No. 31.

11. **Consumption of Oil and Fuel.**—The following table shows the quantities and values of oil and fuel consumed by the various Government Railway Departments during 1939-40:—

GOVERNMENT RAILWAYS : CONSUMPTION AND VALUE OF OIL AND FUEL, 1939-40.

System.	Oil.				Coal.	
	Lubricating.		Fuel and Light.		Tons.	£
	Gallons.	£	Gallons.	£		
New South Wales ..	413,342	54,475	1,409,860	55,936	1,466,868	1,220,996
Victoria ..	175,889	22,982	1,377,792	59,711	489,983	567,592
Queensland..	242,596	29,840	482,648	32,673	455,780	440,185
South Australia ..	87,319	10,980	1,163,960	67,310	190,436	280,494
Western Australia ..	102,993	12,695	415,389	17,139	316,293	249,441
Tasmania ..	44,334	4,869	469,637	14,919	47,749	62,659
Commonwealth ..	27,570	3,208	149,307	6,652	28,724	47,606
Australia ..	1,094,043	139,049	5,468,593	254,340	2,995,833	2,868,973

12. **Staff Employed.**—The following table gives details of the average staff employed by the Government railways of Australia during 1939–40. Further details may be found in *Transport and Communication Bulletin* No. 31.

GOVERNMENT RAILWAYS : AVERAGE STAFF EMPLOYED, 1939–40.

System.	Operating Staff.		Construction Staff.		All Employees—Staff.	
	Salaried.	Wages.	Salaried.	Wages.	Salaried.	Wages.
	No.	No.	No.	No.	No.	No.
New South Wales(a)	7,048	33,657	44	1,242	7,092	34,899
Victoria	3,621	20,417	(b)	(b)	3,621	20,417
Queensland	3,223	15,349	7	107	3,230	15,456
South Australia ..	1,384	6,957	..	32	1,384	6,989
Western Australia ..	1,281	6,963	3	138	1,284	7,101
Tasmania(a)	208	1,779	(c)	(c)	208	1,779
Commonwealth	185	1,953	..	33	185	1,986
Australia	16,950	87,075	54	1,552	17,004	88,627

(a) Includes members of staff serving with Defence Services. (b) In Victoria, railway construction work is not under the control of the Railways Commissioners. (c) Construction work has been placed under the direction of the Chief Engineer of the Way and Works Section.

§ 3. Private Railways.

1. **Total Mileage Open, 1939–40.**—The bulk of the private railways in Australia have been laid down for the purpose of hauling timber, firewood, sugar-cane, coal and other minerals, and they are not generally used for the conveyance of passengers or for public goods traffic. In many cases the lines are practically unballasted and easily removable.

The railways referred to in this section include only lines open to the public for general passenger and goods traffic. Complete particulars of lines used for special purposes only are not available.

2. **Lines Open for General Traffic.**—The following statement gives a summary of the operations of private railways open for general traffic for 1939–40 :—

PRIVATE RAILWAYS : SUMMARY OF OPERATIONS, 1939–40.

State.	Route-Miles Open.	Capital Cost.	Gross Revenue.	Working Expenses.	Train-Miles Run.	Passenger-Journeys.	Goods, etc., Carried.	Em- ployees.
	Miles.	£'000.	£	£	'000.	'000.	'000. Tons.	No.
N.S.W.(a)	69.10	1,214	348,264	205,042	481	970	731	422
Vic. ..	24.94	82	5,483	7,319	17	4	17	17
Q'land(a)	183.39	247	30,849	27,606	100	4	196	48
S.A.(a) ..	50.90	(b)	(b)	(b)	109	..	2,584	(b)
W.A. ..	277.00	2,258	156,230	82,756	266	22	127	279
Tas.(a) ..	116.34	925	150,356	126,610	217	38	221	282
Australia(a)	721.67	4,726	691,182	449,333	1,190	1,038	3,876	1,048

(a) Incomplete.

(b) Not available.

Some of the particulars given in the table are incomplete in respect of New South Wales, Queensland, South Australia and Tasmania. In New South Wales and Queensland several lines, although owned by private companies, are operated by the Government Railway Departments, and Government rolling stock is used thereon, while some of the companies are not able to supply particulars of the capital cost, revenue and working

expenses of the lines which they operate. In some cases the figures relating to tonnage of goods, etc., include particulars of coal, ores, timber, sugar-cane, etc., carried for private purposes, as details relating to goods carried for the general public are not recorded separately.

C. TRAMWAYS.

1. **Systems in Operation.**—(i) *General.* Tramway systems are in operation in all the Capital cities and in a number of the larger towns of Australia. The systems are operated mainly by governmental and municipal authorities, and are now practically all electric.

In many parts of Australia private lines used for special purposes in connexion with the timber, mining, sugar, or other industries are often called tramways, but they are more properly railways (see above), and the traffic on them has nothing in common with that of the street tramways for the conveyance of passengers, which are dealt with in the present section.

(ii) *Total Mileage Open and Classification of Lines.* The following tables show for each State the total mileage of tramway lines open for general passenger traffic for 1939-40, classified (a) according to the controlling authority, (b) according to the motive-power used, and (c) according to gauge:—

TRAMWAYS : ROUTE MILEAGE OPEN, 1939-40.

Particulars—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
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ACCORDING TO CONTROLLING AUTHORITY.

	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
Government ..	162.20	173.58	..	..	58.84	..	394.62
Municipal ..	..	..	61.59	77.47	11.90	29.44	180.40
Private ..	3.50	..	..	..	9.40	..	12.90
Total ..	165.70	173.58	61.59	77.47	80.14	29.44	587.92

ACCORDING TO MOTIVE-POWER.

Electric ..	162.20	165.68	61.59	77.47	71.19	29.44	567.57
Steam or Petrol ..	3.50	..	..	..	8.95	..	12.45
Cable ..	..	7.90	..	..	..	..	7.90
Total ..	165.70	173.58	61.59	77.47	80.14	29.44	587.92

ACCORDING TO GAUGE.

Gauge—							
5 ft. 3 in. ..	..	5.18	..	..	..	..	5.18
4 ft. 8½ in. ..	165.70	168.40	61.59	77.47	..	..	473.16
3 ft. 6 in. ..	..	..	..	..	80.14	29.44	109.58
Total ..	165.70	173.58	61.59	77.47	80.14	29.44	587.92

Further details may be obtained from *Transport and Communication Bulletin No. 31.*

(iii) *Cost of Construction and Equipment.* The table hereunder shows the total cost of construction and equipment of all tramways to 30th June, 1940, classified according to the nature of the motive-power. Further details relating to controlling authorities are available in *Transport and Communication Bulletin* No. 31.

TRAMWAYS : COST OF CONSTRUCTION AND EQUIPMENT, 1939-40.

Nature of Motive-power.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
Electric..	£ 8,935,612	£ 8,123,638	£ 2,443,242	£ 4,435,930	£ 1,755,826	£ 671,879	£ 26,366,127
Steam or Petrol	(a) 20,000	..	..	..	86,273	..	106,273
Cable ..	..	461,842	..	..	..	..	461,842
Total ..	8,955,612	8,585,480	2,443,242	4,435,930	1,842,099	671,879	26,934,242

(a) Estimated.

(iv) *Summary of Operations, 1935-36 to 1939-40.* The following table gives a summary of the working of all tramway systems in Australia for the years 1935-36 to 1939-40 :—

TRAMWAYS : SUMMARY OF OPERATIONS.

Particulars.	1935-36.	1936-37.	1937-38.	1938-39.	1939-40.
Mileage open for traffic .. miles	611.90	613.02	607.66	606.49	587.92
Cost of construction and equipment .. £'000	26,654	26,949	26,959	26,888	26,934
Cost per mile £	43,559	43,961	44,366	44,334	45,813
Gross revenue £'000	7,567	7,735	7,835	7,866	7,865
Working expenses „	5,464	5,609	5,975	6,264	6,213
Net earnings „	2,103	2,126	1,860	1,602	1,652
Interest „	1,135	1,102	1,117	1,094	1,101
Percentage of working expenses on gross revenue %	72.20	72.51	76.26	79.63	78.99
Percentage of net earnings on capital cost %	7.89	7.89	6.90	5.96	6.13
Tram-miles run '000 miles	81,481	82,295	83,806	83,838	80,343
Gross revenue per tram-mile .. d.	22.29	22.56	22.44	22.52	23.49
Working expenses per tram-mile .. „	16.09	16.36	17.11	17.93	18.56
Net earnings per tram-mile „	6.20	6.20	5.33	4.59	4.93
Passenger-journeys '000	688,123	701,941	754,957	716,351	712,772
„ „ per tram-mile No.	8.45	8.53	8.49	8.54	8.87
Average revenue per passenger-journey d.	2.64	2.64	2.64	2.64	2.65
Persons employed at end of year No.	17,712	17,864	18,073	17,695	17,450

2. *Electric Tramways.*—(i) *Financial Operations.* The following table gives the capital cost and the financial result of electric tramways for each State during 1939-40, together with similar details for Australia for the last five years.

ELECTRIC TRAMWAYS : CAPITAL COST AND FINANCIAL RESULTS.

State.	Route-Miles Open at 30th June, 1940.	Capital Cost.	Gross Revenue.	Working Expenses.	Net Revenue.	Interest.	Employees at 30th June, 1940.
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STATES, 1939-40.

	Miles.	£'000.	£'000.	£'000.	£'000.	£'000.	No.
New South Wales ..	162.20	8,935	3,331	2,973	358	389	7,813
Victoria ..	165.68	8,124	2,191	1,449	742	250	4,388
Queensland ..	61.59	2,443	869	641	228	126	1,937
South Australia ..	77.47	4,436	730	513	218	249	1,739
Western Australia ..	71.19	1,756	372	339	33	45	771
Tasmania ..	29.44	672	186	147	38	39	335
Australia ..	567.57	26,366	7,679	6,062	1,617	1,098	16,983

AUSTRALIA, 1935-36 TO 1939-40.

1935-36 ..	570.64	25,428	7,201	5,165	2,036	1,123	16,789
1936-37 ..	577.96	25,984	7,438	5,361	2,077	1,092	17,143
1937-38 ..	578.16	26,132	7,602	5,783	1,819	1,112	17,464
1938-39 ..	586.14	26,275	7,649	6,089	1,560	1,092	17,207
1939-40 ..	567.57	26,366	7,679	6,062	1,617	1,098	16,983

(ii) *Traffic and Accidents.* Particulars of the traffic of electric tramways and the accidents which occurred in the movement of rolling stock are shown in the following table for each State during 1939-40, and for Australia during the last five years :—

ELECTRIC TRAMWAYS : TRAFFIC AND ACCIDENTS.

State.	Average Mileage Open for Year.		Car-Miles Run.	Passenger-Journeys.	Average Number Passengers per Car-Mile.	Accidents.	
	Route.	Track.				Killed.	Injured.

STATES, 1939-40.

	Miles.	Miles.	'000.	'000.	No.	No.	No.
New South Wales	162.20	308.81	31,498	311,539	9.89	31	1,597
Victoria ..	165.68	306.63	22,905	181,634	7.93	32	375
Queensland ..	60.75	107.85	8,164	93,431	11.44	2	608
South Australia ..	77.47	145.95	8,876	53,933	6.08	9	103
Western Australia	71.19	109.03	4,669	38,386	8.22	4	220
Tasmania ..	29.44	44.33	2,095	16,034	7.65	..	22
Australia ..	566.73	1,022.60	78,207	694,957	8.89	78	2,925

AUSTRALIA, 1935-36 TO 1939-40.

1935-36 ..	570.42	1,016.63	76,684	652,491	8.51	70	2,226
1936-37 ..	576.79	1,025.99	78,526	673,227	8.57	74	2,535
1937-38 ..	577.57	1,044.74	81,038	689,286	8.51	71	2,853
1938-39 ..	585.37	1,045.59	81,361	695,476	8.55	61	2,750
1939-40 ..	566.73	1,022.60	78,207	694,957	8.89	78	2,925

D. MOTOR VEHICLES.

1. **The Motor Car and Motor Industry.**—(i) *Evolution of the Motor Car.* In Official Year Book No. 20, p. 319, a short history is given of the evolution of the motor car.

(ii) *Motor Industry.* Although motor cars are not entirely manufactured in Australia the capital invested in assembling and body-building plants is considerable. The importance of the industry is shown by the following figures which relate to the local manufacture of motor bodies and the importation of motor cars, fuel and tyres during the four years ended 1938–39. The number of motor bodies built in 1939–40 was 71,637 valued at £5,583,316.

MOTOR VEHICLES, ETC. : LOCAL MANUFACTURE AND IMPORTS.

Particulars.	Unit.	1935–36.	1936–37.	1937–38.	1938–39.
Motor bodies built ..	No.	67,337	77,191	92,061	79,017
	£	6,043,735	6,461,314	7,400,497	6,379,955
Imports—					
Motor bodies	No.	1,699	786	646	532
	£	149,593	81,380	63,810	56,641
Chassis	No.	75,652	69,915	89,632	76,094
	£	5,507,957	5,458,640	7,355,586	6,416,949
Crude petroleum ..	Mill. gal.	65	60	70	54
	£	539,693	520,517	603,216	448,880
Petroleum spirit, etc. ..	Mill. gal.	255	282	333	345
	£	3,792,950	4,525,939	5,503,085	5,209,650
Pneumatic tyres and tubes	lb.	225,087	342,651	341,178	322,764
	£	18,826	27,032	30,968	28,094

Later particulars of imports are not available for publication.

Although precise figures are not available, the value of motor tyres and tubes produced in Australia during 1939–40 was approximately £4,500,000, and a thriving industry is engaged in the manufacture of spares, batteries and accessories.

2. **Registration.**—The arrangements for the registration of motor vehicles and the licensing of drivers and riders thereof are not uniform throughout Australia. Methods of registration, licence fees payable, etc., in each State are referred to in Official Year Book No. 16, pp. 337–40, and later issues up to No. 25.

3. **Public Vehicles.**—In all the capital cities of the States and in many of the most important provincial centres taxi-cabs and other vehicles ply for hire under licence granted either by the Commissioner of Police or the Local Government authority concerned. As most of these vehicles are independently controlled by individuals or small companies, it has not been possible to obtain complete data in respect of their operations.

4. **Motor Omnibuses.**—In both urban and provincial centres motor omnibus traffic has assumed considerable proportions during recent years, and has had a marked effect on railway and tramway services. The constitution of Boards empowered to allocate the routes over which omnibuses may operate arose from the belief that the economic waste resulting from duplication, by running services parallel with or contiguous with existing railway and tramway systems, is thus avoided. The general principle governing the allocation of routes is that the omnibus services should act as feeders to existing transport facilities. In some States the railway and tramway systems run motor services complementary to their main services to meet the competition of private

enterprise and to endeavour to protect the existing transport utilities provided by public bodies. Such services are conducted in New South Wales by the Department of Road Transport and Tramways, in Victoria by the Victorian Railways Commissioners, in South Australia by the South Australian Railways Commissioners and by the Municipal Tramways Trust, Adelaide, and in Tasmania by the Hobart City Council.

5. Motor Vehicles on the Register, etc.—(i) Year 1939-40. Particulars of the registration of motor vehicles, licences issued and revenue received for 1939-40 are contained in the following table :—

MOTOR VEHICLES : REGISTRATIONS AND REVENUE, 1939-40.

(Excluding Defence Service Vehicles.)

State or Territory.	Motor Vehicles Registered at 30th June, 1940.(a)					Drivers' and Riders' Licences in force at 30th June, 1940.	Gross Revenue derived from—			
	Motor Cars.(b)	Commercial Vehicles (c)	Motor Cycles.	Total.	Per 1,000 of Population at 30th June, 1940.		Vehicle Registrations and Motor Tax.	Drivers' and Riders', etc., Licences.	Other Sources.	Total.
	No.	No.	No.	No.	No.	No.	£	£	£	£
N. South Wales	210,808	75,887	21,542	308,237	111.08	472,595	2,538,903	243,502	106,472	2,888,877
Victoria ..	156,337	484,575	25,705	666,617	140.09	370,838	1,844,901	93,126	43,655	1,981,682
Queensland ..	77,037	44,689	8,031	129,757	126.44	163,864	921,782	64,923	59,109	1,045,874
South Australia	56,510	23,966	8,825	89,301	149.25	129,950	628,378	58,468	12,540	699,386
Western Aust.	38,930	23,135	6,791	70,856	151.45	86,986	403,215	27,067	25,786	456,068
Tasmania ..	17,598	5,235	3,351	26,184	109.42	31,148	175,675	15,574	23,588	214,837
Northern Terr.	459	1,061	100	1,620	194.88	2,029	2,777	815	..	3,592
Aust. Cap. Terr.	1,854	446	91	2,391	187.94	3,371	14,062	1,908	99	16,069
Australia ..	559,533	260,994	74,496	895,023	127.29	1,260,781	6,529,693	505,383	271,309	7,306,385

(a) Excluding Trailers (20,418), Road Tractors, etc. (2,196), and Dealers' Plates (3,309).

(b) Including Taxis and Hire Cars. (c) Including Lorries, Vans, Buses and Utility Trucks.

(d) Including 49,549 vehicles registered as primary producers'.

Particulars relating to the number of motor vehicles registered at 30th June, 1941, will be found in the Appendix to this volume.

(ii) *Quinquennium* 1935-36 to 1939-40. The following table shows the number of vehicles registered, licences issued, and revenue received therefrom during each of the years 1935-36 to 1939-40. :—

MOTOR VEHICLES : REGISTRATIONS AND REVENUE, AUSTRALIA.

(Excluding Defence Service Vehicles.)

Year.	Motor Vehicles Registered at 30th June.					Drivers' and Riders' Licences in force at 30th June.	Gross Revenue derived from—			
	Motor Cars.	Commercial Vehicles.	Motor Cycles.	Total.	Per 1,000 of Population at 30th June.		Vehicle Registrations and Motor Tax.	Drivers' and Riders', etc., Licences.	Other Sources.	Total.
	No.	No. (a)	No.	No.	No.	No.	£	£	£	£
1935-36	484,832	180,567	77,467	742,866	109.64	979,343	5,017,888	386,322	215,949	5,620,159
1936-37	499,289	214,296	77,912	791,497	115.86	1,092,973	5,413,282	448,914	218,671	6,080,867
1937-38	534,963	241,751	80,114	856,828	124.30	1,175,786	5,884,847	470,053	234,161	6,589,061
1938-39	562,271	258,025	79,237	899,533	129.23	1,238,497	6,318,435	508,387	244,722	7,071,544
1939-40	559,533	260,994	74,496	895,023	127.29	1,260,781	6,529,693	505,383	271,309	7,306,385

(a) Including primary producers' vehicles, Victoria.

(iii) *Relation to Population.* The table hereunder gives the number of vehicles (exclusive of motor cycles) registered per 1,000 of population in each State at 31st December, 1921, and at 30th June for each of the years 1936 to 1940 :—

MOTOR VEHICLES (EXCLUSIVE OF MOTOR CYCLES) REGISTERED PER 1,000 OF POPULATION.
(Excluding Defence Service Vehicles.)

Year.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
31st Dec., 1921 ..	15	16	8	24	12	13	(a)	..	15
30th June, 1936 ..	89	105	102	110	110	77	185	160	98
„ 1937 ..	96	112	105	119	119	82	191	162	104
„ 1938 ..	103	120	111	135	128	90	206	159	113
„ 1939 ..	107	125	118	137	134	96	221	182	118
„ 1940 ..	103	127	119	135	137	95	192	181	117

(a) Not available.

(iv) *Revenue per Motor Vehicle.* The following table gives the average revenue per vehicle (exclusive of motor cycles) received in respect of registration and motor tax in the several States for each year from 1935-36 to 1939-40. In some States the revenue from motor tax on cycles is not separately recorded. In these cases an amount based on the flat rate provided for cycles in the registration acts has been deducted from the total revenue received, and the average amounts shown must therefore be regarded as approximate only.

AVERAGE REVENUE PER VEHICLE FROM REGISTRATION FEES AND MOTOR TAX (EXCLUSIVE OF MOTOR CYCLES).

State or Territory.	1935-36.	1936-37.	1937-38.	1938-39.	1939-40.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
New South Wales ..	7 14 2	7 16 0	7 17 11	7 19 10	8 11 5
Victoria ..	7 5 11	7 5 10	7 7 8	7 7 9	7 8 8
Queensland ..	6 0 8	6 3 0	6 5 10	6 16 3	7 7 0
South Australia ..	8 8 6	7 14 0	7 4 7	7 9 10	7 6 11
Western Australia ..	5 16 11	6 11 5	6 5 2	6 6 0	6 2 6
Tasmania ..	5 14 3	5 13 0	5 17 6	6 13 3	7 6 7
Northern Territory ..	1 5 0	1 7 0	1 8 1	1 11 0	1 15 2
Aust. Cap. Territory	5 12 2	6 6 0	5 18 7	5 15 2	5 16 11
Australia ..	7 4 0	7 4 9	7 5 2	7 8 3	7 13 10

(a) Decrease as compared with figures for 1935-36 largely due to the introduction during the year of a change in the method of registering, which enabled persons to register vehicles for six-monthly periods, instead of annually only, as before.

6. *New Vehicles Registered.*—(i) *Year 1939-40.* The following table gives the number of new vehicles registered in each State during 1939-40 :—

NEW MOTOR VEHICLES REGISTERED, 1939-40.
(Excluding Defence Service Vehicles.)

State or Territory.	Motor Cars.	Commercial Vehicles, etc.	Motor Cycles.	Total.
	No.	No.	No.	No.
New South Wales ..	14,255	6,117	1,385	21,757
Victoria ..	11,613	(a) 5,773	1,370	18,756
Queensland ..	5,786	4,037	721	10,544
South Australia(b) ..	4,028	1,623	535	6,186
Western Australia(c) ..	1,744	450	170	2,364
Tasmania ..	1,400	540	176	2,116
Australian Capital Territory ..	154	18	6	178
Total ..	38,980	18,558	4,363	61,901

(a) Including vehicles registered as primary producers'.

(b) Excluding Northern Territory.

(c) Metropolitan area only.

Particulars of the number of new vehicles registered during 1940-41 will be found in the Appendix to this volume.

(ii) *Quinquennium* 1935-36 to 1939-40. Particulars of the number of new vehicles registered in Australia during the years 1935-36 to 1939-40 appear in the following table :—

NEW MOTOR VEHICLES REGISTERED : AUSTRALIA.(a)
(Excluding Defence Service Vehicles.)

Year.	Motor Cars.	Commercial Vehicles, etc.	Motor Cycles.	Total.
	No.	No.	No.	No.
1935-36	50,427	19,851	6,673	76,951
1936-37	48,587	(b) 24,191	7,479	80,257
1937-38	55,125	(b) 27,402	8,323	90,850
1938-39	52,897	(b) 23,646	7,064	83,607
1939-40	38,980	(b) 18,558	4,363	61,901

(a) Excluding Northern Territory and extra-Metropolitan area of Western Australia. (b) Including vehicles registered as primary producers' vehicles, Victoria.

7. *World Motor Vehicle Statistics, 1941.*—The result of the 1941 World Motor Census, conducted by the *American Automobile*, from which the following particulars have been extracted, shows that there were 45,790,140 motor cars, trucks, and buses registered in various countries of the world at 1st January, 1941. This shows an increase of 2.9 per cent. on the figure for the previous year, 44,515,137, and is the highest figure yet obtained.

The following table shows the number of motor vehicles registered in each continent at 1st January, 1941 :—

MOTOR VEHICLES : WORLD REGISTRATIONS AT 1st JANUARY, 1941.

Continent.	Total Automobiles.(a)	Motor Cars.(a)	Motor Trucks and Buses.(a)	Motor Cycles.(a)
	No.	No.	No.	No.
Africa (b)	692,974	543,740	145,840	52,293
America (exclusive of U.S.A.) ..	2,435,374	1,876,431	558,943	12,426
United States of America	31,468,887	26,915,836	4,553,051	122,761
Asia	595,111	310,284	184,827	40,409
Europe (b)	9,436,293	6,704,286	2,662,007	2,771,112
Oceania	1,161,501	862,604	298,397	91,765
Total	45,790,140	37,213,181	8,403,065	3,090,766

(a) Not complete for all territories.

(b) 1st January, 1940.

The next table gives the number of motor vehicles registered in various countries. For the purposes of comparison, the approximate population in millions of each country is also shown :—

COMPARATIVE MOTOR VEHICLE STATISTICS, 1st JANUARY, 1941.

Country.	Approximate Population in Millions.	Motor Cars, Trucks and Buses.	Motor Cycles.
		No.	No.
Australia	7	808,500	73,000
Argentine Republic	13	397,935	..
Canada	11	1,468,883	..
France (a)	42	2,268,985	..
Germany (a)	79	1,951,789	1,860,722
United Kingdom (a)	48	2,608,501	411,593
India	366	123,400	5,100
Italy (a)	44	475,000	200,000
Japan	104	100,000	..
New Zealand	2	276,057	17,014
Union of South Africa	2	394,698	25,080
United States of America	130	31,468,887	122,761

(a) 1st January, 1940.

The foregoing figures are in some cases approximations based on estimates furnished by Trade Commissioners or representative motor trade organizations in the several countries, and in other cases are incomplete, especially in relation to motor cycles.

E. TRAFFIC ACCIDENTS.

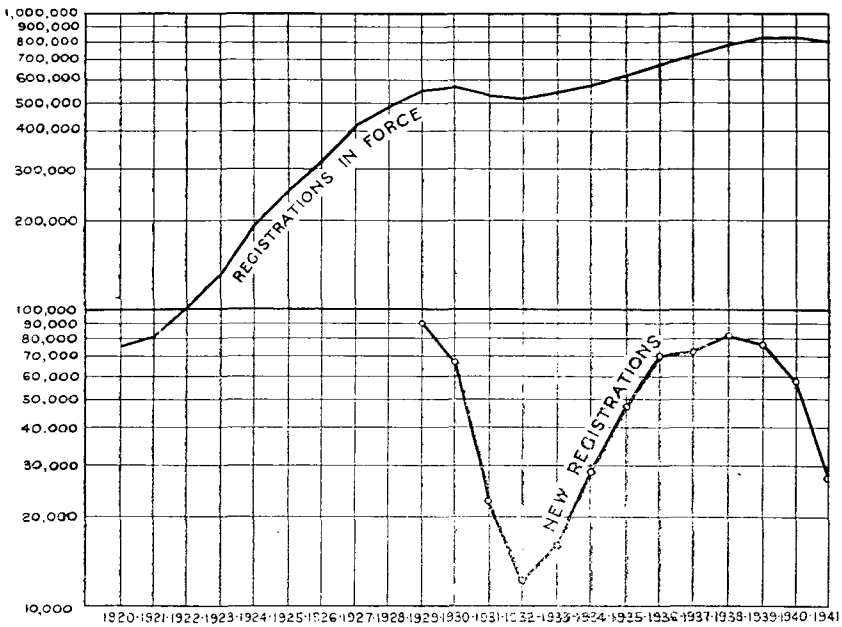
1. *General.*—The practice of reporting accidents occurring in public thoroughfares is not uniform throughout Australia. In New South Wales the reporting of minor accidents has not been enforced, while all other States require that all accidents be reported. Hence the figures for New South Wales are not comparable with those for other States with regard to the number of accidents, and to a lesser extent with regard to the number of persons injured.

2. *Total Accidents Registered.*—(i) *Year 1939-40.* The following table gives particulars of the number of persons killed or injured in accidents (known to the police) which occurred in public thoroughfares during 1939-40 :—

ACCIDENTS (KNOWN TO THE POLICE) WHICH OCCURRED IN PUBLIC THOROUGHFARES : PERSONS KILLED AND INJURED, 1939-40.

State or Territory.	Accidents.	Persons Killed.			Persons Injured.		
		Number.	Per 1,000 of Mean Population.	Per 100 Motor Vehicles Registered.	Number.	Per 1,000 of Mean Population.	Per 100 Motor Vehicles Registered.
New South Wales	11,200	545	0.20	0.18	8,398	3.04	2.73
Victoria ..	20,120	515	0.27	0.19	8,723	4.62	3.27
Queensland ..	9,904	187	0.18	0.14	3,844	3.78	2.96
South Australia ..	12,314	126	0.21	0.14	3,128	5.24	3.50
Western Australia	5,314	123	0.26	0.17	998	2.14	1.41
Tasmania ..	4,768	55	0.23	0.21	1,009	4.23	3.85
Aus. Cap. Territory	81	7	0.56	0.29	42	3.37	1.76
Total ..	63,701	1,558	0.22	0.17	26,142	3.74	2.92

MOTOR VEHICLE REGISTRATION—AUSTRALIA, 1920 TO 1941.

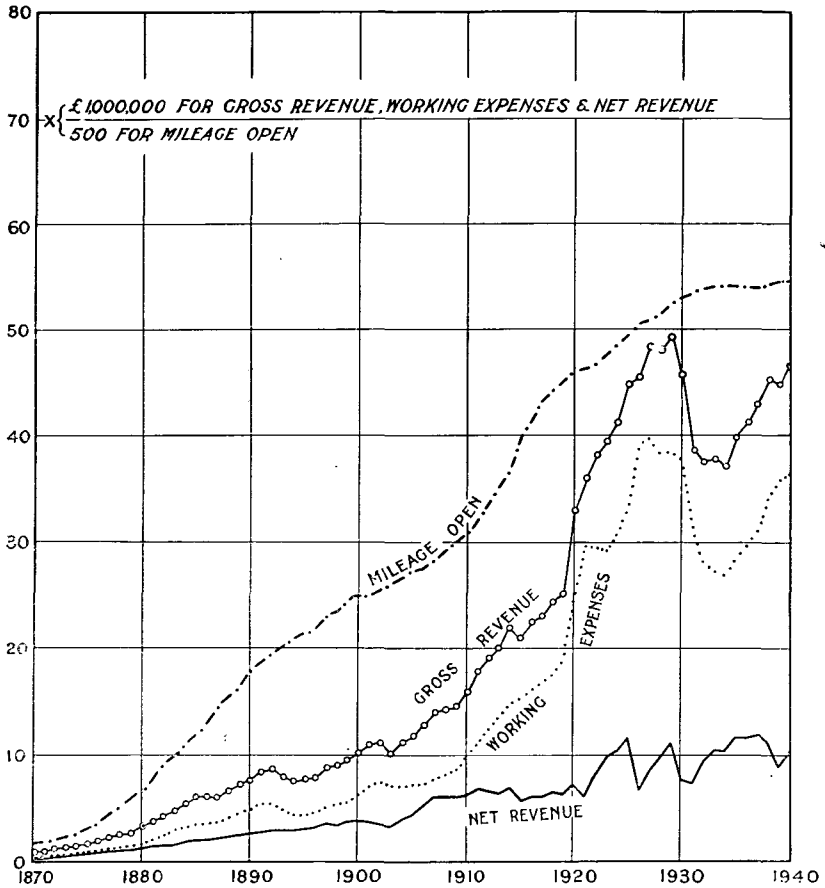


(See page 115.)

EXPLANATION.—This is a ratio graph, the vertical scale being logarithmic, and the curves rise and fall according to the rate of increase or decrease. Actual numbers are indicated by the scale at the side of the graph.

The graphs show for all motor vehicles other than motor cycles the registrations in force at 30th June each year and the number of new registrations during the year.

FINANCIAL POSITION OF THE GOVERNMENT RAILWAYS OF AUSTRALIA, 1873 TO 1940.



EXPLANATION.—The base of each square represents throughout ten years. The significance of the vertical height of each square varies according to the nature of the several curves.

In the curves for (i) gross revenue; (ii) working expenses; and (iii) net revenue, the vertical side of each square represents £10,000,000. The mileage open is shown by a broken line, the vertical side of each square representing 5,000 miles.

The ages of the persons killed or injured are given below :—

AGES OF PERSONS KILLED OR INJURED, 1939-40.

State or Territory.	Under 10 years.		10 to 59 years.		60 years and over.		Age not known.		Total.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
New S. Wales	40	573	383	7,207	122	618	..	..	545	8,398
Victoria ..	31	614	373	6,978	107	783	4	348	515	8,723
Queensland ..	(a) 19	(a) 547	(b) 142	b 2,974	26	311	..	12	187	3,844
South Aust. ..	4	147	97	2,764	25	217	..	..	126	3,128
Western Aust.	(c) 21	(c) 120	(d) 83	(d) 827	19	51	..	..	123	998
Tasmania ..	..	76	47	869	8	64	..	..	55	1,009
Aus. Cap. Terr.	(a)	(a)	(b)	(b)	..	..	..	..	7	42
Total ..	(e) 115	(e) 2,083	(e) 1,132	(e) 21,655	307	2,044	4	360	1,558	26,142

(a) Under 15. (b) Fifteen and under 60. (c) Under 16. (d) Sixteen and under 60.
(e) Approximate.

(ii) *Years 1931-32 to 1939-40.* Approximate figures relating to the persons killed and injured in traffic accidents in Australia during the years 1931-32 to 1939-40 are given hereunder :—

ACCIDENTS (KNOWN TO THE POLICE) WHICH OCCURRED IN PUBLIC THOROUGHFARES : PERSONS KILLED AND INJURED, AUSTRALIA.(a)

Particulars.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.	1937-38.	1938-39.	1939-40.
Persons killed ..	818	914	952	1,100	1,350	1,387	1,483	1,426	1,558
„ injured ..	13,728	15,073	18,039	19,189	22,131	22,940	25,097	25,653	26,142

(a) Prior to 1935 figures were compiled by three States for the calendar year, and by one State for the years 1935 and 1936.

3. *Accidents Involving Casualties.*—Owing to limitation of space the table showing detailed causes of accidents for 1938-39 and 1939-40 has been omitted, but may be found in the *Transport and Communication Bulletin* No. 31.

F. AVIATION.

1. *Historical.*—A short review of the progress of civil aviation in Australia up to the date of foundation of a Civil Aviation Administration appears in Official Year Book No. 16, pp. 334-5.

2. *Civil Aviation Administration.*—A brief account of the foundation and objects of this Administration will be found in Official Year Book No. 19, p. 299. In 1936 the organization was changed and the responsibility of regulating and controlling civil aviation in the Commonwealth was entrusted to a Board, consisting of four members and a secretary. The Board was responsible to the Minister for Defence and continued to function as a unit of the Defence Department organization until November, 1938. In January, 1939, the Civil Aviation Board was abolished and the Civil Aviation Administration was made a separate Department under the Minister for Civil Aviation. The permanent Head of the Department is the Director-General of Civil Aviation.

3. *Air Services.*—Since 1920, the grant of financial assistance for the establishment and maintenance of regular air transport services has been part of the Government's policy for the development of civil aviation in Australia.

In addition to the air services operating solely within Australia, the following overseas services operate :—Sydney-Singapore, there connecting with British Overseas Airways Service to Cairo and Durban ; the Sydney-Rabaul Service ; and the Sydney-Auckland Service. A notable development during 1940 was the inauguration by

Pan-American Airways of the San Francisco-Auckland Service to a fortnightly schedule. This service provides connexion at Auckland with the Auckland-Sydney Service, giving "through" air conveyance for passengers, mails and freight from Sydney to America. A Dutch (K.N.I.L.M.) Service operates weekly between Sydney and Batavia (Netherlands East Indies).

In January, 1941, the Government considered the renewal of the contracts of those services whose contracts expired on 26th January, 1941, and approved that new contracts be entered into with Airline Operators for a further period of twelve months from the 26th January, 1941.

Owing to the Censorship provisions the detailed paragraphs previously shown dealing with the services have been omitted.

4. **Statistical Summary.**—The collection and compilation of aircraft statistics were undertaken by this Bureau on 1st July, 1922. The following table gives a summary of operations for the five years ended 30th June, 1940:—

CIVIL AVIATION IN AUSTRALIA : SUMMARY.

Particulars.	1935-36.	1936-37.	1937-38.	1938-39.	1939-40.
Registered aircraft owners					
(a) No.	124	102	139	149	137
Registered aircraft(a) ..	228	214	286	296	288
Licensed pilots—(a)					
Private	714	744	937	1,096	(b) 1,225
Commercial ..	236	265	323	346	(b) 324
Licensed navigators(a) ..	22	29	47	59	(b) 85
Licensed aircraft radio telegraph operators(a) No.	8	9	23	75	(b) 92
Licensed ground engineers (a) No.	295	346	437	525	(b) 651
Aerodromes—(a)					
Government	63	72	74	71	73
Public	171	183	197	213	224
Government emergency grounds .. No.	148	151	153	147	141
Hours flown	62,479	84,010	113,647	121,935	120,133
Approx. mileage .. miles	5,819,751	8,731,612	12,291,570	14,098,615	12,822,751
Passengers carried—					
Paying No.	60,476	85,574	133,408	123,566	121,700
Non-paying	14,643	16,590	25,495	24,353	21,097
Total No.	75,119	102,164	158,903	147,919	142,797
Goods, weight carried lb.	442,407	822,724	1,169,207	1,734,644	1,770,738
Mails,	121,187	167,601	228,581	(c) 740,375	(c) 416,996
Accidents—					
Persons—killed .. No.	20	19	10	38	11
injured	6	14	4	15	6

(a) At 30th June. of oversea mail.

(b) Includes licences issued for New Guinea.

(c) Including gross weight

Separate particulars of flying over the Darwin-Singapore Section of the Imperial Airways route, included in the table above, are shown below:—

Particulars.	1935-36.	1936-37.	1937-38.	1938-39.	1939-40.
Hours flown .. No.	2,159	3,767	3,788	4,903	3,593
Miles flown	290,542	494,105	488,417	718,288	522,664
Passengers carried ..	177	351	522	1,112	1,504
Goods, weight carried lb.	8,564	17,582	28,080	103,948	79,190
Mails,	69,436	89,647	113,117	(a) 576,188	(a) 259,518

(a) Gross weight.

Preliminary figures relating to the operations of civil aircraft in Australia during 1940-41 will be found in the Appendix to this volume.

5. **New Guinea Activities.**—Since the discovery of gold in New Guinea in 1927, air transport has been introduced to the gold-fields as the most efficient means of communication and transport owing to the nature of the terrain of the country. Aviation has progressed considerably since 1927 and to-day air services operate to practically every part of New Guinea. The greatest activity is between Salamaua and Lae on the north-east coast of the mainland of New Guinea to Wau and Bulolo, the two main centres of the gold-fields. Wau and Bulolo are located inland about 70 miles by native track over very mountainous country, and the journey occupies about a week. The approximate time by air is 25 minutes.

All types of mining and dredging machinery, motor cars, trucks, horses, cattle, building and other heavy materials, and all the requirements of the European population of the gold-fields and of the native indentured labourers are carried by aircraft. The petrol required for the operation of motor transport on the gold-fields alone amounts to more than 12,000 gallons per month and this is also transported by air. During 1939-40 the average weight of cargo and mails carried per day was 29 tons.

The companies and persons operating in New Guinea and Papua are :—Guinea Airways Ltd., Bulolo Gold Dredging Ltd., Mandated Airlines Ltd., Stephens Aviation Ltd., K. Parer, Ray Parer and Madang Aerial Transport Co. W. R. Carpenter & Co. Ltd. operate a weekly service from Sydney to Port Moresby, Salamaua and Rabaul. Mails, official passengers and cargo are carried by Guinea Airways Ltd. and Mandated Airlines Ltd., under contract with the New Guinea Administration, between Salamaua and Lae, Bulolo, Wau, Surprise Creek, Madang, Wewak and intermediate centres.

The following table gives a summary of operations for the five years ended 30th June, 1940.

CIVIL AVIATION IN TERRITORY OF NEW GUINEA : SUMMARY.

Particulars.	1935-36.	1936-37.	1937-38.	1938-39.	1939-40.
Registered aircraft owners					
(a) No.	12	9	10	10	9
Registered aircraft(a) ..	38	34	40	47	43
Licensed pilots—(a)					
Private	5	4	12	13	(b)
Commercial	27	22	24	23	(b)
Licensed navigators(a) ..	1	..	2	3	(b)
Licensed ground engineers					
(a) No.	41	36	37	46	(b)
Aerodromes—(a)					
Government	15	18	21	24	30
Public	15	19	19	19	23
Government emergency landing grounds No.	6	8	6	11	13
Hours flown	18,114	16,371	15,445	15,626	13,814
Approximate mileage miles	1,486,983	1,466,355	1,560,179	1,456,154	1,253,632
Passengers carried—					
Paying No.	15,943	11,718	12,247	12,909	15,433
Non-paying	616	1,382	1,017	1,569	1,551
Total	16,559	13,100	13,264	14,478	16,984
Goods, weight carried lb.	21,883,413	24,441,860	25,574,028	27,063,912	23,499,629
Mails,	128,982	122,063	166,643	162,608	146,998
Accidents—					
Persons—killed No.	1	..	1	..	8
injured .. .. .	..	..	1	1	1

(a) At 30th June. (b) Not available.

Preliminary figures relating to the operations of civil aircraft in New Guinea during 1940-41 will be found in the Appendix to this volume.

G. POSTS, TELEGRAPHS AND TELEPHONES.

§ 1. General.

1. **The Commonwealth Postal Department.**—In previous issues of the Official Year Book some account is given of the procedure in connexion with the transfer to the Commonwealth Government of the postal, telegraph and telephone facilities of the separate States. (See Official Year Book No. 15, p. 601.)

Under the provisions of the Commonwealth Post and Telegraph Act 1901, the Commonwealth Postal Department was placed under the control of the Postmaster-General, being a responsible Minister. The Director-General of Posts and Telegraphs controls the Department under the Postmaster-General, whilst the principal officer in each State is the Deputy Director of Posts and Telegraphs.

2. **Postal Facilities.**—(i) *Relation to Area and Population.* The following statement shows the number of post offices, the area in square miles and the number of inhabitants to each post office (including non-official offices) in each State and in Australia at 30th June, 1940. In order to judge clearly the relative postal facilities provided in each State, the area of country to each office as well as the number of inhabitants per office should be taken into account. The returns given for South Australia in this and all succeeding tables include those for the Northern Territory, and the returns for the Australian Capital Territory are included in those for New South Wales.

**POSTAL FACILITIES : RELATION TO AREA AND POPULATION,
AT 30th JUNE, 1940.**

State.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aust.
Number of post offices (a) ..	2,525	2,583	1,233	787	615	508	8,251
Number of square miles of territory to each office in State ..	123	34	544	1,148	1,587	52	361
Number of inhabitants to each office	1,104	737	832	770	761	471	852
Number of inhabitants per 100 square miles	898	2,166	153	67	48	913	236

(a) Including "official," "semi-official," and "non-official" offices.

The foregoing table does not include "telephone" offices at which there is no postal business.

(ii) *Number of Offices.* The following table shows the number of post offices in each State for the years 1910, 1920, 1930, and 1940 :—

NUMBER OF POST OFFICES.

State.	At 31st December—		At 30th June—					
	1910.		1920.		1930.		1940.	
	Official and Semi-Official.	Non-Official. (a)	Official and Semi-Official.	Non-Official. (a)	Official and Semi-Official.	Non-Official. (a)	Official and Semi-Official.	Non-Official. (a)
New South Wales ..	483	1,954	464	2,129	445	2,231	440	2,085
Victoria ..	294	2,126	269	2,267	282	2,450	282	2,301
Queensland ..	200	1,180	199	1,073	207	1,046	196	1,037
South Australia ..	171	567	137	655	147	658	143	644
Western Australia ..	153	277	126	485	126	497	129	486
Tasmania ..	56	373	46	442	43	475	44	464
Australia ..	1,357	6,477	1,241	7,051	1,250	7,357	1,234	7,017

(a) Including offices previously designated as "Allowance" and "Receiving" Offices.

(iii) *Employees and Mail Contractors.* The number of employees and mail contractors in the Central Office and in each of the States at specified dates is given in the following table :—

POSTAL EMPLOYEES AND MAIL CONTRACTORS.

State.	At 31st December—		At 30th June—					
	1910.		1920.		1930.		1940.	
	Em- ployees.	Mail Con- tractors.	Em- ployees.	Mail Con- tractors.	Em- ployees.	Mail Con- tractors.	Em- ployees.	Mail Con- tractors.
Central Office ..	(a)	..	83	..	205	..	356	..
New South Wales ..	8,622	1,602	11,334	1,912	14,383	1,952	17,281	2,577
Victoria ..	7,043	848	7,962	1,089	10,709	1,175	13,605	1,645
Queensland ..	3,247	720	4,778	723	5,179	814	6,577	1,568
South Australia ..	1,905	268	2,679	427	3,954	414	4,013	333
Western Australia..	1,894	233	2,110	286	2,902	398	3,469	389
Tasmania ..	969	189	1,156	227	1,517	270	1,716	222
Australia ..	23,680	3,860	30,102	4,664	38,849	5,023	47,017	6,734

(a) Included in Victorian Staff.

3. *Gross Revenue, Postmaster-General's Department.—Branches.* The gross revenue (actual collections) in respect of each branch of the Department during each of the last five years is shown in the table hereunder :—

POSTMASTER-GENERAL'S DEPARTMENT : GROSS REVENUE.

Branch and Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
Postal—							
1935-36 ..	2,705	1,850	959	503	452	193	6,662
1936-37 ..	2,825	1,915	994	521	471	200	6,926
1937-38 ..	2,992	2,010	1,039	550	491	208	7,290
1938-39 ..	3,048	2,042	1,067	552	502	211	7,422
1939-40 ..	3,025	2,082	1,078	564	489	207	7,445
Telegraph—							
1935-36 ..	443	322	225	112	144	44	1,290
1936-37 ..	496	348	229	115	146	37	1,371
1937-38 ..	508	342	231	117	143	37	1,378
1938-39 ..	502	341	234	118	139	38	1,372
1939-40 ..	511	367	236	117	136	34	1,401
Wireless—							
1935-36 ..	141	118	35	39	22	11	366
1936-37 ..	163	136	44	45	27	14	429
1937-38 ..	185	156	52	51	33	16	493
1938-39 ..	198	152	59	53	36	18	516
1939-40 ..	207	161	67	56	39	19	549
Telephone—							
1935-36 ..	2,583	1,892	946	594	356	151	6,522
1936-37 ..	2,825	2,066	976	628	395	171	7,061
1937-38 ..	3,083	2,192	1,024	669	415	189	7,572
1938-39 ..	3,261	2,352	1,098	696	431	202	8,040
1939-40 ..	3,443	2,487	1,137	740	453	223	8,483
All Branches—							
1935-36 ..	5,872	4,181	2,165	1,249	974	399	14,840
1936-37 ..	6,309	4,465	2,243	1,309	1,039	422	15,787
1937-38 ..	6,768	4,700	2,346	1,387	1,082	450	16,733
1938-39 ..	7,009	4,887	2,458	1,419	1,108	469	17,350
1939-40 ..	7,186	5,097	2,518	1,477	1,117	483	17,878
Total revenue per capita—							
	£	£	£	£	£	£	£
1935-36 ..	2.20	2.27	2.23	2.11	2.18	1.73	2.20
1936-37 ..	2.34	2.41	2.28	2.20	2.30	1.82	2.32
1937-38 ..	2.48	2.52	2.34	2.32	2.35	1.92	2.43
1938-39 ..	2.55	2.61	2.44	2.36	2.40	1.98	2.50
1939-40 ..	2.59	2.70	2.47	2.45	2.40	2.02	2.56

Compared with the corresponding figures for the previous year, an increase of 3.0 per cent. is shown in the gross revenue earned. Increases in the several branches were as follows :—Postal 0.3 per cent., Telegraph 2.1 per cent., Wireless 6.3 per cent., and Telephone 5.5 per cent.

4. **Expenditure, Postmaster-General's Department.**—(i) *Distribution.* The following table shows, as far as possible, the distribution of actual expenditure on various items in each State during the year ended 30th June, 1940. The table must not be regarded as a statement of the working expenses of the Department, since items relating to new works, interest, etc. are included therein.

POSTMASTER-GENERAL'S DEPT. : DISTRIBUTION OF EXPENDITURE, 1939-40.

Particulars.	Central Office.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£	£
Expenditure from Ordinary Votes—								
Salaries and payments in the nature of salary ..	66,013	2,220,760	1,594,464	831,148	537,527	419,301	207,048	5,578,262
General expenses ..	11,694	190,749	133,470	43,543	38,252	26,204	11,885	455,803
Stores and material ..	2,804	77,147	51,942	26,085	9,505	13,104	6,500	187,087
Mail services ..	4,377,443	423,405	269,599	223,867	78,688	86,191	38,500	1,497,713
Engineering services (other than New Works) ..	78,109	1,357,033	949,018	462,122	314,723	263,870	144,041	3,568,916
Other services ..	59,559	..	..	..	..	..	..	59,559
Total ..	597,622	4,269,094	2,998,499	1,587,685	978,695	808,670	407,975	11,648,240
Pensions and retiring allowances ..	..	20,751	23,168	..	..	23,222	..	67,141
Rent, repairs, maintenance, fittings, etc. ..	..	28,421	32,902	14,900	13,182	7,623	3,278	100,306
Proportion of audit expenses ..	..	4,764	3,240	1,740	1,032	792	432	12,000
New Works—								
Telegraph, telephone and wireless ..	10,750	1,329,092	885,694	334,000	170,275	146,706	70,949	2,947,466
New Buildings, etc. ..	..	153,253	16,592	54,932	8,710	4,306	4,837	242,630
Other expenditure not allocated to States ..	3,458,022	..	..	..	..	..	..	3,458,022
	(b)							
Grand Total ..	4,066,394	5,805,375	3,960,095	1,993,257	1,171,894	991,319	487,471	18,475,805
	(c)							

(a) Orient Steam Navigation Company's Oversea Mail Contract and expenditure on air-mail services.
 (b) Particulars of apportionment to States not available. (c) Including expenditure not apportioned to States.

(ii) *Total, 1935-36 to 1939-40.* The next table gives the actual payments made, as shown by records kept for Treasury purposes in respect of the Postmaster-General's Department, for each of the last five years :—

POSTMASTER-GENERAL'S DEPARTMENT : EXPENDITURE.

	1935-36.	1936-37.	1937-38.	1938-39.	1939-40.
	£	£	£	£	£
Total Expenditure ..	14,424,388	15,622,255	17,135,560	18,873,934	18,475,805

The total expenditure decreased by 2.1 per cent. during 1939-40.

5. **Profit or Loss, Postmaster-General's Department.**—(i) *States, 1939-40.* The foregoing statement of gross revenue and expenditure represent actual collections and payments made and cannot be taken to represent the actual results of the working of the Department for the year. The net results for each branch in the several States, after providing for working expenses, depreciation and interest charges, including exchange, were as follows :—

POSTMASTER-GENERAL'S DEPARTMENT : PROFIT OR LOSS, 1939-40.

Branch.	Profit or Loss.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
		£	£	£	£	£	£	£
Postal ..	{ Profit Loss	802,552 ..	652,642 ..	308,840 ..	136,085 ..	74,904 ..	23,122 ..	1,998,145 ..
Telegraph ..	{ Profit Loss	27,286 ..	55,311 ..	8,496 ..	6,685 ..	6,779 ..	4,326 ..	108,283 ..
Wireless ..	{ Profit Loss	19,194 ..	16,785 ..	.. 7,906	12,964 ..	.. 18,835	.. 8,946	13,256 ..
Telephone ..	{ Profit Loss	822,377 ..	521,175 ..	247,609 ..	61,558 ..	3,075 ..	.. 16,913	1,638,881 ..
All Branches ..	{ Profit Loss	1,671,409 ..	1,245,913 ..	557,039 ..	216,692 ..	65,923 ..	1,589 ..	3,758,565 ..

After providing for depreciation, pensions and retiring allowances and interest on capital, the year 1939-40 closed with a surplus of £3,758,565. For the preceding year a profit of £3,625,371 was shown.

(ii) *Branches, 1935-36 to 1939-40.* The following statement gives particulars of the operating results of each branch for the period 1935-36 to 1939-40 :—

POSTMASTER-GENERAL'S DEPARTMENT : PROFIT OR LOSS, BRANCHES.

Year.	Branch Profits—				
	Postal.	Telegraph.	Wireless.	Telephone.	All Branches.
	£	£	£	£	£
1935-36..	1,948,385	64,993	86,184	884,423	2,983,985
1936-37..	2,055,963	79,791	87,718	1,117,458	3,340,930
1937-38..	2,024,561	73,020	82,211	1,283,684	3,533,476
1938-39..	2,105,208	51,617	76,054	1,392,492	3,625,371
1939-40..	1,998,145	108,283	13,256	1,638,881	3,758,565

6. **Capital Account.**—The appended statement shows particulars of the fixed assets of the Postmaster-General's Department at 30th June, 1940 :—

POSTMASTER-GENERAL'S DEPARTMENT : FIXED ASSETS, 30th JUNE, 1940.

Particulars.	Net Value, 1st July, 1939.	Capital Expenditure, 1939-40.	Gross Value, 30th June, 1940.	Less Deprecia- tion, &c. 1939-40. (a)	Net Value, 30th June, 1940.
	£	£	£	£	£
Telephone service plant (ex- clusive of trunk lines) ..	40,919,903	3,449,602	44,369,505	866,655	43,502,850
Trunk and telegraph service plant (aerial wires) ..	10,907,702	212,603	11,120,305	75,750	11,044,555
Telegraph service plant ..	726,032	30,919	756,951	7,110	749,841
Postal service plant ..	436,758	13,055	449,813	4,642	445,171
Wireless plant ..	562,576	40,505	603,081	11,417	591,664
Sites, buildings, furniture and office equipment ..	10,613,577	299,415	10,912,992	41,889	10,871,103
Miscellaneous plant ..	956,422	88,542	1,044,964	45,904	999,060
Total	65,122,970	4,134,641	69,257,611	1,053,367	68,204,244

(a) Including dismantled assets, depreciation written off, and assets transferred.

During the past quinquennium the value of the fixed assets has increased by 24.9 per cent., the net value at 30th June, 1935, being £54,627,080.

§ 2. Posts.

1. **Postal Matters Dealt With.**—(i) *Australia.* The following table gives a summary of the postal matter dealt with in Australia during the five years 1935-36 to 1939-40. Although mail matter posted in Australia for delivery therein is necessarily handled at least twice, only the number dispatched are included in the following table, which consequently gives the number of distinct articles handled :—

POSTAL MATTER DEALT WITH : AUSTRALIA.

Year.	Letters, Postcards, Letter-cards and Packets.		Newspapers.		Parcels.		Registered Articles other than Parcels.	
	Number (‘000 omitted).	Per 1,000 of Popula- tion.	Number (‘000 omitted).	Per 1,000 of Popula- tion.	Number (‘000 omitted).	Per 1,000 of Popu- lation.	Number (‘000 omitted).	Per 1,000 of Popu- lation.
POSTED WITHIN AUSTRALIA FOR DELIVERY THEREIN.								
1935-36 ..	775,469	114,869	129,290	19,152	8,606	1,275	6,814	1,009
1936-37 ..	792,869	116,519	123,034	19,550	8,811	1,295	7,144	1,046
1937-38 ..	825,128	119,704	138,129	20,039	9,072	1,316	7,439	1,079
1938-39 ..	826,243	120,717	139,635	20,157	9,056	1,307	7,474	1,079
1939-40 ..	834,113	119,295	138,900	19,866	9,065	1,296	7,780	1,113
TOTAL POSTAL MATTER DEALT WITH.								
1935-36 ..	832,685	123,344	150,755	22,331	9,058	1,342	7,539	1,117
1936-37 ..	853,676	125,455	156,123	22,943	9,264	1,362	7,950	1,164
1937-38 ..	889,771	129,082	162,682	23,601	9,572	1,389	8,489	1,231
1938-39 ..	903,090	130,367	165,362	23,871	9,585	1,384	8,371	1,208
1939-40 ..	881,910	126,131	157,677	22,551	9,484	1,356	8,512	1,218

(ii) *States.* The next table shows the postal matter dealt with in each State during the year 1939-40.

POSTAL MATTER DEALT WITH : STATES 1939-40.(a)

State.	Letters, Postcards, Letter-cards and Packets.		Newspapers.		Parcels.		Registered Articles other than Parcels.	
	Number (‘000 omitted).	Per 1,000 of Popula- tion.	Number (‘000 omitted).	Per 1,000 of Popula- tion.	Number (‘000 omitted).	Per 1,000 of Popula- tion.	Number (‘000 omitted).	Per 1,000 of Popula- tion.
POSTED FOR DELIVERY WITHIN AUSTRALIA.								
New South Wales	326,986	117,812	66,873	24,094	3,798	1,368	2,875	1,034
Victoria ..	245,264	129,798	28,713	15,195	1,843	975	2,219	1,174
Queensland ..	109,257	107,324	23,501	23,085	1,873	1,840	1,183	1,162
South Australia ..	62,694	103,784	7,819	12,944	753	1,247	637	1,054
Western Australia	57,835	124,044	6,779	14,540	673	1,443	561	1,203
Tasmania ..	32,077	134,424	5,215	21,854	125	524	305	1,278
Australia ..	834,113	119,295	138,900	19,866	9,065	1,296	7,780	1,113

POSTED FOR DELIVERY OVERSEAS.

New South Wales	9,497	3,422	2,097	756	106	38	180	65
Victoria ..	6,866	3,634	2,830	1,498	52	28	85	45
Queensland ..	1,908	1,874	523	514	13	13	36	35
South Australia ..	2,180	3,609	326	540	8	13	19	31
Western Australia	2,581	5,536	392	841	12	26	30	64
Tasmania ..	1,209	5,067	97	406	3	13	4	17
Australia ..	24,241	3,467	6,265	896	194	28	354	51

RECEIVED FROM OVERSEAS.

New South Wales	12,059	4,345	7,567	2,726	109	39	202	73
Victoria ..	5,817	3,078	1,838	973	67	35	99	52
Queensland ..	1,996	1,961	1,146	1,126	17	17	27	27
South Australia ..	1,149	1,902	677	1,121	11	18	14	23
Western Australia	1,946	4,174	1,071	2,297	17	36	32	69
Tasmania ..	589	2,468	213	893	4	17	4	17
Australia ..	23,556	3,369	12,512	1,789	225	32	378	54

(a) See explanation in paragraph (i).

2. *Value-Payable Parcel Post.*—(i) *General.* The Postal Department undertakes to deliver registered articles sent by parcel post within Australia, or between Papua or Nauru and Australia, to recover from the addressee on delivery a specified sum of money fixed by the sender, and to remit the sum to the sender by money order, for which the usual commission is charged. The object of the system is to meet the requirements of persons who wish to pay at the time of receipt for articles sent to them, also to meet the requirements of traders and others who do not wish their goods to be delivered except on payment.

(ii) *Summary of Business.* The next statement gives particulars regarding the value-payable parcels posted in each State for the years 1935-36 to 1939-40:—

VALUE-PAYABLE PARCEL POST: SUMMARY OF BUSINESS.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
NUMBER OF PARCELS POSTED.							
	No.	No.	No.	No.	No.	No.	No.
1935-36 ..	324,800	39,700	192,539	20,340	76,946	2,023	656,348
1936-37 ..	326,045	35,510	186,439	20,367	75,068	1,573	645,002
1937-38 ..	328,459	34,681	184,080	20,592	70,719	1,168	639,699
1938-39 ..	332,419	36,000	175,376	20,596	67,852	849	633,092
1939-40 ..	346,327	60,417	180,215	22,697	68,883	670	679,209
VALUE COLLECTED.							
	£	£	£	£	£	£	£
1935-36 ..	389,595	55,577	236,608	22,347	81,538	2,597	788,262
1936-37 ..	398,582	50,529	230,656	22,343	84,382	2,111	788,603
1937-38 ..	395,969	48,250	232,797	24,124	78,196	1,591	780,927
1938-39 ..	405,844	50,224	226,409	22,962	76,323	1,143	782,905
1939-40 ..	417,046	88,225	232,873	27,844	72,250	831	839,069

REVENUE INCLUDING POSTAGE, COMMISSION ON VALUE, REGISTRATION AND MONEY ORDER COMMISSION.

	£	£	£	£	£	£	£
1935-36 ..	43,285	5,334	24,830	2,546	8,775	242	85,012
1936-37 ..	43,214	4,761	25,081	2,448	8,666	191	84,361
1937-38 ..	41,958	4,672	23,816	2,507	8,102	139	81,194
1938-39 ..	45,097	4,867	24,881	2,587	8,207	102	85,741
1939-40 ..	45,702	8,566	24,741	2,792	7,382	76	89,259

The number and value of parcels forwarded in New South Wales and Queensland are much higher than in any of the other States, although the system has also found favour in Western Australia. These three States have the largest areas, and consequently more people at long distances from business centres who avail themselves of the value-payable system. Although South Australia also has a large area, the population of that State is, comparatively, not widely spread.

3. *Sea-borne Mail Services.*—(i) *General.* In earlier issues of this work particulars of sea-borne mail services have been included, but owing to the restrictions of space the insertion of this information terminated with Official Year Book No. 22.

(ii) *Amounts of Subsidies Paid.* The following table shows the amounts of subsidies paid by the Postal Department for ocean and coastal mail services during the year ended 30th June, 1940:—

MAIL SUBSIDIES: OCEAN AND COASTAL SERVICES, 1939-40.

Service.	Orient S.N. Co.	Queens- land Ports.	South Australian Ports.	Western Australian Ports.	Tas- manian Ports.
	£ Stg.	£	£	£	£
Annual subsidy ..	137,913	975	3,800	5,500	54,379

4. **Total Cost of Carriage of Mails.**—During 1939-40 the total amount paid for the carriage of mails, as disclosed by the Profit and Loss Account of the Postal Branch, was £1,454,021. Details appear hereunder :—

CARRIAGE OF MAILS : TOTAL COST, 1939-40.

Inland Mails.		Non-Contract Vessels.	Overland and Sea Transit.	Coastwise Mails.	Mails to Europe. (a)	Air Mails.	Tasmanian Subsidy.	Total.
By Road.	By Railway.							
£	£	£	£	£	£	£	£	£
553,652	461,730	35,529	3,586	10,886	119,106	239,532	30,000	1,454,021

(a) Orient contract.

5. **Transactions of the Dead Letter Offices.**—The table hereunder shows the number of letters, postcards and letter-cards, and packets and circulars, including Inland, Interstate and International, dealt with by the Dead Letter Offices in 1939-40, and the methods adopted in the disposal thereof :—

DEAD LETTER OFFICES : TRANSACTIONS, 1939-40.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
LETTERS, POSTCARDS AND LETTER-CARDS.							
Returned to writers or delivered ..	No. 518,445	No. 262,846	No. 164,267	No. 87,870	No. 116,539	No. 58,032	No. 1,207,999
Destroyed in accordance with Act ..	75,400	30,682	13,104	8,874	3,958	2,580	134,598
Returned to other States or Countries as unclaimed ..	52,076	12,239	3,169	2,535	5,100	984	76,103
Total ..	645,921	305,767	180,540	99,279	125,597	61,596	1,418,700
PACKETS AND CIRCULARS.							
Returned to writers or delivered ..	199,893	136,691	260,369	11,887	12,289	43,914	665,043
Destroyed in accordance with Act ..	23,041	22,087	11,856	663	2,138	1,488	61,273
Returned to other States or Countries as unclaimed ..	11,614	4,827	115	1,881	224	342	19,003
Total ..	234,548	163,605	272,340	14,431	14,651	45,744	745,319
Grand Total (letters, packets, etc.) ..	880,469	469,372	452,880	113,710	140,248	107,340	2,164,019

During 1939-40 money and valuables to the amount of £93,486 were found in postal articles sent to the Dead Letter Office.

6. **Money Orders and Postal Notes.**—(i) *General.* The issue of money orders and postal notes is regulated by Sections 74-79 of the Post and Telegraph Act 1901. A money order may be issued for payment of sums up to £20 within Australia, and not

exceeding £40 (in some cases £20, and in Mauritius £10) in places abroad. A postal note, which is payable only within Australia and in Papua, cannot be issued for a larger sum than twenty shillings.

(ii) *States, 1939-40.* Particulars regarding the business transactions in each State for 1939-40 are given hereunder :—

MONEY ORDERS AND POSTAL NOTES : TRANSACTIONS, 1939-40.

State.	Value of Money Orders Issued.	Value of Money Orders Paid.	Net Money Order Commission Received.	Value of Postal Notes Issued.	Poundage Received on Postal Notes.
	£	£	£	£	£
New South Wales ..	8,964,202	9,092,460	44,713	3,489,945	79,390
Victoria ..	3,636,028	3,892,846	21,224	2,232,187	54,016
Queensland ..	2,876,188	2,702,204	19,483	940,426	21,452
South Australia ..	1,168,065	1,092,054	6,039	536,293	12,757
Western Australia ..	1,534,201	1,440,178	9,191	488,473	10,823
Tasmania ..	686,153	638,548	3,683	208,652	4,390
Australia ..	18,864,837	18,858,290	104,333	7,895,976	182,828

(iii) *Australia, 1935-36 to 1939-40.* The next table shows the number and value of money orders and postal notes issued and paid in Australia from 1935-36 to 1939-40 :—

MONEY ORDERS AND POSTAL NOTES : TRANSACTIONS, AUSTRALIA.

Year.	Money Orders.				Postal Notes.			
	Issued.		Paid.		Issued.		Paid.	
	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.
	'000.	£'000.	'000.	£'000.	'000.	£'000.	'000.	£'000.
1935-36 ..	2,968	16,303	2,938	16,260	21,083	7,221	21,103	7,222
1936-37 ..	3,066	17,098	3,057	17,105	20,622	7,348	20,538	7,313
1937-38 ..	3,191	17,959	3,175	17,935	21,426	7,706	21,375	7,692
1938-39 ..	3,239	18,349	3,254	18,548	21,942	7,926	21,966	7,934
1939-40 ..	3,325	18,865	3,247	18,858	21,724	7,896	21,688	7,888

(iv) *Classification of Money Orders Issued and Paid.* (a) *Money Orders Issued.* The next table shows the number and value of money orders issued during 1939-40, classified according to the country where payable :—

MONEY ORDERS ISSUED : COUNTRY WHERE PAYABLE, 1939-40.

Where Issued.	Where Payable.				Total.
	In Australia.	In New Zealand.	In United Kingdom.	In Other Countries.	
NUMBER.					
Australia	3,169,344	18,596	89,598	47,716	3,325,254
VALUE.					
Australia	£ 18,544,943	£ 38,405	£ 156,050	£ 125,439	£ 18,864,837

(b) *Money Orders Paid.* The number and value of money orders paid during 1939-40, classified according to the country where issued, are given hereunder:—

MONEY ORDERS PAID : COUNTRY OF ISSUE, 1939-40.

Where Paid.	Where Issued.				Total.
	In Australia.	In New Zealand.	In United Kingdom.	In Other Countries.	
NUMBER.					
Australia	3,141,550	47,369	30,742	27,009	3,246,670
VALUE.					
Australia	£ 18,525,465	£ 125,424	£ 117,415	£ 89,986	£ 18,858,290

In the tables above, money orders payable or issued in foreign countries which have been sent from or to Australia through the General Post Office in London are included in those payable or issued in the United Kingdom.

(v) *Postal Notes Paid.* The following table shows the number and value of postal notes paid in each State during 1939-40. Particulars regarding the number and value of postal notes issued and paid in each of the last five years have been given previously.

POSTAL NOTES PAID : STATE OF ISSUE, 1939-40.

Issued in—	Postal Notes Paid in—						
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
NUMBER.							
Same State ..	'000. 7,785	'000. 3,899	'000. 2,000	'000. 899	'000. 1,055	'000. 429	'000. 16,067
Other States ..	825	621	801	117	450	2,807	5,621
Total ..	8,610	4,520	2,801	1,016	1,505	3,236	21,688
VALUE.							
Same State ..	£'000. 2,976	£'000. 1,481	£'000. 760	£'000. 345	£'000. 406	£'000. 152	£'000. 6,120
Other States ..	307	242	261	47	78	833	1,768
Total ..	3,283	1,723	1,021	392	484	985	7,888

The number and value of postal notes paid in Australia during the year showed decreases of 1.3 per cent. and 0.6 per cent. respectively on the corresponding figures for 1938-39.

§ 3. Telegraphs.

1. *General.*—(i) *Development of System.* A review of the development of the Telegraph Services in Australia appears in Official Year Book No. 15, p. 625. During the past few years substantial improvements in both the speed and grade of telegraph service throughout Australia have been effected, the entire system being subjected to intensive reorganization.

(ii) *External Circulation or Routing of Traffic.* The external circulation system of the Australian telegraph service has been considerably modified, direct communication having been established between cities and towns which formerly were served through intermediate repeating centres. The reorganization has eliminated the loss of time in transit, improved the grade of service, and led to economy as regards the labour formerly required in manual re-transmission. As a result of the reorganization there are now only four repeating centres, nineteen centres having been abolished.

(iii) *Supra-acoustic Carrier Wave System.* This system which permits a number of messages to be transmitted simultaneously over the one pair of wires is now in operation between Perth and Adelaide, Adelaide and Melbourne, Melbourne and Sydney, and Sydney and Brisbane. There are now 41,158 miles of one-way telegraph carrier channels in operation.

(iv) *Voice-Frequency Telegraph Carrier System.* This system, which enables a number of telegraph channels to be superposed on a single telephone channel by employing frequencies from 420 to 2,460 cycles per second, was introduced between Sydney and Tamworth. Between these two points 18 duo-directional channels have been provided by adopting the voice-frequency principle, equivalent to 9,360 miles of uni-directional channels. This system has now been extended to the following routes:—Sydney-Canberra, Sydney-Wagga Wagga, Perth-Kalgoorlie, Brisbane-Townsville and Adelaide-Port Augusta. In view of its service and economic advantages, extensions to other main telegraph routes are contemplated.

(v) *Direct Telegraph Communication over Great Distances.* The telegraph system in Australia provides direct communication between many places separated by great distances as indicated in the following examples:—Sydney-Perth, 2,695 miles; Perth-Wyndham, 1,933 miles; Brisbane-Thursday Island, 1,775 miles; Melbourne-Brisbane, 1,246 miles; Brisbane-Cairns, 1,056 miles; Brisbane-Cloncurry, 1,215 miles; Adelaide-Perth, 1,627 miles; Melbourne-Perth, 2,104 miles; Adelaide-Darwin, 1,940 miles; and Sydney-Adelaide, 1,068 miles. These direct channels provide a speedy service between the centres named, the average time involved in the transmission of a telegram being ten minutes.

(vi) *Machine Telegraphy.* In order to speed up transmission, machine printing telegraph systems have been introduced between capital cities and between important country centres. Murray multiplex machine apparatus is in operation between Sydney and Melbourne, Sydney and Brisbane, Sydney and Adelaide, Sydney and Perth, Sydney and Canberra, Sydney and Lismore, Sydney and Newcastle, Sydney and Wagga Wagga, Melbourne and Brisbane, Melbourne and Adelaide, Melbourne and Perth, Melbourne and Canberra, Adelaide and Perth, Brisbane and Rockhampton, and Brisbane and Townsville. These provide telegraph outlets which permit the carriage of very heavy loads with a minimum transit time. The operation of the apparatus has been steadily improved, and the system now gives a high output. Between Melbourne and Mildura, Melbourne and Launceston, Sydney and Tamworth, Brisbane and Toowoomba, Brisbane and Mackay, Perth and Fremantle, Perth and Kalgoorlie, and Adelaide and Darwin, start-stop telegraph printing systems are in operation.

(vii) *Phonogram Service.* Telephone subscribers may now telephone telegrams for onward transmission, or have messages telephoned to them. The fee for the service is small, and the innovation means, in effect, that the telegraph system is brought into the home of every telephone subscriber. The number of telegrams lodged by telephone during the year ended 30th June, 1940, was 3,234,093 or 18.3 per cent. of the total lodgments, and the popularity of this service is growing.

(viii) *Radiograms within Australia.* On 1st May, 1929, the rates for radiograms between Flinders Island, Wave Hill, Brunette Downs and other places within Australia were reduced to 1½d. per word with a minimum charge of two shillings. Communication at these rates was extended to Lord Howe Island in August, 1929.

(ix) *Pedal Wireless Stations.* A number of privately operated wireless transceiver stations have been established at various centres throughout the Commonwealth, enabling telegrams to be exchanged with departmental telegraph offices. These stations are sponsored by the Australian Aerial Medical Services, and communicate by wireless with base stations established at Wyndham, Port Hedland, Cloncurry, Kalgoorlie, Broken Hill, Yunta, Nonning, Dalwallinu, Wave Hill, Camooweal, Port Lincoln and Alice Springs. The radiogram rates of 1½d. per word with a minimum charge of two shillings apply to telegrams exchanged with these stations.

(x) *Picturegram Service.* During the year ended 30th June, 1941, 351 picturegrams were transmitted between Sydney and Melbourne, the revenue being £862. Any kind of picture of document may be accepted for transmission, the charges varying from 30s. to 67s. 6d. according to the size of the picture or document and the grade of transmission desired.

(xi) *Oversea Phototelegram Service.* An oversea phototelegram service, "via Beam," was inaugurated in October 1934, permitting the transmission in either direction of facsimiles between Sydney or Melbourne and England, of dimensions up to a maximum of ten inches by seven inches. The tariff for this service was reduced on 1st January, 1940, and the charges are now calculated at the rate of one shilling and four pence per square centimetre with a minimum charge of £10 as for 150 square centimetres.

(xii) *Ornamental Telegram Forms.* The use of appropriately designed telegram forms for conveying Christmas and New Year greetings continues to increase in volume and popularity. In 1940, 453,886 Greeting Telegrams were sent, an increase of 214.9 per cent. on the number (144,102) sent in 1929, the year of inception of the service.

During 1933-34 telegram forms of special design and attractive colouring in connexion with Mothers' Day messages, birthday greetings and congratulatory telegrams were placed at the disposal of the public. The popularity of these facilities is indicated by the increase in the number of Mothers' Day telegrams from 16,091 in 1934 to 84,713 in 1941. Complete statistics are not available in respect of birthday greetings and congratulatory messages, but it is estimated that the number of telegrams in these categories is approximately 750,000 annually. In 1936 two additional greeting facilities employing ornamental telegram stationery were introduced, one for the conveyance of social greetings and the other for use during Easter-tide. The number of Easter Greeting telegrams in 1935, prior to the introduction of the special form for the occasion, was 4,164. This figure increased to 23,062 in 1941. Extensive use is also being made of the Social telegram service, which is popular for conveying "bon voyage" greetings and for making social engagements.

(xiii) *Private Wire Teleprinter and Printergram Services.* In conformity with its policy of placing at the service of the public new developments in communication, the department has now introduced the teleprinter service. This may be briefly defined as typewriting over electrical circuits, teleprinters being similar in performance to typewriters, except that the keyboard and distant printer are electrically connected by means of a telegraph line.

This facility combines the speed of the telegraph and the flexibility and personal touch of the telephone with the accuracy and permanency of the printed word. It affords the great advantage of direct and instantaneous communication between points within the same building or separated by distances up to thousands of miles. Communications are automatically produced at both ends exactly as sent, and information may be dispatched with the utmost privacy even in exposed situations where other means are unsuitable. It affords two-way communication at speeds up to 60 words a minute.

Printergram services connecting any business premises with the local telegraph office for the transmission and reception of telegrams are also available. This saves time and labour, while providing a permanent record of each transaction.

One hundred and twelve private wire services employing 185 teleprinter units have already been installed, including a stock ticker service enabling the simultaneous communication of information from a single transmitting unit located in the Sydney Stock Exchange to separate machines installed in the offices of city stock-brokers.

(xiv) *Telegraph Tariffs.* Important modifications of the telegraph tariff structure were introduced on 10th June, 1940. Under the amending Post and Telegraph Rates Act of 1940 ordinary telegrams between offices not more than 15 miles apart are subject to a minimum charge of 9d. for 14 words and 1d. for each additional word, irrespective of whether the telegraph offices of origin and destination are in the same State. Ordinary telegrams between offices which are more than 15 miles apart are subject to a uniform charge of 1s. as for 14 words and 1d. for each additional word, irrespective of State boundaries. Double rates are applicable to urgent telegrams. Ordinary charges, instead of double rates as previously, are applied to ordinary telegrams lodged for transmission on Sundays, Christmas Day, Good Friday or after certain hours on other days. The prescribed press rates have also been extended to telegrams containing news intended for broadcasting.

2. *Telegraph Offices, Length of Lines and Wire.*—(i) *States.* The following table shows the number of telegraph offices and the length of telegraph lines and of telegraph wire available for use in each State at 30th June, 1940 :—

TELEGRAPH OFFICES AND LINES : STATES, 30th JUNE, 1940.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Number of offices ..	3,072	2,474	1,590	839	931	544	9,450
Length of wire (miles)—							
Telegraph purposes only	12,237	7,615	14,774	6,377	8,485	641	50,129
Telegraph and telephone purposes ..	63,223	19,121	37,072	13,057	10,071	1,448	143,992
Length of line (miles)—							
Conductors in Morse cable	2,792	1,417	490	..	181	24	4,904
Conductors in submarine cable (statute miles) ..	4,937	422	339	226	193	624	6,741
Pole routes (miles) ..	33,708	19,185	14,779	14,740	12,040	3,516	97,968

A total length of 194,121 miles of wire is available for telegraph purposes, of which 143,992 miles are also used for telephone purposes. Compared with those for the previous year, the figures show an increase of 2,203 miles (1.1 per cent.) in the total length and an increase of 2,632 miles (1.8 per cent.) in the length of line used for both telegraph and telephone purposes.

(ii) *Summary for Australia.* The following table gives corresponding particulars for Australia for the years 1936 to 1940 :—

TELEGRAPH OFFICES AND LINES : AUSTRALIA, AT 30th JUNE.

Particulars.	1936.	1937.	1938.	1939.	1940.
Number of offices	9,252	9,320	9,359	9,389	9,450
Length of wire (miles)—					
Telegraph purposes only ..	56,292	55,196	51,027	50,558	50,129
Telegraph and telephone purposes ..	113,277	121,788	134,974	141,360	143,992
Length of line (miles)—					
Conductors in Morse cable ..	4,815	4,863	4,813	4,816	4,904
Conductors in submarine cable (statute miles) ..	5,193	5,421	5,693	5,747	6,741
Pole routes (miles)	97,850	96,917	97,120	97,311	97,968

3. Number of Telegrams Dispatched.—(i) *States*. The following table shows the number of telegrams dispatched in each State during 1939-40 according to the class of message transmitted :—

TELEGRAMS DISPATCHED(a) : STATES, 1939-40.

Class of Message Transmitted within Australia.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	No.	No.	No.	No.	No.	No.	No.
Paid and Collect—							
Ordinary ..	5,160,761	3,577,639	2,740,563	1,055,544	1,604,143	306,182	14,444,832
Urgent ..	202,148	75,491	82,281	39,418	37,902	9,672	446,912
Press ..	177,934	82,925	69,828	27,709	38,542	31,564	428,502
Lettergram ..	61,615	37,688	39,749	25,951	70,200	15,405	250,608
Radiogram ..	21,874	1,921	18,765	8,564	14,541	2,588	68,253
Total ..	5,624,332	3,775,664	2,951,186	1,157,186	1,765,328	365,411	15,639,107
Unpaid—							
Service ..	198,074	110,968	88,303	37,145	54,774	21,712	510,976
Shipping ..	4,547	23,617	2,958	1,225	3,514	901	36,762
Meteorological ..	371,484	172,291	331,492	273,797	227,291	82,764	1,459,119
Total ..	574,105	306,876	422,753	312,167	285,579	105,377	2,006,857
Grand Total ..	6,198,437	4,082,540	3,373,939	1,469,353	2,050,907	470,788	17,645,964

(a) Including radiogram traffic with islands adjacent to Australia and to ships at sea.

(ii) *Australia*. The number of telegrams dispatched to destinations within Australia during each of the last five years is given hereunder :—

TELEGRAMS DISPATCHED : AUSTRALIA, 1935-36 TO 1939-40.

Telegrams.	1935-36.	1936-37.	1937-38.	1938-39.	1939-40.
Number(a) ..	15,508,843	16,268,416	16,965,336	17,251,759	17,645,964

(a) See Note (a) above.

The increase in the volume of telegraph business has averaged 427,424 messages in each of the past five years.

4. *Letter-telegrams*.—Letter-telegrams are accepted at any hour at telegraph offices which are open for business after 7 p.m., subject to the condition that delivery is effected by posting at the letter-telegram office of destination.

5. *Telegraph Density*.—The latest statistics available disclose that, on a population basis, Australia now occupies a pre-eminent position in the world in the use of the telegraph service, with an average of 2.6 messages annually per head of population. The United

States of America has the second highest average of 1.6, followed by the United Kingdom with 1.3 per head of population. The following table gives the figures for the more important countries :—

TELEGRAPH DENSITY STATISTICS : PRINCIPAL COUNTRIES.

Country.	Percentage of Telegraph to Total Wire Communication.	Telegraph Messages per Head of Population.
Australia	2.9	2.6
Belgium	1.8	0.7
Canada	0.5	1.1
Denmark	0.2	0.4
Finland	0.3	0.2
France	2.8	0.6
Germany	0.6	0.3
United Kingdom	2.6	1.3
Hungary	1.3	0.3
Japan	1.3	0.9
Netherlands	0.8	0.4
Norway	1.2	1.2
Poland	0.7	0.1
Sweden	0.4	0.7
Switzerland	0.6	0.4
Union of South Africa	2.2	0.7
United States of America	0.7	1.6

§ 4. Oversea Cable and Radio Communication.

1. *First Cable Communication with the Old World.*—In earlier issues of the Official Year Book will be found a detailed account of the connexion of Australia with the Old World by means of submarine cables. (See No. 6, p. 770.)

2. *General Cable Service.*—Descriptions of the various cable services between Australia and other countries are given in Official Year Book No. 22, pp. 335–6.

3. *Merging of Cable and Wireless Interests.*—Following upon the recommendations of the Imperial Wireless and Cable Conference in London in 1928 which examined the situation that had arisen as the result of the competition of the Beam wireless with the cable services, the Imperial and International Communications Limited (since renamed Cable and Wireless Ltd.) was formed and took over the operations of the Pacific Cable Board and the control of the Eastern Extension Cable Company and the Marconi Wireless Company. Further particulars in relation to wireless services will be found in par. 5 of this section and in § 6, Radio Telegraphy and Telephony.

4. *Oversea Cable and Radio Traffic.*—(i) *States.* The number of telegrams received from and dispatched overseas in each State during 1939–40 is given hereunder :—

INTERNATIONAL TELEGRAMS : STATES, 1939–40.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number received ..	396,440	223,992	25,793	28,200	28,160	7,837	710,422
„ dispatched	360,670	238,334	27,920	30,981	43,166	8,551	709,622
Total ..	757,110	462,326	53,713	59,181	71,326	16,388	1,420,044

(ii) *Australia*. The following table shows the number of international telegrams received from and dispatched overseas in Australia during 1938-39 and 1939-40:—

INTERNATIONAL TELEGRAMS.—AUSTRALIA.

Messages.	Number Received.		Number Dispatched.		Total Number Received and Dispatched.	
	1938-39.	1939-40.	1938-39.	1939-40.	1938-39.	1939-40.
Number ..	716,007	710,422	745,754	709,622	1,461,761	1,420,044

5. *Cable and Beam Wireless Rates.*—(i) *Ordinary Messages*. As from 25th April, 1938, the Cable and Beam Wireless rates per word for telegrams exchanged between Australia and British Empire Countries were reduced to the following levels:—Urgent, 2s. 6d.; Ordinary 1s. 3d.; C.D.E. (5 letter code), 10d., (minimum 5 words); Deferred, 7½d.; (minimum 5 words); Daily Letter Telegram, 5d., (minimum charge 10s. 5d. as for 25 words). Where, however, the charges between Australia and certain Empire countries (e.g., New Zealand, Fiji and some Pacific Islands) were below these levels, the rates were unaltered. No change was effected in the rates for traffic exchanged between Australia and foreign countries.

The following are the ordinary rates at present operating in regard to traffic with the principal countries, other than members of the British Empire:—

INTERNATIONAL TELEGRAM RATES.

To—	Rate per Word and Route.	
	Via Cable.	Via Beam.
European Countries	2s. 6d. to 2s. 7d.	1s. 11½d. to 2s. 5½d.
Asiatic Countries	2s. 5d. to 4s. 7d.	.. .. .
Africa	2s. 6d. to 5s. 6d.	2s. 2½d. to 2s. 11d.
United States of America	2s. 4d. to 2s. 8d.	2s. 1½d. to 2s. 5d.
Central America	3s. 2½d. to 4s. 4½d.	2s. 11½d. to 4s. 4½d.
West Indies	3s. 0d. to 5s. 1d.	2s. 8½d. to 4s. 11d.
South America	3s. 9d. to 5s. 9d.	3s. 8d. to 5s. 2½d.

(ii) *Deferred Telegrams (via Cable or Beam)*. Under this system a reduction of 50 per cent. in the ordinary charge for international telegrams is made under certain conditions. Deferred telegrams are transmitted after ordinary rate telegrams and ordinary press telegrams have been disposed of.

(iii) *Daily Letter Telegrams*. The daily letter telegram service was inaugurated in September, 1923, between Australia and Great Britain and Canada, later being extended to most countries in the British Empire and in Europe, to the United States of America and to certain other places. The charges are based on one-third of the tariff per word for ordinary messages, subject to a minimum charge as for 25 words. These messages are delivered on the morning of the second day following that of lodgment.

(iv) *Night Letter Telegrams*. A night letter telegram service was introduced between Australia and New Zealand on 1st May, 1924, and was extended to Fiji on 1st December, 1924. The minimum charge for messages is fixed as for 25 words, the rates being— to New Zealand, 3s. 9d. minimum, 2d. for each additional word beyond 25; Suva, 5s. 10d. minimum, 3d. for each additional word; other places in Fiji, 7s. 4d. minimum and 4d. for each additional word. Night letter telegrams are delivered on the morning following the day of lodgment.

(v) *Oversea Press Telegrams*. The rate on ordinary press telegrams exchanged with Great Britain prior to 15th April, 1939, was 4d. per word and on deferred press 3d. per word. As from this date a uniform tariff of 2½d. a word is applied uniformly to all Empire countries except Sudan. In all cases where the reduced rate applies the deferred press service has been abolished.

(vi) *Social Greetings Telegram Service*. As from 1st May, 1939, a social greeting service was introduced between Australia and Empire points. The minimum charge for messages is 5s. for thirteen words, the indicator GLT being counted and charged

for as one word. A charge of 5d. is made for each additional word. The text of such telegrams are restricted to messages of a social and greeting character. This service replaces the special Christmas, Easter and Jewish New Year greeting telegram service previously available to Empire points. These facilities are also available, on payment of the prescribed rates, to foreign countries which admit the service.

(vii) *De-Luxe Telegram Service.* A de-luxe telegram service has been established between Australia and certain of the more important oversea countries whereby, on payment of an additional fee of sixpence per telegram, the message will be delivered to the addressee on an ornamental form enclosed in a decorative envelope.

§ 5. Telephones.

1. *Telephone Services.*—(i) *Mileage in Australia.* The following table shows the mileage of lines for telephone purposes, giving trunk lines separately, at 30th June, in each of the years 1937 to 1940:—

TELEPHONE LINES : AUSTRALIA AT 30th JUNE.

Particulars.	1937.	1938.	1939.	1940.
Ordinary Lines—				
Conduits duct miles	8,546	9,664	10,817	11,919
" route "	5,869	6,942	8,082	9,179
Conductors in aerial and underground cables miles	892,795	941,816	983,756	1,053,242
Working conductors in cables for junction circuits, not included above				
loop mileage	77,889	84,437	102,649	108,649
Open conductors single wire "	425,857	428,106	434,932	433,605
Trunk Lines—				
Telephone trunk lines only .. miles	224,447	218,146	220,687	219,880
Telegraph and telephone purposes ..	121,788	134,974	141,360	143,992

(ii) *Comparison with Other Countries.* During 1939-40 the total number of telephones added to the Post office system was 29,092 compared with 31,821 in 1938-39. The rate of progress was satisfactory bearing in mind the abnormal conditions which have prevailed. With an average of 98 telephones per 1,000 of population, Australia continues to hold seventh place amongst the countries of the world in respect of telephone density. The average length of wire per instrument in Australia is 4½ miles.

(iii) *Trunk Line System.* Good progress is being made with the laying of an underground trunk line cable from Sydney to Newcastle and Maitland, a distance of 124 miles, in order to meet the continually increasing development of this important route. The provision of a similar cable between Melbourne and Seymour (61 miles) is also proceeding, this being a section of the Sydney-Melbourne route. Both cables are of special design and will provide several communication channels over each circuit within the cable.

Many additional trunk lines, including 35 carrier-wave systems were brought into use during the year. One hundred and sixty-nine carrier wave systems are now in operation, yielding 316 channels of an aggregate length of 78,518 miles.

Despite the installation of the Sydney-Melbourne route of the special 12-channel system, referred to in the previous issue of the Official Year Book, thus increasing the total channels in this group to 30, additional circuits will be required in the near future to cater for the rapidly increasing public demand for telephone communication between those cities. Plans are being formulated covering not only this route but also other main interstate routes, including the submarine cable between the Mainland and Tasmania, where the business is growing at a high rate.

The new semi-auto positions at the Main Trunk Exchange, Melbourne, on which channels connecting other capital cities are terminated, have been brought into service. The additional facilities and operating aids incorporated in the equipment have already demonstrated their value in disposing of the ever-increasing volume of interstate telephone business. The installation of the remaining positions is proceeding satisfactorily.

(iv) *Automatic Exchanges.* The plan to convert the metropolitan network to automatic working was advanced appreciably during 1939-40 when 14 new exchanges of this type were installed. At 30th June, 1940, there were 96 automatic exchanges in the metropolitan areas and 105 in country districts to which 368,755 telephones were connected, representing 53 per cent. of the number in use in Australia.

(v) *Rural Automatic Exchanges.* The establishment of automatic switching units which have been designed to meet the special needs of rural communities is advancing steadily. Twenty-three new exchanges were provided during the year and at 30th June, 1940, 101 of these units were in service. Work is proceeding to enable a further 55 exchanges to be established.

(vi) *Summary for States.* Particulars relating to the telephone service in each State for the years ended 30th June, 1938 to 1940, will be found in the following table :—

TELEPHONE SERVICES : SUMMARY.

Particulars.	Year (30th June).	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Exchanges ..	1938	2,004	1,682	1,029	569	652	355	6,291
	1939	2,010	1,680	1,053	579	653	358	6,333
	1940	2,016	1,685	1,075	584	645	357	6,362
Telephone Offices (in- cluding Exchanges)	1938	3,036	2,356	1,519	820	903	510	9,144
	1939	3,040	2,358	1,517	829	907	509	9,160
	1940	3,043	2,379	1,541	833	910	511	9,217
Lines connected ..	1938	181,458	143,657	58,626	43,307	24,968	13,482	465,498
	1939	189,915	150,570	61,650	45,224	26,032	14,144	487,535
	1940	197,046	157,081	64,120	46,767	26,903	14,695	506,612
Instruments con- nected	1938	244,590	198,761	77,929	57,630	34,210	17,055	630,175
	1939	257,246	208,230	82,226	60,451	35,830	18,013	661,996
	1940	268,216	218,128	85,847	62,788	37,227	18,882	691,088
(a) Subscribers' in- struments	1938	238,283	194,451	75,122	55,874	32,807	16,170	612,707
	1939	250,511	203,668	79,293	58,512	34,380	17,098	643,462
	1940	261,185	213,395	82,790	60,801	35,717	17,998	671,886
(b) Public tele- phones	1938	3,941	2,506	1,726	906	904	549	10,532
	1939	4,223	2,573	1,775	1,017	926	562	11,076
	1940	4,303	2,620	1,831	995	935	559	11,243
(c) Other local in- struments	1938	2,366	1,804	1,081	850	499	336	6,936
	1939	2,512	1,989	1,158	922	524	353	7,458
	1940	2,728	2,113	1,226	992	575	325	7,959
Instruments per 100 of population	1938	8.96	10.65	7.77	9.63	7.43	7.28	9.14
	1939	9.32	11.07	8.09	10.04	7.70	7.61	9.51
	1940	9.59	11.46	8.41	10.38	7.97	7.94	9.83
Earnings ..		£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
	1938	3,194	2,250	1,063	685	425	194	7,811
	1939	3,371	2,409	1,136	709	450	209	8,284
	1940	3,581	2,602	1,176	758	467	226	8,810
Working expenses ..	1938	1,936	1,361	652	516	326	192	4,983
	1939	2,119	1,488	691	543	365	204	5,410
	1940	2,154	1,635	713	537	367	197	5,603
Percentage of working expenses on earn- ings	1938	%	%	%	%	%	%	%
	1939	60.63	60.47	61.36	75.31	76.57	99.01	63.78
	1940	62.87	61.75	60.80	76.58	81.13	97.94	65.31
		60.15	62.86	60.65	70.90	78.63	86.91	63.61

Of the total telephones (691,088) in service on 30th June, 1940, 260,865, or 38 per cent. were connected to exchanges situated beyond the limits of the metropolitan telephone networks. The number of telephone offices, including exchanges, opened during the year was 57, bringing the total in Australia to 9,217.

Handset telephones installed during the year totalled 54,335. At 30th June, 1940, there were 313,466 handset instruments in service, or 45.36 per cent. of the total telephones connected.

(vii) *Systems in Use.* Of the total telephone subscribers' lines in service in Australia 53 per cent. are connected to automatic exchanges, 41 per cent. to magneto exchanges and 6 per cent. to common battery exchanges. Details for each State are shown in *Transport and Communication Bulletin No. 31* issued by this Bureau.

(viii) *Subscribers' Lines and Calling-rates.* The next table gives the number of subscribers' lines and daily calling-rate at central, suburban and rural telephone exchanges in the several States for 1939-40 :—

TELEPHONES: SUBSCRIBERS' LINES AND DAILY CALLING-RATE, 1939-40.

State.	Central Exchanges.		Suburban Exchanges.		Rural Exchanges.		Total.	
	Subscribers' Lines.	Average Outward Calls Daily per line.	Subscribers' Lines.	Average Outward Calls Daily per line.	Subscribers' Lines.	Average Outward Calls Daily per line.	Subscribers' Lines.	Average Outward Calls Daily per line.
	No.	No.	No.	No.	No.	No.	No.	No.
New South Wales ..	20,213	13.60	102,156	4.37	69,560	2.39	191,929	4.62
Victoria ..	12,396	11.13	88,144	4.49	52,154	1.99	152,694	4.18
Queensland ..	8,653	10.63	18,651	3.65	33,250	2.81	60,554	4.19
South Australia ..	6,247	10.05	19,569	3.30	18,456	1.83	44,272	3.64
Western Australia ..	7,398	7.45	8,436	3.62	10,599	1.85	26,433	3.98
Tasmania ..	3,531	5.16	1,894	2.74	8,684	2.39	14,109	3.13
Australia ..	58,438	10.97	238,850	4.23	192,703	2.27	489,991	4.26

A comparison of the average daily calling-rates for each class of exchange shows that New South Wales registered the greatest number of calls per line at central, Victoria at suburban exchanges and Queensland at rural exchanges.

For Australia the average number of calls per line at central exchanges was approximately two and a half times greater than at suburban exchanges, while the average for suburban exchanges was almost double the number shown for rural exchanges.

(ix) *Effective Paid Local Calls.* The numbers of effective paid local calls from subscribers and public telephones in the various States during the years ended 30th June, 1939 and 1940 appear hereunder :—

TELEPHONES: NUMBER OF EFFECTIVE PAID LOCAL CALLS.

State.	Subscribers' Calls.		Calls from Public Telephones.		Total Calls.	
	1938-39.	1939-40.	1938-39.	1939-40.	1938-39.	1939-40.
	'000.	'000.	'000.	'000.	'000.	'000.
New South Wales ..	236,372	258,356	22,768	24,227	259,140	282,583
Victoria ..	166,529	173,987	10,857	11,549	177,386	185,536
Queensland ..	65,654	68,236	5,002	5,584	70,656	73,820
South Australia ..	43,232	46,319	3,676	3,954	46,908	50,273
Western Australia ..	28,821	30,625	1,533	1,687	30,354	32,312
Tasmania ..	10,903	11,932	847	928	11,750	12,860
Australia ..	551,511	589,455	44,683	47,929	596,194	637,384

(x) *Trunk Line Calls and Revenue.* In the next table the number of telephone trunk line calls recorded, the amount of revenue received, and the average revenue per call are shown for each of the States for the years 1937-38 to 1939-40:—

TELEPHONES : TRUNK LINE CALLS AND REVENUE.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Total Calls—	'000.	'000.	'000.	'000.	'000.	'000.	'000.
1937-38 ..	14,217	11,007	6,851	4,211	2,222	1,727	40,235
1938-39 ..	14,401	11,198	7,306	4,166	2,311	1,770	41,152
1939-40 ..	14,688	11,853	7,485	4,265	2,282	1,930	42,503
Total Revenue—	£	£	£	£	£	£	£
1937-38 ..	711,872	518,212	387,431	194,909	122,915	68,114	2,003,453
1938-39 ..	739,472	529,190	412,811	196,780	126,141	73,634	2,078,028
1939-40 ..	786,200	577,312	418,800	200,639	127,124	79,543	2,189,618
Average Revenue per Call—	d.	d.	d.	d.	d.	d.	d.
1937-38 ..	12.02	11.30	13.57	11.11	13.27	9.47	11.95
1938-39 ..	12.32	11.34	13.56	11.34	13.09	9.98	12.12
1939-40 ..	12.85	11.69	13.43	11.29	13.37	9.89	12.36

The number of trunk line calls during 1939-40 increased by nearly one and a half million, or 3.28 per cent., compared with the figures for the previous year, whilst the average revenue per call rose by 0.24d.

2. *Revenue from Telephones.*—Particulars regarding the revenue from telephone services are included in tables in § 1.

§ 6. Radio Telegraphy and Telephony.

1. *General.*—A statement in regard to the initial steps taken to establish radio telegraphy in Australia appears in Official Year Book No. 18, p. 343.

2. *Wireless Licences.*—(i) *General.* Under the Wireless Telegraphy Act and Regulations, no wireless station can be installed or operated without a licence from the Postmaster-General. Licences are issued for the following:—(a) *Coast Stations*, which are operated at various points around the coast and in Papua and New Guinea by Amalgamated Wireless (Australasia) Ltd., under agreement with the Commonwealth; (b) *Ship Stations* (regulations under the Navigation Act 1912-1935 require that all ships registered in Australia and engaged in international or interstate traffic shall have an efficient radio telegraph installation, which in the case of cargo vessels of less than 750 tons gross register shall include apparatus for automatically transmitting prescribed signals of distress, these vessels not being required to carry fully qualified operators; similar legislation, designed to ensure the safety of life at sea, has also been introduced by the Governments of New South Wales, Victoria and Queensland); (c) *Land Stations* to be operated where no telegraph or telephone facilities exist; (d) *Broadcasting Stations*, other than those of the National Broadcasting Service; (e) *Broadcast Listeners' Receiving Sets*; (f) *Portable Stations* on motor cars, etc.; (g) *Aircraft Stations*; (h) *Experimental Stations*; and (i) *Special Stations*, i.e., stations other than those named above. The issue of Experimental Licences has been suspended for the duration of the war.

The following table shows the number of each class of licence in force in each State and Territory as at 30th June, 1940 :—

WIRELESS LICENCES : 30th JUNE, 1940.

Station Licence.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Coast ..	1	1	6	1	5	3	1	..	18
Ship ..	82	94	14	10	3	1	1	..	205
Aircraft ..	9	10	5	5	3	2	1	..	35
Land(a) ..	19	4	61	35	77	9	50	1	256
Broadcasting(b) ..	35	19	19	8	9	8	..	1	99
Broadcast Listeners' ..	456,012	348,158	151,109	124,585	87,764	42,182	306	2,143	1,212,259
Experimental ..	101	106	42	37	26	9	..	..	321
Portable ..	13	2	8	4	6	..	6	2	41
Special ..	72	28	21	3	12	1	..	..	137
Total Issued	456,344	348,422	151,285	124,688	87,905	42,215	365	2,147	1,213,371

(a) In addition to the licensed stations there were two operated by the Postmaster-General's Department, namely, Wave Hill (N.T.) and Camooweal (Q.). (b) There were also twenty-nine stations operated by the National Broadcasting Service, including three short-wave stations (VLR Lyndhurst, Vic., VLLQ, Sydney, N.S.W., and VLIW, Perth, W.A.).

Similar particulars to the above in relation to the year 1940-41 will be found in the Appendix to this volume.

(ii) *Broadcast Listeners'*. The striking development of the use of the radio in Australia is illustrated by the following table, which gives the number of broadcast listeners' licences in force at 30th June, 1925, 1930, and for each year from 1933 to 1940 :—

NUMBER OF BROADCAST LISTENERS' LICENCES.

In force at 30th June—	N.S.W. (a)	Victoria.	Q'land. (b)	S. Aust. (c)	W. Aust.	Tas.	Australia.
1925 ..	33,719	19,243	1,061	3,118	3,417	501	61,059
1930 ..	111,080	139,887	23,263	25,671	5,715	6,032	311,648
1933 ..	178,000	170,995	36,186	50,150	20,536	12,563	468,430
1934 ..	226,831	206,995	52,038	64,174	31,404	16,547	597,989
1935 ..	278,648	236,886	67,369	76,365	41,176	20,088	720,532
1936 ..	315,731	263,414	83,028	87,335	49,987	24,118	823,613
1937 ..	358,292	288,717	101,358	99,033	61,151	29,780	938,331
1938 ..	403,978	315,406	117,496	111,787	71,324	36,013	1,056,004
1939 ..	433,029	327,579	133,217	117,307	79,262	39,392	1,129,786
1940 ..	458,155	348,158	151,110	124,891	87,764	42,182	1,212,260

(a) Including Australian Capital Territory.

(b) Including Papua.

(c) Including Northern Territory.

3. **Broadcasting.**—(i) *The National Broadcasting Service.* The technical services for the National Service are provided by the Postmaster-General's Department, and the programme by the Australian Broadcasting Commission, a body consisting of five members, constituted under the provisions of the Australian Broadcasting Commission Act. The fee for a broadcast listener's licence is 20s. per annum for a receiver situated approximately within 250 miles from a station of the National Service, and 14s. per annum in the area beyond. Licences are issued free to blind persons. The Commission receives 10s. from each fee, the Department retaining the balance.

The National Broadcasting System of Australia comprises 29 transmitting stations as follows :—

Medium-wave Stations—

2FC and 2BL Sydney.	4QN Townsville.
2NC Newcastle.	4RK Rockhampton.
2CO Corowa.	4QS Dalby.
2NR Lawrence.	5CL and 5AN Adelaide.
2CR Cummoek.	5CK Crystal Brook.
2CY Canberra.	6WF and 6WN Perth.
3LO and 3AR Melbourne.	6WA Minding.
3GI Sale.	6GF Kalgoorlie.
3WV Dooen.	7ZL and 7ZR Hobart.
4QG and 4QR Brisbane.	7NT Kelso.

Short-wave Stations—

VLR and VLG Lyndhurst, Victoria.	VLW Perth, Western Australia.
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With the exception of the short-wave stations, all transmitters operate in the broadcast frequency band 550 to 1,500 kilocycles per second. From the short-wave stations, using the band of frequencies 6 to 20 megacycles per second, service is given to listeners in sparsely populated parts of Australia such as the north-west of Western Australia, Northern Territory, and Northern and Central Queensland. The short-wave stations are also used for the oversea service of the Department of Information. It is proposed to install higher-powered transmitters of world range to increase the efficiency of this service.

Programmes for country regional stations are normally relayed from the central studio of the nearest capital city. A high-quality programme transmission network connects the studio to the station. A number of programme channels are utilized to link national broadcasting stations in the capital cities of Australia, and frequently this system is extended to connect both the national and commercial broadcasting stations. Recent chain broadcasts have involved 125 broadcasting stations in Australia, 26,000 miles of trunk-line channels and the attendance of 150 technicians.

Oversea programmes have increased considerably in importance, especially since the outbreak of war, and they are broadcast regularly over the national stations. Short-wave reception centres are established at Mont Park near Melbourne, Liverpool near Sydney, and at Byford, near Perth.

(ii) *Commercial Broadcasting Stations.* The services of other broadcasting stations are conducted by private enterprise under licence from the Postmaster-General. Licences are granted on conditions which ensure satisfactory alternative programmes for listeners. The fee for a broadcasting station licence is £25 and the maximum period of a licence is three years, although they may be renewed annually at the discretion of the Postmaster-General. Licensees of these stations do not share in the listeners' licence fees, but rely for their income on revenue received from the broadcasting of advertisements and other publicity. The number of these stations in operation at 30th June, 1941, was 96, and there are other stations in prospect.

(iii) *Radio Inductive Interference.* The Postmaster-General's Department takes active measures to suppress, so far as possible, interference with broadcast reception resulting from the radiations of energy from electrical machinery and appliances. During the year, the Department received 7,067 complaints of interfering noises, which, in all but a few instances, were remedied.

(iv) *Prosecutions under the Wireless Telegraphy Act.* During the year 2,601 persons were convicted for using unlicensed broadcasting receiving equipment. The total fines amounted to £6,338.

(v) *World Licence Distribution.* The following table shows the number of listeners' licences and the ratio of licences to population in the leading "radio" countries. These particulars are compiled from figures supplied by L'Union Internationale de Radio-diffusion.

WORLD RADIO LICENCE DISTRIBUTION, 31st DECEMBER, 1939.

Country.	Listeners' Licences.	
	Total.	Per 100 of Population.
Sweden	1,358,000	21.52
United States of America	(a) 28,000,000	21.49
Denmark	820,100	21.47
New Zealand	337,090	20.83
United Kingdom	9,200,000	19.33
Australia	1,172,323	16.79
Netherlands	1,437,596	16.47
Germany	11,593,019	14.52
Norway	423,470	14.50
Switzerland	593,400	14.10
Belgium	1,148,659	13.70
France	5,000,000	11.91
Union of South Africa	249,200	11.87
Canada	(c) 1,213,723	10.78
Argentine Republic	1,180,000	9.11
Finland	332,450	9.09
Eire	(b) 148,811	5.07
Hungary	496,311	4.90
Japan	4,666,058	4.47
Mexico	(b) 875,000	4.46
Poland	(b) 1,016,473	2.90
Italy	(b) 995,500	2.24
Union of Soviet Socialist Republics	(d) 3,760,400	2.21

(a) Listeners are not licensed and the totals shown are estimates only of the number of receiving sets in operation. (b) December, 1938, figures. (c) At 31st March, 1939. (d) December, 1936, figures.

Australia ranks sixth amongst countries of the world in relation to radio licences per 100 of population.

4. *Overseas Communication by Wireless.*—(i) *Beam Wireless.* The Beam Wireless stations provided for under the agreement between the Commonwealth Government and Amalgamated Wireless (Australasia) Ltd. were completed early in 1927, and a direct beam wireless service to England was established on 8th April, 1927. A similar service to North America was opened on 16th June, 1928. Satisfactory communication is maintained daily over a period of hours, and the services are being well patronized by the public. A comparison of the rates charged for "Beam" and Cable messages is given in §4, Oversea Cable and Radio Communication. Particulars of international traffic via "Beam" are given in par. (iii) (a) following.

(ii) *Wireless Communication in the Pacific.* New Zealand, the territories of New Guinea and Papua and the various small islands in the Pacific Ocean are served by a comprehensive system of wireless communication. In New Guinea and Papua, nine wireless telegraphy stations are established under an agreement between the Commonwealth and Amalgamated Wireless (Australasia) Ltd. for communication with ships at sea, and for intercommunication. Three of these stations—Rabaul (New Guinea) and Port Moresby and Samarai (Papua)—also have direct communication with the mainland of Australia. In addition, there are in New Guinea several low-powered transmitters established by the New Guinea Administration for interior communication, while in both Papua and New Guinea several small stations are operated by gold exploration parties, missionary societies and others.

Direct communication by wireless telegraphy exists between Sydney and Suva (Fiji) and Noumea (New Caledonia). Other wireless telegraph stations in the Pacific include Auckland, Awarua and Chatham Islands (New Zealand), Port Vila (New Hebrides), Apia (Samoa), Tulagi and Vanikoro (Solomon Islands), Nauru (Marshall Islands), Ocean Island (Gilbert and Ellice Group), Truk and Yappu (Caroline Islands), and Guam (Marian Islands).

(iii) *Radiotelegraphic Traffic.* (a) *International.* The following statement shows particulars of international traffic "via Beam" to and from United Kingdom and other places during the year ended 30th June, 1940 :—

RADIO TRAFFIC : INTERNATIONAL, 1939-40.

Class of Traffic.	Number of Words Transmitted to—			Number of Words Received from—		
	United Kingdom.	Other Places.	Total.	United Kingdom.	Other Places.	Total.
Ordinary (a) ..	615,023	282,333	897,356	547,927	71,621	619,548
Deferred ordinary ..	2,019,464	945,507	2,964,971	1,859,082	244,140	2,103,222
Government (a) ..	74,419	32,021	106,440	13,366	2,363	15,729
Press (including deferred press) ..	125,606	54,774	180,380	3,730,970	296,585	4,027,555
Daily letter and greeting telegrams ..	2,206,034	1,323,397	3,529,431	1,757,765	602,687	2,360,452
Total ..	5,040,546	2,638,032	7,678,578	7,909,110	1,217,396	9,126,506

(a) Including code telegrams.

(b) *Coast Stations.* Particulars of the traffic handled by the several coast stations during 1939-40 are as follows :—

RADIO TRAFFIC : COAST STATIONS, 1939-40.

State or Territory.	Particulars.				
	Total Paying Words.	Messages.			
		Paying.	Service.	Weather.	Total.
	No.	No.	No.	No.	No.
New South Wales ..	1,403,336	57,828	10,006	10,930	78,764
Victoria ..	29,640	2,527	5	868	3,400
Queensland ..	159,779	9,633	1,900	11,768	23,301
South Australia ..	15,126	1,385	198	312	1,895
Western Australia ..	44,899	2,844	876	2,759	6,479
Tasmania ..	73,854	4,113	824	3,221	8,158
Northern Territory ..	67,799	3,331	858	2,511	6,700
Australia ..	1,794,433	81,661	14,667	32,369	128,697
Papua ..	724,991	34,357	2,272	8,798	45,427
Grand Total ..	2,519,424	116,018	16,939	41,167	174,124

(c) *Island Stations.* Particulars of the island radio traffic dealt with during 1939-40 are given in the following table :—

RADIO TRAFFIC : ISLAND STATIONS, 1939-40.

Particulars.	To Australia.	From Australia.	Inter- Island.	Ship.	Total.
	No.	No.	No.	No.	No.
Messages	16,981	14,807	21,516	482	53,786
Words	364,801	263,923	346,608	6,174	981,506

5. **Proficiency Certificates.**—Every transmitting station, in respect of which a licence is issued, must be operated by a person holding a certificate of proficiency.

During the year ended 30th April, 1941, 362 Operators' Certificates of Proficiency were awarded. The number of each class were :—Commercial—First Class, 125 ; Second Class, 108 ; Third Class, 12 ; Aircraft—First Class, 1 ; Second Class, 2 ; Third Class, 12 ; Broadcast Station, 75 , and Amateur, 27.